

LSAC RESEARCH REPORT SERIES

■ A Compendium of LSAT and LSAC-Sponsored Item Types 1948–1994

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■ Law School Admission Council
Research Report 94-01
April 1994

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Executive Summary

This report provides an overview of the makeup of the LSAT since it was first administered in February of 1948 through to the present. Various item types have been included, disregarded, changed, added, and reevaluated during this time period. Half-day tests have made way for full-day tests, only to return to the current half-day test administration. Throughout this evolutionary process, the goal of the LSAT has been a consistent one. It is to assure that the LSAT assesses, as completely and thoroughly as possible, those skills needed for success in law school.

A time line is included as a part of this report that shows the year by year development of the LSAT from its inception to the present. A detailed description of every item type administered as a part of an LSAT form, whether operationally or as part of a pretest section, is also included. The intended purpose of each item type is also explained, and the timing and length of a section containing the item type is given. Any available statistical information about each item type is presented and described, along with the reasons for adopting, rejecting, or discontinuing the item type. Examples of each item type as they appeared at the time of their administration are included in an appendix to the report.

Some item types have made consistent appearances on the LSAT; others have been removed because of poor validity; some were too difficult to score; others were pretested but never adopted for operational use. The Reading Comprehension item type has appeared on more LSAT forms than any other item type. A Reading Comprehension section was included on the first LSAT in 1948 and, with only a ten year absence along the way, still appears on the LSAT today.

This comprehensive report of item types represents one aspect of the ongoing evaluation of the construct validity of the LSAT. The compilation of information on the item types that have been evaluated in the past can provide direction for future efforts toward the development of new measures.

A Compendium of LSAT and LSAC-Sponsored Item Types 1948 – 1994

INTRODUCTION

This report provides a description of the item types that have appeared on the LSAT from the first administration of the test (February of 1948) through to the present. Also included is information related to the General Background and Writing tests that were administered for some time in an afternoon session but for which separate scores were reported. Test books, test analysis reports, validity studies, research reports, LSAT Information Books, and LSAT documentation in the ETS archives were used as source material. This report will be presented at two levels. First, an overview of how the LSAT has evolved will be presented. The information on each item type will be presented at a more detailed level. An Appendix containing an example of each item type with an answer key also is included.

Purpose

In our work with the LSAT, the issue of construct validity is always at the foreground. Our goal with respect to this issue is to assure that not only are the skills assessed by the LSAT related to law school success, but also that the LSAT tests as many as possible of the skills necessary to succeed in law school. In meeting this goal, the question of whether or not new item types should be introduced to replace the old is constantly raised. However, before developing new item types and exploring new options, the first step is to evaluate what has already been tried. Perhaps through exploring the various item types that have been tried and used, some item types will be rediscovered that did not work well in the past but could be adapted into something much more promising when new techniques and new technology are applied. For example, some item types that did not work well in a paper and pencil format could prove to be very promising as we move into the age of computer administered testing.

Given these goals, this report represents a first step in documenting and evaluating the construct validity of the LSAT. Hopefully, with this information on the item types compiled into a single source, some new and interesting avenues for exploration will be uncovered.

How the LSAT Evolved

The LSAT was first pretested in 1947 and was first administered operationally in 1948. The test form administered in 1948 required a full day of testing and consisted of 10 sections, named Verbal Analogies, Sentence Completion, Paragraphs (later called Paragraph Reading), Word Classification, two sections of Reading Comprehension, Figure Classification, Debates, Contrary and Irrelevant Statements, and Reasoning. Many changes to the test occurred over the first several years. With the February 1949 test, five sections were removed (Word Classification, Figure Classification, Debates, Reasoning and one Reading Comprehension section) and the Best Argument, Data Interpretation, Principles and Cases, and Gottschaldt Figures Test item types were added to the test. In 1950, the Debates item type was reinstated

and other changes were introduced based on the results of some validity studies. Thus, the 1950 test consisted of the Principles and Cases, Data Interpretation, Reading Comprehension, Opposites, Debates, consisted of the Principles and Cases, Data Interpretation, Reading Comprehension, Opposites, Debates, Best Argument, and Gottschaldt Figures Test item types. In 1951, the test was shortened to a half day format and contained the Reading Comprehension, Principles and Cases, Data Interpretation, Contrary and Irrelevant Statements and Figure Classification item types. The format of the test remained constant until 1956 when the Contrary and Irrelevant Statements item type was dropped and the Directed Memory and Error Recognition item types were added to the test. This addition was the result of the pretesting of several writing item types in September of 1954.

In November 1961, a major change occurred with the addition of an afternoon test of Writing Ability and General Background. Each of these afternoon measures produced a score separate from the LSAT score. The morning test remained identical to that administered in 1956. The afternoon session consisted of the General Background test and the Writing Ability test which included the Error Recognition, Outline Organization (or Organization of Ideas) and Interlinear item types. The Error Recognition item type remained on both the morning and afternoon test until it was removed from the morning test in November, 1962. In February 1963, the Interlinear item type was replaced with the Editing item type because it had become too expensive to score.

No changes to the test took place until October 1970 when the General Background test and the Figure Classification and Organization of Ideas item types were dropped. Also at this time, the name of the Directed Memory item type was changed to Reading Recall. In October 1971, the afternoon test was eliminated and the Error Recognition and Sentence Correction (formerly Editing) item types were moved to the morning session. The test then consisted of the Reading Comprehension, Data Interpretation, Reading Recall, Principles and Cases, Error Recognition and Sentence Correction item types.

The next round of changes to the test took place in February 1975 when Logical Reasoning and Practical Judgment were introduced to replace Reading Recall and Reading Comprehension. In February 1976, Quantitative Comparison was introduced to replace Data Interpretation, and in February 1978 the Usage item type was introduced to replace the Error Recognition item type. In June 1982, the test was beginning to resemble the test of today with the Issues and Facts, Analytical Reasoning, Reading Comprehension and Logical Reasoning item types. In June 1989, Issues and Facts was dropped from the test, and a second Logical Reasoning section was added in June 1991 (Educational Testing Service, 1945-1973; Law School Admission Council and the Law School Admission Services, 1991; and McPeck, Pitcher, & Carlson, 1974).

SUMMARY OF ITEM TYPE INFORMATION

This report will now turn to a summary of the information compiled on each item type. As an aid in this discussion, Table 1 provides the two-character abbreviation assigned to each item type, and Table 2 provides some interesting historical facts related to the LSAT and the item types. An example of each of the item types discussed along with an answer key may be found in the Appendix to this document. It was our desire to be historically accurate in this research. All item types represented in the appendix are presented exactly as they appeared in their original test books. Therefore, some of the older item types may violate current sensitivity guidelines that were not in place when the item types were used.

Table 1
Item Type Codes and Changes

Item Type	Code	Changes
Analytical Reasoning	AR	First administered operationally in 1982 and still appears on the test today.
Artificial Language	AL	Pretested, but never adopted for operational use.
Best Argument	BA	Introduced in 1949 to replace WC. Dropped 1951.
Combining Sentences	CS	Included on the Writing pretest in 1954, but never adopted for operational use.
Common Word	CW	Pretested, but never adopted for operational use.
Contrary and Irrelevant Statements	CI	First administered in 1948. Dropped in 1956.
Data Interpretation	DI	Introduced in 1949. Replaced by QC in 1976.
Debate	DB	Introduced in 1948; replaced by DI in 1949; reinstated in 1950; dropped in 1951. High predictive validity but difficult to construct.
Deductive Reasoning from Artificial Signs	DR	Pretested, but never adopted for operational use.
Directed Memory	DM	Included on the Writing pretest in 1954; introduced in 1956; name changed to RR in 1970; removed from the test in 1975.
Editing	ED	Included on the Writing pretest in 1954; replaced IL in 1962; name changed to SR; removed from test in 1982.

Table 1 (continued)

Item Type	Code	Changes
Error Recognition	ER	Included on the Writing pretest in 1954. Introduced in 1956. Administered in AM & PM beginning in 1961; removed from AM in 1962; replaced by US in 1978.
Expression Situations	ES	Included on the Writing pretest but never adopted for operational use.
Figure Classification	FC	Introduced in 1948; removed from test in 1949; reinstated in 1951; removed from test in 1970.
General Background	GB	Pretested in 1958; introduced in 1961 afternoon session (separate score from LSAT); removed from test in 1970.
General Understanding	GU	Pretested but never adopted for operational use; appeared to be identical to GB.
Gottschaldt	GC	Introduced in 1949; removed from test in 1951.
Induction	IN	Pretested, but never adopted for operational use.
Insightful Reasoning	IR	Pretested, but never adopted for operational use.
Interlinear	IL	Introduced on the writing test in 1961; replaced by ED in 1963 because it was too expensive to score.
Issues and Facts	IF	Introduced in 1982; removed from test in 1989 because difficulty in writing resulted in ambiguity and unsound questions.
Logical or Argumentative Relationship	LA	Pretested, but never adopted for operational use.
Logical Reasoning	LR	Introduced in 1975 and still appears on the test today.
Opposites	OP	Administered only on one test form in 1950.
Organization of Ideas	OI	See OO.
Outline Organization	OO	Included on the Writing pretest in 1954; introduced in 1961; name changed to OI in 2/62; removed from test in 10/70 due to low predictive validity.

Table 1 (continued)

Item Type	Code	Changes
Paragraphs	PA	Appeared on test only in 1948; appears to be identical to PR.
Paragraph Reading	PR	Introduced in 2/49; removed from test in 1950 due to poor validity.
Practical Judgment	PJ	Introduced in 1975; removed from test in 1982.
Principles and Cases	PC	Introduced in 1949; removed from test in 1982.
Quantitative Comparison	QC	Introduced in 1976; removed from test in 1982.
Reading Comprehension	RC	First administered in 1948 and still appears on the test; not administered from 1975 to 1982.
Reading Recall	RR	Name of DM changed to this in 1970; time interval intro between reading of paragraphs and answering of questions in 1971.
Reasoning	RS	Introduced in 1948; removed from test in 1949.
Reference Reading	RF	Pretested, but never adopted for operational use.
Sentence Completion	SM	Introduced in 1948; removed from test in 1950 due to poor validity.
Sentence Correction	SR	Name change from ED; appeared on test until 1982.
Usage	US	Introduced in 1978 to replace ER; removed from test in 1982.
Verbal Analogies	VA	Introduced in 1948; removed from test in 1950, due to poor validity.
Writing Ability	WA	Writing item types for this test were pretested in 1954; introduced in 1961 afternoon session (separate score from LSAT); removed from test in 10/70.
Word Classification	WC	Introduced in 1948; removed from test in 1949.

Table 2
Historical Facts Related to the LSAT Item Types in Chronological Order

1947	LSAT pretested among first year law students at 9 law schools.
1948	First final form, a full-day, 6-hour test, administered to 2,753 candidates. Since results of pretesting were not yet available, College Board item files used to build test, so content was different from later forms.
1948	Scaling
1949	Administration of first test form tailor-made for law school admissions.
1950	Changes in test are the result of validity studies.
1951	Half-day format (3 1/2 hours) introduced.
1951-1956	Half-day test included RC, PC, DI, CI, FC and a pretest section.
1954	Writing pretest administered to four law schools to explore the possibility of including a writing test. Item types pretested were CS, ED, OI, ER, ES, and DM.
1955	For each test taker taking the Writing pretest, data were available on relationship among LSAT scores, scores on experimental tests, prelaw averages, first year law school averages, and independent ratings of writing ability.
1955	Committee approves the revision of the LSAT to include DM (later called RR), and ER.
1955-1956	No new forms of the LSAT administered during this academic year.
1956	First new form administered with the following item types: RC, DI, DM, PC, ER, FC, and a pretest section.
1957	Committee established to look into possibility of a separate writing ability and general culture test. Committee recommended inclusion of these sections even though they did not improve law school grade prediction and they were achievement tests rather than aptitude tests. The Policy committee accepted the recommendation because they thought these were prerequisite skills for admission to their law schools.
1961	Full-day, 3-score test introduced - GB, Writing, and LSAT scores. AM: RC, DI, DM, PC, ER and FC; PM: ER, OO, IL, & GB. OO is same as OI that was pretested in 1954.
1962	ER deleted from AM test, but remained in PM test (Prior to this, ER appeared in both sessions).

Table 2 (continued)

1963	ED introduced to replace IL which had become too expensive to score, requiring more than 20 readers for 4 or 5 days.
1966	Name of ED changed to SR.
1969	Council votes to drop GB after 7/70. Surveys showed that few schools were using the results of this test for admissions decisions. 1960s research confirmed that this test was a relatively poor predictor of law school success. Research also showed that FC and Writing added little to predictive validity.
1970	Test Development and Research Committee approves ETS's recommendation to drop FC, OI of the Writing test, and GB as of 10/70.
1970	FC, OI, & GB dropped. SR shortened to 25 items & 20 min., DM name changed to RR. PM testing session retained for 1 yr in order to extensively pretest new items.
1971	PM session eliminated and two writing ability tests (ER and SR) moved to AM. Time interval introduced between reading paragraphs and answering questions in RR. Sections included are: RC, DI, RR, PC, ER & SR a pretest section for a 3 hr 50 min. test.
1974	Total test time reduced to 3 hr 20 min., but with no change in format.
1975	LR and PJ replaced RR and RC.
1982	New content and structure: IF, AR, LR, & RC; multiple-choice writing and separate writing score dropped.
1989	IF dropped.
1991	Second LR section added.

Sources: Educational Testing Service, 1945-1973; Law School Admission Council and the Law School Admission Services, 1991

The information presented for each item type includes, where available, a description of the item type, the purpose of the item type, and the timing and length for an associated section. Statistical information on the item type such as difficulty, discrimination, reliability, standard error of measurement (SEM), speededness, and validity study results including subgroup differences are also presented, where available. In terms of the difficulty of the item types, the equated delta statistic is reported here. In calculating the delta statistic, the proportion of test takers answering an item correctly is converted to the delta scale and a delta equating is performed (See Hecht & Swineford, 1981). This procedure serves to remove the group differences so that individual test items may be more appropriately compared across forms and administrations. The delta scale has a mean of 13 and a standard deviation of 4; a higher value

of this statistic indicates a more difficult item. The r-biserial is the item discrimination statistic reported here. This statistic is the correlation between the test taker's score on an item and the test taker's score on the total test. If an item is discriminating well, test takers who answer the item correctly should do well on the total test and test takers who answer the item incorrectly should do poorly on the total test. The reliability coefficient, reported on a scale ranging from 0 to 1.0, is a measure that tells us how consistently a test taker would score if he or she were to take the LSAT repeatedly, while the SEM tells us the average amount of error inherent in individual test scores. A test taker's test score will be within one SEM of his or her "true score" approximately 68 percent of the time and within two SEMs approximately 95 percent of the time. An individual's true score is the score he or she would receive on a perfectly reliable test. The speededness measure given is the number of items reached by a certain percentage of test takers. It should be noted, however, that since LSAT scores are based on the number of questions a test taker answers correctly, many test takers realize that they are unwise to leave unanswered questions at the end of the test and should guess at items they do not have time to thoughtfully answer. For this reason, the speededness information provided is only a rough estimate of how the time limitations imposed affected test takers' ability to complete the test. New measures of speededness are currently being explored by LSAS research staff. Finally, validity refers to the appropriateness of the test for its intended purpose. For a more detailed explanation of all of these measurement concepts, the reader is referred to Allen and Yen (1979). In what follows, the items types are grouped as LSAT item types, Writing item types and the General Background test. In the LSAT and Writing sections, operational item types are addressed separately from item types that were tried out but never adopted for operational use.

Operational LSAT Item Types

In this section, information will be summarized for those item types that have been used operationally on the LSAT.

Analytical Reasoning. The purpose of the Analytical Reasoning (AR) item type is to evaluate the test taker's ability to understand the structure of a relationship and to draw conclusions about that structure. A set of statements, rules, or conditions are presented describing the relationship among persons, places, things, or events, and the test taker is asked to make deductions about these. The analyses represent the kind of detailed analyses necessary in solving legal problems (Law School Admission Services, 1993). The AR item type was first introduced operationally in 1982, and still appears on the LSAT today.

Between 23 and 29 AR items have appeared in an AR section, but 24 items are typically presented. The timing for this item type ranges from 1.35 to 1.55 minutes per item. The mean delta range for the various administrations of this item type is 11.8 to 13.4, with the standard deviation of this statistic ranging from 1.7 to 2.4. These statistics indicate that the AR item type can yield difficult items when required. For the r-biserial, the range of the mean for the administrations for which data were

available varied from .40 to .61, with standard deviations ranging from .05 to .10. Reliability ranged from .67 to .86, while the SEM ranged from 1.93 to 2.33. Using the percent completing a section as the criteria, the AR item type does not appear to be speeded with the time allotments provided. For the test forms having data available, between 83 percent and 94 percent completed the AR section of the test, and greater than 80 percent of the test takers reached the last item for all forms reviewed.

With respect to subgroup differences, one study reported that test questions are consistently more difficult for minority group members as compared to White test takers, with the exception of Asian Americans who tend to perform better on this item type. Male and female test takers perform equally well on AR (Wightman & Muller, 1990).

Best Argument. In the Best Argument (BA) item type, a dispute or disagreement between parties is described and the test taker is asked to evaluate the argument presented by the disputants or to evaluate the situation in some other way. The disputes presented are being brought before a lay arbitrator rather than before a court of law.

The number of items in a BA section for the forms on which it appeared were 30, 35 and 36, with the timing ranging from 1 to 1.28 minutes per item. In terms of the difficulty produced by this item type, the mean delta ranged from 10.8 to 12.5, while the standard deviation for this statistic ranged from 1.6 to 2.4. In terms of item discrimination, the mean r-biserial ranged from .34 to .52 and the standard deviation for this statistic ranged from .11 to .13. Reliability varied a bit, ranging from .49 to .74. The SEM, however, was more stable with values of 2.4 for two forms and a value of 2.5 for one form. With only one minute per item, this item type was speeded, with only 52.4 percent completing the section and 80 percent of the test takers reaching only item 22 out of 30 items. With 1.28 minutes per item, only 72.8 percent completed the section and 80 percent of the test takers reached item 33 out of 35 items. With 1.25 minutes per item, 94.5 percent completed the test, indicating that the test was considerably less speeded with this time allotment.

Contrary and Irrelevant Statements. In the Contrary and Irrelevant Statements (CI) item type, a series of premises were presented, each followed by two sets of three statements each. In each set, two statements were in support of or agreed with the premise, and the third statement was either contrary or irrelevant to the premise. The task presented to the test taker was that of identifying the contrary or irrelevant statement (Olsen, 1956). The purpose of this item type was to assess the test taker's ability to discriminate between supporting evidence and nonsupporting evidence in argument analysis.

The number of items presented in a CI section ranged from 20 to 40, and the timing ranged from .67 to .75 minutes per item. In terms of the difficulty produced by this item type, the mean value of the delta statistic ranged from 8.5 to 10.7. The standard deviation of this statistic ranged from 1.8 to 2.0. In terms of discrimination, the mean r-biserial range for this item type was .46 to .56, with the standard deviation ranging from .11 to .14. The reliability coefficients for this item type were quite high, ranging

from .73 to .82. The SEM for this item type ranged from 1.6 to 2.3. In terms of speededness, with .67 minutes allotted for each item, 86 percent of test takers completed the test. However, with .75 minutes allotted per item, between 87.8 percent and 93.6 percent of test takers completed the test. Overall, therefore, this item type was unspeeded under these testing conditions.

In terms of the validity of this item type, in one research study, correlations of .62 and .60 with the LSAT were reported, along with correlations of .23 and .25 with first-year average (FYA) and correlations of .08 and .09 with undergraduate grade point average (UGPA) (French, 1949). In a second research study, correlations of .31, .28, .11, and .58 with UGPA were reported, with a weighted average of .29 (Olsen, 1956).

Data Interpretation. The purpose of the Data Interpretation (DI) item type was to measure the test taker's ability to comprehend and interpret data that were presented in graphs, tables, or charts. Each set of data was followed by items that were to be answered based on the information presented (Olsen, 1956).

Typically, between 20 and 35 items appeared in a DI section, with between .60 and 1.75 minutes allotted for each item. The DI item type yielded fairly difficult items, with the mean delta statistic ranging from 12.1 to 13.7. The standard deviation of the delta statistic ranged from 1.8 to 3.0. The mean value of the r-biserial for this item type ranged from .38 to .53, while the standard deviation for this statistic ranged from .08 to .16. Reliability for this item type ranged from .66 to .86, while the SEM for this item type ranged from 1.9 to 2.9. In terms of speededness, between 49.2 percent and 90.1 percent of test takers completed the DI section on various forms, indicating that some DI sections were speeded, but others were not. Overall, it seems that the last few items in a DI section were not being reached until the time allotment was increased to 1.3 minutes per item.

With regard to validity, one research study reported a correlation with FYA ranging from .28 to .32 with a weighted average of .30 (McPeck, Pitcher, & Carlson, 1974). In another study, it was concluded that this item type tends to favor Canadian test takers (Wightman, 1976).

Debate. In the Debate (DB) item type, the test taker was presented with a resolution and was required to categorize a number of statements as either supporting the resolution, supporting the negative side of the resolution, or as having no bearing on the argument. The DB item type was dropped from the test in 1951 because although this item type displayed high predictive validity, it was difficult to construct.

In the three forms on which the DB item type appeared, a section was comprised of 50, 90, and 60 items. The timing for this item type ranged from .33 to .40 minutes per item. The mean delta values for DB ranged from 9.9 to 11.3 and the standard deviation of the delta statistic ranging from 1.8 to 2.7. Mean values of the r-biserial for this item type ranged from .36 to .41, with standard deviations ranging from .11 to .14. With reliability coefficients ranging from .77 to .86, this item type was quite reliable.

The value of the SEM for this item type ranged from 3.2 to 3.9. The DB item type was not speeded on any of the forms on which it appeared, with from 92.5 percent to 97.2 percent of test takers completing the DB section of the test.

One validity study on this item type reported correlations of .45, .44 and .75 with LSAT, correlations of .32, .26, .52, and .38 with FYA, and correlations of .18 and .07 with UGPA (French, 1949).

Directed Memory/Reading Recall. The Directed Memory/Reading Recall (DM/RR) item type assessed the test taker's ability to remember the main points of a reading passage. The test taker was first given 15 minutes to read three reading passages of 500 to 1000 words each, and was prompted as to the general types of information he or she would be expected to recall from each passage. The test taker was then presented with the task of answering questions based on what was stated or implied in the passage without looking back to the passage (Olsen, 1956). In October 1971, a time interval was introduced between the reading of the passages and the answering of the questions. Typically, 30 items were presented to the test taker based on the three passages, and 1 minute was allotted for each item.

The range of the mean of the delta statistic for this item type was from 10.9 to 12.1, while the standard deviation of this statistic ranged from 1.8 to 2.5. For the r-biserial, the mean ranged from .37 to .48, while the standard deviation of this statistic ranged from .07 to .12. This item type showed good reliability with values ranging from .64 to .79, while the values of the SEM ranged from 2.31 to 2.48. In terms of speededness, between 80.5 percent and 97 percent of test takers completed the test, and at least 80 percent of test takers reached the last item on the test for all forms. Under these conditions, this item type appears not to be speeded.

Although DM/RR is not a writing item type, it was pretested with the writing item types because validity information was desired for this item type at that time. For that reason, DM/RR was evaluated in terms of its prediction of writing ability. On the writing pretest, this item type showed correlations with 3 ratings of writing ability ranging from .04 to .19 and correlations with FYA ranging from .37 to .65 (weighted average = .42). Therefore, this item type, like the writing item types, correlated more strongly with FYA than with writing ability. It was also stated that, "the results for directed memory may be considered quite favorable in confirming previous findings on the effectiveness of this type of material as a predictor of law school grades" (Olsen, 1956, p. 60). One study concluded that the improvement in prediction achieved with this item type was greater than could be achieved by lengthening the current test, indicating that this item type should be studied further (French, 1952). For DM/RR, the average partial correlation with grades was .21, while the average partial correlation with the LSAT was .11 (Olsen, 1956). DM/RR displayed no differential prediction among White, Black and Chicano test takers (Powers, 1980).

Figure Classification. For each Figure Classification (FC) item, the test taker was presented with two groups of figures followed by five lettered answer figures. The task of the test taker was to identify the characteristic possessed by all figures in Group 1 and none of the figures in Group 2. In the first administration of FC, 80 items were presented, but only 20 items appeared in each subsequent form. For all test lengths, the time allotment was .75 minutes per item.

In terms of the difficulty produced using this item type, the mean of the delta statistic ranged from 10.2 to 12.6, with the standard deviation ranging from 1.9 to 3.1. The mean of the r-biserial statistic ranged from .39 to .62, while the standard deviation for this statistic ranged from .06 to .15. The reliability of this item type varied a bit, with the value of this statistic ranging from .59 to .82 for the 20 item tests and a value of .88 for the 80 item test. It should be noted, however, that a longer test is always more reliable and the differences in reliability between the 20 and 80 item tests may be attributed to test length. The SEM was more stable with values ranging from 1.65 to 2.0. Some forms of this item type appear to be slightly speeded, with between 74.3 percent and 91.8 percent of test takers completing the test section.

Only one validity study was available for this item type, reporting correlations with FYA ranging from -.03 to 0.0 and correlations with LSAT of .52 and .64 (French, 1949).

Gottschaldt. In the Gottschaldt (GC) item type, five simple figures were presented, followed by several complex figures. The test taker was required to determine, for each complex figure, which one of the five simple figures was incorporated into that complex figure. This item type was administered only on two forms of the LSAT, with either 15 or 25 items presented within a GC section and one minute allotted per item.

In terms of statistical information, the mean delta values for the two forms were 12.1 and 12.6, with respective standard deviations of 1.5 and 2.3. For the r-biserial, the mean values for the two forms were .64 and .52, with standard deviations of .11 and .08. The reliability of this item type was quite high, with values of .81 for both forms. The values of the SEM were 1.6 and 2.1. GC did not appear to be speeded at its first administration, with 88.4 percent of test takers completing the test. However, only 67.3 percent of the test takers completed this section on its second form.

Issues and Facts. In the Issues and Facts (IF) item type, the test taker was presented with a statement of facts, a dispute, and two rules that were followed by questions. The test taker was required to evaluate each question in terms of the application of one or both rules to the dispute and classify each question as one of the following: (1) A relevant question, requiring a choice between the rules, (2) A relevant question not requiring a choice between the two rules but requiring additional facts or rules, (3) A relevant question that may be answered based on the facts, the rules, or both, or (4) an irrelevant question or a question whose answer bears only remotely on the outcome of the dispute. The purpose of this item type was to measure the test taker's ability to recognize when and under what conditions a

general rule should be applied to a specific set of facts and when the application of two different rules to a dispute would lead to different outcomes. The test taker was also expected to determine whether new information was relevant to the application of a general rule to specific facts, and to determine how the issue raised by a question pertained to the application of a rule to a given set of facts (Law School Admission Council and Law School Admission Services, 1982). Between 35 and 40 IF items typically have been presented in a section, and between .87 and 1 minute per item typically has been allotted.

In terms of statistical information, the mean delta values for this item type have ranged from 9.66 to 10.95 with the standard deviation ranging from 1.5 to 2.5 for this statistic. These statistics indicate that this item type was not very difficult. The mean r-biserial for this item type ranged from .34 to .62, with the standard deviation ranging from .09 to .15. The reliability for this item type ranged from .75 to .88, while the SEM ranged from 2.25 to 2.75. This item type showed no indication of speededness with the time allotment provided, with from 96.4 percent to 97.5 percent of test takers completing the section for the various forms. One validity study of this item type reported correlations with FYA of .28, .22, and .25 (Pitcher, McPeck, & Binkley, 1976).

Logical Reasoning. The purpose of the LR item type is to evaluate the test taker's ability to understand, analyze, criticize, and complete a variety of arguments. Stimulus passages are drawn from letters to the editor, speeches, advertisements, newspaper articles and editorials, informal discussions and conversations, and articles from the humanities, social science and natural science, and questions are posed to the test taker based on these passages. The number of items administered in an LR section ranged from 24 to 35, and the time allotment ranged from 1.2 to 1.4 minutes per item.

In terms of the difficulty produced using this item type, the mean delta value has ranged from 10.8 to 12.2, while the standard deviation for this statistic ranged from 1.9 to 2.3. The mean value of the r-biserial for this item type ranged from .39 to .56, while the standard deviation for this statistic ranged from .06 to .09. Reliability for this item type ranged from .66 to .85, while the SEM ranged from 2.03 to 2.56. The LR item type does not appear to be speeded with the time allotments provided, with between 90.5 percent and 97.2 percent completing the various LR sections.

In terms of the validity of the LR item type, one study judged LR to be among the three most valid of seven item types being studied. This study reported correlations with FYA of .35 and .38 with a weighted average of .37 (McPeck, Pitcher, & Carlson, 1974). In terms of subgroup differences, one study comparing White men to Black men, Black women, Chicano men and women and White women found that 15 out of 25 items showed some subgroup differences. Differences were found for all subgroups studied, with some items favoring the minority subgroup and others favoring the White male subgroup (Wightman, 1979). A more recent study comparing subgroup performance found that individual LR test questions are consistently more difficult for minority test takers than for White test takers, but that male and female test takers perform equally well on LR (Wightman & Muller, 1990). Finally, another

study found the LR item type to favor non-Canadians, but this difference was not statistically significant (Wightman, 1976).

Opposites. In the Opposites (OP) item type, that appeared on only one form of the LSAT, the test taker was presented with four words, two of which were approximately opposite in meaning. The task of the test taker was to identify the two words that were opposites. The OP item type was intended to be a speed test, and 130 items were administered within a section with only .12 minutes allotted per item.

In terms of the difficulty produced using this item type, the mean delta value was 9.7, with a standard deviation of 2.4. Thus, this item type was not particularly difficult. The mean r-biserial for this item type was .51 with a standard deviation of .11. This item type was very reliable with a reliability coefficient of .97, but note that the large number of items presented in a section for this item type would greatly increase the reliability. The SEM for this item type was 3.7. The OP section was definitely speeded, as intended, with only 9.6 percent of test takers completing the section. Eighty percent of the test takers reached only item 63.

One validity study of this item type showed correlations with FYA at two schools to be .30 and .26. For one of these schools, a correlation of .14 with UGPA was reported (French, 1949).

Paragraphs/Paragraph Reading. The Paragraphs (PA) item type appeared on only one form of the LSAT. In this item type, the test taker was required to choose the numbered word that spoiled the sense or meaning of the entire paragraph. In its only test form, 30 items were administered in a PA section with 20 minutes allotted for the section. Thus, .67 minutes were allotted per item. After dropping PA, the Paragraph Reading (PR) item type was introduced on the LSAT. This item type appeared to be identical to the PA item type, indicating that the name of the item type was probably changed. When administered under the PR name, between 30 and 40 items were administered in a section with between .33 and .75 minutes allotted per item.

In reporting the statistical information here, information for the item type administered under the two names will be treated together. The range of the mean delta value for this item type was 13.1 to 14.05 with the standard deviation ranging from 1.9 to 2.36. Thus, it was possible to produce difficult items with this item type. The mean r-biserial value ranged from .54 to .58 with the standard deviation ranging from .10 to .13. In terms of reliability, coefficients ranging from .85 to .86 were reported for the 30-item test, and a coefficient of .92 was reported for the 40-item test. The SEM ranged from 2.2 to 2.5. With only between 39.4 percent and 72.6 percent of test takers completing the test, this item type was quite speeded under these conditions.

Practical Judgment. The purpose of the Practical Judgment (PJ) item type was to evaluate the test taker's ability to judge the relevance and importance of a set of facts and to apply those facts to decide among several courses of action. After reading a passage, the test taker was presented with both

data evaluation and data application questions. In the data evaluation portion, the test taker was required to classify certain facts in the passage based on their importance. In the data application portion, the test taker was asked to apply the information stated in the passage to answer specific multiple-choice questions. Generally, 50 items were administered in a PJ section, and .8 minutes were allotted per item.

In terms of the difficulty produced using this item type, the mean value of the delta statistic ranged from 11.8 to 13.1, while the standard deviation of this statistic ranged from 1.7 to 2.2. The mean value of the r-biserial statistic for this item type ranged from .35 to .41, while the standard deviation for this statistic ranged from .08 to .11. Reliability for this item type ranged from .77 to .83, while the SEM ranged from 3.09 to 3.23. This item type did not appear to be speeded with the time allotment provided, with between 83.1 percent and 96.9 percent completing the section for the various test forms.

In one validity study based on 1950 data, the PJ item type showed no predictive value since adding PJ to the prediction of FYA by LSAT alone did not increase the multiple correlation. Across 6 schools, the correlations of PJ with LSAT ranged from -.05 to .38, while the correlations between PJ and FYA ranged from -.08 to .16 (French, 1952). In another study utilizing 1970-1971 data, the correlations of this item type with FYA ranged from .31 to .35 with a weighted average of .33. This study concluded that among 7 item types being pretested, PJ was among the 3 most valid, along with LR and Delayed RR (McPeck, Pitcher, & Carlson, 1974). In terms of subgroup differences, in a study employing item response theory (IRT) methodology to compare White men to Black men, Black women, Chicano men and women and White women, 29 out of 50 items showed some subgroup differences. Differences were observed for all subgroups studied, with some items favoring White males and others favoring the minority group (Wightman, 1979). Finally, another study showed that this item type favors Canadians, but this difference was not statistically significant (Wightman, 1976).

Principles and Cases. The purpose of the Principles and Cases (PC) item type was to measure the test taker's ability to reason logically. A section of this item type was divided into three parts. In each part, descriptions of three law cases were presented, each followed by a list of several legal principles. In the first part, the test taker's task was to decide if each principle could be applied appropriately in consideration of the case. In the second part, the test taker was required to choose the principle most applicable to each case. Finally, in the third part, each principle was followed by four statements regarding the applicability of the principle to the case. The test taker was required to select the statement that best explained the applicability or inapplicability of the principle to the case. In each of these item subtypes, no specific knowledge was presupposed (Olsen, 1956). Two experimental versions of this item type, related cases and decided cases were pretested around 1959 or 1960, but no information is available on these experimental item types. An example of each of these is included in the Appendix of this document. Between 30 and 46 items were presented in a section of this item type, but typically, between 30 and 40 items were administered in a section. The time allotment for this item type ranged from .98 to 1.5 minutes per item, but typically, between 1.33 and 1.38 minutes were allotted per item.

The mean value of the delta statistic for this item type ranged from 9.7 to 13.7, while the standard deviation of this statistic ranged from 1.8 to 2.8. Thus, it was possible to produce difficult PC items. The mean value of the r-biserial ranged from .29 to .49, with the standard deviation ranging from .07 to .17. Reliability for this item type ranged from .59 to .82, while the SEM ranged from 2.1 to 2.9. In terms of speededness, between 69.7 percent and 94.4 percent of test takers completed the section for the various forms on which this item type appeared, indicating that this item type was somewhat speeded with some time allotments. For one form with .98 minutes allotted per item, 80 percent of test takers did not reach the last 4 items on the test. For 9 other forms, the last 1 to 3 items were not reached by 80 percent of the test takers. The timing for these forms was 1.29, 1.38 and 1.41 minutes respectively per item.

In one validity study involving this item type, correlations with first year average ranged from -.01 to .36, while correlations with LSAT ranged from .36 to .51. In this same study, correlations with UGPA of -.08 and -.05 were reported (French, 1949). Another study reported correlations with FYA ranging from .36 to .57 with a weighted average of .39 (Olsen, 1956). In terms of subgroup differences, this item type was found to slightly favor Canadians, but this difference was not statistically significant (Wightman, 1976). Finally, in a study using IRT methodology to compare White men to Black men, Black women, Chicano men and women and White women, 21 out of 30 items overall showed statistically significant subgroup differences. Differences were observed for all subgroups studied, with some items favoring White males and others favoring the minority group (Wightman, 1979).

Quantitative Comparison. The purpose of the Quantitative Comparison (QC) item type was to measure those quantitative abilities that are measured by other mathematics item types in a manner that is more efficient in terms of testing time. The test taker was required to compare two quantities and state which is greater, state if they are equal, or state that there is insufficient information to make a judgment (Pitcher, 1976). Typically, 25 items appeared in a section, with .6 minutes allotted for each item.

In terms of statistical information, the mean of the delta statistic for this item type ranged from 11.6 to 13.2, with the standard deviation ranging from 2.0 to 2.3. The range of the mean r-biserial varied from .45 to .54, with the standard deviation ranging from .08 to .13. The reliability of this item type ranged from .72 to .81, and the SEM ranged from 2.1 to 2.2. This item type certainly did not appear to be speeded with the time limits provided, with between 85.5 percent and 90.4 percent of test takers completing the various forms of the test.

One study reviewed for this item type used IRT methodology to investigate subgroup differences, comparing White men to Black men, Black women, Chicano men and women and White women. The results revealed that 17 out of 25 items showed some subgroup differences. Differences were observed for all subgroups studied, with some items favoring White males and others favoring the minority group (Wightman, 1979).

Reading Comprehension. The purpose of the Reading Comprehension (RC) item type is to measure the test taker's ability to read with understanding and discrimination. In this item type, several passages are presented, with each passage followed by questions based on the content of the passage. The test items are incomplete statements for which the test taker must choose the best completion. The test taker is permitted to look back to the passage in answering the test items (Olsen, 1956).

The RC item type has appeared on more forms of the LSAT than any other item type. The item type was first presented on the first form of the LSAT and still appears on the test today. At one point it was removed from the test, but only for a period of less than ten years. Over the history of this item type, between 25 and 52 items appeared within an RC section. However, between 25 and 28 items was most common. The time allotment for the item type was quite consistent, with between 1.12 and 1.33 minutes being allotted per item.

In terms of the difficulty produced by this item type, the mean value of the delta statistic ranged from 11.1 to 13.4, while the standard deviation for this statistic ranged from 1.3 to 2.3. The mean r-biserial ranged from .39 to .59, while the standard deviation for this statistic ranged from .06 to .12. The reliability statistic ranged from .67 to .86, while the value of the SEM ranged from 2.1 to 3.2. For the most part, the RC item type does not appear speeded with the time limits provided, with between 66 percent and 99.3 percent of test takers completing the section for the forms having data available. Also, between 99.7 percent and 99.9 percent of test takers completed 75 percent of the section for these forms. There were only 6 forms for which the last 1 to 6 items were not reached by 80 percent of the test takers.

One validity study is available. This study reported correlations with the LSAT as a whole ranging from .43 to .81, correlations with FYA ranging from .11 to .43, and correlations with UGPA ranging from -.04 to .24. The correlations of this item type with other RC test sections ranged from .37 to .64 (French, 1949). In terms of subgroup differences, one study reported that minority test takers tend to perform less well on this item type as compared to White test takers, but male and female test takers tend to perform equally well (Wightman & Muller, 1990).

Reasoning. The Reasoning (RS) item type appeared only on the first form of the LSAT. In an RS section, facts were presented to the test taker, followed by a set of three conclusions based on these facts. The task of the test taker was to choose the one conclusion among the three that was valid based on the facts presented. The length of the RS section was 32 items, presented with a time limit of 20 minutes. In one report, this item type was called Syllogism (French, 1949).

The mean value of the delta statistic for the RS section was 11.8 with a standard deviation of 2.3, while the r-biserial had a mean value of .42 and a standard deviation of .10. This item type was quite reliable, with a reliability coefficient of .78. The RS section was somewhat speeded under the timing conditions provided, with 66.4 percent of test takers completing the test and 90.6 percent of test takers completing 70 percent of the test. Eighty percent of test takers reached only item 25 out of 32.

One validity study of this item type reported correlations with LSAT of .50 and .64, correlations with FYA of .26 and .15, correlations with UGPA of .01 and -.12, and correlations with an RS pretest section of .52 and .61 (French, 1949).

Sentence Completion. In the Sentence Completion (SM) item type, the test taker was presented with sentences having either one or two blank spaces where a word had been left out for each blank space. The task of the test taker was to select the word or word pair from among 5 options that best completed the sentence.

The SM item type was administered only on two forms of the LSAT. At its first administration, 35 items were administered with .57 minutes allotted per item, while 45 items were administered in the second form with a .67 minute time allotment per item.

The mean and standard deviation of the delta statistic for the two forms were 11.96 and 2.37, and 12.2 and 2.1, respectively. The mean and standard deviation of the r-biserial were the same for both forms, with values of .47 and .09, respectively. The reliability for the two forms were .85 and .87. The SEM was reported for only the second form, and had a value of 2.8. The SM sections were somewhat speeded with the time allotment provided, with only 43.4 percent and 59.8 percent of test takers completing the sections on the two forms. On the first form, 87 percent of test takers did not reach the last 7 items in the section, while for the second form, 80 percent of test takers did not reach the last 7 items in the section.

In terms of validity, one study reported correlations of .74 and .77 with LSAT, correlations of .22 and .28 with FYA, and correlations of .15 and -.15 with UGPA (French, 1949).

Usage. The Usage (US) item type was designed to evaluate the test taker's ability to recognize errors in sentences. Several sentences, each with 4 segments underlined, were presented. The test taker was directed to decide if the sentence was correct, or if it was incorrect, to identify which underlined segment contained an error (Pitcher, McPeck, & Binkley, 1977). In each US section, 35 items were administered with a time limit of 20 minutes.

The two test forms having difficulty information available reported mean delta values of 12.7 and 11.7, with standard deviations of 1.6 and 2.5, respectively. The mean values of the r-biserial were .48 and .47, with standard deviations of .11 and .12, respectively. The value of the reliability coefficient ranged from .79 to .83, with the SEM ranging from 2.5 to 2.7. For the most part, the sections containing this item type did not appear to be speeded with the time allotment provided, with between 88.3 percent and 95.4 percent of test takers completing the test. On one test form, 80 percent of the test takers did not reach the last ten items in the section. For the other forms, however, at least 80 percent of the test takers reached the last item in the section.

In one validity study available on this item type, a correlation of .26 with FYA was reported, as opposed to .24 for the ER item type. This led to the conclusion that the US item type was a good candidate to replace ER. Correlations with FYA for men were .24 and .23, as opposed to .36 and .37 for women, but these differences were not statistically significant (Pitcher, McPeck, & Binkley, 1977).

Verbal Analogies. In the Verbal Analogies (VA) item type, the test taker was presented with a pair of words, followed by five pairs of words as response options. The test taker was asked to select the word pair from among the response options that represented the same relationship as the stimulus word pair. This item type appeared on only two test forms. On the first, 40 VA items were presented, while 60 items were presented on the second form. For both of these forms, .5 minutes were allotted per item.

On the two forms, the mean delta values were 13.2 and 12.2, respectively, with respective standard deviations of 2.7 and 2.4. For these same forms, mean r-biserial values were .49 and .47 with standard deviations of .08 and .10. Reliability for the first form was .83, while reliability for the second form was .90. It should be noted that the higher reliability for the second form is probably due to the longer test length. The SEM for the second form was 3.1. These sections were somewhat speeded, with only 65.2 percent of test takers completing the section on the first form and only 73 percent of test takers completing the section on the second form. On the first form, 80 percent of test takers did not reach the last 2 items, while 80 percent of test takers did not reach the last 4 items on the second form.

In terms of validity, one study reported correlations with LSAT ranging from .66 to .79, correlations with FYA ranging from .12 to .45, correlations with UGPA ranging from -.21 to .17, and correlations with another VA section of .62 and .79 (French, 1949).

Word Classification. The Word Classification (WC) item type appeared on only the first form of the LSAT. In this item type, the test taker was presented with five words, four of which had some characteristic in common. The task of the test taker was to identify the one word that did not fit in with the other words. Sixty WC items were presented in a section, with 20 minutes allotted for the section.

The mean delta value for this item type was 11.1, with a standard deviation of 2.8. The mean r-biserial was .38 with a standard deviation of .13. The reliability coefficient for this item type was .81. The WC section was not speeded under this time allotment, with 89.4 percent of test takers completing the section.

A validity study of this item type reported correlations of .72 and .78 with LSAT, correlations of .24 and .18 with FYA, and correlations of .05 and -.06 with UGPA (French, 1949).

Experimental Item Types

Throughout the history of the LSAT, many item types were tried out, but never adopted for operational use. The information available on these item types will be summarized here. For some of these item types, very little information is available.

Artificial Language. Two different formats for the Artificial Language (AL) item type were used, and they will be discussed here as ALI and ALII. In ALI, the test taker was required to translate English verb forms into artificial verb forms using a given set of rules. In ALII, the test taker was presented with words in the artificial language paired with pictures. The test taker was then asked to answer questions that were presented in the artificial language. In ALI, 15 items were presented with a 20 minute time allocation, while 25 items were presented with a 30 minute time allocation for ALII.

A major reason for developing this item type was to provide testing material that was equally fair to all candidates in that no test taker would have previous knowledge of the material (Pitcher, McPeck, & Binkley, 1976). For ALII, one validity study reported validity coefficients for the prediction of FYA of .28, .21 and .25 for three different samples of test takers. When added to the total operational LSAT, ALII only increased the validity coefficient by .01 (from .50 to .51). Therefore, it was concluded that this item type was not very promising for operational use (Pitcher, McPeck, & Binkley, 1976).

Common Word. The Common Word (CW) item type appeared in some LSAT pretest sections in the late 1960s and early 1970s. In this item type, the test taker was presented with three words followed by five word pairs. Each of the three words presented was often used with a single fourth word either directly before or directly after it. The task of the test taker was to find that fourth word and then choose the word pair from among the five options that shared that fourth word in common. For each test form, 20 minutes were allotted for a section of 30 items. In terms of validity, one study reported this item type to be the least valid among the operational and experimental item types being studied (McPeck, Pitcher, & Carlson, 1974).

Deductive Reasoning from Artificial Signs. In the Deductive Reasoning from Artificial Signs (DR) item type, the test taker was presented with a series of diagrams consisting of a rectangle divided into four sections. These sections could contain a plus sign denoting that there was something in the region, a minus sign denoting that there was nothing in the region, or the region could be blank. A bracket connecting two signs meant that either the first sign held and the opposite of the second sign held, or vice versa. The test taker was then required to answer questions based on the diagrams presented. Twenty-two DR items were presented with a 30 minute time limit.

Induction. The Induction (IN) item type was intended to measure the test taker's skill at inductive reasoning. In this item type, the test taker was presented with a group of 5 words. Among this set of five words were two groups of three words each with one word belonging to both of the groups. The test taker was asked to identify the word that belonged to both of the groups. Forty items were administered with a 20 minute time limit.

Insightful Reasoning. In the Insightful Reasoning (IR) item type, the test taker was presented with mathematical problems that all had both an insightful and quick solution and a laborious and time consuming solution. Since only one minute was allotted per item, the test taker who could discern the insightful solution would be the most successful. Twenty items were presented with a 20 minute time limit.

Logical or Argumentative Relationships. In the Logical or Argumentative Relationships (LA) item type, a short passage describing a situation was presented, followed by the result of the situation. Several independent statements were then presented, and the test taker was asked to categorize each of these statements in relation to the passage and the result as either inconsistent, adequate, deducible, relevant or irrelevant. An LA section consisted of 45 items with a time limit of 30 minutes.

Reference Reading. In the Reference Reading (RF) item type, the test taker was first presented with a lengthy report and told to simply skim the report in order to answer factual questions based on it. A time allotment of 20 minutes was allowed in order to answer 25 items based on the report, so there clearly was not enough time for the test taker to read the report thoroughly.

Test of General Background

The General Background (GB) test was introduced to assess the test taker's knowledge of the society to which he or she belongs. It was felt that those with a breadth of interest and knowledge beyond that of the law were desirable within the legal profession. Therefore, this test was introduced with the intention of encouraging the development of a general cultural knowledge and of subsequently measuring the extent to which this had been achieved. The test taker's score on the GB test was reported separately from the LSAT score and on a different scale (Educational Testing Service, 1945-1973). The GB test consisted of 30 items each in the areas of Science, Social Studies and Humanities, with the timing ranging from .67 to 1 minute per item. This item type was dropped from the test in 1970 because it showed a lack of predictive validity and it was not being used by admissions officers in making admissions decisions.

The mean value of the delta statistic for the GB test ranged from 11.8 to 13.2, with the standard deviation of this statistic ranging from 1.9 to 2.6. Therefore, it was possible to produce difficult items for this test. For the r-biserial statistic, the mean values ranged from .30 to .35, while the standard deviations ranged from .09 to .14. Reliability for this test ranged from .80 to .85, which is quite high. The SEM ranged from 4.08 to 4.34. Between 94.1 percent and 98.9 percent of test takers completed the test section for the various administrations of GB, clearly demonstrating that the test was not speeded under the time allotment provided.

The GB test showed a lower correlation with FYA than either pre-law record or LSAT, implying that GB did not add much to the predictive effectiveness of the test beyond these two predictors (Pitcher,

1965). The correlations among GB, LSAT, and the writing test were very high, which also indicates that the GB measure doesn't add much to prediction. However, the GB test was not included on the LSAT to improve prediction, but instead was added in order to encourage the development of this type of knowledge at the undergraduate level and to aid in admissions decisions when large differences existed among the LSAT, Writing and GB measures. It is interesting to note that Science majors scored better on the GB test relative to their LSAT scores (Miller, 1962). In fact, an ideal distribution of subject matter such that applicants of a particular undergraduate major would not be unfairly disadvantaged was never achieved. Any combination of the three areas resulted in scores that under-predicted the law school performance of Business majors and over-predicted the law school performance of Humanities majors (Educational Testing Service, 1945-1973).

General Understanding. The General Understanding (GU) item type was administered as a part of a pretest form in 1963, and appeared to be identical to GB. Twenty minutes were allotted for a 30 item section addressing the areas of world affairs, business, art and science.

Test of Writing Ability

In September of 1954, an experimental test of writing ability was pretested. The purpose of introducing a writing measure was not to improve prediction of first year average, but instead was intended to encourage the development of writing skills among undergraduate students aspiring to attend law school. In this experimental form, six different measures of writing ability were administered with the intention of selecting the most valid measures of writing ability for inclusion on the operational test. In general, validity studies showed that the writing measures pretested did not contribute to the prediction of writing ability and did not improve the prediction power of the LSAT. In fact, these measures showed a stronger relationship to first year average than to measures of writing ability.

Regardless of this low predictive validity, the writing test was introduced in the afternoon testing session in November of 1961, and a separate writing score (WA) was reported. This test included the Error Recognition (ER), Outline Organization (OO), and Interlinear (IL) item types. The writing test underwent many changes, dropping some item types and introducing new item types, until the writing test was dropped in October, 1970 due to low predictive validity. The writing test did, however, achieve its objective of influencing pre-law advisors to encourage their advisees to develop their writing skills. An advantage of the writing test was that it did not show differential prediction among White, Black, and Chicano test takers (Powers, 1980). Below, the information available on each of the writing item types is summarized.

Operational Writing Item Types

Editing/Sentence Correction. The Editing (ED) item type was developed to measure the test taker's ability "to recognize correct and effective writing" (Olsen, 1956, p. 70). In this item type, the test taker was presented with sentences and paragraphs that had certain portions underlined. The test taker was then presented with response options illustrating different ways to represent the underlined portion, and was either asked to choose the best way to write or punctuate the underlined portion or was asked to select the best place within the sentence to position the underlined portion. In some cases, the entire sentence was underlined, and the test taker was required to choose the best way to correct the sentence (Olsen, 1956).

The ED item type was introduced as an alternative to the Interlinear (IL) item type, that had become too expensive to score. In 1966, the name of this item type was changed to Sentence Correction (SR), and the time allocated for this item type was shortened. Therefore, both the ED and SR item types will be addressed in this section. Note from the section describing the evolution of the LSAT that SR also contributed to the LSAT score for some time.

In terms of section length and timing for this item type, under the name of ED, between 35 and 45 items typically appeared in a single test section, while only 25 to 35 items were presented after the name was changed to SR. The timing for this item type remained similar throughout its history, with between .67 and .86 minutes being allocated per item. The range of the mean for the delta statistic for the ED/SR item type varied from 10.7 to 12.5. The standard deviation for this statistic ranged from 1.5 to 2.6. For the r-biserial statistic, the value of the mean ranged from .35 to .52, with the standard deviation for this statistic ranging from .05 to .11. In terms of the reliability of this item type, the value of this statistic ranged from .64 to .78, while the SEM ranged from 1.6 to 3.0. This item type was clearly not speeded with the time provided, with between 88.9 percent and 98.6 percent of test takers completing the section for the various test forms.

Based on the Writing pretest data, the correlations of ED with three ratings of writing ability ranged from .02 to .24, while correlations with FYA ranged from .29 to .69 with a mean of .36 (Educational Testing Service, 1945-1973). It was concluded that this item type did add somewhat to the prediction of writing ability and appeared to be a somewhat promising measure of writing ability, although to a lesser extent than the ER and DM/RR item types. This item type did show a somewhat stronger relationship to the LSAT than most of the other item types, but this does not mean that it added anything to prediction over and above the existing LSAT. The average partial correlation with grades for this item type was .15, while the average partial correlation with the LSAT was .06 (Olsen, 1956).

Several validity studies were also conducted that involved the SR item type. In one study investigating subgroup differences comparing White men to Black men, Black women, Chicano men and women and White women, 14 out of 25 items showed some subgroup differences. Differences were observed for all subgroups studied, with some items favoring White males and others favoring the

minority group (Wightman, 1979). Another study showed that this item type favors Canadians, and the difference was statistically significant (Wightman, 1976). Finally, one validity study showed that the SR item type correlated only .18 with FYA, and was therefore a good candidate for replacement (Pitcher, McPeck, & Binkley, 1977).

Error Recognition. The Error Recognition (ER) item type was introduced with the purpose of evaluating the test taker's ability to identify various writing errors. The test taker was asked to classify sentences into four categories: (1) diction errors, (2) verbosity, (3) faulty grammar, or (4) none of the above errors. The test taker was not directed toward the incorrect portion of the sentence, and corrections of the sentence were not presented. Note from the section describing the evolution of the LSAT that ER also contributed to the LSAT score for some time. This item type was replaced on the LSAT in February, 1978 by the Usage (US) item type. Initially, 38 items appeared in an ER section, but this was eventually dropped to 35 items. Twenty minutes were always allocated for an ER section, so between .53 and .57 minutes were allotted per item.

For the administrations having statistical information available, the mean value of the delta statistic ranged from 11.1 to 12.9, with the standard deviation for this statistic ranging from 1.4 to 2.4. For the r-biserial, the range of the mean varied from .34 to .46, with the standard deviation ranging from .07 to .13. Reliability ranged from .63 to .78, while the SEM ranged from 2.48 to 2.84. Clearly, this item type was not speeded with the time provided, with between 92.2 percent and 100 percent of test takers completing the section at the various administrations.

As is the case with most of the writing item types, there are several studies related to the validity of ER. In terms of the prediction of writing ability, the ER item type proved to be the most promising of the item types pretested with a multiple correlation with 3 ratings of writing ability of approximately .37. The correlation of this item type with FYA at four schools ranged from .27 to .58 with a weighted average of .32. It was concluded that this was the only writing item type that could make some contribution to the effectiveness of the LSAT (Educational Testing Service, 1945-1973). Another study pointed out, however, that although this item type showed a strong relationship to the LSAT, this does not mean that it added anything to prediction over and above the LSAT. This particular study reported an average partial correlation with grades of .12 and an average partial correlation with writing of .13 (Olsen, 1956). Several studies addressing subgroup differences have been carried out with this item type, concluding that there was no differential prediction among White, Black and Chicano candidates (Powers, 1980), but that this item type does favor Canadian test takers (Wightman, 1976). A third study comparing White men to Black men, Black women, Chicano men and women and White women reported that 20 out of 40 items showed some subgroup differences. Differences were observed for all subgroups studied, with some items favoring White males and others favoring the minority group (Wightman, 1979).

Interlinear. The Interlinear (IL) item type was not pretested with the other writing item types, but it was included in the first writing test form. This item type was, however, quickly replaced by the ED item type because it proved to be too expensive to score, requiring more than 20 readers for 4 to 5

days. The purpose of the IL item type was to measure correctness and effectiveness of expression. The test taker was presented with a passage containing errors of grammar, clarity and emphasis. The task of the test taker was to find the errors and correct them by changing word position, adding or deleting words, or rewriting clauses or sentences in the space between the lines (Pitcher, 1962). For the IL item type, the number of items was the number of errors in the passage, with 55 errors typically appearing. The timing for such a passage was 30 minutes.

The IL item type only appeared on three forms of the LSAT. The respective statistics for these forms were as follows: The mean delta values were 13.0, 15.2, and 14.0, with delta standard deviations of 2.6, 2.5, and 2.5. The mean r-biserial values were .42, .39, and .42, with r-biserial standard deviations of .14, .10, and .12. The reliability for the three forms was .84, .79, and .84, with the SEMs being 3.19, 2.92, and 3.05. The item type was somewhat speeded under these time restrictions, with 44.6 percent and 47 percent completing the two later forms.

In terms of the validity of this item type, the coefficient for predicting FYA ranged from .09 to .42 with an average of .19. With the effect of LSAT removed, these coefficients ranged from -.03 to .34 with a weighted average of .08. The average correlation with writing ability for two schools was .26. With the effect of LSAT removed, this average dropped to .23. These values indicate that this item type does have some predictive value over and above the LSAT (Pitcher, 1962).

Organization of Ideas/Outline Organization. After being pretested with the writing pretest, the Organization of Ideas/Outline Organization (OI/OO) item type was introduced on the LSAT under the name of Outline Organization (OO). The name of this item type was later changed to Organization of Ideas (OI). This item type was dropped due to low predictive validity. OI and OO were identical as presented under each of these names.

The OI/OO item type was designed to measure the test taker's ability to eliminate irrelevant ideas from a group of ideas and to organize the remaining ideas in outline form (Olsen, 1956). In this item type, a group of outline headings was presented, and the test taker was required to classify the statements into the following categories: (1) Central idea to which most of the ideas are related, (2) Main supporting ideas, (3) Illustrative facts or details documenting main ideas, or (4) Irrelevant ideas. Thirty items were administered in a section, with from .67 to 1 minute being allotted per item.

For the administrations having statistical information available, the mean value of the delta statistic ranged from 10.0 to 12.2 with the value of the standard deviation ranging from 1.2 to 2.2. In terms of the discrimination parameter, the mean value of the r-biserial had a range of .38 to .47, with a standard deviation range of .08 to .13. Reliability ranged from .32 to .62, while the SEM ranged from 2.6 to 3.7. In terms of speededness, between 93.5 percent and 99.5 percent completed the sections appearing on the various forms, indicating that this item type was clearly not speeded under the conditions provided.

In terms of the validity of this item type, the correlation with three ratings of writing ability on the Writing pretest ranged from .04 to .08 for this item type, while correlations with FYA at four schools ranged from .26 to .51 with a weighted average of .33 (Educational Testing Service, 1945-1973). It was concluded that this item type does add something to the prediction of grades over LSAT alone, with an average partial correlation with grades of .15 and an average partial correlation with the LSAT of .01 (Olsen, 1956).

Experimental Writing Item Types

Combining Sentences. The combining sentences item type was developed to measure the test takers ability to organize several simple ideas into one complex thought (Coffman & Papachristou, 1955). The test taker was presented with several short sentences and asked to choose the best long sentence for combining these simple ideas while considering both content and expression (Olsen, 1956). In a constructed response version of this item type, the test taker was required to combine the sentences and write out his or her answer without any choices from which to select. A disadvantage of this version was that it required readers for scoring (Pitcher, 1962). A section containing 25 items was administered, with a time allocation of 40 minutes. For the experimental administration, the mean value of the r-biserial was .40. The reliability for this section was .62 (Coffman & Papachristou, 1954).

In terms of validity, this item type showed a low correlation with grades at four schools (.2, .19, .28, and .41, with a weighted average of .23). This item type also showed a low correlation with ratings of writing ability, with correlations of .03, .2, .16, and .18, and a weighted average of .12. Overall, this item type had a reliability coefficient of .57. The CS item type was shown to add less to the prediction of grades than the other writing item types pretested. For the constructed response version, the coefficients predicting first year average ranged from .07 to .32 for 5 schools. With the LSAT partialled out, these correlations ranged from .02 to .19. These correlations are low, but they are statistically significantly different from zero. It was concluded that this item type did have some predictive validity (Educational Testing Service, 1945-1973; Coffman & Papachristou, 1955; Olsen, 1956; Miller, 1962; Pitcher, 1962; Miller, 1963).

Expression Situations. The purpose of the Expression Situations (ES) item type was to measure the sensitivity of the test taker to the overtones of writing. Specifically, this item type sought to measure the writer's awareness of his audience and the purpose of his writing. In each item, the test taker was presented with a particular problem of expression that has arisen due to a particular situation or incident. The test taker was then required to choose the best solution to this problem from among 4 options. Examples of situations that may be presented are: (1) contradicting a respected authority or (2) using tact in rejecting a job application (Olsen, 1956).

The ES item type showed correlations with three ratings of writing ability ranging from -.04 to .09 and correlations with FYA at four schools ranging from .22 to .65 with an average of .31 (Educational Testing Service, 1945-1973).

REFERENCES

- Allen, M. J., & Yen, W. M. (1979). Introduction to measurement theory. Monterey, CA: Brooks Publishing Company.
- Coffman, W. E., & Papachristou, J. (1954). Experimental objective tests of writing ability for the Law School Admission Test, (Report #RM-54-5). Princeton, NJ: Educational Testing Service.
- Coffman, W. E., & Papachristou, J. (1955). Experimental objective tests of writing ability for the Law School Admission Test (Report #LSAC-55-1). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume I, 1949-1969. Princeton, NJ: Law School Admission Council.
- Educational Testing Service (1945-1973). The LSAT papers in the ETS archives. Princeton, NJ: Author.
- French, J. W. (1949). Validation of experimental Law School Admission Test administered in the fall of 1948 (Report #LSAC-49-1). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume I, 1949-1969. Princeton, NJ: Law School Admission Council.
- French, J. W. (1952). Validation of the practical judgment and directed memory experimental sections of one form of the Law School Admission Test (Report #RB-52-3). Princeton, NJ: Educational Testing Service.
- Hecht, L. W., & Swineford, S. (1981). Item analysis at Educational Testing Service. Princeton, NJ: Educational Testing Service.
- Law School Admission Council and the Law School Admission Services (1991). Law School Admission Test: Sources, contents, and uses. Newtown, PA: Author.
- Law School Admission Council and the Law School Admission Services (1982). Law School Admission Test: Sources, contents, and uses. Newtown, PA: Author.
- Law School Admission Services, Incorporated (1993). LSAT/LSDAS registration and information book. Newtown, PA: Author.
- McPeck, W. M., Pitcher, B., & Carlson, A. B. (1974). The predictive effectiveness of several experimental item types and the operational item types in the Law School Admission Test in 1970-71 (Report #LSAC-74-1). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume II, 1970-1974. Princeton, NJ: Law School Admission Council.
- Miller, P. V. (1962). A study of the relationships existing among scores on the LSAT, writing ability and general background tests and between these scores and certain other candidate variables (Report #LSAC-62-1). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume I, 1949-1969. Princeton, NJ: Law School Admission Council.

- Miller, P. V. (1963). A repetition study of the relationship existing among scores on the LSAT, writing ability and general background tests and between these scores and other candidate variables (Report #LSAC-63-1). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume I, 1949-1969. Princeton, NJ: Law School Admission Council.
- Olsen, M. A. (1956). The effectiveness of tests of writing ability and of directed memory for prediction of law school grades and ability (Report #LSAC-56-1). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume I, 1949-1969. Princeton, NJ: Law School Admission Council.
- Pitcher, B. (1962). The prediction of first-year law school grades from experimental tests of writing and reasoning ability and from the Law School Admission Test (Report #LSAC-62-2). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume I, 1949-1969. Princeton, NJ: Law School Admission Council.
- Pitcher, B. (1965). The Law School Admission Test as a predictor of first-year law school grades 1962-63 (Report #LSAC-65-2). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume I, 1949-1969. Princeton, NJ: Law School Admission Council.
- Pitcher, B. (1976). Subgroups validity study (Report #LSAC-76-6). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume III, 1975-1977. Princeton, NJ: Law School Admission Council.
- Pitcher, B., McPeck, W. M., & Binkley, M. (1976). The validity of two experimental item types -- Issues and facts and artificial language (Report #LSAC-76-3). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume III, 1975-1977. Princeton, NJ: Law School Admission Council.
- Pitcher, B., McPeck, W. M., & Binkley, M. (1977). The validity of the usage experimental item type (Report #LSAC-77-7). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume III, 1975-1977. Princeton, NJ: Law School Admission Council.
- Powers, D. E. (1980). A consideration of the possibility of differential predictive effectiveness of writing ability scores for minority groups (Report #LSAC-80-1). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume IV, 1978-1983. Newtown, PA: Law School Admission Services.
- Wightman, L. E. (1979). Differences in LSAT item performance for different subgroups: A methodological investigation (Report #LSAC-79-2). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume 4, 1978-1983. Newtown, PA: Law School Admission Services.
- Wightman, L. E. (1976). Law School Admission Test: Comparisons of Canadian candidates with non-Canadian candidates (Report #LSAC-76-5). In Law School Admission Council, Reports of LSAC Sponsored Research: Volume III, 1975-1977. Princeton, NJ: Law School Admission Council.
- Wightman, L. F., & Muller, D. G. (1990). Comparison of LSAT performance among selected subgroups (Report LSAC-90-01). Newtown, PA: Law School Admission Services.

APPENDIX

Examples of Item Types

Answer Key for Example Questions

Analytical Reasoning: E A B D C C E

Artificial Language I: 1 5 5 1 5 4 5 3 2 2 4 3 1 2 3

Artificial Language II: A B B

Best Argument: 3 1

Combining Sentences: D C

Combining Sentences - Open Ended: See example

Common Word: B C E A C A E B

Contrary and Irrelevant Statements: 2 1 1 3 2 1 2 1

Data Interpretation: B D D E B B B A

Debate: N A X X N A N X A A X A N X A X X X

Deductive Reasoning from Artificial Signs: A D

Directed Memory: E E D A C E

Editing: D C D E C B C E B B

Error Recognition: G G V G D

Expression Situations: A B C A C

Figure Classification: B D A

General Background: E A D B A C D E C

General Understanding: A B A E E C C D E

Gottschaldt: A D

Induction: B A E E A E A B B D C A C C E C E C E D C

Insightful Reasoning: B D C D C C B B E B E B A D

Interlinear: See example

Issues and Facts: B A B C D D A C

Logical or Argumentative Relationship: C A B B D C A

Logical Reasoning: A A B C

Opposites: 1-4 1-4 1-3 2-3 3-4 1-2 3-4 2-3 1-4 1-3 2-3 2-4 3-4 2-3 1-3 1-2 2-3 2-4 2-4 1-3 1-4 2-4 2-4
1-3 1-2 1-2 2-4 1-3 1-2 2-3

Organization of Ideas/Outline Organization: B B A D C C

Paragraphs: 3 7 4 6 5 6 6 2 1 5

Paragraph Reading: 2 2 2 1 6 3 6 6 1

Practical Judgement: D A B C E A

Principles and Cases: A

Principles and Cases - Related Cases: C B

Principles and Cases - Decided Cases: C D

Quantitative Comparison: A D B C B D

Reading Comprehension: E B E

Reading Recall: B D C D A D

Reasoning: 3 2 3 1 3 2 1 3

Reference Reading: B A A D B A E A A B D

Sentence Completion: 2 4 3 2 5 1 3 1 3 4 5

Sentence Correction: B D E A E B E

Usage: B C D A

Verbal Analogies: 3 4 5 4 1 5 1 2 2 1 5 2 2 5 3 5 4 4 5 1

Word Classification: 4 5 2 4 2 4 1 4 3 4 5 3 1 4 2 3 2 4 1 1 3 1 2 3 2 5 1 3 1 3 3

3

SECTION III

3

Time - 35 minutes

25 Questions

Directions: Each group of questions is based on a set of conditions. In answering some of the questions it may be useful to draw a rough diagram. Choose the best answer for each question and blacken the corresponding space on your answer sheet.

Questions 1-7

Five persons, V, W, X, Y, and Z, run a series of footraces in which the following is always true of the results.

W finishes ahead of X.

Either V is first and Z is last or V is last and Z is first.

There are no ties in any race; that is, no two people ever finish in the same position in a race.

Everyone runs in, and finishes, every race.

1. If exactly one person finishes between V and W, which of the following must be true?
 - (A) V finishes first.
 - (B) Z finishes first.
 - (C) Y finishes third.
 - (D) W finishes fourth.
 - (E) X finishes fourth.
2. Which of the following CANNOT be true?
 - (A) X finishes second.
 - (B) Y finishes second.
 - (C) Y finishes third.
 - (D) X finishes ahead of Y.
 - (E) Y finishes ahead of W.
3. If Z and W finish so that one is directly behind the other, which of the following must be true?
 - I. X finishes fourth.
 - II. Y finishes third.
 - III. Z finishes first.
 - (A) I only
 - (B) III only
 - (C) I and III only
 - (D) II and III only
 - (E) I, II, and III
4. If W finishes third, which of the following must be true?
 - (A) Z finishes first.
 - (B) V finishes first.
 - (C) X finishes ahead of Y.
 - (D) Y finishes ahead of X.
 - (E) Y finishes behind W.
5. If V finishes first, in how many different orders is it possible for the other runners to finish?
 - (A) 1
 - (B) 2
 - (C) 3
 - (E) 4
 - (F) 5
6. Which of the following additional conditions makes it certain that Y finishes second?
 - (A) V finishes ahead of W.
 - (B) W finishes ahead of Y.
 - (C) Y finishes ahead of W.
 - (D) W finishes behind Z.
 - (E) Z finishes behind Y.
7. If a sixth person, T, enters a race, and finishes ahead of Y and behind W, which of the following CANNOT be true?
 - (A) W finishes ahead of Z.
 - (B) T finishes ahead of X.
 - (C) X finishes third.
 - (D) Y finishes fourth.
 - (E) T finishes fifth.

GO ON TO THE NEXT PAGE.

SECTION IV

ARTIFICIAL LANGUAGE

Time—20 minutes

Directions: In this test you will be asked to translate English verb forms into artificial verb forms, using the rules given below. You may consult these rules during the test. Each artificial verb form consists of a stem taken from the English present infinitive of the verb (jump, see, go, come, sit, run, love, take, do) plus a two-letter ending. The rules for the spelling of these endings are as follows:

- I. For past tense both letters of the ending are chosen from among the letters A, B, C, D, E, F, G, and H.

Examples: I jumped. Jumpac.
I went. Gobd.

For present tense both letters of the ending are chosen from among the letters I, J, K, L, M, N, O, P, Q, and R.

Examples: I jump. Jumpik.
I go. Gojl.

For future tense both letters of the ending are chosen from among the letters S, T, U, V, W, X, Y, and Z.

Examples: I shall jump. Jumpuw.
I shall go. Gosu.

- II. For first person the letters of the ending are in alphabetical order.

Examples: I jumped. Jumpac.
We two jumped. Jumpad.

For second person the letters of the ending are not in alphabetical order.

Examples: You (singular) jumped. Jumpec.
You two jumped. Jumpheb.

For third person the letters of the ending are in alphabetical order but rule IV below is reversed.

Examples: He jumped. Jumpbd.
They two jumped. Jumpbe.

- III. For number there are not simply singular and plural but singular, two, three, four, and more than four (or "all"). The number of persons involved is designated by the number of letters existing in the alphabet between the letters of the ending. (The alphabet is given in rule I.)

Examples: I jumped. Jumpac. (Only b is between a and c.)
We two jumped. Jumpad. (b and c are between a and d.)
We three jumped. Jumpae. (b, c, and d are between a and e.)
We all jumped. Jumpag. (b, c, d, e, and f are between a and g.)

- IV. When the stem of the verb ends in a consonant, the first letter of the ending must be a vowel; when the stem ends in a vowel, the first letter of the ending must be a consonant. (Vowels are taken as a, e, i, o, u, and y; all other letters are consonants.) For third person (he or they) this rule is reversed.

Examples: I jumped. Jumpac. I went. Gobd.
You (singular) jumped. Jumpec. You (singular) went. Goca.
He jumped. Jumpbd. He went. Goac.

- V. The first letter of the ending must be the earliest one possible in the alphabet.

Examples: I jumped. Jumpac; not Jumpeg.
You (singular) went. Goca; not Godb or Goge.

GO ON TO THE NEXT PAGE.

For each problem use the above rules to decide on the correct spelling of the artificial verb form and then find the last letter of the ending in one of the numbered rows in the Key Table below.

Key Table

1.	C	F	N	Q	V	Z
2.	A	I	L	P	U	
3.	B	H	O	S	W	
4.	E	J	M	T	Y	
5.	D	G	K	R	X	

Finally, blacken the space on your answer sheet under the number corresponding to the number of the row of the Key Table that includes the selected letter. For example, if A is the last letter in the artificial verb form, you find A in the Key Table in row 2 and mark space 2 on your answer sheet.

Sample Problem:

They two will come.

- Select the ending from S, T, U, V, W, X, Y, and Z, since this is future tense.
- To denote third person, the two letters will be in alphabetical order and the first will be a vowel since the stem, come, ends in a vowel (the reverse of rule IV).
- To denote two people, the letters of the ending must be separated by 2 letters.
- The correct spelling is therefore comeux.
- The last letter, X, is in row 5 of the Key Table. Therefore, space 5 would be marked for this problem.

Problems:

- I sat.
- He ran.
- I saw.
- You (singular) ran.
- They both saw.
- You all come.
- We both sat.
- I shall run.
- He runs.
- They two love.
- We both took.
- You three will take.
- He did.
- I shall come.
- They all go.

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.

SECTION VII

Time— 30 minutes

Directions: This is a test of your ability to infer and use the rules of an artificial language. It consists of pictures paired with words and sentences in this artificial language.

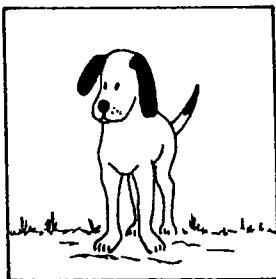
Some of the material is designed to introduce you to the vocabulary and grammar of the language. Study this material. Attempt to determine the meanings of the new words and the significance of changes in parts of words or in word order.

Numbered pictures and sentences are questions. Each question has four answer choices. Choose the response that best completes the sentence or that best answers the given question and blacken the corresponding space on your answer sheet. You may refer to the examples and to the study material as often as necessary.

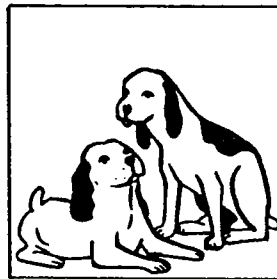


ibalu

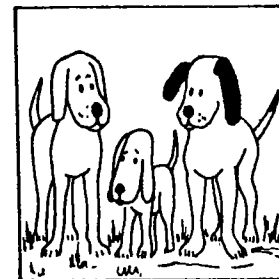
?ardi za huta lib
(is) (what) (this)
ardi sy oledlu ibalu
(is) (it) (1 dog)



ibalu



ipibalu



utibalu

Example 1



utibalu

?ardimo za uthuta utlib
(are) (what) (these)
ardimo sy utoledlu -----
(are) (they) (3 dogs)
(A) utibalu
(B) ipibalu
(C) ibalu
(D) ibalumo

Answer

☐ A ☐ B ☐ C ☐ D

Example 2



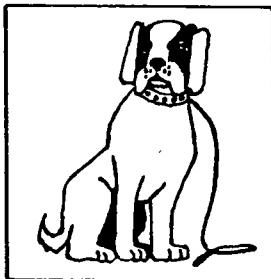
ipibalu

?ardipi za iphuta iplib
(are) (what) (these)
.ardipi sy ipoledlu -----
(are) (they) (2 dogs)

- (A) utibalu
- (B) ipibalu
- (C) ibalu
- (D) ibalupi

Answer

☐ A ☒ B ☐ C ☐ D



ibalu rief

?ardi za huta lib
(is) (what) (this)
.ardi sy oledlu ibalu rief
(is) (it) (1 dog) (large)

Example 3



ibalu suf

?ardi za huta lib
(A) .ardi sy ipibalu suf
(B) .ardi sy oledlu ibalu suf
(C) .ardi ibalu suf
(D) .ardi za ipibalu suf

Answer

☐ A ☒ B ☐ C ☐ D

WHEN YOU ARE ANSWERING THE QUESTIONS, YOU MAY LOOK BACK AT THESE PAGES.

2

SECTION II

2

Time - 30 minutes

Directions: Each situation described in this section of the test involves some sort of dispute or disagreement between the parties concerned. In most of the questions following the situations, you will be asked to evaluate the arguments which might be offered by the disputants; some questions will require you to analyze the situations in other ways. You are to assume that these disputes are being brought before an intelligent lay arbitrator (not a court of law) for decision; the questions, therefore, will not involve any legal precedents or technicalities. You are to evaluate the situations objectively in terms of ordinary concepts of reasonableness and fair play and base your answers on a logical analysis of the facts and arguments as they are presented to you.

Since several different types of questions are included, it is important that you read each question carefully and answer it in the manner indicated. Some questions will require two answers; be sure to give only one answer to a question unless you are specifically asked to give two. To indicate an answer to a question, make a cross in the box on the answer sheet beneath the number which corresponds to the number of the answer you have chosen.

Selection One

Bruce Bond, a broker, one morning overhears a famous financier say, "The price of American Beartrap stock will go sky-high within two weeks." Later that day Pete Goodfellow, an old friend to whom Bond owes many favors, calls on Bond to ask for advice about investments. He emphasizes that he wants to buy some stock on which he can make money quickly because he is in a tight financial spot. Bond says that American Beartrap is the best buy he knows at the moment. When Goodfellow protests that he has never heard of American Beartrap, Bond replies that the basis of his recommendation is information received from a reliable source. Goodfellow accepts the advice and invests heavily. Within two weeks American Beartrap stock has become virtually worthless, Goodfellow's entire investment is lost, and Goodfellow is ruined financially. Goodfellow thereupon accuses Bond of causing his financial downfall.

61. Which one of the following arguments best supports Goodfellow's accusation?

- 1-Bond should not have presumed to give Goodfellow any advice.
- 2-Goodfellow naturally believed that Bond, as a friend, would safeguard his interests.
- 3-Bond had misrepresented his knowledge of the situation.
- 4-Bond should have cautioned Goodfellow not to invest too heavily in the stock.
- 5-Bond had taken advantage of Goodfellow's obvious lack of knowledge of financial matters.

62. Which one of the following arguments best justifies Bond's actions?

- 1-Bond had given Goodfellow what he believed to be appropriate advice.
- 2-Bond had not known that Goodfellow was going to risk his whole financial position on this one venture.
- 3-Bond did not stand to gain in any way from his advice to Goodfellow.
- 4-Speculation in the stock market almost inevitably involves risk which the speculator must assume.
- 5-Bond was in no way responsible for Goodfellow's foolish attempt to make money quickly on the stock market.

PART I

Time - 40 minutes

Directions: Each question below consists of several statements followed by four long sentences. Each of the four long sentences is an attempt to express effectively the meaning of the initial statements. Read the statements to see what they mean. Then select the one long statement which best combines the original statements from the standpoint both of content and of expression and blacken the corresponding space on the answer sheet.

1. There is more to a job than just wages.

Because of this fact, it is assumed that every worker will weigh the relative merit of each factor involved in a job.

He will do this weighing in accordance with his own scale of values.

He will choose the job which he considers to be best.

- (A) There being more to a job than just wages, every worker will weigh the relative merit of each factor involved in a job in accordance with his own scale of values, one can assume, choosing the job he considers to be best.
- (B) Since there is more to a job than just wages, assuming that every worker will weigh the relative merit of each factor involved in a job, he will weigh it in accordance with his own scale of values and choose the job which he considers to be best.
- (C) There is more to a job than just wages, and because of this it is assumed that every worker will weigh the relative merit of each factor involved in a job, and he will do this and choose the job which he considers to be best.
- (D) Since there is more to a job than just wages, it is assumed that every worker will weigh the relative merit of each factor involved in a job in accordance with his own scale of values and choose the job which he considers to be best.
-

2. Manufacturers have always accepted the current theory of free competition.

Their practice offers a contradiction of this theory.

In practice they have found that the search for profits sometimes leads to a limitation of the free competition in which they believe.

The search for profits presumably is the proper end for a businessman.

- (A) Manufacturers have always accepted the current theory of free competition although their practice offers a contradiction insofar as they have found that the search for profits sometimes leads to a limitation of the free competition in which they believe and although the search for profits presumably is the proper end for a businessman.
- (B) Although manufacturers have always accepted the current theory of free competition and although the search for profits presumably is the proper end for a businessman, in practice they have found, contrary to this, that the search for profits sometimes leads to a limitation of the free competition in which they believe.
- (C) Manufacturers have always accepted the current theory of free competition, but in practice they have found that the search for profits, presumably the proper end for a businessman, sometimes leads to a limitation of the free competition in which they believe.
- (D) Contrary to the constant acceptance by manufacturers of the current theory of free competition, practice reveals that the search for profits sometimes leads to a limitation of the free competition in which they believe, although the search for profits presumably is the proper end for a businessman.

GO ON TO THE NEXT PAGE.

SECTION II

Time—50 minutes

Directions: Each of the problems in this section consists of a group of three or more short sentences. The sentences in each group contain a set of related ideas that can be combined into one sentence that has a single main idea. Your task is to combine the ideas into one grammatically correct sentence that expresses the relationship of the main idea and the subordinate ideas. Do not add new ideas or change the time relationships. Express the relationships among the ideas in the sentences by turning some of the sentences into modifying clauses or phrases. To accomplish this, it will often be necessary for you to supply appropriate connectives such as when, although, which, since, etc. You will have to use commas at times to indicate the relationships you intend, but do not use colons, semi-colons, or dashes.

You are to write out all words in your responses except the names of persons and places. These you may abbreviate by using capital letters. Your responses will be scored for organization of ideas, correct expression of original meaning, and grammatical correctness.

SAMPLE PROBLEM

I lost my sight.
I fell from a ladder.
It was propped against the side of my house.

Correct Response:

I lost my sight when I fell from a ladder that was propped against the side of my house.
(Note the use of appropriate connectives to produce a meaningful and well-organized sentence.)

Incorrect Response:

I fell from a ladder propped against the side of my house and lost my sight.
(Note the inclusion of two main ideas joined by and.)

Incorrect Response:

While working on a ladder, I fell, which resulted in my blindness.
(Note the inclusion of ideas and wording, while working and which resulted in my blindness, which are not supplied by the original sentences and the exclusion of an idea which is given, the ladder was propped against the side of my house.)

GO ON TO THE NEXT PAGE

1. Spencer was impressed by Darwin's findings.
Social Darwinism owes much to Spencer.
Spencer was a political philosopher.

Social Darwinism owes much to Spencer, a political philosopher who was
impressed by Darwin's findings.

2. I entered the room.
The first thing I saw was the sombrero.
The room was oak-paneled.
The owner of the sombrero was bending over a pile of manuscripts.
The manuscripts were on the table.

The first thing I saw when I entered the oak-paneled room was the sombrero
whose owner was bending over a pile of manuscripts on the table.

3. The singer and his wife bought a home.
I sometimes stayed there.
They were my good friends.
They could afford to settle down.

My good friends, the singer and his wife, could afford to settle down, so
they bought a home where I sometimes stayed.

4. Lincoln was speaking to Mrs. Stowe.
It was in 1862.
He said, "So you're the woman who wrote that book."

In 1862 Lincoln, speaking to Mrs. Stowe, said,
"So you're the woman who wrote that book."

SECTION VI

Time—20 minutes

For each of the questions in this section, choose the best answer and blacken the corresponding space on the answer sheet.

Each question below consists of three words printed in capital letters, followed by five pairs of words lettered A through E. Each of the three words in capital letters is frequently used in combination with a single fourth word which can be placed just before or just after each of the capitalized words. (For example, the words GUN and PUFF have in common the word powder, which can be placed just after gun to produce gunpowder and just before puff to produce powder puff.) For each question, first think of the single word that is used in combination with all three of the words in capital letters. Then find among the lettered pairs of words the one pair that also has that fourth word in common.

Example:

CUFF BOOK FREE

- (A) train flower
- (B) tape plastic
- (C) give lettuce
- (D) ring jewel
- (E) grenade farm

Each of the words in capital letters is often used in conjunction with the fourth word hand (handcuff, handbook, freehand). Each of the words in choice (E) is also used in conjunction with the word hand (hand grenade, farm hand). Therefore, E is the correct answer.

156. JELLY LIMA BAKED

- (A) round computer
- (B) coffee jumping
- (C) crystal tone
- (D) box life
- (E) jar ruler

160. PANE SILL WASHER

- (A) darkness wide
- (B) bolt parade
- (C) bay shade
- (D) heavy dryer
- (E) mouth date

157. BARBER FLAG NORTH

- (A) whisker cut
- (B) scissors relax
- (C) magnetic fishing
- (D) link effort
- (E) circle distance

161. BRUSH RIBBON CUT

- (A) dresser pin
- (B) hammer farmer
- (C) party frame
- (D) wall paste
- (E) royal power

158. BUSHEL PICNIC TRASH

- (A) stream slice
- (B) door phone
- (C) march signal
- (D) margin pit
- (E) wicker weave

162. SICK SHORE FOOD

- (A) roof drain
- (B) stomach twirl
- (C) bug flicker
- (D) cord dress
- (E) breeze side

159. SLEEPING PAPER SHOPPING

- (A) pipe laundry
- (B) uncle cousin
- (C) retard capable
- (D) interest attitude
- (E) desk chair

163. GAME CREDIT GREETING

- (A) nut dice
- (B) table index
- (C) take piston
- (D) stay join
- (E) dash ship

Time - 15 minutes

Directions: In this section each premise is followed by two sets of additional statements. There are three statements in each set; two of these statements support or are in agreement with the premise, and one is contrary or irrelevant to the premise. Find the contrary or irrelevant statement in each set of three, and blacken the space beneath its number on the answer sheet.

(Note: You are not asked to judge the truth or falsity of the premise or any of the statements.)

Although the United States did not officially enter World War II until late in 1941, its participation was insured by actions taken some time earlier.

102. (1) By the terms of the Hull-Lothian agreement, 50 overage destroyers were transferred to the British government.
(2) In July 1939 all attempts to revise the Neutrality Act to permit greater assistance to Great Britain and France in the event of war were thwarted by a determined isolationist bloc in the Senate.
(3) In a 1937 speech, President Roosevelt established the necessity of declaring a quarantine on aggressor nations.
103. (1) The people of the United States were universally opposed to war but were swept along by forces they could not control.
(2) The Lend-Lease Act of 1940 provided for the transfer of munitions and goods to nations friendly to the United States, on a deferred-payment basis.
(3) In order to insure the safe arrival of American munitions at their destinations, the United States Navy initiated convoy service early in 1941.

Nations are actually governed by a minority, however much they may profess to believe in democratic equality.

104. (1) In a presidential election of 1944, Roosevelt received approximately 53 per cent of the votes cast.
(2) Political opinions are almost invariably determined by the newspaper; a citizen reads, and newspaper policy, in turn, is determined by the big advertisers.
(3) In most elections, less than half of the eligible voters cast their ballots.
105. (1) Small economic pressure groups often obtain legislation which favors their own members.
(2) Radio time for political campaigning must be paid for; hence, a small rich party can attract the attention of the public more easily than can a larger poor party.
(3) Only a small minority of the population have the advantage of a college education.

Freedom of speech and of the press in the United States is limited only by the demands of national defense.

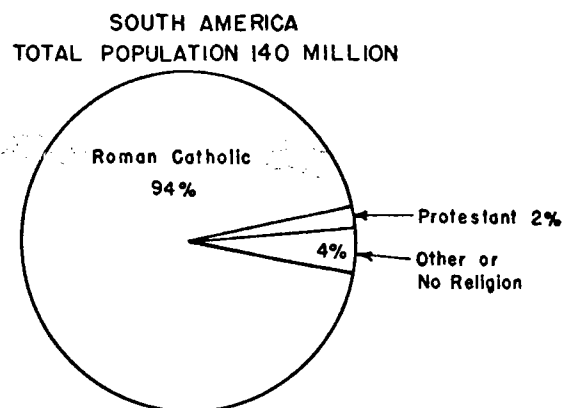
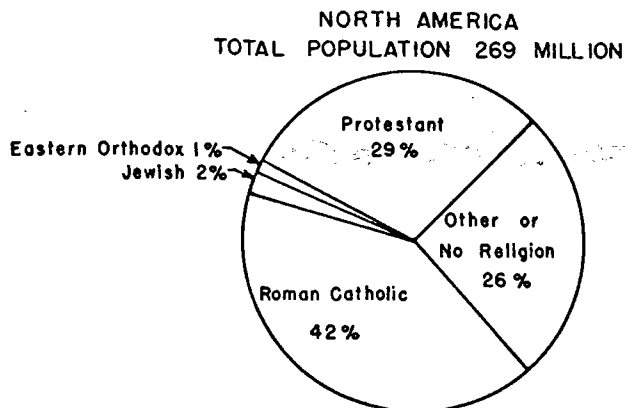
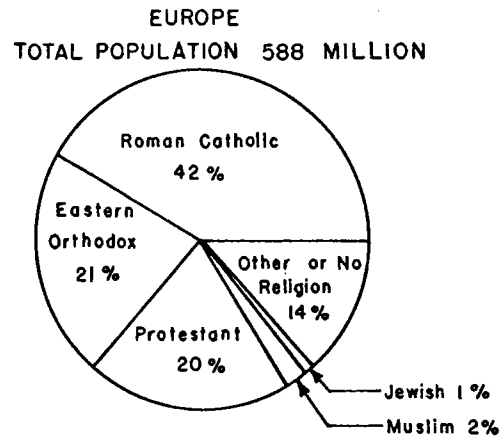
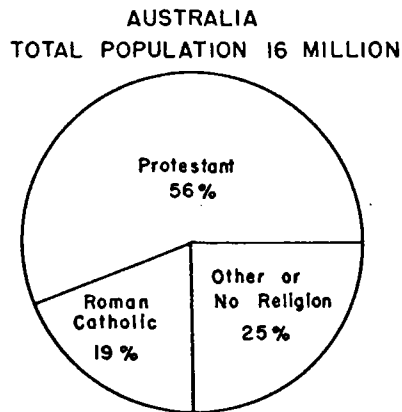
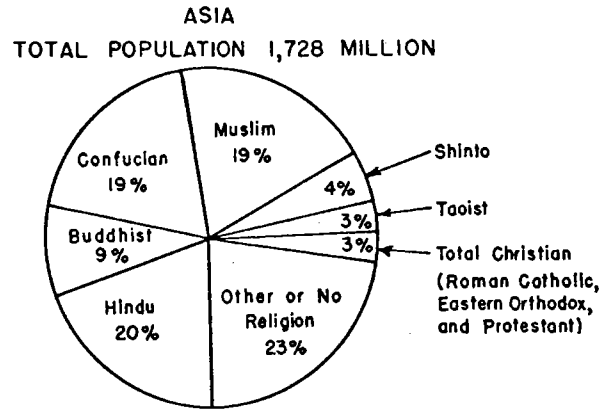
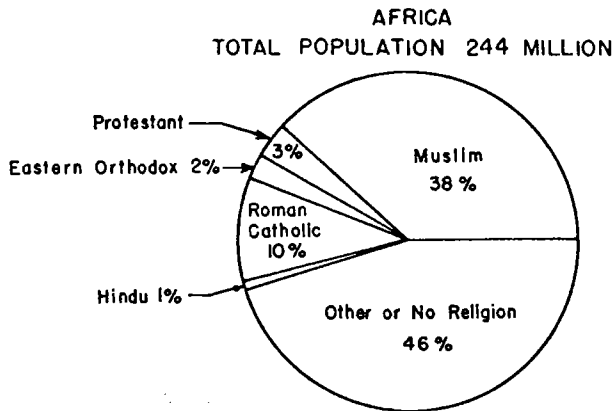
106. (1) The only publications banned during World War II were pro-Axis in sympathy.
(2) Libel suits against newspapers are not uncommon in courts of law in the United States.
(3) In 1917 Eugene V. Debs was imprisoned because he publicly advocated resistance to the Selective Service Act.
107. (1) Some city governments have not allowed Communists to hold street meetings during business hours.
(2) The Office of War Information withheld from publication many important facts about World War II.
(3) In 1919 the Supreme Court established the criterion of "clear and present danger" to the nation as the only limitation upon freedom of speech.

"Historians of today generally agree that the primary motive for emigration to colonial America was economic, — that is, the desire of the emigrants to improve their material circumstances."

108. (1) The colonies attracted many immigrants by advertising among the poverty-stricken people of Germany the advantages that America offered.
(2) The largest single movement of people to the English colonies was the "great migration" of Puritans to Massachusetts during the period of religious persecution under Charles I.
(3) Between Virginia and New England, the Dutch, with that remarkable instinct for sources of wealth that has always characterized their commercial ventures, planted a colony that in due time became New York.
109. (1) Even though Negro slaves were carried from Africa to the colonies against their will, it is generally admitted that those who survived enjoyed a more comfortable life in America than in Africa.
(2) John Adams once overheard an argument about the motives for English migration. He turned and said, "Sir, our ancestors came here to fish."
(3) Most American colonies, in their inception, were largely business ventures of groups of individuals or joint-stock companies and, as such, were only episodes in the expansion of English commerce.

Questions 33-40 refer to the following graphs.

POPULATION OF SIX CONTINENTS ON BASIS OF RELIGION, 1963



Note: Each person is counted in only one category. Any religion not shown separately for any continent accounts for less than 1 per cent of the total population.

33. On how many continents was the combined Muslim and Hindu population more than $\frac{1}{3}$ of the total population on that continent?
- (A) One (B) Two (C) Three (D) Four
(E) It cannot be determined from the information given.
34. How many of the continents have total populations smaller than the Hindu population of Asia?
- (A) One (B) Two (C) Three
(D) Four (E) Five
35. What is the difference to the nearest 10 million between the number of Muslims in Asia and the number of Muslims in Africa?
- (A) 20 million (B) 60 million (C) 90 million
(D) 240 million (E) 330 million
36. Which religion in Europe had approximately the same population as the total Christian population of Australia?
- (A) Roman Catholic
(B) Eastern Orthodox
(C) Protestant
(D) Jewish
(E) Muslim
37. Which of the continents had the fewest people in the category Other or No Religion?
- (A) Africa (B) Australia (C) Europe
(D) North America (E) South America
38. Which continent had the fewest Christians?
- (A) Europe (B) Australia (C) North America
(D) Asia (E) Africa
39. On the continent with the greatest number of Roman Catholics, the number of Protestants is approximately what per cent of the number of Roman Catholics?
- (A) 53% (B) 48% (C) 42% (D) 20% (E) 2%
40. Which of the following can be inferred from the graphs?
- I. The Jewish population of North America is larger than the Jewish population of any other continent.
II. Of the six continents, Asia has the greatest number of people who profess no religion.
III. South America has a larger population of Roman Catholics than any other continent.
- (A) None (B) I only (C) III only
(D) I and III only (E) I, II, and III

GO ON TO THE NEXT PAGE.

PART VII

Time - 20 minutes

Directions: Each resolution in this section is followed by a series of statements. Some of these statements support the resolution, either directly or indirectly, some could be used in arguing against the resolution, and some have no bearing on the issue at all. On the answer line corresponding to each numbered statement, blacken the space beneath the

"A" – if you feel that it could be used by the affirmative side in a debate on the resolution

"N" – if you feel that it could be used by the negative side

"X" – if you feel that it has no bearing on either side of the argument

(Note: You are not asked to judge the truth or falsity of the resolution or the statements.)

A

Resolved: That, at the conclusion of a large-scale war during which prices have risen sharply, the government should try to keep the price level fixed at the then existing point, rather than to lower it to its pre-war position.

276. Falling prices do not depress business if natural price-wage equilibrium is not upset.
277. Strikes and general discontent in the ranks of labor are apt to occur in periods of price instability.
278. In national emergencies the government finds itself in almost absolute control of the nation's economic life.
279. People as producers usually prefer high prices, but as consumers they prefer low prices.
280. When a labor surplus is created by the demobilization of armies, wages will decline and prices must follow if our national economy is to remain in balance.
281. In deciding to reduce prices, the government would have to face the question, "To what level?", with all of its exasperating complications.
282. Economically speaking, it is natural and healthy for prices to rise during a war and decline afterwards.
283. The little man is hard hit if prices are high, because of the lag between the rise of prices and increases in wages.
284. Fluctuations in price level complicate our credit system.
285. Declining prices discourage not only the reckless speculator, but also the man in search of a sound investment.
286. In a war period, when a shortage of labor sends wages up, prices follow, unless the government takes steps to freeze both prices and wages.
287. People who borrow money in times of inflation must actually, in terms of purchasing power, repay much more than they borrow, if the purchasing power of the dollar is increased before they repay.
288. It is unfair when creditors who lent money before the war are repaid in dollars of less purchasing power than the dollars they lent originally.
289. To stabilize prices usually involves some degree of price-fixing by the government.
290. Declining prices encourage the export trade, but discourage imports, thus impairing a normal balance of trade.
291. Most people do not realize that in preferring high prices to low, or vice versa, they are trying to "eat their cake and have it too."
292. In France after World War I many people of the lower classes found that their life's savings, amounting in most cases to only a few thousand francs, had depreciated to less than one-fifth of their original value.
293. Prices are significant only in relation to wages.

GO ON TO THE NEXT PAGE.

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SECTION VII
Time—30 minutes
22 Questions

PLEASE NOTE THAT YOUR ANSWER SHEET HAS FIVE ANSWER POSITIONS MARKED A, B, C, D, AND E WHEREAS THE QUESTIONS IN THIS SECTION CONTAIN ONLY FOUR CHOICES. BE SURE NOT TO MAKE ANY MARKS IN COLUMN E.

Directions: The questions in this section are based on diagrams consisting of a rectangle divided into 4 regions.



A plus sign (+) in a region represents the statement that there is something in the region.

A minus sign (-) in a region represents the statement that there is nothing in the region.

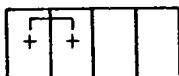


There is something in the first region.

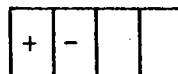


There is nothing in the first region, and there is something in the fourth region.

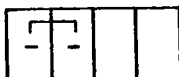
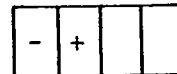
If a bracket ($\{$) connects two signs, then either the first sign holds and the opposite of the second sign holds, or the second sign holds and the opposite of the first sign holds.



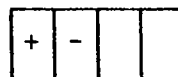
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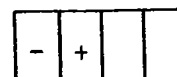
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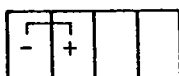
or



Note that if two plus signs or two minus signs are connected by a bracket, then one plus sign and one minus sign must result.

Similarly, if a plus sign and a minus sign are connected by a bracket, then two plus signs or two minus signs must result.

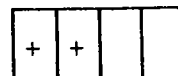
For example:



is equivalent to



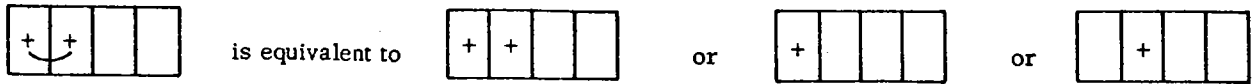
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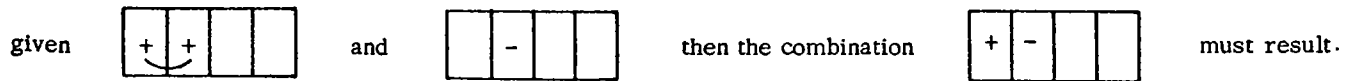
If an arc (—) connects two signs, then AT LEAST ONE of the signs holds, and BOTH signs may hold.

For example:



If two diagrams are given, the information in them may be combined in a single diagram.


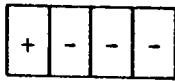
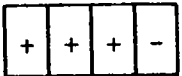
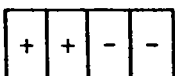
For example:



Sample Question



Which of the following can result?

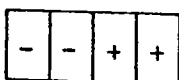
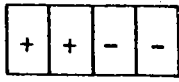
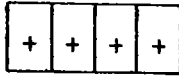

- (A) 
 (C) 
 (B) 
 (D) 

Sample Answer

(A) (B) (C) (D)

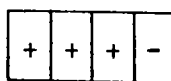

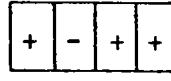
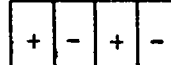


Which of the following can result?

- (A) 
 (B) 
 (C) 
 (D) 



Which of the following can result?

- (A) 
 (B) 
 (C) 
 (D) 

Part A

Time—15 minutes

Passage 1

Directions: You will be asked to recall conditions in Japan after World War II, particularly as they relate to foreign policy.

Japan made remarkable progress in the decade since the end of World War II despite many difficulties. Many of its problems seemed almost to defy solution. Ninety million people crowded its four main islands, comprising an area smaller than California. The arable acreage could not feed them. Housing was pitifully inadequate. Despite industrial recovery on an amazing scale there was a high degree of unemployment.

For an economy accustomed to governmental guidance the shift of power from an oligarchy composed of seasoned civilian and military leaders to a bureaucracy which had to work through parliament entailed confusion and delay in the development of policies and programs. This was a healthy situation from the point of view of political liberals, but it tended to slow the pace of reconstruction.

Many of the political, economic, and legal changes imposed by the post World War II American occupation were now in process of revision or repeal. In consequence there were doubts in many minds as to what might or might not be done legally. The Japanese wanted to reorganize their political and economic system in accordance with their own traditions and beliefs. Yet they were fully aware that wholesale rejection of occupational reforms would be disadvantageous. This operated as a brake on the machinery of revision. They were feeling their way carefully, throwing out what was found wanting, and holding fast to what, in their judgment, was good.

In the field of foreign relations the government of Japan then had five main objectives: to assist in maintaining world peace; to continue close and cordial relations with the United States; to become a member of the United Nations; to establish regular diplomatic relations with Soviet Russia; and to balance its exports against its imports. A sixth objective was perhaps equally important: to regain the confidence of the peoples of Asia.

Prime Minister Hatoyama and Foreign Minister Shigemitsu spoke frequently of Japan's consuming desire that the current tension between the United States and Russia should not bring on war.

This was obviously not an unqualified assurance of Japanese support in the event of an attack upon the United States. But such an assurance would be beyond the authority of the Japanese cabinet to give since the new constitution declared that "the Japanese people forever renounce war," and also that "land, sea, and air forces will never be maintained." The latter clause already was a dead letter, but as yet the constitution has not been amended.

Beyond question it would be amended if the conservatives retained power and were able to muster the two-thirds majority in each house of the Diet and the majority of the popular vote required by the constitution. It was doubtful, however, that it was the issue of constitutionalism which agitated the people of Japan. They were for peace because Japan was militarily and economically weak and is so situated geographically that war would be suicidal.

Why, then, had they spent many billions of yen on a new military machine which employed nearly 196 thousand men at the end of 1955? Set up in 1950 as a police force at the behest of the Supreme Commander of the Allied Powers—General Douglas MacArthur—the original force was limited to 75 thousand men. In 1952 a naval squadron was added and in 1954 an air force. All three were administered under a "Defense Agency" headed by a civilian minister who was a member of the cabinet.

Official statements were careful to refrain from calling these forces by their true names, in part because of the constitutional prohibition, and more importantly because of the widespread objection to rearmament. The strong Socialist party had consistently and vehemently led this opposition. The conservatives themselves had been only lukewarm in favoring rearmament. Not only were the party politicians fearful of being involved in war, they also were anxious to build up the parliamentary system and had no desire to contend again with a powerful military hierarchy. Their attitude was that the country's dignity and independence called for rearmament, but that this should be on a scale which would arouse no fear of aggression among their neighbors.

Part B

Time—15 minutes

Directions: The questions which follow are based on the three passages you have read in Part A. Choose the best answer to each question and blacken the space beneath the appropriate letter on the answer sheet. Answer all questions on the basis of what is stated or implied in the passages.

You are not permitted to refer back to the passages when answering the questions.

Questions on Passage 1

51. Which of the following statements summarizes the author's description of the food and housing problems of the Japanese?
- (A) Their land produced enough food, and their housing was sufficient.
 - (B) Their land produced enough food, but they lacked sufficient housing.
 - (C) Their land did not yield enough food, but their housing was sufficient.
 - (D) Their land yielded a surplus of food, but they lacked sufficient housing.
 - (E) Their land did not produce enough food, and their housing was insufficient.
52. Which of the following best summarizes the author's statement about employment conditions in Japan?
- (A) Unemployment had decreased as industry had recovered slightly.
 - (B) Industry had recovered on a large scale, and unemployment was being rapidly decreased.
 - (C) Neither industrial recovery nor employment conditions had improved appreciably.
 - (D) Both industrial recovery and employment conditions were reasonably satisfactory.
 - (E) Industry had recovered on a large scale, but unemployment was still high.
53. According to the author, which of the following groups gained control after World War II?
- (A) A parliament dominated by conservative members
 - (B) A bureaucracy of military leaders
 - (C) A group of political liberals
 - (D) A bureaucracy operating through a parliament
 - (E) A parliament dominated by economy-minded members
54. According to the author, which of the following was one of the first results of control by the new government after World War II?
- (A) A slowing of reconstruction owing to confusion and delay in policy-making
 - (B) The adoption of policies advocated by political liberals
 - (C) A rapid increase in the rate of reconstruction because of firmer policies
 - (D) An intensification of nationalistic feeling among the Japanese people
 - (E) A rebirth of the old militaristic psychology of the Japanese people
55. What was the Japanese attitude toward the reforms introduced by the American occupation?
- (A) The Japanese attitude varied from acceptance of the reforms to resentment.
 - (B) The Japanese resented the reforms but could not agree on what action to take.
 - (C) The Japanese wanted to preserve the reforms they thought good and abolish those of which they disapproved.
 - (D) The Japanese wanted to abolish all the reforms.
 - (E) The Japanese wanted to retain most of the reforms.
56. Prime Minister Hatoyama and Foreign Minister Shigemitsu spoke frequently of Japan's consuming desire that
- (A) a military union be organized among the Asiatic nations
 - (B) Japanese exports to other Asiatic nations be substantially increased
 - (C) a two-party political system be established in Japan
 - (D) Russia be forced to withdraw from the United Nations
 - (E) the current tensions between the United States and Russia should not bring on war

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SECTION III

Time—30 minutes

Directions: Certain portions of the sentences and paragraphs below are underlined and numbered. Several ways of writing each underlined portion are suggested, including the omission of the portion as one possibility in some instances. The first way merely repeats the original and should be chosen if you believe the original to be better than any of the other answers. Select the best answer and blacken the corresponding space on your answer sheet.

This is a test of correctness and effectiveness of expression. In choosing answers, follow the requirements of standard written English; that is, pay attention to acceptable usage in grammar, word-choice, sentence construction, and punctuation. Also, choose the answer that produces an effective sentence—clear and exact, without awkwardness or ambiguity. When several underlined portions are interrelated, make sure that the answers you choose are consistent with one another.

66. Until recently very few women were permitted a more extended education than offered in high school.

(A) than offered in high school
(B) than that of high school
(C) than high school
(D) than that offered in high school

67. Production difficulties make it impossible to send you a detailed list of forthcoming publications, not because the titles are not in production but because of the various difficulties with which printers are beset and are therefore unable to give us months in advance an exact date for publication.

(A) because of the various difficulties with which printers are beset and are therefore unable to give us months in advance an exact date for publication
(B) because of the difficulties which beset printers leading to their inability to give us months in advance an exact publication date
(C) because the printers, beset with various difficulties, are unable to give us months in advance an exact date for publication
(D) because of the various difficulties with which printers are beset and therefore cannot give us months in advance an exact publication date

68. He had no respect or confidence in his superiors.

(A) respect or confidence in
(B) respect or confidence toward
(C) respect toward or confidence in
(D) respect for or confidence in

69. The number of miles of railroad track in 1950 is less than in 1916 since there was a continuous growth in the number of miles of track until 1930.

(A) since
(B) because
(C) ; hence
(D) ; in addition
(E) although

Questions 70-72 are based on the following sentence.

In an old adage it says that a prophet who, having 70 71 72
predicted a flood, should be the first man to climb
a tree.

70. (A) In an
(B) According to an
(C) An

71. (A) it says
(B) says
(C) OMIT

72. (A) who
(B) whom
(C) OMIT

73. I was called out of town and had to cancel the party; in addition, I learned later that Jackson and Charlie could not have come.

(A) in addition
(B) on the contrary
(C) still
(D) nevertheless
(E) anyway

74. He had no thought of deliberately deceiving his friend in this manner nor to cause him trouble.

(A) nor to cause him trouble
(B) nor intention of causing him trouble
(C) nor thought of causing him trouble
(D) nor causing him trouble

75. Life in the mountains was distinct from anywhere else.

(A) from anywhere else
(B) from life in other places
(C) from any other place
(D) from living elsewhere

SECTION I

Time—20 minutes

Directions: Among the sentences in this section are some which cannot be accepted in formal, written English for the following reasons:

Poor Diction: The use of a word which is improper either because its meaning does not fit the sentence or because it is not acceptable in formal writing.

Examples: The audience was strongly effected by the senator's speech.

In spite of their remarkable display of fortitude, the gallant defenders were plenty discouraged.

Verbosity: Repetitious elements adding nothing to the meaning of the sentence and not justified by any need for special emphasis.

Examples: At that time there was then no right of petition.

He appeared the next day in the same identical suit.

Faulty Grammar:

Word forms and expressions which do not conform to the grammatical and structural usages required by formal written English (errors in case, number, parallelism, and the like).

Examples: Everyone in the delegation had their reasons for opposing the measure.

The commission decided to reimburse the property owners, to readjust the rates, and that they would extend the services in the near future.

No sentence has more than one kind of error. Some sentences have no errors.

Read each sentence carefully; then on your answer sheet blacken space

- D if the sentence contains an error in diction.
V if the sentence is verbose.
G if the sentence contains faulty grammar.
O if the sentence contains none of these errors.

1. The cabin at Walden contained only three chairs: the first for solitude, the second for friendship, and visitors used the third.

2. In 1932 the American Council on Education authorized the appointment of a committee to determine whether or not revision of the academic code of 1895 will be necessary.

3. In the United States our system of free public education, which is available equally to all citizens at no cost, is justified only if it provides the equality of opportunity which we say we believe in.

4. The satirist sees the vices and faults of the human race and exposes it in a comic manner in order to call the matter to attention for correction.

5. The great mountain systems show evidence of complex folds, normal faults, igneous intrusions, and stream dissection, as well as the affects of other natural forces.

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Time - 30 minutes

Directions: Each one of the following questions presents a specific problem of English expression arising from a described situation or incident. You are to select the one answer which is most appropriate for the situation or incident described. Base your answer only on the requirements set forth at the beginning of each question. When you have decided upon the answer, blacken the space on the answer sheet corresponding to the letter of your choice.

154. Which one of the following is the clearest and most convincing statement that the speaker will do something to relieve the situation under discussion?
- (A) We resolve to put into effect measures which will remedy this situation.
 - (B) We think this situation is appalling and we hereby demand that an intensive study be undertaken at once.
 - (C) If there is a cure for the situation, we will look for it.
 - (D) The injustices of this situation and the unnecessary unhappiness that it is causing cry for a remedy.
155. Which one of the following sentences expresses most clearly and most factually (without implications) the fact that immigrants arriving in the United States at first lived mostly with members of their own group?
- (A) At first the various groups in the United States lived by themselves, like patches of unusual texture dotting the landscape.
 - (B) At first the immigrant to the United States tended to live only with his own cultural group.
 - (C) The aliens generally first lived in isolated groups of their own kind in the United States.
 - (D) Isolating himself from all native Americans, the foreign immigrant would not live with any but his own group.
156. Which one of the following statements would be the clearest, most direct, and most objective death notice for newspaper publication?
- (A) John J. West, barrister, having succumbed to angina pectoris, came to his demise on the fifteenth of March last and has been interred at Point Charles cemetery.
 - (B) Death and taxes met this year when Attorney John J. West, who had handled numerous tax cases, died on March 15.
 - (C) John J. West, tax expert and author (Law and Language), senior partner of West, West, Westgate, and Western, died on March 15.
 - (D) West, West, Westgate, and Western mourn the death of their beloved founder, the distinguished and always kindly John J. West, on March 15.
157. Which one of the following would be the clearest and most appropriate personal advice for a young lawyer who has written a disorganized brief?
- (A) The trick is to make the first idea lead directly to the second, and the second to the third; if you need to bring in other and subordinate ideas, make the construction of the sentences demonstrate not only that they are subordinate but what they are subordinate to.
 - (B) The trouble with this is, you don't come across. Your ideas don't blend. The brief lacks cohesion; it doesn't hold together.
 - (C) Law is based on language, which means that things have to follow, and when you confuse your syntax, you spoil the whole thing, so you have to begin at the beginning and go on from there, as Aristotle says, with a beginning, a middle, and an end.
 - (D) In this form of writing, connected progression is certainly desirable; but you tend to ignore this by the digression of what should be subordinate and related ideas.
158. Which one of the following sentences would be most appropriate for a speaker trying to give encouragement and self-confidence to an average adult audience?
- (A) Each man is the sole originator of his own activities and he, and he alone, is ultimately responsible for what he does with himself and the character he develops.
 - (B) You are the sole source of your motivations and impulses and only you can be the justification or the rationalization for any behavior you exhibit or for any personality development you attain.
 - (C) Only you can determine your own actions; you are able to do with yourself and make of yourself whatever you will.
 - (D) The prime mover of your activity, the guardian of what you do with yourself or make of yourself, is you, only you.

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














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SECTION VI

Time—15 minutes

Directions: The problems in this section are designed to measure reasoning ability without depending on verbal skills or educational background. Each problem consists of two groups of figures, labeled 1 and 2. These are followed by five lettered answer figures. For each problem you are to decide what characteristic it is that each of the figures in group 1 has and none of the figures in group 2 has. Then select the lettered answer figure that has this characteristic and blacken the space beneath the appropriate letter on the answer sheet.

Now look at the sample problems and their explanations below.

	1	2	A	B	C	D	E						
I.													
II.													
III.													

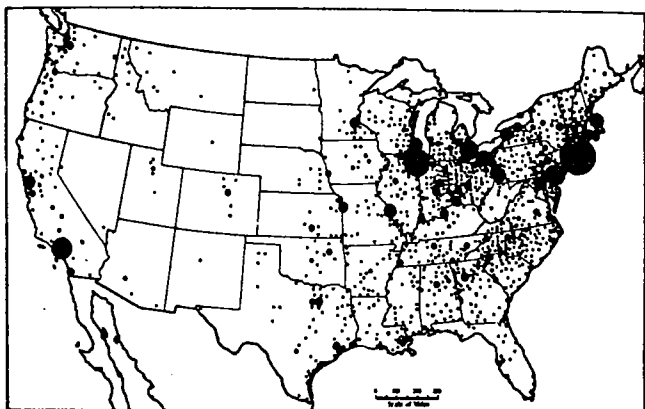
(In sample problem I all the figures in group 1 are rectangles but none of the figures in group 2 are rectangles, so B is the answer. In sample problem II all the figures in group 1 include a dot, so D is the answer. The figures in group 1 of sample problem III are all white figures, so A is the answer.)

As soon as you understand the directions start to work on the problems in this section, marking your answers on your answer sheet.

TEST OF GENERAL BACKGROUND

Time—60 minutes

Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the one which is best in each case and then blacken the corresponding space on the answer sheet.



1. The distribution of which of the following economic activities is depicted above?
 - (A) Mining
 - (B) Dairy farming
 - (C) Grain farming
 - (D) Lumbering
 - (E) Manufacturing
2. Increasing air pollution stemming from cars, incinerators, community dumps, and industries contributes to all of the following EXCEPT
 - (A) radioactive fallout
 - (B) occasional death of livestock and plants
 - (C) increased incidence of respiratory diseases
 - (D) deterioration of building surfaces
 - (E) deterioration of paint and rubber products
3. The principle of American government that permits the Supreme Court to declare an act of Congress unconstitutional is known as
 - (A) bicameralism
 - (B) republicanism
 - (C) representative democracy
 - (D) judicial review
 - (E) constitutionalism
4. If you find a fossil trilobite in your backyard and learn that this animal lived in the ocean a half-billion years ago, which of the following can you conclude?
 - (A) The trilobite adapted to life on land.
 - (B) This area was probably once under the sea.
 - (C) This area was formed by a volcanic eruption that created the trilobite fossil.
 - (D) Trilobite fins became vestigial.
 - (E) Trilobites are the oldest of the fossils that have been found.
5. Which of the following is the best objective criterion for studying social stratification in the contemporary United States?
 - (A) Income
 - (B) Ancestry
 - (C) Religious affiliation
 - (D) Self-rating
 - (E) Political affiliation
6. "Once an unwritten custom of the United States Constitution, it was begun by Washington, continued by Jefferson, threatened by Grant and Theodore Roosevelt, and broken by Franklin Roosevelt."

The statement above is referring to

 - (A) the presidential cabinet
 - (B) isolation and neutrality
 - (C) the two-term limit for Presidents
 - (D) the annual State of the Union address
 - (E) the two-party system
7. Which of the following is NOT a problem faced by metropolitan areas in the United States today?
 - (A) Traffic congestion
 - (B) Air pollution
 - (C) Insufficient finances
 - (D) Population decrease
 - (E) Racial strife
8. Scottish dialect is characteristic of the poetry of
 - (A) Thomas Gray
 - (B) Jonathan Swift
 - (C) Samuel Johnson
 - (D) William Blake
 - (E) Robert Burns
9. Which of the following would be likely to lead to a decrease in United States national income?
 - (A) An increase in consumption expenditure
 - (B) An increase in plant and equipment investment
 - (C) An increase in imports
 - (D) An increase in residential construction
 - (E) An increase in government expenditure programs

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SECTION III
GENERAL UNDERSTANDING

Time—20 minutes

The questions in this test concern world affairs, business, art, and science. They will require some very general knowledge which you may have picked up in the course of your reading, hobbies, or school work, but specific knowledge is not required for this test. You are expected to be able to answer the questions through reasoning, common sense, and a general understanding of the situations involved.

Blacken the appropriate spaces on your answer sheet.

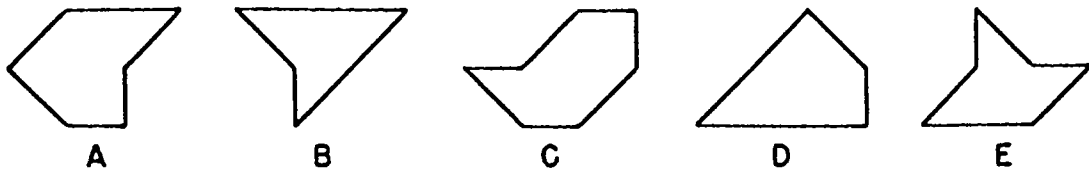
You will be allowed 20 minutes for 30 questions.

36. The secret ballot was introduced in elections primarily to prevent such practices as
- (A) vote buying
 - (B) blind voting
 - (C) fraudulent vote counting
 - (D) fraudulent registration
 - (E) voting by proxy
37. A comparison of the average incomes of rural and urban families should include
- (A) size of the family
 - (B) noncash income
 - (C) indebtedness of the family
 - (D) local tax rates
 - (E) cost of food
38. It can be argued that the principle of seniority as applied to the chairmanships of congressional committees is advantageous because
- (A) conflicts and deadlocks over position are avoided
 - (B) qualified persons are put in positions of leadership
 - (C) committee members from districts or states with strong two-party systems are given a chance to become chairmen
 - (D) the member who has served longest is experienced in dealing with the current administration
 - (E) committee members are motivated to work hard and to attend meetings
39. Which of the following crops would be most conducive to soil erosion on a sloping field?
- (A) Grass
 - (B) Soy beans
 - (C) Wheat
 - (D) Alfalfa
 - (E) Potatoes
40. Which of the following economic phenomena is likely NOT to be contemporaneous with the others in the business cycle?
- (A) Rising interest rates
 - (B) Rising costs of production
 - (C) Increasing production of durable goods
 - (D) Declining unemployment
 - (E) Declining prices
41. The national debt has been used since the 1920's to help stabilize the nation's purchasing power. Which of the following policies would be most likely to achieve that result?
- (A) Raise taxes during depression and lower them during prosperity.
 - (B) Keep tax rates about the same at all times.
 - (C) Increase government spending during depression and decrease it during prosperity.
 - (D) Increase government spending during prosperity and decrease it during depression.
 - (E) Maintain government spending at a fairly constant rate at all times.
42. Which of the following is omitted in calculating the national wealth?
- I. The value of plants and equipment
 - II. The value of real estate
 - III. The value of bank deposits
- (A) I only
 - (B) II only
 - (C) III only
 - (D) I, II, and III
 - (E) None of the above
43. The most significant explanation of the mid-twentieth-century change in the attitude of the southeastern United States toward free trade lies in the
- (A) rising cost of foreign aid
 - (B) weakening of one party control in the South
 - (C) shifting population of the region
 - (D) increasing diversification of the economy of the region
 - (E) increasing competition of foreign cotton-producing areas
44. An observer near the equator on the planet Jupiter could see fewer planets in the midnight sky than an observer near the equator on Earth. This is because
- (A) Jupiter is farther from most of the other planets than is Earth
 - (B) the period of rotation of Jupiter is much shorter than that of Earth
 - (C) the inclination of Jupiter's equator to its orbit is only 3° whereas that of Earth's equator to its orbit is more than 23°
 - (D) Jupiter is much larger than Earth
 - (E) more planets have orbits between Jupiter and the sun than have orbits between Earth and the sun

SECTION VII

Time—25 minutes

In this section you are to determine which one of five simple figures, the patterns lettered A, B, C, D, and E at the top of each page, is contained in each of the more complex problem figures. There is only one lettered pattern in each problem figure. The pattern will always be right side up and will be the exact size and shape of one of the lettered patterns at the top of the page. Try sample problems I and II; then check your answers with the figures in the box below.



The figures below illustrate how the patterns are included in the problem figures. Pattern A is contained in the first problem and pattern D in the second.



As soon as you understand the directions, begin working on this section. Mark your answers on the answer sheet.

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SECTION V

INDUCTION

Time— 20 minutes

This is a test of inductive reasoning: your ability to form concepts that relate words or ideas to each other. In each problem consisting of 5 words or expressions, there are two groups having 3 words each. One word belongs to both groups. You are to decide what the groups are and to select the word which belongs to both groups. Your answer is the letter designation of this word. Blacken the space beneath the appropriate letter on your answer sheet.

Sample problem:

- A. necktie
- B. nylons
- C. shoes
- D. trousers
- E. dress

Of these five words A, C, and D are articles of men's clothing; B, C, and E are articles of women's clothing. Therefore, the answer is C, "shoes," because it belongs to both groups. For all problems in this test, the groupings are based on relationships and distinctions in the meanings of the words. The groupings are not related to spelling, number of syllables, number of words, parts of speech, etc.

You will be allowed 20 minutes for 40 problems.

81. A. chimney
B. window
C. steering wheel
D. foundation
E. fender
82. A. beaver
B. eel
C. moose
D. swordfish
E. monkey
83. A. MacArthur
B. Adams
C. Hoover
D. Pershing
E. Grant
84. A. parallelogram
B. intersection
C. junction
D. trapezoid
E. circle
85. A. imprison
B. quarantine
C. spank
D. bind
E. fine
86. A. haven
B. family
C. possessions
D. inn
E. home
87. A. interest
B. debt
C. salary
D. mortgage
E. dividend
88. A. postponement
B. hesitation
C. breaking stride
D. procrastination
E. faltering
89. A. cry
B. speak
C. orate
D. utter
E. address
90. A. teach
B. pretend
C. preach
D. act
E. make-believe
91. A. fishing rod
B. window screen
C. butterfly net
D. shotgun
E. wire fence
92. A. work
B. sleep
C. aspire
D. play
E. strive
93. A. sociable
B. riotous
C. noisy
D. talkative
E. dangerous
94. A. illiteracy
B. contiguity
C. isolation
D. wealth
E. combination
95. A. magnification
B. sound effects
C. classification
D. costuming
E. illumination
96. A. wind
B. depression
C. storm
D. snow
E. hardship
97. A. satisfying
B. degrading
C. filling
D. monotonous
E. tasteless
98. A. Dorothy Parker
B. Dean Martin
C. Rosalind Russell
D. Eleanor Roosevelt
E. Cary Grant
99. A. ethics
B. excitement
C. conscience
D. humor
E. fear
100. A. condemnation
B. evidence
C. clue
D. testimony
E. accusation
101. A. gregarious
B. adequate
C. generous
D. prudish
E. voluminous

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SECTION I

Insightful Reasoning

Time—20 minutes

The title of this test means that each question will have at least two methods of solution--one laborious and time-consuming and the other insightful and rapid. Since you will have only 20 minutes to do 20 questions, it will be to your advantage to do as many of the questions as possible by the short, insightful method. You will probably not discover the insightful method on every question, so you should move rapidly through the test working those questions that you can do quickly and return later, if you have time, to the questions that may take longer. Solve each problem, using any available space on the page for scratchwork. Then indicate the one correct answer in the appropriate space on the answer sheet.

1. If $2x + y = 8$, then $x + \frac{y}{2} = (?)$
(A) 2 (B) 4 (C) 6 (D) 8 (E) 16
2.
$$\frac{\frac{3 \times 4 \times 5}{3 \times 4} \times \frac{3 \times 4 \times 5}{3 \times 5} \times \frac{3 \times 4 \times 5}{4 \times 5}}{\frac{3 \times 4 \times 5}{4 \times 5} \times \frac{3 \times 4 \times 5}{3 \times 5} \times \frac{3 \times 4 \times 5}{3 \times 4}} = (?)$$

(A) $\frac{1}{3 \times 4 \times 5}$ (B) $\frac{3}{5}$ (C) $\frac{3}{4}$
(D) 1 (E) $3 \times 4 \times 5$
3. $0.875 \times 32 \times 0.25 = (?)$
(A) $1\frac{3}{4}$ (B) $3\frac{1}{2}$ (C) 7 (D) 14 (E) 28
4. If
$$\frac{\frac{x - \frac{3}{y}}{x + \frac{2}{y}} - \frac{x + \frac{4}{y}}{x - \frac{5}{y}} + \frac{x - \frac{7}{y}}{x + \frac{6}{y}}}{\frac{x - \frac{3}{y}}{x + \frac{2}{y}} - \frac{\frac{4}{y} + x}{x - k} + \frac{x - \frac{7}{y}}{x + \frac{6}{y}}} = 1$$
, then $k = (?)$
(A) $-\frac{y}{5}$ (B) $-\frac{5}{y}$ (C) 5 (D) $\frac{5}{y}$ (E) $\frac{y}{5}$
5. If $\frac{.484}{.365}x = \frac{.121}{.365}y$, what per cent of y is x ?
(A) $\frac{1}{4}$ (B) 12.1 (C) 25 (D) 36.5 (E) 400
6.
$$\frac{1.7 - 3.5 + 4.5 - 2.1 + 5.6}{10} = (?)$$

(A) 0.0062 (B) 0.062 (C) 0.62
(D) 6.2 (E) 62
7. If $q + 0.10q = 4.07$, then $q + 0.20q = (?)$
(A) 4.14 (B) 4.44 (C) 4.77
(D) 4.86 (E) 4.88
8. $(0.055)^2 - (0.045)^2 = (?)$
(A) -0.017225 (B) 0.001 (C) 0.0028225
(D) 0.01 (E) 0.028225
9.
$$\frac{1 - (y - z)^2}{1 - (z - y)^2} = (?)$$

(A) 0 (B) $\frac{1 - y + z}{1 + y - z}$ (C) $\frac{y - z}{z - y}$
(D) $\frac{y + z}{y - z}$ (E) 1
10. What is the edge in inches of a cube whose volume is equal to that of a rectangular solid 12" by 24" by 48" ?
(A) 12 (B) 24 (C) 96 (D) 516 (E) 2304
11. $-1 + 2 - 3 + 4 - 5 + 6 - 7 + 8 - 9 + 10 \dots$
If the above series of integers were continued, then the sum of how many terms would equal 264 ?
(A) 66 (B) 131 (C) 132 (D) 527 (E) 528
12. If, to the nearest thousandth, $\sqrt{2} = 1.414$, then $\sqrt{2}(10 - 2\sqrt{2}) = (?)$
(A) 6.14 (B) 10.14 (C) 12.14
(D) 14.14 (E) 137.4
13. What is the numerical value of $(4x + 5)(5x + 4)(x - 2) - (2x + 3)(3x + 2)(y - 6)$ if $x = 2$ and $y = 3x$?
(A) 0 (B) 196 (C) 686 (D) 1200 (E) 1286
14. What is $\frac{y}{x}$, if $x = \frac{a^2 + b^2}{\frac{c + d}{2n^2}}$ and $y = \frac{a^2 + b^2}{\frac{c + d}{6n^2}}$?
(A) $\frac{1}{9}$ (B) $\frac{n^2}{3}$ (C) $\frac{1}{12}$ (D) 3 (E) $\frac{3}{n^2}$

SECTION III

Time—30 minutes

Directions

This section contains a discussion some of which needs to be corrected and revised. You are to make the necessary changes.

Do not rewrite the discussion. Make only the changes needed to express clearly and accurately what the writer is evidently trying to say. The result should be well-phrased, concise, grammatical, and properly punctuated, to meet the requirements of standard written English.

Any clear method of showing changes will be satisfactory. However, simple changes made neatly are best because they save time for you and can be easily read. Here is an example:

Queen Elizabeth the First

Never had the fortunes of England ^{fallen} ~~dived~~ to a lower ebb than at the moment when Elizabeth ^{ascended} ~~ascende~~ the throne. The country was humiliated by defeat, ^{then by} ~~^~~ dissension ~~had torn it~~, and ~~it was being~~ threatened by ~~hosts of~~ danger from without. ~~The~~ ^{England's} ~~English~~ hope lay in ^{her} ~~their~~ queen. Not only ~~was~~ Elizabeth ~~was~~ ^{also} the daughter of Henry, but [^] the daughter of Anne Boleyn.

How to make your best score

You will probably make your best score if you proceed as follows:

1. First read the entire discussion for "sense" or intended meaning.
2. Work from the beginning. Do not skip about. If you finish before time is called, check your work.
3. Have a good reason for all changes. Do not change a sentence unless you think that it should be stated more concisely or maturely, that its language is inaccurate or confusing, or that it violates grammatical or structural principles of standard written English.

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SECTION VI

Time—35 minutes

37 Questions

PLEASE NOTE THAT YOUR ANSWER SHEET HAS FIVE ANSWER POSITIONS MARKED A, B, C, D, E WHEREAS THE QUESTIONS IN THIS SECTION CONTAIN ONLY FOUR CHOICES. BE SURE NOT TO MAKE MARKS IN COLUMN E.

Directions: Each of the sets in this section contains a statement of facts, a dispute, and two rules. The rules may be conflicting. Each rule should be applied independently and not as an exception to the other. The rules are followed by questions. Select from the choices below the one that most accurately classifies each question as it relates to the possible application of one or both of the rules to the dispute. Blacken the corresponding space on the answer sheet.

- (A) A relevant question whose answer requires a choice between the rules
- (B) A relevant question whose answer does not require a choice between the rules but requires additional facts or rules
- (C) A relevant question that is readily answerable from the facts or the rules or both
- (D) An irrelevant question or one whose answer bears only remotely on the outcome of the dispute

These questions do not presuppose any specific legal knowledge on your part; you are to arrive at your answers entirely by the ordinary processes of logical reasoning.

Set 1

Facts: John Váldez stopped by Anna Whiteside's custom tools factory to pick up an electric drill that he had ordered. Whiteside told him that the drill was not yet finished. Váldez then asked to watch the final stages of assembly of his drill, and Whiteside permitted him to do so. After observing for a while, Váldez returned to the sales area to await completion of the drill. The drill was shortly delivered to the sales area but, unknown to either Váldez or Whiteside, it had been dropped on a concrete floor. The delivery clerk gave the drill to Whiteside, who handed it to Váldez to examine. Saying that he was in a hurry, Váldez quickly paid for the drill and left. When Váldez subsequently used the drill, a crack that had resulted from the fall to the floor caused a piece of metal to fly out and injure Váldez.

Dispute: Váldez sued Whiteside for damages and Whiteside contested the suit.

- Rules:**
- I. Manufacturers of goods are liable for injury caused by the goods as a result of the manufacturer's failure to exercise reasonable care in the manufacture of the goods.
 - II. A manufacturer of goods is not liable for damages caused by the goods if the purchaser was given the opportunity to inspect the goods before purchase.

Questions:

1. Did Whiteside's employees examine the drill carefully for damage after it was dropped?
2. If the exercise of reasonable care includes inspecting the drill thoroughly before its sale, and if Whiteside failed to inspect the drill, must she pay damages to Váldez?
3. Did Whiteside exercise reasonable care in the manufacture of the drill?
4. Was Váldez given an opportunity to inspect the drill before purchasing it?
5. If Whiteside identifies the employee who dropped the drill, will she have sufficient grounds for dismissing him?
6. Was Váldez satisfied with the care taken by the workers who did the final assembly of his drill?
7. If the crack in the drill was caused by Whiteside's carelessness, with respect to quality control of her company's products, will Váldez' suit succeed?
8. If Whiteside's employees used reasonable care in inspecting the drill before handing it to Whiteside, but found no damage because the crack was virtually invisible, will Váldez win the suit?

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Logical or Argumentative Relationship

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SECTION VII

Time—30 minutes

45 Questions

Directions: For each set of questions, a fact situation and a result are presented. A number of independent statements follow the result. For each statement, decide whether it is

- A an inconsistent statement
- B a possible adequate explanation
- C a deducible statement
- D a relevant statement
- E an irrelevant statement

Consider and eliminate the choices in the order A, B, C, D, E. The first choice that cannot be eliminated is the correct answer.

Each statement presents a new factual element. First ask whether the statement is inconsistent with, or contradicts, the given facts and result. If so, choose A. If it is consistent with the given facts and result, does it present a possible adequate explanation of the result? If so, choose B. If not, can the statement be deduced from something in the given facts and result? That is, if the given facts and result are as stated, must the statement be true? If so, choose C. If not, does the statement either support or weaken a possible explanation of the result? If so, it is relevant to an explanation; choose D. If not, the statement is irrelevant to an explanation of the result; choose E.

Use common sense to decide whether explanations are adequate and whether statements are inconsistent with or deducible from other statements. No formal system of logic is presupposed. Do not consider extremely unlikely or remote possibilities.

Set 1

Situation: Peter Romano's rose garden, of which he was very proud, was situated in a sunny corner of his yard. His roses were normally of prize quality. One year, he followed his usual practices in caring for the roses. However, he found that an unusually heavy infestation of aphids, small insects that suck the juices of plants, had invaded his roses. Romano asked the county agricultural agent for the name of an insecticide that would kill the aphids on contact and sprayed his plants with the recommended insecticide. The spraying seemed successful; afterwards, Romano saw only a very few aphids on his plants.

Result: In a short time, the roses were attacked by a second aphid infestation that was heavier than the first.

1. Romano used the same procedures for watering his rosebushes as he had in previous years.
2. The agricultural agent recommended a spray that was not effective against aphids.
3. The spraying killed insects that were natural enemies of the aphids, which then reproduced freely.
4. A very heavy infestation of aphids spread to Romano's rosebushes from a neighbor's garden.
5. Nearby unsprayed plants in a neighbor's garden were heavily infested with aphids.
6. Aphids can thrive in sunny locations.
7. The reinfestation was due to some unusual practice of Romano's in caring for the roses other than the spraying.

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SECTION I

Time—30 minutes

25 Questions

The questions in this section require you to follow or evaluate the reasoning contained in brief statements or passages. In some questions, each of the choices is a conceivable solution to the particular problem posed. However, you are to select the one that answers the question best, that is, the one that does not require you to make what are by common-sense standards implausible, superfluous, or incompatible assumptions. After you have chosen the best answer, blacken the corresponding space on the answer sheet.

(The passages for this section have been adapted from published material to provide the candidate with significant problems for analysis and evaluation. The ideas contained in the passages are those of the original authors and do not necessarily represent the opinions of the Law School Admission Council or Educational Testing Service.)

1. Emperor Hirohito of Japan was born in 1901. He became emperor in 1926. On the day of Pearl Harbor he was 40 years old and had been emperor for 15 years. These four figures total 3,882. On that same day Hitler was 52 and had been in power for 8 years. He was born in 1889 and became chancellor in 1933. These four figures also total 3,882.

What is most likely to be true of the identical figures arrived at by the calculations?

- (A) They are coincidental and insignificant.
- (B) They have political significance but are significant in no other way.
- (C) They suggest that important historical figures are produced by similar circumstances.
- (D) They suggest that there is more design in events than is usually acknowledged.
- (E) They are significant, but their meaning is not clear.

2. It is all right to send troops to another country to prevent a Communist take-over. It is all right to wage an endless war in still another country to prevent one corrupt faction from defeating an equally corrupt faction. But it is not seemly to use the faintest hint of force to get food to an isolated, starving people. No, that would be interfering in the internal affairs of another nation.

Which of the following is the author's primary method of making his point?

- (A) Irony
- (B) Vituperation
- (C) Introspection
- (D) Analysis of evidence
- (E) Attack on decorum

3. "Get off my land."
 "Who says it's your land?"
 "I did."
 "Where did you get it?"
 "From my father."
 "Where did he get it?"
 "From his father."
 "Where did he get it?"
 "He fought for it."
 "Well, I'll fight you for it."

In the context of the exchange above, the statement "Well, I'll fight you for it" implies which of the following presuppositions?

- (A) An end cannot be achieved without force.
- (B) Precedent suggests acceptable action.
- (C) A meaningful tradition is one of long standing.
- (D) Ownership is a right, not a privilege.
- (E) A desire for territory is an irrepressible instinct.

4. Rosa Martinez's vituperative reviews of the film cast doubt on her ability to assess the worth of cinematic works because that film has been an overnight box office success.

The author's questioning of Rosa Martinez's critical ability could be faulted if it were true that

- (A) a film's box office success is quickly forgotten
- (B) reviewers have always differed among themselves
- (C) a film's popularity is not necessarily an indication of its worth
- (D) only time can determine the importance of a work of art
- (E) a critic's opinion can change radically from month to month

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Time - 15 minutes

Directions: Each question in this section consists of a group of four words, two of which are approximately opposite to each other in meaning. Decide which two words in each group are most nearly opposite, and blacken the space beneath the corresponding pair of numbers on the answer sheet; i.e., mark the space between the dotted lines beneath "1-2" if words numbered 1 and 2 are opposite, beneath "2-4" if words 2 and 4 are opposite, beneath "3-4" if words 3 and 4 are opposite, etc. Mark only ONE set of dotted lines for each question. This is a speed test; work as rapidly as you can.

128. 1-win 2-cancel 3-draw 4-lose
129. 1-early 2-soon 3-never-ending 4-tardy
130. 1-forget 2-obliterate 3-recollect 4-sense
131. 1-emotional 2-mobile 3-fixed 4-destructive
132. 1-shortened 2-forsaken 3-conscientious 4-careless
133. 1-aggressive 2-defensive 3-military 4-fortified
134. 1-ablative 2-competitive 3-able 4-incompetent
135. 1-exact 2-scant 3-ample 4-mighty
136. 1-initial 2-monographic 3-panoramic 4-final
137. 1-tranquil 2-immanent 3-turbulent 4-translucent
138. 1-dramatic 2-actual 3-fictitious 4-photographic
139. 1-vernacular 2-moderate 3-customary 4-exorbitant
140. 1-effusive 2-hopeful 3-momentous 4-trivial
141. 1-perilous 2-restrained 3-rampant 4-dangerous
142. 1-overdue 2-infrequent 3-premature 4-robust
143. 1-eminent 2-obscure 3-indecorous 4-disfigured
144. 1-linguistic 2-negligent 3-fastidious 4-chemical
145. 1-important 2-potent 3-lazy 4-feeble
146. 1-daily 2-permanent 3-weekly 4-transient
147. 1-subordinate 2-sturdy 3-dominant 4-cheerful
148. 1-liable 2-illicit 3-unbroken 4-exempt
149. 1-diverse 2-procured 3-nourished 4-dispensed
150. 1-appreciate 2-depress 3-allow 4-elate
151. 1-communicative 2-spiteful 3-reserved 4-cautious
152. 1-spectacular 2-commonplace 3-clairvoyant 2-pacific
153. 1-defamatory 2-laudatory 3-notorious 4-worthless
154. 1-challenging 2-gloomy 3-defiant 4-jocular
155. 1-rigid 2-accused 3-supple 4-righteous
156. 1-impromptu 2-prepared 3-delayed 4-protracted
157. 1-predictable 2-precarious 3-stable 4-laborious

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SECTION II

Time—20 minutes

Directions: Each set of questions in this section consists of a number of statements. Most of these statements refer to the same subject or idea. The statements can be classified as follows:

- (A) the central idea to which most of the statements are related;
- (B) main supporting ideas, which are general points directly related to the central idea;
- (C) illustrative facts or detailed statements, which document the main supporting ideas;
- (D) statements irrelevant to the central idea.

The sentences do not make up one complete paragraph. They may be regarded as the components of a sentence-outline for a brief essay. The outline might, for example, have the following form:

- A. A sentence containing the central idea
- B. A sentence containing a main supporting idea
- C. A sentence presenting an illustrative fact
- B. A sentence containing a main supporting idea
- C. A sentence presenting an illustrative fact
- C. A sentence presenting an illustrative fact

Consider the following completed sample set of statements:

A Sample Set of Questions

- B 1. The Roman roads connected all parts of the empire with Rome.
- B 2. The Roman roads were so well built that some of them remain today.
- A 3. One of the greatest achievements of the Romans was their extensive and durable system of roads.
- D 4. Wealthy travelers in Roman times used horse-drawn vehicles.
- C 5. Along Roman roads caravans would bring to Rome luxuries from Alexandria and the East.
- C 6. In present-day Italy some of the roads used are original Roman roads.

(You may or may not wish to work out the relationships for the test sentences in the above manner.)

Clearly most of the statements are about Roman roads, their extensiveness, and their durability. Statement 3 contains the central idea of the group and, therefore, was classified (A).

A main supporting idea (B) of this central idea is found in statement 2, which explains that Roman roads were so well built that some of them remain today. Statement 6, indicating that some of the ancient Roman roads are still in use, is an illustration (C) of statement 2.

Another main supporting idea (B) of the central idea is found in statement 1, which points out that the Roman roads extended throughout the empire. Statement 5 gives an illustration (C) of this main supporting fact by indicating that the roads extended even as far as Alexandria.

Statement 4, which deals with the kinds of carriages used by the wealthy in Roman times, has no relevance (D) among the statements describing the durability and extensiveness of the Roman roads.

Time - 20 minutes

Directions: One of the numbered words in each of the following paragraphs spoils the sense or meaning of the paragraph as a whole. Read each paragraph through, decide which one of the numbered words spoils the meaning, and make a cross in the box beneath the corresponding number on the answer sheet.

76. There was change₁ in the young₂ man, less₃ than the₄ one short year added to his age could₅ have effected₆. He looked like a man who had thought much₇, suffered much.
77. But Kua-ko told them pompously₁ that it was not theirs₂ for them to handle₃, but his for all time; that he had won it by accompanying₄ me, valorous₅ man that he₆ was, to that evil wood into which they, timid inferior creatures that they were, would have scorned₇ to set foot.
78. A number of recent American writers have called our₁ attention to the last remnants of village life. In order to understand₂ the civilization₃ of cities, we must look at that urban₄ population from₅ which they draw₆ their₇ life.
79. Yesterday a friend told₁ me that in a bank in Pittsburgh some young ladies occasionally allotted₂ the job of going down into₃ the deposit₄ vaults to wear₅ pearl necklaces left there by the wealthy dowagers of the Golden Triangle. Pearls lose their lustre when₆ renewed from time to time on warm₇ (and presumably feminine) bosoms.
80. One could₁ wish that the psychoanalysts would go into the question₂ of diary-keeping. For₃ often it is the one mysterious₄ person₅ in a life otherwise as clear₆ as the sky and as candid₇ as the dawn.
81. Even though Simon Bolivar, the South American Liberator, has a statue of heroic₁ size in the midst of New York's millions₂, neither they₃ nor the other₄ hundred₅ millions of Americans living there₆ seem to be aware of the man's full₇ significance.
82. There are few persons, even among the calmest₁ thinkers, who have not occasionally been startled into a vague yet thrilling₂ half-credence in the supernatural, by coincidences of so seemingly₃ marvelous₄ a character that as mere₅ coincidences the intellect has been able₆ to receive₇ them.
83. In their emphasis on the moral duty of untiring activity, or₁ work as an end in itself, on the evils of luxury and fortitude₂, on foresight and thrift, on moderation and self-discipline and rational calculation, they had created an ideal of Christian conduct, which canonized₃ as an ethical principle the efficiency₄ which economic₅ theorists were preaching as a specific₆ for moral disorders₇.
84. He spent the hours in reading or talking₁, drinking₂ his fill of solitude till nightfall. By dint₃ of constantly brooding₄ over the same₅ thoughts, his mind gained concentration₆ and his still undeveloped₇ ideas ripened towards maturity.
85. Sometimes the mood is brought about by laughter at the humorous₁ side of life, as when, abstracting₂ ourselves from earth₃, we imagine people plodding on foot, or seated in ships and speedy trains, with the planet₄ all the while whirling in the same₅ direction, so that, for all their hurry₆, they travel back-foremost₇ through the universe of space.

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6

SECTION VI

6

Time - 10 minutes

Directions: One of the numbered words in each of the following paragraphs spoils the sense or meaning of the paragraph as a whole. Read each paragraph through and decide which one of the numbered words spoils the meaning. Then blacken the space beneath the corresponding number on the answer sheet.

97. The world₁ was not₂ asleep; the little streets were empty, and beyond the quiet fields the gleaming₃ waters₄ of the river crept₅ towards₆ London in the sunrise. All its streets and squares were still in shadow as the light touched the housetops. The great city hardly₇ stirred.
98. As the foundation₁ under₂ which all designing is based, mechanical₃ drawing becomes, with perhaps the exception₄ of mathematics, the most important single₅ branch of study in a technical₆ school. It is the language₇ of the engineer.
99. No publisher would dare assault₁ the fresh morning mind of the reader, listless₂ after sleep and coffee, with the kind of trivial fantasy₃ that is acceptable₄ in the afternoon. It is taken for granted₅ that by lunch time the average₆ man has been so beaten down by life that he will believe anything₇.
100. Fashion seldom₁ changes, thought I eagerly₂ to myself; a time will come, and that₃ speedily₄, when he₅ will be no₆ longer in the₇ fashion.
101. For sheer audacity₁, it would be difficult₂ to parallel₃ the opening of What Every Woman Knows. The curtain rises and not a word is spoken for seven minutes. To conceive₄ of and to insist₅ on such a situation is an indication of how little₆ confidence₇ the playwright had in himself and in his audience.
102. Whether our ancestors made a virtue₁ of a necessity by adopting₂ a celestial₃ life because₄ there were no more trees or₅ whether they took a chance on the ground₆ out of sheer initiative₇ can be argued but not proved.
103. Why₁ struggle with₂ French verbs, many argue, when shorthand and typewriting can get₃ you a job? This argument and similar ones have led₄ to the abandonment in₅ decreasing₆ degree of₇ modern-language instruction in the secondary schools.
104. In dealing with a thing, you must first find out what it is and then act accordingly. But with a person, you must first find out what₁ he is and then carefully₂ conceal₃ from him the fact that you have made the discovery. The tactless₄ person can never₅ be made to overlook₆ this. He prides himself on taking people as they are without being aware that that is not the way they want₇ to be taken.
105. Plato has written, "Man, unless₁ he is granted₂ a proper₃ education and a happy endowment₄, becomes the most divine₅ and civilized of all created beings; however, he is the most savage of all the products₆ of the earth if he is inadequately₇ and improperly trained."

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SECTION II
Time—40 minutes
50 Questions

Directions: Each passage in this section is followed by two sets of questions, data evaluation and data application. In the first set, data evaluation, you will be required to classify certain of the facts presented in the passage on the basis of their importance, as illustrated in the following example:

Fred North, a prospering hardware dealer in Hilldale, Connecticut, felt that he needed more store space to accommodate a new line of farm equipment and repair parts that he intended to carry. A number of New York City commuters had recently purchased tracts of land in the environs of Hilldale and there had taken up farming on a small scale. Mr. North, foreseeing a potential increase in farming in that area, wanted to expand his business to cater to this market. North felt that the most feasible and appealing recourse open to him would be to purchase the adjoining property owned by Mike Johnson, who used the premises for his small grocery store. Johnson's business had been on the decline for over a year since the advent of a large supermarket in the town. North felt that Johnson would be willing to sell the property at reasonable terms, and this was important since North, after the purchase of the new merchandise, would have little capital available to invest in the expansion of his store.

The following questions consist of items related to the passage above. Consider each item separately in terms of the passage and on the answer sheet blacken space

- A if the item is a Major Objective in making the decision; that is, one of the outcomes or results sought by the decision-maker;
- B if the item is a Major Factor in making the decision; that is, a consideration, explicitly mentioned in the passage, that is basic in determining the decision;
- C if the item is a Minor Factor in making the decision; that is, a secondary consideration that affects the criteria tangentially, relating to a Major Factor rather than to an Objective;
- D if the item is a Major Assumption in making the decision; that is, a supposition or projection made by the decision-maker before weighing the variables;
- E if the item is an Unimportant Issue in making the decision; that is, a factor that is insignificant or not immediately relevant to the situation.

SAMPLE DATA EVALUATION QUESTIONS

1. Increase in farming in the Hilldale area
2. Acquisition of property for expanding the store
3. Cost of Johnson's property
4. State of Johnson's grocery business
5. Quality of the farm equipment North intends to sell

A	B	C	D	E
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
A	B	C	D	E
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A	B	C	D	E
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A	B	C	D	E
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
A	B	C	D	E
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The correct designation for number 1 is (D), a Major Assumption, since North bases his whole expansion project on his supposition that the new commuter-farmers in the Hilldale area are indicative of a trend in that direction. Number 2 is (A), a Major Objective, inasmuch as North's immediate purpose is to obtain room for expansion. (B), a Major Factor, is the correct answer for number 3 because North's present lack of capital renders cost a vital consideration. The best classification of number 4 is (C), a Minor Factor, because the depreciating value of Johnson's business influences his willingness to sell and also the price he will demand for his property; thus, this factor pertains to 3, the cost of Johnson's property, and is an indirect consideration in the case. Number 5, finally, is (E), an Unimportant Issue, for the quality of North's goods has no relevance to the situation at hand; i. e., the desire for room to expand his business.

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A second set of questions, data application, requires judgments based on a comparison of the available alternatives in terms of the relevant criteria, in order to attain the objectives stated in the passage.

Each of the following questions relates to the passage above. For each question, choose the best answer and blacken the appropriate space on the answer sheet.

SAMPLE DATA APPLICATION QUESTION

6. Which of the following reasons is (are) given for North's decision to expand his business?
- I. Potential demand for farm equipment in the Hilldale area
 - II. Desire to undermine Mike Johnson's business
 - III. Higher profit margin on farm equipment than on hardware
- (A) I only
 - (B) III only
 - (C) I and II only
 - (D) II and III only
 - (E) I, II, and III

The correct designation here is (A), I only, since the passage clearly states that North anticipates a demand for farm equipment in the Hilldale area and wishes to attract that market. Alternative II is easily eliminated because there is no indication of competition or malice between North and Johnson, and Johnson's business has, in any case, declined already. Alternative III, while plausible, is not supported by the passage.

NOW READ THE PASSAGES AND ANSWER THE QUESTIONS FOLLOWING THEM.

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Time - 35 minutes

26 Questions

Part A

Directions: In each of the questions below a principle of law is applied to a statement of facts. These principles may be either real or imaginary, but for the purposes of this test you are to assume them to be valid. In each question you will be asked to decide which of four factors is the major factor in the application of the principle to the statement of facts. Choose the best answer to the question and blacken the corresponding space on the answer sheet. You are to answer each question on the basis of what is stated or implied in the principle and statement of facts of that question only.

These questions do not presuppose any specific legal knowledge on your part; you are to arrive at your answers entirely by the ordinary processes of logical reasoning.

Case 1

The Hunts live in a subdivision of one-family houses, where the only zoning restriction is that lots should be used for residential purposes. On part of their property, the Hunts had an artificial lake made for decorative purposes, with mobiles of familiar cartoon figures projecting out of the water. There was no fence around the lake, nor was there any other barrier to the public around the lake or the Hunts' property. Although there were many children in the subdivision, there was no sign warning that the lake was six feet deep. The Hunts did not visit their neighbors, rarely spoke to them, and did not invite their neighbors to visit them.

William Jones, a two-and-a-half-year-old who lived next door to the Hunts, became fascinated by the mobiles. One day, while his mother had her back to him as she worked in her vegetable garden, he went over to the lake and walked in. His mother, seeing her child go into the lake, ran over, pushed a long stick into the water alongside William, and told him to take hold of it. William ignored his mother and continued to try to reach the mobiles. His mother could not swim and ran for help. William was injured and he almost drowned.

1. A suite brought on behalf of William against the Hunts is held for William on the following principle:

A possessor of land is liable for injury to a child caused by a condition on his land if the landholder knows or should know that children are likely to enter there and if the condition foreseeably involves an unreasonable risk of harm that the child is unlikely to appreciate.

Which of the following was the major factor in the disposition of this case?

- (A) The mobiles made the unfenced lake attractive to young children.
- (B) There was no warning sign posted at the lake.
- (C) The Hunts could not have known that William would enter their property.
- (D) The lake was constructed for decorative rather than for useful purposes.

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SECTION I

Time—40 minutes

Directions: This section consists of several groups of hypothetical law cases. Each case provides you with a set of facts and a legal holding which you are to assume was handed down by the court. Following each case is a list of four legal principles. You are to select the narrowest principle which provides the reasoning underlying the court decision rendered and which, at the same time, is not inconsistent with the rulings given in any of the preceding cases in that group. Indicate your choice by blackening the appropriate space on your answer sheet.

For example, the correct answer for the first case in any group will always be the narrowest principle which accurately explains the legal decision made. In the remaining cases in the group, however, the narrowest principle may not always be correct because it may be inconsistent with or contradictory to a decision reached in a preceding case. Therefore, in selecting the best principle for the second and later cases in a group, make sure that you choose the narrowest principle which is not inconsistent with a ruling in a preceding case.

These questions do not presuppose any specific legal knowledge on your part. You are to arrive at your answers entirely by the ordinary processes of logical reasoning and common sense.

If in working on this section you find it helpful to make marginal notes in your test book, you are free to do so. However, be sure to record all of your answers on your answer sheet.

Group 1

1. Alice was a notorious gossip. One day, while talking to a friend, Daley, she said, "Have you heard the latest? Herring was just caught stealing money from his employer!" Alice believed her statement to be accurate, although it was untrue. Since nobody believed Alice, Herring was not injured. In an action by Herring against Alice for damages, held, for Herring.

The narrowest principle that provides the reasoning underlying this result is:

- (A) One who spreads stories about another must respond in damages to such person.
- (B) The law will allow recovery of damages from a gossip, regardless of injury.
- (C) A false accusation that a person is a thief is grounds for recovery of damages.
- (D) The constitutional right to free speech is not absolute and can be limited as to those who would abuse it.

2. Littleton was known in the community as an honest, fair-minded person. One day, in a private conversation, he found himself in the midst of a heated argument with Manley. Overcome with rage, Littleton unjustifiably accused Manley of being "as crooked as they come." When Manley told others about the argument, Manley's esteem in the community was seriously diminished. In an action by Manley against Littleton for damages, held, for Littleton.

The narrowest principle that provides the reasoning underlying this result, and is not inconsistent with the preceding case, is:

- (A) One who accuses another to his face, giving him the opportunity of refutation, does not abuse the right to free speech.
- (B) One who makes a false accusation about another is not liable unless he communicates the accusation to a third person.
- (C) A statement made in uncontrollable anger is not likely to be believed and is not actionable.
- (D) One who contributes to his own injury cannot recover damages from another.

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SECTION II

Time—40 minutes

Directions: This section consists of several groups of hypothetical law cases. Each group contains (1) a set of four or five hypothetical law cases for which the decisions handed down by the court are given, and (2) a set of similar cases for which no court decision is given. Taken together, the set of five decided cases is to be regarded as the body of law in the jurisdiction under consideration. On the basis of this body of law you are to select the correct decision in each of the undecided cases and blacken the appropriate space on your answer sheet.

Before attempting to answer the questions, read each set of decided cases with care to determine the reasons underlying the court decision given. In doing this you are free to underline or to make marginal notes in your test book if you think this will be of help. However, be sure to mark your answers to the undecided cases on your answer sheet.

These questions do not presuppose any specific legal knowledge on your part. You are to arrive at your answers entirely by the ordinary processes of logical reasoning and common sense.

Group 1Decided Cases

- I. Haskell v. Scanlon: Haskell hitched a ride on Scanlon's truck which was driven by Jones. Scanlon had told Jones to permit nobody to hitch a ride. The road was wet and when Jones, exercising due care, attempted to stop at a traffic light, the truck skidded. Haskell fell off and was injured. In an action by Haskell against Scanlon, held, for Scanlon.
- II. McLaughlin v. Penny Co.: While shopping in Penny Co.'s store, McLaughlin used the washroom in the store. Smith, the washroom attendant, was mopping the floor and negligently injured McLaughlin with the mop handle. In an action by McLaughlin against Penny Co., held, for McLaughlin.
- III. Creed v. Sullivan: Sullivan, after returning from a rabbit hunt, negligently left his loaded gun in the yard. His thirteen-year-old son, not knowing it was loaded, picked up the gun and shot Creed. In an action by Creed against Sullivan, held, for Creed.
- IV. Tilli v. Johnson: Brown, an even-tempered man, worked as a counterman in Johnson's luncheonette. Tilli, who was an enemy of Brown, entered the luncheonette and ordered a cup of coffee. Brown brought the coffee to Tilli and intentionally spilled it on him. In an action by Tilli against Johnson, held, for Johnson.
- V. Davis v. Perrill: Ridley had a police record as a drunkard and was known in the community to become dangerously angry on slight provocation. Perrill hired Ridley as a gateman at a railroad crossing and furnished him with a gun. Davis wanted to cross the tracks and told Ridley to raise the gate. Ridley became angry and shot Davis. In an action by Davis against Perrill, held, for Davis.
28. Abbott, while driving to work, offered a ride to Cass. Cass's place of employment was three blocks past Abbott's office. As a favor to Cass, Abbott drove past his own office. As he neared Cass's office, Abbott negligently injured Fromm, a pedestrian. In an action by Fromm against Cass,
 - (A) Fromm will recover, because one may recover for an injury caused by another's negligence
 - (B) Fromm will recover, because Abbott was acting for Cass's benefit at the time of the accident
 - (C) Fromm will not recover, because neither Cass nor any employee of his was negligent
 - (D) Fromm will not recover, because he had no reason to expect that Abbott's negligence would render Abbott liable
29. May operated a firearms store. He employed Brian, an even-tempered man, as a salesman. Only one gun was kept loaded as a protection against thieves. The gun was carefully placed out of normal reach of customers and workers. One day, Large entered the store for the purpose of continuing a feud with Brian. Brian became enraged, reached for the gun, and shot Large. In an action by Large against May,
 - (A) Large will recover, because May was negligent in having kept a dangerous instrumentality on the premises
 - (B) Large will recover, because Brian was acting in the course of his employment
 - (C) Large will not recover, because May was careful in hiring an even-tempered man
 - (D) Large will not recover, because Brian acted out of personal malice

GO ON TO THE NEXT PAGE

3A⁻²⁰⁻

PART A
Time—15 minutes
25 Questions

Directions: Each question in this section consists of two quantities, one in Column A and one in Column B. You are to compare the two quantities and on the answer sheet blacken space

- A if the quantity in Column A is the greater;
B if the quantity in Column B is the greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

Note: Since there are only four choices, NEVER MARK (E).

Common

Information: In a question, information concerning one or both of the quantities to be compared is centered above the two columns. A symbol that appears in both columns represents the same thing in Column A as it does in Column B.

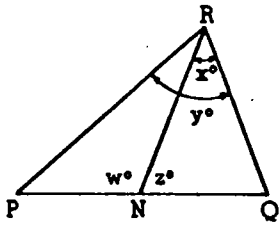
Numbers: All numbers used are real numbers.

Figures: Position of points, angles, regions, etc. can be assumed to be in the order shown.

Lines shown as straight can be assumed to be straight.

Figures are assumed to lie in the plane unless otherwise indicated.

Figures which accompany questions are intended to provide information useful in answering the questions. However, unless a note states that a figure is drawn to scale, you should solve these problems NOT by estimating sizes by sight or by measurement, but by using your knowledge of mathematics (see example 2 below).

	Column A	Column B	Sample Answers
Example 1:	2×6	$2 + 6$	<input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D
Examples 2-4 refer to $\triangle PQR$.			
			
Example 2:	PN	NQ	<input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input checked="" type="radio"/> D (since equal measures cannot be assumed, even though PN and NQ appear equal)
Example 3:	x	y	<input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D (since N is between P and Q)
Example 4:	$w + z$	180	<input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D (since PQ is a straight line)

3 3 3 3 3 3 3 3 3 -25- 3B

Part B

Time—15 minutes

15 Questions

YOU MAY NOT RETURN TO THE QUESTIONS IN PART A.

PLEASE NOTE THAT YOUR ANSWER SHEET HAS FIVE ANSWER POSITIONS MARKED A, B, C, D, E WHEREAS THE QUESTIONS IN THIS SECTION CONTAIN ONLY FOUR CHOICES. BE SURE NOT TO MAKE ANY MARKS IN COLUMN E.

Directions: Each passage in this part consists of numbered sentences. Following each passage are several statements. Under each statement, answer choices A, B, and C give the numbers of single sentences or combinations of sentences in the passage.

You are to decide whether the information in the statement is explicitly supplied by the passage. If it is, decide whether A, B, or C lists the fewest number of sentences from the passage necessary to supply all of the information in the statement. If one of them does, it is the correct answer, and you should blacken the corresponding space on your answer sheet. If the information in the statement is not explicitly supplied by the passage or if none of the answer choices A, B, or C lists the fewest number of sentences necessary to supply the information in the statement, blacken space D on your answer sheet.

SAMPLE SET

(1) A recent court ruling held that citizens defamed by public officials cannot sue in federal courts for deprivation of their civil rights. (2) This decision, made by the United States Supreme Court, did not affect the right to sue public officials in state courts for defamation. (3) However, such suits are difficult to bring in many states, because of statutes or legal rules favoring public officials in civil suits. (4) The decision appeared to extend a recent trend toward denying access to federal court by persons complaining of constitutional violations by public officials. (5) The Court divided five to three in this decision.

1. **Statement:** In a split decision the United States Supreme Court seemed to continue a recent trend toward limiting citizens' access to federal court for suits involving the violation of constitutional rights by public officials.

(A) 1, 2, and 4

(B) 2, 4, and 5

(C) 1, 2, 3, 4, and 5

(D) None of the above lists the fewest number of sentences necessary to supply the information in the statement.

(A) (B) (C) (D)

2. **Statement:** The United States Supreme Court ruled that citizens defamed by public officials cannot sue for deprivation of their civil rights.

(A) 1

(B) 1 and 2

(C) 1, 2, and 4

(D) None of the above lists the fewest number of sentences necessary to supply the information in the statement.

(A) (B) (C) (D)

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1 -2-

SECTION I

Time—30 minutes

Directions: Each passage in this section is followed by questions based on its content. After reading a passage, choose the best answer to each question and blacken the space beneath the appropriate letter on the answer sheet. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Carlyle has said scornfully that America means only roast turkey every day for everybody. He forgot that states, as has been said of armies, go on their bellies.

- (5) As for the security of property, it should be moderately well insured in a country where almost every man hopes to be rich, even though the only property qualification is the ownership of two hands that add to the general wealth. Is it not the best security for anything to interest the largest possible number of persons in its preservation and the smallest number in its division? In point of fact, however, farseeing men count the increasing power of wealth and its combinations as one of the chief dangers with which the institutions of the United States are threatened in the not-too-distant future. The right of individual property
- (10) may well be the very cornerstone of civilization, but I am a little impatient of being told that property is entitled to exceptional consideration because it bears all the burdens of the state. It bears those, indeed,
- (15) which can most easily be borne, but poverty pays with its person the chief expenses of war, pestilence, and famine. Wealth should not forget this, for poverty is beginning to think of it now and then.
- (20) Let me not be misunderstood. I see as clearly as any man possibly can, and rate as highly, the value of newly acquired and hereditary wealth as the security of refinement and the feeder of all those arts that ennoble and beautify life. Many an ancestral hall in England has been a nursery of that culture which has been of example and benefit to all. But new gold can, with time, exert the civilizing virtue which old gold
- (25) now engenders.
1. The author's main contention concerning recently accumulated wealth is that
- (A) it is usually used for unethical purposes
(B) it is in no way different from old wealth
(C) since it is not inherited it is ignorant of its responsibility to foster cultural advantages
(D) it is the cornerstone of society
(E) it can become a cultural influence
2. According to the passage, the impoverished must often make a contribution of
- (A) material goods
(B) their lives
(C) production in times of crisis
(D) caring for the victims of disaster
(E) supporting the cultural institutions established by the wealthy
3. We may infer that by "general wealth" (lines 9 and 10) the author means
- (A) the raw materials produced by a nation
(B) the benefits of the culture and institutions of a nation
(C) hereditary wealth
(D) funds controlled by the federal government
(E) the collective wealth of all the individuals in a nation

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Part A

Time—15 minutes

Passage 1

The economic growth of underdeveloped countries needs to be actively fostered. In achieving this end, an important element is the flow of fresh capital. Both creditor and debtor countries should do what is within their power to enlarge this flow. It is, however, becoming apparent that in any foreseeable circumstances only insufficient private capital will be available for investment in underdeveloped countries. Governments should therefore empower the International Bank of the United Nations to go as far in its lending for developmental purposes as its laudable policy of following regular business procedures will permit, and should instruct it to act accordingly.

The peoples of the advanced countries should gradually be educated to make the sacrifice of an increasing amount of international aid to underdeveloped countries. We need particularly to tap more effectively the resources of other advanced countries in the United Nations in addition to the United States. Quite apart from the increase in aid which this would imply, a broader participation in international sharing would also help to keep a semblance of political balance in the international aid schemes. A gradually increasing part of international aid could then be channeled through international agencies. This is probably the only means by which aid to underdeveloped countries can be preserved on any appreciable level. It is important to emphasize that aid should be kept separate from credit and prevented from deteriorating sound business standards in credit affairs. Distribution of aid to underdeveloped countries through international agencies would be important also in order to tackle more successfully the thorny question of distinguishing between "good" and "bad" backward states. In the past, the United States has sometimes placed considerations of international politics above the basic economic needs of the countries involved. In the future we must be more prepared to come to the aid of all those governments that prove themselves willing and able to tackle with determination their basic problems, and assistance must be furnished even when we are not in complete accord with the national and international policies of the countries involved. It is recognized, of course, that if international aid is completely swallowed up in the military strategy of current world-wide tensions, none of these reforms in the direction of good economy and fair standards is feasible.

Another important way through which the economies of underdeveloped countries may be strengthened is through their setting up import restrictions. Unfortunately, we have too often been unwilling to admit that underdeveloped countries have a rational interest in protecting their struggling industries against our competition. To admit this openly and squarely and to take the consequences in loss of foreign markets is probably the most powerful of the aids to self-aid that we are at present in a position to give the underdeveloped countries.

Appeals to abolish restrictions on international trade have a legitimate address, and that is to the industrially advanced countries. The advanced countries should, in fact, manage their internal affairs and their international relations so that they can take their proper place in a better integrated world economy as creditor countries; and creditor countries should accept the consequences of their position. Thus when creditor countries decrease their import restrictions, they raise the level of world trade in general, and at the same time help specifically the underdeveloped countries that are interested in maximizing their exports and obtaining freer access to markets.

Another service, which we can render the underdeveloped countries without any cost to ourselves and actually to our own advantage, is to take steps to encourage more stable world-wide economic conditions. We must realize that the struggling economies of underdeveloped countries may not be able to endure successfully the widespread business fluctuations that commonly occur.

We need to give some thought also to increasing the possibilities for individuals, and not simply for commodities, to move across the frontiers between our countries. Labor should be allowed to flow freely. More generally, we should relax our national restrictions on migration. For four decades now the countries of our part of the world have been busy splitting themselves up into isolated national compartments. By limiting the international elbow room for ordinary working people, farmers, and professionals, as well as the small-scale businessman, we have prevented human resources from assembling where they may be needed. The right of men to choose where they will work represents a fundamental value in Western civilization of which we are in dire need if we are to have any chance of tackling constructively the formidable international problems that are now facing us.

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Part B

Time—15 minutes

Directions: The questions which follow are based on the three passages in Part A. Choose the best answer to each question and blacken the corresponding space on the answer sheet.

As stated previously, these questions test your ability to remember the main points and significant details of the passages and your ability to draw inferences from this material.

YOU ARE NOT TO REFER BACK TO THE PASSAGES.

Questions on Passage 1

61. According to the author, to whom specifically should appeals be addressed for abolishing trade restrictions?
- (A) Underdeveloped countries
 - (B) Industrially advanced countries
 - (C) Countries providing strategic materials
 - (D) Countries of the United Nations
 - (E) Debtor countries
62. Which of the following does the author believe will occur if international aid is granted on the basis of military strategy?
- (A) Underdeveloped countries will be encouraged to solve basic economic problems.
 - (B) Current world-wide tensions will be intensified, increasing the danger of war.
 - (C) The United Nations will become increasingly recognized as an important political force.
 - (D) Provision for the economic development of backward areas will not be satisfactory.
 - (E) Political considerations will be given equal weight with economic considerations.
63. The author believes that it would be advantageous to relax national restrictions on migration primarily in order to
- (A) build up better understanding among the peoples of the world
 - (B) provide better opportunities for individual advancement
 - (C) permit human resources to assemble where needed
 - (D) weaken loyalties to nationality groupings
 - (E) prove that the United States really believes in democratic freedoms
64. It can be inferred that aid to underdeveloped countries is best given
- (A) directly by advanced countries that can provide markets for the goods of underdeveloped countries
 - (B) directly by those advanced countries that will probably not provide markets for the goods of underdeveloped countries
 - (C) directly by advanced countries in the same "sphere of influence" as the countries they aid
 - (D) by advanced countries through international agencies
 - (E) by advanced countries through limited treaty organizations
65. The author feels that aid should be kept separate from credit in order to
- (A) preserve sound business standards in credit affairs
 - (B) encourage creditor countries to invest wisely
 - (C) place the basic economic needs of underdeveloped countries above international politics
 - (D) prevent widespread business fluctuations that commonly occur
 - (E) make foreign aid more attractive politically
66. A fundamental value of Western civilization specifically mentioned in the passage is
- (A) freedom from want
 - (B) freedom to establish trade barriers
 - (C) the right to sell where one chooses
 - (D) the right to choose where one will work
 - (E) the right to aid or to withhold aid as one chooses

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9

SECTION IX

9

Time - 20 minutes

Directions: In this section you will first be given a statement setting forth certain facts or imaginary conditions which you are to assume to be true. Following the statement are two sets of conclusions drawn from these facts; in each set of three conclusions, one is true, or valid, and two are false. A valid conclusion is one which may justifiably be drawn from the information given; a false conclusion is one which is contradicted by or irrelevant to the information given.

In each set of three conclusions, you are to pick the one conclusion which is valid and make a cross in the box beneath the corresponding number on the answer sheet.

All unripe fruit is unfit to eat, and no fruit grown in the shade is ripe at this time of the year. However, these apples are fit to eat.

Conclusions:

356. 1-All ripe fruit is fit to eat.
2-Not all fruit that is fit to eat is ripe.
3-No fruit grown in the shade is now fit to eat.
357. 1-Not all of these apples are ripe.
2-These apples were grown in the sun.
3-These apples are the only fruit which is ripe at this time.

Cullington, who was a liberal, and Throckmorton both ran against Senator Rotanes. No liberal was elected.

Conclusions:

358. 1-Throckmorton was probably a liberal.
2-It is possible that any one of the three men was elected.
3-Throckmorton may have been elected.
359. 1-Senator Rotanes may have been a liberal.
2-Neither Throckmorton nor Senator Rotanes could have been liberals.
3-Rotanes and Cullington probably had similar policies.

Entomologists report that the Black Widow, a type of spider, is very poisonous. The Red Queen is very poisonous.

Conclusions:

360. 1-The Red Queen must be a type of spider.
2-Not all Black Widows are poisonous.
3-Spiders may not include Red Queens.
361. 1-All spiders are poisonous.
2-Not all spiders are necessarily poisonous.
3-At least two types of spider are very poisonous.

A study of aquatic vertebrate types reveals that some finigals belong to the class ospule and some finigals belong to the class caspule.

Conclusions:

362. 1-There may be finigals belonging to neither of the two classes mentioned.
2-All ospules and caspules are finigals.
3-Finigals are divided into only two classes.
363. 1-Finigals are not vertebrates.
2-Most finigals are either ospules or caspules.
3-Ospules and caspules may include types other than finigals.

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SECTION VI

REFERENCE READING

Time—20 minutes

It is often necessary to find certain facts from a lengthy report without taking time to read the report from cover to cover. The ability to do this effectively may be very helpful to you.

For this test you will be given a pamphlet about GRAIN SORGHUM. Do not attempt to read it through, but look at the paragraph headings, skim it, or do what is necessary to answer the questions printed in the remainder of this booklet. Use your answer sheet to make your responses.

You will be allowed 20 minutes to answer 25 questions.

121. Grain sorghums have an advantage over other crops in that they require
- (A) less fertilizer
 - (B) less moisture
 - (C) a shorter growing season
 - (D) less frequent cultivation
 - (E) cheaper pest control techniques
122. For greatest grain production, what distance between rows is recommended?
- (A) 20 inches
 - (B) 30 inches
 - (C) 36 inches
 - (D) 42 inches
 - (E) 50 inches
123. A recommended application rate of 2,4-D acid equivalent in pounds per acre is
- (A) $\frac{1}{3}$
 - (B) $\frac{3}{4}$
 - (C) $1\frac{1}{2}$
 - (D) $2\frac{1}{2}$
 - (E) 4
124. Head smut is controlled by
- (A) spraying with methoxychlor
 - (B) planting rows further apart
 - (C) avoiding excess irrigation
 - (D) use of smut-resistant varieties
 - (E) locating away from other grains
125. A recommended mercurial fungicide is
- (A) Captan Dieldrin
 - (B) Ceresan M
 - (C) Delsan A-0
 - (D) Panoram D-31
 - (E) Drinox
126. Compared to corn, grain sorghum has
- (A) less vitamin A
 - (B) less vitamin B
 - (C) more lysine
 - (D) less protein
 - (E) more fat
127. In 1958 the national production of grain sorghum in bushels was
- (A) 8 million
 - (B) 16 million
 - (C) 165 million
 - (D) 564 million
 - (E) 614 million
128. 2,4-D should be applied
- (A) before the boot stage
 - (B) upon emergence
 - (C) during heading
 - (D) when the sorghum is 2 to 4 inches high
 - (E) any time before heading
129. One suggestion made to minimize damage from birds is to
- (A) plant away from buildings and trees
 - (B) hang pieces of aluminum from poles
 - (C) use scarecrows
 - (D) spray with formic acid
 - (E) use a fertilizer additive
130. In addition to treating seed, what should be done to prevent seed rot?
- (A) Plant early
 - (B) Plant late
 - (C) Plant shallow
 - (D) Plant deep
 - (E) Plant in loose soil
131. Grain sorghums have the greatest need for
- (A) lime
 - (B) phosphates
 - (C) potash
 - (D) nitrogen
 - (E) organic compounds

SECTION II

Time - 20 minutes

Directions: Some of the following sentences contain one blank space; some sentences contain two blank spaces. Each blank space indicates that one word has been omitted. Beneath a sentence which contains one blank space are five numbered words; from these five words you are to choose the one word which, when inserted in the blank space, best fits in with the meaning of the sentence as a whole. Beneath a sentence which contains two blank spaces are five numbered sets of words; from these five sets you are to choose the one set which best completes the sentence when the first word of the set is inserted in the first blank and the second word in the second blank. Then, on the answer sheet, make a cross in the box beneath the number corresponding to the number of the word or set of words which you have chosen.

41. There were ----- in his nature which made him seem an inexplicable enigma: he was severe and gentle; he was modest and scornful; he longed for affection and he was cold.
1-aspirations 2-contradictions 3-distortions 4-virtues 5-flaws
42. Andrew Jackson believed that wars were inevitable; and to him the configuration of our coast, its length and its innumerable bays and inlets, presented a ----- that called for more than a passive navy standing watchful.
1-possibility 2-threat 3-provocation 4-vulnerability 5-tendency
43. Since society is not -----, some modification of any set of institutions is always necessary in order to adapt them to changing conditions.
1-institutionalized 2-invincible 3-static 4-flexible 5-coherent
44. Those who are ----- lose initiative, both in thought and action; moreover, the anger generated by the feeling of being ----- tends to find an outlet in bullying those who are weaker.
1-aggressive..important 2-submissive..thwarted 3-admired..superior 4-ambitious..criticized 5-indispensable..subjugated
45. The amusements of modern urban people tend more and more to be ----- and to consist of the ----- of the skilled activities of others.
1-strenuous..contemplation 2-healthful..enjoyment 3-individual..sharing 4-passive..observation 5-intellectual..repetition
46. We can never really ----- children who respect us merely as the owners of material things; we can only keep them in temporary ----- by withholding those things from them.
1-teach..ignorance 2-protect..custody 3-befriend..enmity 4-understand..occupations 5-discipline..subjugation
47. This sense of living in a new age, broken from the past by a kind of awesome discontinuity, gave the impression that the troubles of this age were -----.
1-unique 2-insoluble 3-incomprehensible 4-grave 5-enigmatic
48. The alternative to rigorously demonstrated truth is not ignorance; there is a middle region of ----- based on observation and reasonable interpretations.
1-facts 2-proof 3-opinion 4-ideals 5-science
49. Because there are ----- value systems, Weber believed that there could be no one universally valid system of sociology.
1-diverse 2-obscure 3-interdependent 4-fallacious 5-complex
50. Although the ultimate fate of the counteroffensive is still in doubt, its ----- of unsuspected enemy resistance has caused hopes of an immediate collapse to fade.
1-suppression 2-distraction 3-revelation 4-repulsion 5-disregard
51. Impartiality is not indifference; it is the ----- of opposite forces and clashing motives.
1-protection 2-existence 3-criticism 4-appreciation 5-arena
52. Modern technology has made it possible for leisure to be a ----- evenly distributed through the community rather than the ----- of small classes.
1-need..demand 2-distraction..incentive 3-necessity..gift 4-reward..virtue 5-right..prerogative

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SECTION VI

Time—20 minutes

25 Questions

Directions: In each of the following sentences, some part of the sentence or the entire sentence is underlined. Beneath each sentence you will find five ways of phrasing the underlined part. The first of these repeats the original; the other four are different. If you think the original is better than any of the alternatives, choose answer A; otherwise choose one of the others. Select the best version and blacken the corresponding space on your answer sheet.

This is a test of correctness and effectiveness of expression. In choosing answers, follow the requirements of standard written English; that is, pay attention to grammar, choice of words, and sentence construction. Choose the answer that produces the most effective sentence—clear and exact, without awkwardness or ambiguity. Do not make a choice that changes the meaning of the original sentence.

1. As Dubček reminds us, giving priority to developing the means of production has and always will be the fundamental aim of the Russian government.
 - (A) has and always will be the fundamental aim of the Russian government
 - (B) has been and always will be the fundamental aim of the Russian government
 - (C) has been and always will have been the fundamental aim of the Russian government
 - (D) is the fundamental aim of the Russian government and always will be so
 - (E) is the Russian government's fundamental aim and has and always will be
2. The automobile industry could improve the safety of cars, but all improvements of such a kind add to the already expensive cost of the units.
 - (A) but all improvements of such a kind add to the already expensive cost of the units
 - (B) but all improvements of such kind would make already expensive units add to the cost
 - (C) although additional cost is added to already expensive units by such improvements
 - (D) but such improvements would add to the cost of already expensive units
 - (E) all such improvements adding more cost to already expensive units
3. Detective stories and crossword puzzles intrigue many, but cryptography and code breaking captures the imagination of a few only.
 - (A) captures the imagination of a few only
 - (B) only captures the imagination of a few
 - (C) captures only the imagination of a few
 - (D) only capture the imagination of few
 - (E) capture the imagination of only a few
4. For Americans, the most seductive appeal of radical ideologies is that all in one way or another attack the competitive foundation of the social structure in the United States.
 - (A) is that all in one way or another attack
 - (B) is that all in one way or another attacks
 - (C) are that all in one way or another attacks
 - (D) are that all in one way or another attack
 - (E) is in their all in one way or another attacking
5. The oriental rugs that embellished the homes of the affluent in the seventeenth and eighteenth century were used more often to cover tables and cupboards as to cover floors.
 - (A) century were used more often to cover tables and cupboards as to cover floors
 - (B) century were used more often to cover tables and cupboards than to cover floors
 - (C) century were used to cover tables and cupboards more than floors
 - (D) centuries were used as often to cover tables and cupboards more than the floor
 - (E) centuries were used more often to cover tables and cupboards than to cover floors
6. In 1836 the first waves of the great tide of European immigration had reached the shores of America with a population still more than ninety per cent rural.
 - (A) of America with a population
 - (B) of an America whose population was
 - (C) in America populated by Americans
 - (D) in America that had a population
 - (E) of the America where a population was
7. A survey conducted by the university showed that sophomores like physics more than freshmen.
 - (A) that sophomores like physics more than freshmen
 - (B) that sophomores liked physics more than freshmen
 - (C) sophomores to like physics more than freshmen
 - (D) sophomores liking physics more than freshmen did
 - (E) that sophomores like physics more than freshmen do

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SECTION V

Time—20 minutes

35 Questions

Directions: The following sentences contain problems in grammar, usage, diction (choice of words), and idiom.

Some sentences are correct.

No sentence contains more than one error.

You will find that the error, if there is one, is underlined and lettered. Assume that all other elements of the sentence are correct and cannot be changed. In choosing answers, follow the requirements of standard written English.

If there is an error, select the one underlined part that must be changed in order to make the sentence correct, and blacken the corresponding space on the answer sheet.

If there is no error, mark answer space E.

EXAMPLES:

SAMPLE ANSWERS

- I. Between 1960 and 1964, Switzerland's
 A
 annual industrial-growth rate were eight
 B
 per cent—a figure surpassed only
 C
 by Japan's. No error
 D E

I. (A) ☒ (B) (C) (D) (E)

- II. Plants are important to human existence
 A
 because of their unique ability to transform
 B C
 the energy of sunlight into the food that
 D
 sustains all life. No error
 E

II. (A) (B) (C) (D) ☒ (E)

- The glue-ear syndrome is a condition involving the
 A
middle ear, occurring most commonly in children,
 (A)
 and being characterized by various degrees
 B
of damage to the eardrum and the tiny bones of
 C D
 the middle ear. No error
 E
- The conference delegates suggested that land
be managed as a public resource rather than
 A B
 as a profit-generating commodity, and
calling for redistribution of land in poor countries
 C
 and for a more equitable distribution of wealth.
 D
No error
 E
- The Nuclear Regulatory Commission defeated a
 proposal by Gilinsky, who had wanted
 A
the sale agreement to require that the
 B
reactor sold to Spain operates with fuel supplied
 C D
 by the United States. No error
 E
- In 1974 a resolution proposed in the state legislature
 A
 to erect 300 sets of windmills along the New Jersey
 B C
coastline to provide for 60 per cent of the state's
 (C) D
future electricity needs. No error
 (D) E

GO ON TO THE NEXT PAGE.

Time - 20 minutes

Directions: Each of the questions in this section consists of two words which have a certain relationship to each other, followed by five numbered pairs of related words. Select the numbered pair of words which are related to each other in the same way as the original pair of words are related to each other. Then, on the answer sheet, make a cross in the box beneath the number corresponding to the number of the pair you have selected.

1. TRUCK:BATTLE :: 1-rebel:authority 2-wire:telephone 3-pause:activity 4-banister:stairs 5-retreat:advance
2. HOOK:FISH :: 1-snow:garden 2-snow:shovel 3-tree:bird 4-snare:bird 5-snare:shovel
3. LINK:CHAIN :: 1-narrative:story 2-history:epoch 3-foundation:wall 4-substantiation:evidence 5-event:history
4. SKETCH:PAINTING :: 1-sculptured:architectural 2-artistic:architectural 3-tentative:architectural 4-tentative:final
5-tentative:substantial
5. CANDY:SUGAR :: 1-repartee:wit 2-sourness:vinegar 3-refinement:coarseness 4-skill:chance
5-fickleness:constancy
6. REGRET:ERROR :: 1-reward-inducement 2-reward:failure 3-shyness:chagrin 4-renunciation:failure
5-chagrin:failure
7. TEMPTATION:SCRUPLES :: 1-bribe:integrity 2-wealth:wants 3-lure:deceit 4-stimulus:response
5-exhortation:ethics
8. IMAGE:DISTORT :: 1-report:disparage 2-account:exaggerate 3-lens:focus 4-audience:confuse 5-lie:falsify
9. CONVOKE:ASSEMBLY :: 1-canvass:membership 2-muster:troops 3-disband:army 4-gavel:attention
5-chairman:order
10. AGRICULTURE:FARMER :: 1-construction:bricklayer 2-plans:architect 3-clothing:laundress 4-factory:mechanic
5-meals:dietician
11. YAWN:BOREDOM :: 1-delight:surprise 2-degree:measurement 3-food:hunger 4-twilight:afternoon
5-ostentation:vanity
12. LEVEE:RIVER :: 1-science:progress 2-conventionality:behavior 3-government:law 4-delegate:convention
5-behavior:mankind
13. SCOFF:DERISION :: 1-insult:indignation 2-rebuke:disapproval 3-praise:hypocrisy 4-doubt:conviction
5-reprimand:disobedience
14. PHOTOGRAPH:PAINTING :: 1-newspaper:book 2-clarity:ambiguity 3-transcript:record 4-mirror:reflection
5-translation:interpretation
15. PRISON:BODY :: 1-punishment:mind 2-knowledge:achievement 3-delusion:mind 4-danger:courage 5-faith:soul
16. CARICATURE:FACE :: 1-criticize:book 2-reflection:image 3-comedy:drama 4-cartoon:politics 5-parody:poem
17. BRASS:GOLD :: 1-tin:lead 2-pupil:teacher 3-disrespect:respect 4-cunning:wisdom 5-merit:virtue
18. OIL:MOTOR :: 1-water:thirst 2-sensitivity:response 3-abrasive:tool 4-tact:discussion 5-wash:dish
19. ENIGMATIC:STATEMENT :: 1-indubitable:argument 2-overt:act 3-specifics:allusion 4-foreboding:event
5-indeterminate:action
20. COWARD:DANGER :: 1-recluse:society 2-menial:position 3-skeptic:truth 4-hero:battle 5-villain:punishment

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Time - 30 minutes

Directions: Each question in this section consists of a group of five words, four of which have a quality in common. Select the one word which does not fit in with the other four words, and make a cross in the box beneath the corresponding number on the answer sheet. Note that the relationships do not depend upon spelling, number of letters or syllables, or parts of speech.

106. 1-uncertainty 2-mistrust 3-doubt 4-reliance 5-misgiving
107. 1-Welsh 2-English 3-Scotch 4-Irish 5-French
108. 1-invisible 2-titled 3-incognito 4-silent 5-anonymous
109. 1-influenza 2-bronchitis 3-sinusitis 4-appendicitis 5-pneumonia
110. 1-append 2-detach 3-affix 4-subjoin 5-annex
111. 1-autobiography 2-diary 3-journal 4-novel 5-memoirs
112. 1-Leghorn 2-Guernsey 3-Alderney 4-Jersey 5-Holstein
113. 1-apothecary 2-chemist 3-druggist 4-physicist 5-pharmacist
114. 1-knit 2-sew 3-read 4-paint 5-write
115. 1-sum 2-merger 3-unanimous 4-solitary 5-aggregate
116. 1-fruit 2-profit 3-dividend 4-harvest 5-wager
117. 1-paramecium 2-amoebea 3-insect 4-bacterium 5-microbe
118. 1-beau 2-page 3-jester 4-knight 5-squire
119. 1-pitch 2-tone 3-vibrancy 4-acoustics 5-timbre
120. 1-worship 2-happiness 3-press 4-assembly 5-speech
121. 1-coincidence 2-simultaneous 3-anachronism 4-accompaniment 5-contemporary
122. 1-again 2-conjugate 3-revision 4-encore 5-renaissance
123. 1-fringe 2-coast 3-hem 4-field 5-frontier
124. 1-relinquish 2-annul 3-repeal 4-abrogate 5-rescind
125. 1-final 2-nucleus 3-equator 4-midriff 5-mediocre
126. 1-launch 2-dory 3-lorry 4-yacht 5-steamer
127. 1-ogre 2-gnome 3-pixie 4-elf 5-leprechaun
128. 1-earth 2-pendulum 3-cyclone 4-wheel 5-whirlpool
129. 1-Mecca 2-Jerusalem 3-Edinburgh 4-Lourdes 5-Canterbury
130. 1-iron 2-water 3-oxygen 4-sodium 5-nitrogen
131. 1-omen 2-overture 3-preamble 4-vanguard 5-retinue
132. 1-immigrant 2-citizen 3-denizen 4-aborigine 5-native
133. 1-dream 2-nightmare 3-sleep 4-fantasy 5-image
134. 1-albatross 2-brontosaurus 3-mastodon 4-dinosaur 5-dodo
135. 1-axiom 2-aphorism 3-annotation 4-apothegm 5-adage
136. 1-square 2-rhombus 3-triangle 4-trapezoid 5-parallelogram

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