

# DU MSc PhD Comb degree Bio Sci N MSc Bio Sci PH

Topic:- DU\_J18\_MSC\_BIOSCI\_Topic01

## 1) 100 microns equals

[Question ID = 4436]

1.  $10^{-6}$  m [Option ID = 17741]
2.  $10^{-4}$  m [Option ID = 17743]
3.  $10^{-7}$  m [Option ID = 17744]
4.  $10^{-5}$  m [Option ID = 17742]

**Correct Answer :-**

- $10^{-4}$  m [Option ID = 17743]

## 2) 100 Angstroms equals

[Question ID = 4435]

1.  $10^{-10}$  m [Option ID = 17739]
2.  $10^{-9}$  m [Option ID = 17737]
3.  $10^{-8}$  m [Option ID = 17738]
4.  $10^{-12}$  m [Option ID = 17740]

**Correct Answer :-**

- $10^{-8}$  m [Option ID = 17738]

## 3) The fingerprint region is a part of

[Question ID = 4437]

1. Proton NMR spectrum [Option ID = 17745]
2. Infrared spectrum [Option ID = 17748]
3.  $C_{13}$  NMR spectrum [Option ID = 17747]
4. UV-Visible spectrum [Option ID = 17746]

**Correct Answer :-**

- Infrared spectrum [Option ID = 17748]

## 4) The first nucleotide polymerizing enzyme discovered was

[Question ID = 4374]

1. DNA polymerase [Option ID = 17494]
2. DNA primase [Option ID = 17495]
3. Taq polymerase [Option ID = 17493]
4. none of these [Option ID = 17496]

**Correct Answer :-**

- DNA polymerase [Option ID = 17494]

## 5) The pH of a 0.001 M solution of HCl is

[Question ID = 4423]

1. 0.001 [Option ID = 17692]
2. 2 [Option ID = 17690]
3. 1 [Option ID = 17689]
4. 3 [Option ID = 17691]

**Correct Answer :-**

- 3 [Option ID = 17691]

**6) The photosynthetic assimilation of atmospheric CO<sub>2</sub> by leaves yield sucrose and starch as end products of two gluconeogenic pathways that are physically separated. Which one of the following combination of cell organelles are involved in such physical separation of the process?**

**[Question ID = 4411]**

1. Sucrose in chloroplasts and starch in cytosol. [Option ID = 17642]
2. Sucrose in cytosol and starch in mitochondria. [Option ID = 17641]
3. Sucrose in cytosol and starch in chloroplasts [Option ID = 17644]
4. Sucrose in mitochondria and starch in cytosol. [Option ID = 17643]

**Correct Answer :-**

- Sucrose in cytosol and starch in chloroplasts [Option ID = 17644]

**7) The excess oxygen consumed after a vigorous exercise help**

**[Question ID = 4419]**

1. to pump out lactic acid from muscles [Option ID = 17673]
2. to reduce dissolved carbon dioxide in blood [Option ID = 17675]
3. to increase the concentration of lactic acid in muscles [Option ID = 17674]
4. to make ATP for gluconeogenesis [Option ID = 17676]

**Correct Answer :-**

- to make ATP for gluconeogenesis [Option ID = 17676]

**8) The approximate molecular weight of the tetrapeptide "A-C-D-E" would be**

**[Question ID = 4388]**

1. 227 Da [Option ID = 17550]
2. 110 Da [Option ID = 17551]
3. 436 Da [Option ID = 17549]
4. 350 Da [Option ID = 17552]

**Correct Answer :-**

- 436 Da [Option ID = 17549]

**9) The genetic distance between two genes can be different from the physical distance between them is**

**[Question ID = 4372]**

1. impossible [Option ID = 17485]
2. possible because genetic distance is relative unlike physical distance [Option ID = 17487]
3. possible because physical distance is relative unlike genetic distance [Option ID = 17488]
4. possible, because of the variation in the position of the gene from the centromere [Option ID = 17486]

**Correct Answer :-**

- possible because genetic distance is relative unlike physical distance [Option ID = 17487]

**10) The enzyme carboxypeptidase contains**

**[Question ID = 4438]**

1. Zinc ion [Option ID = 17751]
2. Iron ion [Option ID = 17750]
3. Cobalt ion [Option ID = 17752]
4. Calcium ion [Option ID = 17749]

**Correct Answer :-**

- Zinc ion [Option ID = 17751]

**11) The coenzyme TPP is derived from the vitamin**

**[Question ID = 4441]**

1. Tetrahydrofolate [Option ID = 17763]
2. Thymine [Option ID = 17761]
3. Biotin [Option ID = 17764]
4. Ascorbic acid [Option ID = 17762]

**Correct Answer :-**

**12) The predominant form of Immunoglobulin present at mucosal sites is**

**[Question ID = 4405]**

1. IgG [Option ID = 17618]
2. IgD [Option ID = 17619]
3. IgM [Option ID = 17620]
4. IgA [Option ID = 17617]

**Correct Answer :-**

- IgA [Option ID = 17617]

**13) Two cockroaches of the same species have the same thickness but different lengths and widths. Their ability to survive in oxygen deficient environments will be compromised if their**

**[Question ID = 4418]**

1. thickness increases, and the rest of the size remains the same. [Option ID = 17669]
2. thickness remains unchanged, but their length increases. [Option ID = 17670]
3. thickness remains unchanged, but their width decreases. [Option ID = 17671]
4. thickness decreases, but the rest of the size remains unchanged [Option ID = 17672]

**Correct Answer :-**

- thickness increases, and the rest of the size remains the same. [Option ID = 17669]

**14) Collagens are the most abundant component of the extracellular matrix. In order to maintain normal physiological processes like wound healing, bone development and others, which one of the following type of enzymes is most important?**

**[Question ID = 4392]**

1. Proteases [Option ID = 17566]
2. Amylase [Option ID = 17567]
3. Peptidase [Option ID = 17565]
4. Lipases [Option ID = 17568]

**Correct Answer :-**

- Proteases [Option ID = 17566]

**15) DNA tangling during replication is prevented by**

**[Question ID = 4376]**

1. DNA ligase [Option ID = 17502]
2. DNA helicase [Option ID = 17501]
3. DNA topoisomerase [Option ID = 17503]
4. All of these [Option ID = 17504]

**Correct Answer :-**

- DNA topoisomerase [Option ID = 17503]

**16) Glutaric acid contains [Question ID = 4429]**

1. 5 carbon atoms [Option ID = 17713]
2. 4 carbon atoms [Option ID = 17716]
3. 2 carbon atoms [Option ID = 17714]
4. 3 carbon atoms [Option ID = 17715]

**Correct Answer :-**

- 5 carbon atoms [Option ID = 17713]

**17) Geometric isomers are**

**[Question ID = 4442]**

1. position isomers [Option ID = 17767]
2. rarely found [Option ID = 17768]
3. configurational isomers [Option ID = 17765]
4. conformational isomers [Option ID = 17766]

**Correct Answer :-**

- configurational isomers [Option ID = 17765]

**18) Retroviruses have RNA genome, however, they replicate through double stranded DNA formation. This process involves**

**[Question ID = 4420]**

1. A polymerase coded by the host [Option ID = 17678]
2. A polymerase coded by the virus itself [Option ID = 17677]
3. Host RNA polymerase [Option ID = 17679]
4. Unknown mechanism [Option ID = 17680]

**Correct Answer :-**

- A polymerase coded by the virus itself [Option ID = 17677]

**19) Caprolactam is a monomer used to produce**

**[Question ID = 4431]**

1. Starch [Option ID = 17722]
2. Cellulose [Option ID = 17721]
3. Glycogen [Option ID = 17723]
4. Nylon [Option ID = 17724]

**Correct Answer :-**

- Nylon [Option ID = 17724]

**20) Tetracycline blocks protein synthesis by**

**[Question ID = 4364]**

1. Inhibiting translocase enzyme [Option ID = 17456]
2. Inhibitory binding of ribosome to 5' Cap [Option ID = 17453]
3. Inhibit binding of ribosome to shine-dalgarno sequences [Option ID = 17455]
4. Inhibiting binding of aminoacyl-tRNA to ribosome [Option ID = 17454]

**Correct Answer :-**

- Inhibiting binding of aminoacyl-tRNA to ribosome [Option ID = 17454]

**21) Hematopoietic stem cells are pluripotent, which means that they are**

**[Question ID = 4400]**

1. capable of developing into any type of blood cells [Option ID = 17598]
2. committed to produce cells of a single lineage [Option ID = 17599]
3. not self renewal [Option ID = 17600]
4. antigen specific cells [Option ID = 17597]

**Correct Answer :-**

- capable of developing into any type of blood cells [Option ID = 17598]

**22) Alveolar cells of the lung arise from which one of the following layers?**

**[Question ID = 4415]**

1. Endoderm [Option ID = 17658]
2. Mesoderm [Option ID = 17657]
3. Both ectoderm and endoderm [Option ID = 17660]
4. Ectoderm [Option ID = 17659]

**Correct Answer :-**

- Endoderm [Option ID = 17658]

**23) A Th2 cell does not produce**

**[Question ID = 4404]**

1. Interleukin-10 [Option ID = 17615]
2. Interleukin-4 [Option ID = 17614]
3. Interferon gamma [Option ID = 17613]
4. Interleukine-5 [Option ID = 17616]

**Correct Answer :-**

- Interferon gamma [Option ID = 17613]

**24) Xenon hexafluoride is a**

**[Question ID = 4439]**

1. Tetrahedral molecule [Option ID = 17753]
2. Square planar molecule [Option ID = 17754]
3. Octahedral molecule [Option ID = 17755]
4. Planar molecule [Option ID = 17756]

**Correct Answer :-**

- Octahedral molecule [Option ID = 17755]

**25) Na<sup>+</sup> dependent carrier exchanger regulates cytosolic pH**

**[Question ID = 4381]**

1. Na<sup>+</sup>/ Glucose symport [Option ID = 17524]
2. Na<sup>+</sup>/ K<sup>+</sup> exchanger [Option ID = 17523]
3. Na<sup>+</sup>/ H<sup>+</sup> antiport [Option ID = 17522]
4. Na<sup>+</sup>/ H<sup>+</sup> symport [Option ID = 17521]

**Correct Answer :-**

- Na<sup>+</sup>/ H<sup>+</sup> antiport [Option ID = 17522]

**26) Thermolysin is**

**[Question ID = 4447]**

1. a vitamin [Option ID = 17788]
2. a carbohydrate [Option ID = 17787]
3. an exopeptidase [Option ID = 17785]
4. an endopeptidase [Option ID = 17786]

**Correct Answer :-**

- an endopeptidase [Option ID = 17786]

**27) During translation, the role of peptidyl transferase enzyme is [Question ID = 4363]**

1. Transfer of peptide from "A" to "P" site [Option ID = 17449]
2. Formation of peptide bond between adjacent amino acids [Option ID = 17450]
3. Binding of ribosome subunit to mRNA [Option ID = 17451]
4. Transfer of phosphate group [Option ID = 17452]

**Correct Answer :-**

- Formation of peptide bond between adjacent amino acids [Option ID = 17450]

**28) cis- and trans-butadiene are**

**[Question ID = 4444]**

1. geometric isomers [Option ID = 17773]
2. position isomers [Option ID = 17775]

3. not isomers [Option ID = 17776]
4. conformational isomers [Option ID = 17774]

**Correct Answer :-**

- geometric isomers [Option ID = 17773]

**29) In the Gram positive bacteria, the two modified sugars- N-acetylglucosamine (NAG) and N-acetylmuramic acid (NAM), are covalently linked by**

**[Question ID = 4395]**

1. beta-1, 6-glycosidic bond [Option ID = 17578]
2. beta-1, 4-glycosidic bond [Option ID = 17580]
3. alpha-1, 6-glycosidic bond [Option ID = 17579]
4. alpha-1, 4-glycosidic bond [Option ID = 17577]

**Correct Answer :-**

- beta-1, 4-glycosidic bond [Option ID = 17580]

**30) Bacterial flagella imparts motility to the cell by**

**[Question ID = 4397]**

1. gliding movement [Option ID = 17587]
2. rotatory movement [Option ID = 17586]
3. undulating movement [Option ID = 17585]
4. both undulating movement & rotatory movement [Option ID = 17588]

**Correct Answer :-**

- rotatory movement [Option ID = 17586]

**31) The Predominant interactions between phospholipids that stabilize a biological membrane include [Question ID = 4394]**

1. Hydrophobic interaction and hydrogen bonding [Option ID = 17575]
2. Covalent and hydrophobic interaction [Option ID = 17576]
3. Hydrogen bonds and covalent interaction [Option ID = 17573]
4. Vander Waal interaction and ionic interaction [Option ID = 17574]

**Correct Answer :-**

- Hydrophobic interaction and hydrogen bonding [Option ID = 17575]

**32) 5.25 kg apples cost Rs. 336=00. The cost of 1 kg in Rupees is.**

**[Question ID = 4456]**

1. 65 [Option ID = 17823]
2. 64 [Option ID = 17822]
3. 63 [Option ID = 17821]
4. 66 [Option ID = 17824]

**Correct Answer :-**

- 64 [Option ID = 17822]

**33) Enzymes accelerate a reaction by which one of the following strategies? [Question ID = 4414]**

1. Increasing the free energy difference between substrate and the product [Option ID = 17655]
2. Decreasing energy required to form the transition state [Option ID = 17653]
3. Increasing kinetic energy of the substrate [Option ID = 17654]
4. Changing the turn over number of enzymes [Option ID = 17656]

**Correct Answer :-**

- Decreasing energy required to form the transition state [Option ID = 17653]

**34) Germ-plasm theory was given by [Question ID = 4368]**

1. Charles Darwin [Option ID = 17471]
2. Walter Sutton [Option ID = 17470]
3. Gregor Mendel [Option ID = 17472]
4. Weismann [Option ID = 17469]

**Correct Answer :-**

- Weismann [Option ID = 17469]

**35) The following two organs are example of secondary lymphoid organs [Question ID = 4402]**

1. bone marrow and MALT [Option ID = 17608]
2. spleen and GALT [Option ID = 17607]
3. spleen and thymus [Option ID = 17605]
4. lymph nodes and thymus [Option ID = 17606]

**Correct Answer :-**

- spleen and GALT [Option ID = 17607]

**36) In regard to animal development, the term pattern formation refers to**

**[Question ID = 4371]**

1. The proteins produced by an individual cell [Option ID = 17481]
2. The process of differentiation of specific cell types [Option ID = 17483]
3. The arrangement of digits in body of an organism [Option ID = 17482]
4. The stages of development through which an organism proceeds [Option ID = 17484]

**Correct Answer :-**

- The arrangement of digits in body of an organism [Option ID = 17482]

**37) Given below are some statements about prokaryotic and eukaryotic mobile genetic elements or transposon**

- 1. Most mobile elements in bacteria transpose via RNA intermediate**
- 2. Most mobile genetic elements in bacteria are DNA**
- 3. Mobile genetic elements in eukaryotes are only transposons**
- 4. Both RNA and DNA transposons are found in eukaryotes**

**Choose the correct combination:**

**[Question ID = 4390]**

1. 2 & 4 [Option ID = 17560]
2. 2 & 3 [Option ID = 17558]
3. 1 & 3 [Option ID = 17557]
4. 1 & 4 [Option ID = 17559]

**Correct Answer :-**

- 2 & 4 [Option ID = 17560]

**38) The word opposite in meaning to the word 'verity' is [Question ID = 4451]**

1. request [Option ID = 17803]
2. abandon [Option ID = 17804]
3. lie [Option ID = 17801]
4. plead [Option ID = 17802]

**Correct Answer :-**

- lie [Option ID = 17801]

**39) The word closest in meaning to the word 'craven' is [Question ID = 4450]**

1. a bird [Option ID = 17797]
2. coward [Option ID = 17798]
3. brave [Option ID = 17799]
4. strong [Option ID = 17800]

**Correct Answer :-**

- coward [Option ID = 17798]

**40)  $(1/2 + 1/3) / (1/4 - 1/6)$  is**

**[Question ID = 4448]**

1.  $5/72$  [Option ID = 17789]

2. 10 [Option ID = 17790]
3. 12 [Option ID = 17792]
4. 11 [Option ID = 17791]

**Correct Answer :-**

- 10 [Option ID = 17790]

**41) A shirt was marked at Rs. 540=00. It was sold at 3/4 of the marked price. Find the sale price**

**[Question ID = 4449]**

1. Rs. 400 [Option ID = 17793]
2. Rs. 410 [Option ID = 17795]
3. Rs. 415 [Option ID = 17796]
4. Rs. 405 [Option ID = 17794]

**Correct Answer :-**

- Rs. 405 [Option ID = 17794]

**42) Artemesinin is a new drug for the treatment of [Question ID = 4424]**

1. Malaria [Option ID = 17695]
2. Hypercholesterolemia [Option ID = 17694]
3. Type II diabetes [Option ID = 17693]
4. Typhoid [Option ID = 17696]

**Correct Answer :-**

- Malaria [Option ID = 17695]

**43) Azidothymidine is used for the treatment of**

**[Question ID = 4426]**

1. Tuberculosis [Option ID = 17702]
2. Genetic disorders [Option ID = 17703]
3. HIV [Option ID = 17701]
4. None of these [Option ID = 17704]

**Correct Answer :-**

- HIV [Option ID = 17701]

**44) RNAi stands for**

**[Question ID = 4369]**

1. RNA intron [Option ID = 17475]
2. RNA impulse [Option ID = 17474]
3. RNA initiator [Option ID = 17473]
4. RNA interference [Option ID = 17476]

**Correct Answer :-**

- RNA interference [Option ID = 17476]

**45) If  $x = 3^2$ , what is the value of  $x^x$**

**[Question ID = 4454]**

1.  $3^4$  [Option ID = 17813]
2.  $3^{12}$  [Option ID = 17815]
3.  $3^8$  [Option ID = 17814]
4.  $3^{18}$  [Option ID = 17816]

**Correct Answer :-**

- $3^{18}$  [Option ID = 17816]

**46) 2-amino propanoic acid is**



**[Question ID = 4387]**

1. Glycine [Option ID = 17548]
2. Leucine [Option ID = 17547]
3. Valine [Option ID = 17545]
4. Alanine [Option ID = 17546]

**Correct Answer :-**

- Alanine [Option ID = 17546]

**47) During denaturation of double-helical DNA,**

**[Question ID = 4389]**

1. Denaturation is accompanied by an increase in the absorption of UV light by DNA [Option ID = 17554]
2. Denaturation increases with decreasing temperature [Option ID = 17553]
3. G-C rich DNA melts at the same temperature as A-T rich DNA [Option ID = 17555]
4. Once denatured, DNA strands cannot anneal [Option ID = 17556]

**Correct Answer :-**

- Denaturation is accompanied by an increase in the absorption of UV light by DNA [Option ID = 17554]

**48) During apoptosis, the cell**

**[Question ID = 4380]**

1. all of the these [Option ID = 17520]
2. phosphatidylserine (PS) is flipped to outer side of membrane [Option ID = 17518]
3. releases of Cytochrome c from mitochondria [Option ID = 17519]
4. loses membrane asymmetry [Option ID = 17517]

**Correct Answer :-**

- all of the these [Option ID = 17520]

**49) Injecting Maturation Promoting Factor (MPF) in S phase cell results in**

**[Question ID = 4393]**

1. all cells move to G1 phase [Option ID = 17569]
2. all cells move to M phase [Option ID = 17571]
3. all of these [Option ID = 17572]
4. all cell remain in S phase [Option ID = 17570]

**Correct Answer :-**

- all cells move to M phase [Option ID = 17571]

**50) Viral replication within the cells is inhibited by**

**[Question ID = 4398]**

1. IL-1 [Option ID = 17590]
2. IL-4 [Option ID = 17589]
3. IFN alpha [Option ID = 17591]
4. TNF alpha [Option ID = 17592]

**Correct Answer :-**

- IFN alpha [Option ID = 17591]

**51) A researcher would like to monitor the level of protein in the blood serum. Which one of the following methods would be best suited for the purpose?**

**[Question ID = 4409]**

1. Enzyme linked immunosorbent assay [Option ID = 17635]
2. Immunofluorescence microscopy [Option ID = 17633]
3. Fluorescence cell sorting [Option ID = 17636]
4. Fluorescence in-situ hybridization [Option ID = 17634]

**Correct Answer :-**

- Enzyme linked immunosorbent assay [Option ID = 17635]

**52) Catabolite repression refers to**

**[Question ID = 4365]**

1. Inhibition of glucose utilization in the presence of lactose [Option ID = 17459]
2. Inhibition of uptake and metabolism of lactose in the absence of glucose [Option ID = 17457]
3. Inhibition of metabolism of lactose in the presence of glucose [Option ID = 17458]
4. None of these [Option ID = 17460]

**Correct Answer :-**

- Inhibition of metabolism of lactose in the presence of glucose [Option ID = 17458]

**53) Phthalates are components of [Question ID = 4422]**

1. Aerosols [Option ID = 17686]
2. Hand sanitizers [Option ID = 17685]
3. Pigments extracted from natural products [Option ID = 17688]
4. Dyes [Option ID = 17687]

**Correct Answer :-**

- Hand sanitizers [Option ID = 17685]

**54) Replicative senescence is due to**

**[Question ID = 4377]**

1. DNA polymerization [Option ID = 17507]
2. Telomerase activation [Option ID = 17506]
3. Shortening of telomere repeats [Option ID = 17505]
4. Active RNA Synthesis [Option ID = 17508]

**Correct Answer :-**

- Shortening of telomere repeats [Option ID = 17505]

**55) The product of the reaction of aniline with sodium nitrite and dilute HCl in ice yields [Question ID = 4428]**

1. Nitrobenzene [Option ID = 17712]
2. Sodium nitrate [Option ID = 17709]
3. Nitric acid [Option ID = 17710]
4. Diazonium chloride [Option ID = 17711]

**Correct Answer :-**

- Diazonium chloride [Option ID = 17711]

**56)**  $\frac{3}{20}$  of 2kg in grams is

**[Question ID = 4455]**

1. 400g [Option ID = 17819]
2. 200g [Option ID = 17817]
3. 500g [Option ID = 17820]
4. 300g [Option ID = 17818]

**Correct Answer :-**

- 300g [Option ID = 17818]

**57) The volume of a cube with edge of length 2cm is how many times the volume of a cube with edge of length  $\sqrt{2}$ cm**

**[Question ID = 4453]**

1. 4 [Option ID = 17812]

- 2 [Option ID = 17810]
- $\sqrt{2}$  [Option ID = 17809]
- $2\sqrt{2}$  [Option ID = 17811]

**Correct Answer :-**

- $2\sqrt{2}$  [Option ID = 17811]

**58) Iodine occurs naturally as**

**[Question ID = 4427]**

- a gas [Option ID = 17708]
- a solid which sublimates [Option ID = 17706]
- a solid with a melting point of 80°C [Option ID = 17707]
- a liquid [Option ID = 17705]

**Correct Answer :-**

- a solid which sublimates [Option ID = 17706]

**59) Most members of bryophyte phylum Anthocerophyta are characterized by [Question ID = 4412]**

- gametophyte with single chloroplast per cell and multicellular rhizoids; sporophyte without stomata. [Option ID = 17645]
- gametophyte with single chloroplast per cell and multicellular rhizoids; sporophyte with stomata. [Option ID = 17648]
- gametophyte with single chloroplast per cell and unicellular rhizoids; sporophyte with stomata. [Option ID = 17646]
- gametophyte with multiple chloroplasts per cell and unicellular rhizoids; sporophyte without stomata. [Option ID = 17647]

**Correct Answer :-**

- gametophyte with single chloroplast per cell and unicellular rhizoids; sporophyte with stomata. [Option ID = 17646]

**60) G-Protein coupled receptors contain the following number of membrane spanning loops [Question ID = 4433]**

- 7 [Option ID = 17731]
- 5 [Option ID = 17729]
- 8 [Option ID = 17732]
- 6 [Option ID = 17730]

**Correct Answer :-**

- 7 [Option ID = 17731]

**61) A gene expressing a 50 kDa protein from Eukaryote was cloned in *E. coli* plasmid under the lac promoter and operator. Upon addition of IPTG, the 50 kDa protein was not detected. Which one of the following explains the above observation?**

**[Question ID = 4416]**

- The cloned sequence lacked the Kozak sequence [Option ID = 17661]
- E. coli* does not make proteins larger than 40 kDa [Option ID = 17662]
- Differences in codon preference [Option ID = 17663]
- 50 kDa protein contains a nuclear localization signal [Option ID = 17664]

**Correct Answer :-**

- Differences in codon preference [Option ID = 17663]

**62) The reaction of  $\text{CH}_3\text{MgBr}$  with acetaldehyde yields [Question ID = 4443]**

- isopropanol [Option ID = 17770]
- n-propanol [Option ID = 17769]
- isobutanol [Option ID = 17772]
- n-butanol [Option ID = 17771]

**Correct Answer :-**

- isopropanol [Option ID = 17770]

**63) The reaction of butadiene with ethene in the presence of heat is an example of [Question ID = 4445]**

- Cannizzaro reaction [Option ID = 17780]
- Claisen condensation [Option ID = 17779]
- Robinson's annulations [Option ID = 17778]
- Diels Alder reaction [Option ID = 17777]

**Correct Answer :-**

- Diels Alder reaction [Option ID = 17777]

**64) The tallest tree in the world is [Question ID = 4452]**

1. The Red Oak [Option ID = 17806]
2. The Banyan tree [Option ID = 17808]
3. The Neem tree [Option ID = 17807]
4. The Eucalyptus tree [Option ID = 17805]

**Correct Answer :-**

**65) Stored form of carbohydrate in sugarcane is [Question ID = 4410]**

1. Sucrose [Option ID = 17638]
2. Glucose [Option ID = 17639]
3. Starch [Option ID = 17637]
4. Maltose [Option ID = 17640]

**Correct Answer :-**

- Sucrose [Option ID = 17638]

**66) Bacteria exhibit a characteristic growth pattern. A phase during which the cells divide continually with a fixed time interval between cell divisions, resulting in exponential growth is called [Question ID = 4370]**

1. Lag phase [Option ID = 17477]
2. Stationary Phase [Option ID = 17479]
3. Log phase [Option ID = 17478]
4. Meta continual phase [Option ID = 17480]

**Correct Answer :-**

- Log phase [Option ID = 17478]

**67) Nuclear receptor belong to which class of transcriptional factor**

**[Question ID = 4366]**

1. Zn-finger proteins [Option ID = 17463]
2. PAH-domain containing protein [Option ID = 17464]
3. Leucine Zipper proteins [Option ID = 17462]
4. Helix-loop-helix proteins [Option ID = 17461]

**Correct Answer :-**

- Zn-finger proteins [Option ID = 17463]

**68) SN1 reactions involve the formation of**

**[Question ID = 4432]**

1. polymeric complexes [Option ID = 17728]
2. a cationic intermediate [Option ID = 17727]
3. 5-membered transition state [Option ID = 17725]
4. a charge transfer complex [Option ID = 17726]

**Correct Answer :-**

- a cationic intermediate [Option ID = 17727]

**69) Initial depolarization of membrane potential begins with the [Question ID = 4382]**

1. opening of sodium channel [Option ID = 17527]
2. closing of sodium channel [Option ID = 17525]
3. closing of potassium channel [Option ID = 17528]
4. opening of potassium channel [Option ID = 17526]

**Correct Answer :-**

- opening of sodium channel [Option ID = 17527]

**70) According to 2014 IUCN Red List, which of the following vertebrate class has the largest percentage of threatened species?**

**[Question ID = 4413]**

1. Amphibians [Option ID = 17652]
2. Reptiles [Option ID = 17651]
3. Mammals [Option ID = 17649]
4. Birds [Option ID = 17650]

**Correct Answer :-**

- Amphibians [Option ID = 17652]

**71) Two component systems in bacteria consist of [Question ID = 4367]**

1. Two transcription factor that work together [Option ID = 17467]
2. Membrane protein and cell wall protein [Option ID = 17466]
3. A sensor kinase and a response regulator [Option ID = 17465]
4. Antibiotic resistance gene and a replication regulatory gene [Option ID = 17468]

**Correct Answer :-**

- A sensor kinase and a response regulator [Option ID = 17465]

**72) HCl is a strong acid and NaOH a strong base. Assuming complete dissociation of each, what will be the pH of solution obtained by adding 30 mL of 100 mM NaOH to 70 ml of 43 mM HCl?**

**[Question ID = 4384]**

1. 7 [Option ID = 17535]
2. 4 [Option ID = 17536]
3. 2 [Option ID = 17533]
4. 3 [Option ID = 17534]

**Correct Answer :-**

- 7 [Option ID = 17535]

**73) Primary lymphoid organs [Question ID = 4399]**

1. are efficient in exposing T cells to foreign antigens [Option ID = 17593]
2. are the primary site of antibody synthesis and release [Option ID = 17594]
3. Filter blood and trap blood-borne antigens [Option ID = 17595]
4. provide the microenvironment for maturation of T and B cells [Option ID = 17596]

**Correct Answer :-**

- provide the microenvironment for maturation of T and B cells [Option ID = 17596]

**74) Localized release of acetylcholine is triggered by [Question ID = 4383]**

1. Opening of voltage gated  $\text{Ca}^{2+}$  channel [Option ID = 17529]
2. Closing of voltage gated  $\text{Ca}^{2+}$  and  $\text{Na}^{+}$  channel [Option ID = 17531]
3. Opening of voltage gated  $\text{Na}^{+}$  channel [Option ID = 17530]
4. Increased influx of  $\text{Na}^{+}$  [Option ID = 17532]

**Correct Answer :-**

- Opening of voltage gated  $\text{Ca}^{2+}$  channel [Option ID = 17529]

**75) Copying errors occurring during replication are corrected by the proof reading activity of DNA polymerases that recognizes incorrect bases at**

**[Question ID = 4391]**

1. 3' end of the growing chain, removes the incorrect base by 5'-3' exonuclease activity [Option ID = 17562]
2. 3' end of the growing chain, removes the incorrect base by 3'-5' exonuclease activity [Option ID = 17563]
3. 5' end of the growing chain, removes the incorrect base by 5'-3' exonuclease activity [Option ID = 17561]
4. 5' end of the growing chain, removes the incorrect base by 3'-5' exonuclease activity [Option ID = 17564]

**Correct Answer :-**

- 3' end of the growing chain, removes the incorrect base by 3'-5' exonuclease activity [Option ID = 17563]

**76) CDK activation is dependent on**

**[Question ID = 4379]**

1. All of the these [Option ID = 17516]
2. Cyclin [Option ID = 17513]
3. CAK [Option ID = 17515]
4. Phosphorylation of T-loop [Option ID = 17514]

**Correct Answer :-**

- All of the these [Option ID = 17516]

**77) Barbiturates cannot be used as**

**[Question ID = 4425]**

1. Anti-convulsants [Option ID = 17697]
2. Anti-histamines [Option ID = 17700]
3. Sedatives [Option ID = 17699]
4. Hypnotics [Option ID = 17698]

**Correct Answer :-**

- Anti-histamines [Option ID = 17700]

**78) In a population from a recently discovered island in the Indian ocean, most of the people were of blood group O. This indicates that**

**[Question ID = 4375]**

1. This is a case of pseudo-genes [Option ID = 17499]
2. This is a case of pseudo-dominance [Option ID = 17500]
3. This is due to high rate of mutation [Option ID = 17498]
4. Blood group O is a truly dominant allele [Option ID = 17497]

**Correct Answer :-**

- This is a case of pseudo-dominance [Option ID = 17500]

**79) Which form of DNA is found most commonly in biological systems?**

**[Question ID = 4440]**

1. Single stranded DNA [Option ID = 17760]
2. A-DNA [Option ID = 17757]
3. B-DNA [Option ID = 17758]
4. Z-DNA [Option ID = 17759]

**Correct Answer :-**

- B-DNA [Option ID = 17758]

**80) Which cell undergoes more rigorous positive and negative selection during development?**

**[Question ID = 4406]**

1. T cells are more rigorously selected than B cells [Option ID = 17622]
2. B cells are more rigorously selected than T cells [Option ID = 17621]
3. Both undergo equal levels of selection [Option ID = 17623]
4. Neither cell undergoes any selection for optimum repertoire [Option ID = 17624]

**Correct Answer :-**

- T cells are more rigorously selected than B cells [Option ID = 17622]

**81) Which one of the following would contribute to the intrinsic fluorescence of a protein?**

**[Question ID = 4417]**

1. Charged amino acids [Option ID = 17667]
2. Aromatic amino acids [Option ID = 17665]
3. Branched chain amino acids [Option ID = 17668]
4. Disulfide bonds [Option ID = 17666]

**Correct Answer :-**

- Aromatic amino acids [Option ID = 17665]

**82) Which one of the following gases contributes to acid rain?**

[Question ID = 4430]

1. Nitrogen [Option ID = 17717]
2. Carbon dioxide [Option ID = 17719]
3. Sulphur dioxide [Option ID = 17718]
4. Oxygen [Option ID = 17720]

**Correct Answer :-**

- Sulphur dioxide [Option ID = 17718]

**83) Which one of the following is not true for tumor suppressor proteins in the cells?**

[Question ID = 4421]

1. They cause growth arrest [Option ID = 17681]
2. They are anti-angiogenesis [Option ID = 17683]
3. They are anti-apoptotic [Option ID = 17684]
4. They regulate DNA repair [Option ID = 17682]

**Correct Answer :-**

- They are anti-apoptotic [Option ID = 17684]

**84) Which one group of the following cells is not phagocytic in nature?**

[Question ID = 4401]

1. T lymphocytes [Option ID = 17602]
2. Neutrophils [Option ID = 17601]
3. Macrophages [Option ID = 17603]
4. Microglial cells [Option ID = 17604]

**Correct Answer :-**

- T lymphocytes [Option ID = 17602]

**85) Which of the following is correct regarding Reverse transcriptase and Telomerase?**

[Question ID = 4378]

1. Both require DNA template [Option ID = 17510]
2. Both require RNA template [Option ID = 17509]
3. Both have the ability to synthesize RNA [Option ID = 17511]
4. None of these [Option ID = 17512]

**Correct Answer :-**

- Both require RNA template [Option ID = 17509]

**86) Which of the following is not true about capsules and slime layers in bacteria?**

[Question ID = 4396]

1. They are required for bacteria to grow normally in culture [Option ID = 17583]
2. They can prevent desiccation of bacterial cells [Option ID = 17582]
3. They help bacteria resist phagocytosis by macrophages [Option ID = 17584]
4. They consist of secreted material, capsules and slime layer [Option ID = 17581]

**Correct Answer :-**

- They are required for bacteria to grow normally in culture [Option ID = 17583]

**87) Which of the following is the source of electrons during photosynthesis?**

[Question ID = 4385]

1. H<sub>2</sub>O [Option ID = 17537]

2. O<sub>2</sub> [Option ID = 17538]
3. CO<sub>2</sub> [Option ID = 17539]
4. NADH [Option ID = 17540]

**Correct Answer :-**

- H<sub>2</sub>O [Option ID = 17537]

**88) Which of the following is a pathogen recognition receptor?**

**[Question ID = 4408]**

1. C CAM-II receptor [Option ID = 17630]
2. CD28 receptor [Option ID = 17632]
3. Toll like receptor [Option ID = 17631]
4. ICAM-I receptor [Option ID = 17629]

**Correct Answer :-**

- Toll like receptor [Option ID = 17631]

**89) Which of the following macromolecules is not a protein?**

**[Question ID = 4434]**

1. Starch [Option ID = 17736]
2. Keratin [Option ID = 17733]
3. Insulin [Option ID = 17735]
4. Casein [Option ID = 17734]

**Correct Answer :-**

- Starch [Option ID = 17736]

**90) Which of the following peptide can tolerate high variation in amino acid sequence?**

**[Question ID = 4373]**

1. All of the these [Option ID = 17492]
2. Peptide fragment of Fibrin [Option ID = 17489]
3. Peptide fragment of both Fibrin and Fibrinogen [Option ID = 17490]
4. Peptide fragment of fibrinogen [Option ID = 17491]

**Correct Answer :-**

- Peptide fragment of fibrinogen [Option ID = 17491]

**91) Which of the following compounds occurs naturally?**

**[Question ID = 4446]**

1. BH<sub>3</sub> [Option ID = 17782]
2. Al<sub>2</sub>H<sub>6</sub> [Option ID = 17784]
3. B<sub>2</sub>H<sub>6</sub> [Option ID = 17781]
4. Si<sub>2</sub>H<sub>6</sub> [Option ID = 17783]

**Correct Answer :-**

- B<sub>2</sub>H<sub>6</sub> [Option ID = 17781]

**92) Which pair of amino acids absorbs the most UV light at 280nm?**

**[Question ID = 4386]**

1. Trp and Tyr [Option ID = 17541]
2. Phe and Pro [Option ID = 17543]
3. Thr and His [Option ID = 17544]
4. Asp and Glu [Option ID = 17542]

**Correct Answer :-**

- Trp and Tyr [Option ID = 17541]



**93) Which cell is referred to as Professional Antigen presenting cell?**

**[Question ID = 4407]**

1. NK cells [Option ID = 17628]
2. B cell [Option ID = 17625]
3. Dendritic cell [Option ID = 17627]
4. Macrophages [Option ID = 17626]

**Correct Answer :-**

- Dendritic cell [Option ID = 17627]

**94) Which statements is true for both prokaryotic and eukaryotic cells?**

**[Question ID = 4403]**

1. Both have DNA as their primary genetic material [Option ID = 17611]
2. Prokaryotic cells are generally much larger than eukaryotic cells [Option ID = 17609]
3. Eukaryotic cells have plasma membranes and prokaryotic cells do not [Option ID = 17612]
4. Eukaryotic cells have ribosomes and prokaryotic cells do not [Option ID = 17610]

**Correct Answer :-**

- Both have DNA as their primary genetic material [Option ID = 17611]

**95) Unwinding of DNA during replication is done by [Question ID = 4362]**

1. Topoisomerase [Option ID = 17447]
2. Telomerase [Option ID = 17448]
3. Ligase [Option ID = 17446]
4. Helicase [Option ID = 17445]

**Correct Answer :-**

- Helicase [Option ID = 17445]

Topic:- DU\_J18\_MSC\_BIOSCI\_Topic02

**1) Directions: Choose the word that is most similar in meaning to the word in capital letters:**

**ACCRETION**

**[Question ID = 4458]**

1. Abstain [Option ID = 17830]
2. Damp [Option ID = 17832]
3. Bent [Option ID = 17831]
4. Growth [Option ID = 17829]

**Correct Answer :-**

- Growth [Option ID = 17829]

**2) Directions: Choose the word that is most similar in meaning to the word in capital letters :**

**HERMETIC**

**[Question ID = 4460]**

1. Airtight [Option ID = 17840]
2. Fresh [Option ID = 17839]
3. Leaky [Option ID = 17837]
4. Preserved [Option ID = 17838]

**Correct Answer :-**

- Airtight [Option ID = 17840]

**3) Directions: Choose the word that is most similar in meaning to the word in capital letters :**

**FACETIOUS**

[Question ID = 4459]

1. Fawn [Option ID = 17836]
2. Interesting [Option ID = 17834]
3. Serious [Option ID = 17833]
4. Humorous [Option ID = 17835]

**Correct Answer :-**

- Humorous [Option ID = 17835]

Topic:- DU\_J18\_MSC\_BIOSCI\_Topic03

**1) Directions: Choose the word for the blanks given in the following paragraph from list (A) & (B) respectively that best fits the meaning:**

**The development of hydrogen-powered cars will always be .....(A) by the physical fact that hydrogen, while containing more energy per liter than does petrol, is much less dense than petrol; making it .....(B) for any vehicle to carry enough hydrogen on board for long trips.**

**List for (B) :**

[Question ID = 4463]

1. Useful [Option ID = 17852]
2. Convenient [Option ID = 17849]
3. Austere [Option ID = 17850]
4. Ungainly [Option ID = 17851]

**Correct Answer :-**

- Ungainly [Option ID = 17851]

**2) Directions: Choose the word for the blanks given in the following paragraph from list (A) & (B) respectively that best fits the meaning:**

**The development of hydrogen-powered cars will always be .....(A) by the physical fact that hydrogen, while containing more energy per liter than does petrol, is much less dense than petrol; making it .....(B) for any vehicle to carry enough hydrogen on board for long trips.**

**List for (A):**

[Question ID = 4462]

1. Parodied [Option ID = 17847]
2. Enhanced [Option ID = 17845]
3. Hindered [Option ID = 17846]
4. Advantageous [Option ID = 17848]

**Correct Answer :-**

- Hindered [Option ID = 17846]