

# DU MSc Biochemistry

Topic:- DU\_J19\_MSC\_BIOCHEM

**1) Which of the following motif is present in calcium binding proteins?**

**[Question ID = 1194]**

1. Ig superfold [Option ID = 4774]
2. EF hand [Option ID = 4775]
3. Solenoid [Option ID = 4776]
4. Zinc fingers [Option ID = 4773]

**Correct Answer :-**

- EF hand [Option ID = 4775]

**2) Which of the following acts as an ATP buffer in human body?**

**[Question ID = 1209]**

1. AMP [Option ID = 4835]
2. Adenosine [Option ID = 4836]
3. Phosphocreatine [Option ID = 4833]
4. Phosphatase [Option ID = 4834]

**Correct Answer :-**

- Phosphocreatine [Option ID = 4833]

**3) Which of the following is a polar amino acid?**

**[Question ID = 1197]**

1. Threonine [Option ID = 4788]
2. Alanine [Option ID = 4785]
3. Proline [Option ID = 4786]
4. Methionine [Option ID = 4787]

**Correct Answer :-**

- Threonine [Option ID = 4788]

**4) Which of the following is a positively charged matrix for ion exchange chromatography?**

**[Question ID = 1183]**

1. CM cellulose [Option ID = 4729]
2. Phosphocellulose [Option ID = 4730]
3. Nitrilotriacetic acid [Option ID = 4732]
4. DEAE cellulose [Option ID = 4731]

**Correct Answer :-**

- DEAE cellulose [Option ID = 4731]

**5) Which of the following is not an ionophore?**

**[Question ID = 1195]**

1. Monensin [Option ID = 4779]
2. Valinomycin [Option ID = 4777]
3. Kanamycin [Option ID = 4778]
4. Gramicidin A [Option ID = 4780]

**Correct Answer :-**

- Kanamycin [Option ID = 4778]

**6) Which of the following is not true about insulin?**

**[Question ID = 1205]**

1. Insulin has 3 chains linked with disulphide bonds [Option ID = 4819]
2. Insulin increases the activity of glycogen synthase [Option ID = 4820]
3. Insulin lowers blood glucose [Option ID = 4818]
4. Insulin is degraded by Insulinase [Option ID = 4817]

**Correct Answer :-**

- Insulin has 3 chains linked with disulphide bonds [Option ID = 4819]

**7) Which of the following is not a peptide hormone?**

**[Question ID = 1201]**

1. Glucagon [Option ID = 4801]
2. Oxytocin [Option ID = 4802]
3. Estrogen [Option ID = 4804]
4. Vasopressin [Option ID = 4803]

**Correct Answer :-**

- Estrogen [Option ID = 4804]

**8) Which of the following is the main immunoglobulin in the gut and secretions (saliva, milk, tears) and is important in mucosal immunity?**

**[Question ID = 1190]**

1. IgA [Option ID = 4757]
2. IgM [Option ID = 4758]
3. IgD [Option ID = 4759]
4. IgG [Option ID = 4760]

**Correct Answer :-**

- IgA [Option ID = 4757]

**9) Which of the following is anorexigenic?**

**[Question ID = 1207]**



1. Endocannabinoids [Option ID = 4827]
2. Cortisol [Option ID = 4825]
3. Leptin [Option ID = 4828]
4. Ghrelin [Option ID = 4826]

**Correct Answer :-**

- Leptin [Option ID = 4828]

**10) Which of the amino acid is coded by a single codon?**

**[Question ID = 1141]**

1. Phenylalanine [Option ID = 4562]
2. Arginine [Option ID = 4563]
3. Tryptophan [Option ID = 4564]
4. Lysine [Option ID = 4561]

**Correct Answer :-**

- Tryptophan [Option ID = 4564]

**11) Which sugar will give a positive result with Seliwanoff test?**

**[Question ID = 1127]**

1. Mannose [Option ID = 4508]
2. Glucose [Option ID = 4505]
3. Galactose [Option ID = 4507]
4. Sucrose [Option ID = 4506]

**Correct Answer :-**

- Sucrose [Option ID = 4506]

**12) Which immunoglobulin(s) is/are predominant in the primary (early) immune response**

**[Question ID = 1185]**

1. IgG & IgM [Option ID = 4740]
2. IgM [Option ID = 4739]
3. IgE [Option ID = 4738]
4. IgG [Option ID = 4737]

**Correct Answer :-**

- IgM [Option ID = 4739]

**13) Which group of a fully protonated glycine ( $\text{NH}_3^+ - \text{CH}_2 - \text{COOH}$ ) will release the proton first when titrated against  $-\text{OH}^-$  ions?**

**[Question ID = 1142]**

1. Amino group [Option ID = 4565]
2. Cannot be predicted [Option ID = 4567]
3. Both at the same time [Option ID = 4568]
4. Carboxyl group [Option ID = 4566]

**Correct Answer :-**

- Carboxyl group [Option ID = 4566]

**14) Which one of the following is not a protein estimation method?**

**[Question ID = 1219]**

1. Bicinchonic acid method [Option ID = 4876]
2. Biuret method [Option ID = 4873]
3. Barfoed method [Option ID = 4874]
4. Lowry method [Option ID = 4875]

**Correct Answer :-**

- Barfoed method [Option ID = 4874]

**15) Which is not an autoimmune disorder?**

**[Question ID = 1149]**

1. Grave's disease [Option ID = 4596]
2. Alzheimer's disease [Option ID = 4595]
3. Multiple sclerosis [Option ID = 4593]
4. Celiac disease [Option ID = 4594]

**Correct Answer :-**

- Alzheimer's disease [Option ID = 4595]

**16) Which amino acid of a protein can make Schiff's base with reducing sugars:**

**[Question ID = 1146]**

1. Glycine [Option ID = 4581]
2. Lysine [Option ID = 4583]
3. Tryptophan [Option ID = 4584]
4. Phenylalanine [Option ID = 4582]

**Correct Answer :-**

- Lysine [Option ID = 4583]

**17) Which hormone is also known as hyperglycemic hormone?**

**[Question ID = 1206]**

1. Glucagon [Option ID = 4822]
2. Cholecystokinin [Option ID = 4823]
3. Insulin [Option ID = 4821]
4. Glycolase [Option ID = 4824]

**Correct Answer :-**

- Glucagon [Option ID = 4822]

**18) Prof. Howard Temin is famous for**



**[Question ID = 1135]**

1. Restriction Endonuclease [Option ID = 4538]
2. DNA Polymerase [Option ID = 4537]
3. DNA Ligase [Option ID = 4539]
4. Reverse Transcriptase [Option ID = 4540]

**Correct Answer :-**

- Reverse Transcriptase [Option ID = 4540]

**19) 4-hydroxy proline (a derivative of proline) is abundantly present in :**

**[Question ID = 1147]**

1. Keratin [Option ID = 4587]
2. Collagen [Option ID = 4586]
3. Myoglobin [Option ID = 4585]
4. Haemoglobin [Option ID = 4588]

**Correct Answer :-**

- Collagen [Option ID = 4586]

**20) Prof. Har Gobind Khorana is known to first synthesize:**

**[Question ID = 1132]**

1. Polynucleotide [Option ID = 4525]
2. Amino Acid [Option ID = 4528]
3. Protein [Option ID = 4527]
4. siRNA [Option ID = 4526]

**Correct Answer :-**

- Polynucleotide [Option ID = 4525]

**21) The classic complement pathway is initiated by interaction of C1 with**

**[Question ID = 1184]**

1. antigen-IgG complexes [Option ID = 4735]
2. antigen [Option ID = 4733]
3. factor B [Option ID = 4734]
4. bacterial lipopolysaccharides [Option ID = 4736]

**Correct Answer :-**

- antigen-IgG complexes [Option ID = 4735]

**22) Which one is a true membrane protein?**

**[Question ID = 1131]**

1. Glycophorin [Option ID = 4521]
2. Isocitrate lyase [Option ID = 4524]
3. Pyruvate Kinase [Option ID = 4523]
4. Hemoglobin [Option ID = 4522]

**Correct Answer :-**

- Glycophorin [Option ID = 4521]

**23) Which of the following is a non-reducing sugar**

**[Question ID = 1133]**

1. Trehalose [Option ID = 4531]
2. Cellobiose [Option ID = 4532]
3. Maltose [Option ID = 4529]
4. Lactose [Option ID = 4530]

**Correct Answer :-**

- Trehalose [Option ID = 4531]

**24) Scientist(s) who proved that DNA and not protein as the genetic material**

**[Question ID = 1157]**

1. Pasteur [Option ID = 4627]
2. Jenner [Option ID = 4628]
3. Hershey and Chase [Option ID = 4625]
4. Beadle and Tatum [Option ID = 4626]

**Correct Answer :-**

- Hershey and Chase [Option ID = 4625]

**25) Which of the following reagents are not a part of a typical polymerase chain reaction:**

**[Question ID = 1174]**

1. Forward and reverse primers [Option ID = 4694]
2. DNA polymerase [Option ID = 4693]
3. Magnesium chloride [Option ID = 4695]
4. Nucleotide triphosphates [Option ID = 4696]

**Correct Answer :-**

- Nucleotide triphosphates [Option ID = 4696]

**26) Role of Glucagon is to:**

**[Question ID = 1210]**

1. Stimulate the formation of cyclic ATP in the liver cells [Option ID = 4839]
2. Stimulate the formation of cyclic AMP in the liver cells [Option ID = 4837]
3. Inhibit the formation of cyclic ATP in the liver cells [Option ID = 4840]
4. Inhibit the formation of cyclic AMP in the liver cells [Option ID = 4838]

**Correct Answer :-**

- Stimulate the formation of cyclic AMP in the liver cells [Option ID = 4837]

**27) In a competitive enzymatic reaction**



**[Question ID = 1154]**

1.  $K_m$  &  $V_{max}$  decreases [Option ID = 4615]
2.  $K_m$  &  $V_{max}$  increases [Option ID = 4614]
3.  $K_m$  increases -  $V_{max}$  shows no change [Option ID = 4613]
4.  $K_m$  shows no change &  $V_{max}$  decreases [Option ID = 4616]

**Correct Answer :-**

- $K_m$  increases -  $V_{max}$  shows no change [Option ID = 4613]

**28) Which vitamin helps in clotting of the blood?**

**[Question ID = 1176]**

1. Vitamin C [Option ID = 4704]
2. Vitamin K [Option ID = 4703]
3. Vitamin A [Option ID = 4701]
4. Vitamin E [Option ID = 4702]

**Correct Answer :-**

- Vitamin K [Option ID = 4703]

**29) Which enzyme carries the incision of the 3' position of the lesion in nucleotide excision repair?**

**[Question ID = 1153]**

1. Urv B [Option ID = 4610]
2. Urv C [Option ID = 4611]
3. Urv D [Option ID = 4612]
4. Urv A [Option ID = 4609]

**Correct Answer :-**

- Urv B [Option ID = 4610]

**30) Which protein strictly interacts with phosphatidylcholine?**

**[Question ID = 1130]**

1. Phosphorylase [Option ID = 4519]
2. Phosphatase [Option ID = 4517]
3. Phospholipase [Option ID = 4520]
4. Alkaline phosphatase [Option ID = 4518]

**Correct Answer :-**

- Phospholipase [Option ID = 4520]

**31) Which of the following is an essential amino acid for humans?**

**[Question ID = 1170]**

1. Serine [Option ID = 4680]
2. Alanine [Option ID = 4678]
3. Isoleucine [Option ID = 4677]

4. Aspartic acid [Option ID = 4679]

**Correct Answer :-**

- Isoleucine [Option ID = 4677]

**32) Which of the following is a keto triose**

**[Question ID = 1128]**

1. Glyceraldehyde [Option ID = 4509]
2. Erythrose [Option ID = 4512]
3. Dihydroxyacetone [Option ID = 4511]
4. Ribulose [Option ID = 4510]

**Correct Answer :-**

- Dihydroxyacetone [Option ID = 4511]

**33) Surface marker for helper T cells:**

**[Question ID = 1140]**

1. CD8 [Option ID = 4558]
2. CD4 [Option ID = 4557]
3. CD48 [Option ID = 4560]
4. CD38 [Option ID = 4559]

**Correct Answer :-**

- CD4 [Option ID = 4557]

**34) Which of the following would be the enzyme of choice to carry out nick translation reaction?**

**[Question ID = 1158]**

1. E.coli DNA polymerase I [Option ID = 4629]
2. T4 DNA polymerase [Option ID = 4631]
3. T7 DNA polymerase [Option ID = 4632]
4. Klenow fragment [Option ID = 4630]

**Correct Answer :-**

- E.coli DNA polymerase I [Option ID = 4629]

**35) Which is the main nitrogenous waste in humans?**

**[Question ID = 1175]**

1. Urea [Option ID = 4698]
2. Uric acid [Option ID = 4699]
3. Ammonia [Option ID = 4700]
4. Ammonium nitrate [Option ID = 4697]

**Correct Answer :-**

- Urea [Option ID = 4698]



**36) An integral membrane protein spanning lipid bilayer of the membrane must have only:**

**[Question ID = 1129]**

1. No hydrophobic domains [Option ID = 4516]
2. Two hydrophobic domains [Option ID = 4513]
3. Three hydrophobic domains [Option ID = 4515]
4. One hydrophobic domains [Option ID = 4514]

**Correct Answer :-**

- One hydrophobic domains [Option ID = 4514]

**37) Dihydrofolate reductase catalyses the conversion of:**

**[Question ID = 1193]**

1. Dihydrofolic acid to tetrahydrofolic acid, using ATP as electron donor [Option ID = 4770]
2. Dihydrofolic acid to tetrahydrofolic acid, using NADPH as electron donor [Option ID = 4772]
3. Tetrahydrofolic acid to Dihydrofolic acid, using NADPH as electron donor [Option ID = 4771]
4. Tetrahydrofolic acid to Dihydrofolic acid, using ATP as electron donor [Option ID = 4769]

**Correct Answer :-**

- Dihydrofolic acid to tetrahydrofolic acid, using NADPH as electron donor [Option ID = 4772]

**38) Kupffer cells are a specialized type of:**

**[Question ID = 1211]**

1. Lymphocytes [Option ID = 4844]
2. Macrophages [Option ID = 4842]
3. Dendritic cells [Option ID = 4841]
4. Monocytes [Option ID = 4843]

**Correct Answer :-**

- Macrophages [Option ID = 4842]

**39) Process of production of glucose from amino acids and the glycerol portion of fats is known as:**

**[Question ID = 1212]**

1. Gluconeogenesis [Option ID = 4848]
2. Glycogenolysis [Option ID = 4847]
3. Glycerogenesis [Option ID = 4845]
4. Glucosis [Option ID = 4846]

**Correct Answer :-**

- Gluconeogenesis [Option ID = 4848]

**40) The vitreous humor of the eye is composed of:**

**[Question ID = 1134]**

1. Chondroitin sulfate [Option ID = 4534]
2. Keratan sulfate [Option ID = 4536]

3. Hyaluronic acid [Option ID = 4535]
4. Heparin [Option ID = 4533]

**Correct Answer :-**

- Hyaluronic acid [Option ID = 4535]

**41) Lipid bilayer membrane model was proposed by**

**[Question ID = 1217]**

1. Danielle and Davson [Option ID = 4866]
2. Singer [Option ID = 4865]
3. Handerson and Nigel Unwin [Option ID = 4868]
4. Robertson [Option ID = 4867]

**Correct Answer :-**

- Danielle and Davson [Option ID = 4866]

**42) Very last step of protein secretion from live cells is :**

**[Question ID = 1136]**

1. Sumoylation [Option ID = 4543]
2. Endocytosis [Option ID = 4541]
3. Membrane Fusion [Option ID = 4544]
4. Protein Sorting [Option ID = 4542]

**Correct Answer :-**

- Membrane Fusion [Option ID = 4544]

**43) The protein responsible for the formation of fibrin monomers is:**

**[Question ID = 1214]**

1. Thrombin [Option ID = 4856]
2. Prothrombin [Option ID = 4855]
3. Heparin [Option ID = 4853]
4. Plasminogen [Option ID = 4854]

**Correct Answer :-**

- Thrombin [Option ID = 4856]

**44) The precursor to IAA (indole 3-acetic acid) biosynthesis in plant is**

**[Question ID = 1138]**

1. Tyrosine [Option ID = 4549]
2. Phenylalanine [Option ID = 4550]
3. Tryptophan [Option ID = 4551]
4. Methionine [Option ID = 4552]

**Correct Answer :-**

- Tryptophan [Option ID = 4551]



**45) Human intestinal flora cannot digest:**

**[Question ID = 1137]**

1. Cellulose [Option ID = 4547]
2. Lignin [Option ID = 4545]
3. Starch [Option ID = 4548]
4. Pectin [Option ID = 4546]

**Correct Answer :-**

- Cellulose [Option ID = 4547]

**46) Bacterial conjugation was discovered by**

**[Question ID = 1156]**

1. Lederberg and Tatum [Option ID = 4622]
2. Beadle and Tatum [Option ID = 4624]
3. Griffith [Option ID = 4621]
4. Robert Koch [Option ID = 4623]

**Correct Answer :-**

- Lederberg and Tatum [Option ID = 4622]

**47) Urea and Formamide can**

**[Question ID = 1172]**

1. Decrease  $T_m$  of the DNA [Option ID = 4686]
2. Does not effect denaturation of DNA [Option ID = 4688]
3. Increase  $T_m$  of the DNA [Option ID = 4685]
4. Helps faster re-annealing of DNA [Option ID = 4687]

**Correct Answer :-**

- Decrease  $T_m$  of the DNA [Option ID = 4686]

**48) An example for non-ionic detergent is :**

**[Question ID = 1213]**

1. Triton X-100 [Option ID = 4851]
2. Benzalkonium chloride [Option ID = 4852]
3. Sodium dodecyl sulphate [Option ID = 4849]
4. Cetyl trimethyl ammonium bromide [Option ID = 4850]

**Correct Answer :-**

- Triton X-100 [Option ID = 4851]

**49) Lectins are known to bind to only:**

**[Question ID = 1145]**

1. Ceramide [Option ID = 4578]
2. Cholesterol [Option ID = 4580]
3. Phospholipids [Option ID = 4577]

4. Glycoconjugates [Option ID = 4579]

**Correct Answer :-**

- Glycoconjugates [Option ID = 4579]

**50) Excessive intake of which of the following element causes mottled teeth and enlarged bones?**

**[Question ID = 1208]**

1. Magnesium [Option ID = 4832]
2. Fluorine [Option ID = 4831]
3. Phosphate [Option ID = 4830]
4. Calcium [Option ID = 4829]

**Correct Answer :-**

- Fluorine [Option ID = 4831]

**51) Absence of functioning peroxisomes results in:**

**[Question ID = 1200]**

1. Wolman disease [Option ID = 4798]
2. Zellweger syndrome [Option ID = 4797]
3. Hunter syndrome [Option ID = 4800]
4. Gaucher disease [Option ID = 4799]

**Correct Answer :-**

- Zellweger syndrome [Option ID = 4797]

**52) A single calmodulin protein can bind to how many calcium molecules?**

**[Question ID = 1162]**

1. 4 [Option ID = 4645]
2. 1 [Option ID = 4648]
3. 3 [Option ID = 4647]
4. 2 [Option ID = 4646]

**Correct Answer :-**

- 4 [Option ID = 4645]

**53) Propagation of the action potential through the heart is fastest in the:**

**[Question ID = 1143]**

1. AV node [Option ID = 4570]
2. Purkinje fibers [Option ID = 4572]
3. SA node [Option ID = 4569]
4. Arterial muscle [Option ID = 4571]

**Correct Answer :-**

- Purkinje fibers [Option ID = 4572]



**54) During aerobic exercise, blood flow remains relatively constant within:**

**[Question ID = 1215]**

1. The brain [Option ID = 4858]
2. The heart [Option ID = 4859]
3. The skin [Option ID = 4857]
4. The skeletal muscles [Option ID = 4860]

**Correct Answer :-**

- The brain [Option ID = 4858]

**55) During electron transport, protons are pumped out of the mitochondrion at each of the major sites except for**

**[Question ID = 1220]**

1. complex II [Option ID = 4878]
2. complex IV [Option ID = 4880]
3. complex III [Option ID = 4879]
4. complex I [Option ID = 4877]

**Correct Answer :-**

- complex II [Option ID = 4878]

**56) Receptor molecule on cell surface for cholera toxin is:**

**[Question ID = 1139]**

1. Glycophorin [Option ID = 4554]
2. EGFR [Option ID = 4553]
3. Cholesterol [Option ID = 4556]
4. Ganglioside [Option ID = 4555]

**Correct Answer :-**

- Ganglioside [Option ID = 4555]

**57) Isoelectric focusing is a technique routinely used to resolve proteins based on their:**

**[Question ID = 1173]**

1. Hydrophobicity [Option ID = 4692]
2. Mass [Option ID = 4689]
3. pI [Option ID = 4690]
4. Length [Option ID = 4691]

**Correct Answer :-**

- pI [Option ID = 4690]

**58) Abzymes are:**

**[Question ID = 1122]**

1. Also referred to as zymogens [Option ID = 4487]
2. Enzymes that are highly specific like antibodies [Option ID = 4485]

3. Enzymes that hydrolyze antibodies [Option ID = 4488]
4. Antibodies that have catalytic activities [Option ID = 4486]

**Correct Answer :-**

- Antibodies that have catalytic activities [Option ID = 4486]

**59) Acid phosphatase can be used as a marker enzyme for?**

**[Question ID = 1199]**

1. Lysosomes [Option ID = 4796]
2. Peroxisomes [Option ID = 4793]
3. Nucleus [Option ID = 4795]
4. Mitochondria [Option ID = 4794]

**Correct Answer :-**

- Lysosomes [Option ID = 4796]

**60) Pyridoxal phosphate is the functional form of:**

**[Question ID = 1192]**

1. Vitamin B<sub>6</sub> [Option ID = 4765]
2. Vitamin B<sub>3</sub> [Option ID = 4768]
3. Vitamin B<sub>12</sub> [Option ID = 4766]
4. Vitamin B<sub>2</sub> [Option ID = 4767]

**Correct Answer :-**

- Vitamin B<sub>6</sub> [Option ID = 4765]

**61) Tay-Sachs disease is caused by the deficiency of?**

**[Question ID = 1196]**

1. Glucocerebrosidase [Option ID = 4782]
2. Galactosidase A [Option ID = 4784]
3. Hexosaminidase A [Option ID = 4781]
4. Sphingomyelinase [Option ID = 4783]

**Correct Answer :-**

- Hexosaminidase A [Option ID = 4781]

**62) During DNA replication, which of the following enzymes is involved in removing supercoiling ahead of the replication fork?**

**[Question ID = 1163]**

1. Primase [Option ID = 4649]
2. Polymerase [Option ID = 4651]
3. Helicase [Option ID = 4650]
4. Topoisomerase [Option ID = 4652]

**Correct Answer :-**

- Topoisomerase [Option ID = 4652]



**63) Cell-cell fusion is exhibited by formation of :**

**[Question ID = 1144]**

1. Multinucleated cells [Option ID = 4575]
2. Microvilli [Option ID = 4574]
3. Elevated numbers of endosomes [Option ID = 4576]
4. Numerous vacuoles [Option ID = 4573]

**Correct Answer :-**

- Multinucleated cells [Option ID = 4575]

**64) Vitamin B<sub>12</sub> is absorbed primarily in the:**

**[Question ID = 1189]**

1. Jejunum [Option ID = 4754]
2. Duodenum [Option ID = 4755]
3. Stomach [Option ID = 4753]
4. Ileum [Option ID = 4756]

**Correct Answer :-**

- Ileum [Option ID = 4756]

**65) Hybridoma technology uses splenocytes for production of**

**[Question ID = 1180]**

1. T-cell receptors. [Option ID = 4719]
2. MHC complex [Option ID = 4720]
3. monoclonal antibodies [Option ID = 4718]
4. viral antigens [Option ID = 4717]

**Correct Answer :-**

- monoclonal antibodies [Option ID = 4718]

**66) RNA lacks which of the following?**

**[Question ID = 1169]**

1. O-Glycosidic bond [Option ID = 4675]
2. N-Glycosidic bond [Option ID = 4674]
3. Purines [Option ID = 4676]
4. Ester bond [Option ID = 4673]

**Correct Answer :-**

- O-Glycosidic bond [Option ID = 4675]

**67) Grafts between genetically identical individuals (i.e., identical twins)**

**[Question ID = 1186]**

1. are not rejected if a kidney is grafted, but skin grafts are rejecte [Option ID = 4744]

2. are not rejected, even without immunosuppression. [Option ID = 4743]
3. are subject to hyperacute rejection. [Option ID = 4742]
4. are rejected slowly as a result of minor histocompatibility antigens. [Option ID = 4741]

**Correct Answer :-**

- are not rejected, even without immunosuppression. [Option ID = 4743]

**68) Multidrug resistance of cancer cells are because of appearance of:**

**[Question ID = 1151]**

1. High rate of protein secretion [Option ID = 4603]
2. Increase of endocytotic capacity [Option ID = 4604]
3. Elevated number of GM1 on cell surface [Option ID = 4602]
4. Special transporter protein on plasma membrane [Option ID = 4601]

**Correct Answer :-**

- Special transporter protein on plasma membrane [Option ID = 4601]

**69) Enzyme with highest turnover number:**

**[Question ID = 1124]**

1. Lysozyme [Option ID = 4495]
2. G3PDH [Option ID = 4494]
3. Carbonic anhydrase [Option ID = 4493]
4. LDH [Option ID = 4496]

**Correct Answer :-**

- Carbonic anhydrase [Option ID = 4493]

**70) In Counter immunoelectrophoresis**

**[Question ID = 1182]**

1. the antibody will migrate towards anode [Option ID = 4727]
2. the antibody will migrate towards cathode [Option ID = 4728]
3. electrophoresis will drive the antibody and antigen toward each other [Option ID = 4726]
4. electrophoresis will drive the antibody and antigen parallel to each other [Option ID = 4725]

**Correct Answer :-**

- electrophoresis will drive the antibody and antigen toward each other [Option ID = 4726]

**71) Antigen-presenting cells that activate helper T cells must express which one of the following on their surfaces?**

**[Question ID = 1179]**

1. IgE [Option ID = 4713]
2. class I MHC antigens [Option ID = 4715]
3. class II MHC antigens [Option ID = 4716]
4. gamma interferon [Option ID = 4714]

**Correct Answer :-**



- class II MHC antigens [Option ID = 4716]

**72) Sphingomyelinase catalyses the conversion of sphingomyelin into:**

**[Question ID = 1191]**

1. Phosphatidylinositol and ceramide [Option ID = 4762]
2. Phosphatidylserine and ceramide [Option ID = 4761]
3. Phosphocholine and ceramide [Option ID = 4764]
4. Acetylcholine and ceramide [Option ID = 4763]

**Correct Answer :-**

- Phosphocholine and ceramide [Option ID = 4764]

**73) Different form of a plasmid, on an agarose gel, after electrophoresis may be in which of the following sequence in decreasing molecular weight?**

**[Question ID = 1177]**

1. Linear plasmid, open circular, super coiled plasmid [Option ID = 4706]
2. Super coiled, open circular, linear plasmid DNA [Option ID = 4705]
3. Open circular, super coiled, linear plasmid DNA [Option ID = 4707]
4. Open circular, linear plasmid, super coiled plasmid [Option ID = 4708]

**Correct Answer :-**

- Linear plasmid, open circular, super coiled plasmid [Option ID = 4706]

**74) Mode of action of Penicillin on killing bacterial cells is through its action on:**

**[Question ID = 1150]**

1. Ribosome [Option ID = 4598]
2. Plasma membrane [Option ID = 4599]
3. Cell wall [Option ID = 4597]
4. DNA [Option ID = 4600]

**Correct Answer :-**

- Cell wall [Option ID = 4597]

**75) AP endonuclease is responsible for**

**[Question ID = 1152]**

1. Double strand break repair [Option ID = 4608]
2. Base excision repair [Option ID = 4605]
3. Nucleotide excision repair [Option ID = 4606]
4. Mismatch repair [Option ID = 4607]

**Correct Answer :-**

- Base excision repair [Option ID = 4605]

**76) At room temperature (25°C) an unsaturated fatty acid will have**

**[Question ID = 1148]**

1. Solid consistency [Option ID = 4592]
2. Waxy consistency [Option ID = 4590]
3. Liquid consistency [Option ID = 4589]
4. Cannot be predicted [Option ID = 4591]

**Correct Answer :-**

- Liquid consistency [Option ID = 4589]

**77) All of the following statements are true about lysozyme except which one?**

**[Question ID = 1187]**

1. It hydrolyzes peptidoglycan. [Option ID = 4748]
2. It destroys gram-positive cell walls. [Option ID = 4745]
3. It is an organelle in white blood cells. [Option ID = 4747]
4. It is an enzyme. [Option ID = 4746]

**Correct Answer :-**

- It is an organelle in white blood cells. [Option ID = 4747]

**78) pH of an aqueous solution of 1M NaCl:**

**[Question ID = 1123]**

1. Acidic [Option ID = 4489]
2. Neutral [Option ID = 4491]
3. Alkaline [Option ID = 4490]
4. Cannot be determined [Option ID = 4492]

**Correct Answer :-**

- Neutral [Option ID = 4491]

**79) Formation of a disulphide bond between two cysteine residues requires which of the following?**

**[Question ID = 1165]**

1. Oxidising agent [Option ID = 4657]
2. Adenosine triphosphate [Option ID = 4660]
3. Reducing agent [Option ID = 4658]
4. Ammonium sulphate [Option ID = 4659]

**Correct Answer :-**

- Oxidising agent [Option ID = 4657]

**80) What is the average resting potential of a mammalian cell?**

**[Question ID = 1161]**

1. +50mV [Option ID = 4642]
2. +60mV [Option ID = 4643]
3. -70mV [Option ID = 4644]
4. -50mV [Option ID = 4641]



**Correct Answer :-**

- -70mV [Option ID = 4644]

**81) What is approximately the half life of 32-Phosphorus?**

**[Question ID = 1178]**

1. 30 days [Option ID = 4712]
2. 42 days [Option ID = 4711]
3. 14 days [Option ID = 4709]
4. 28 days [Option ID = 4710]

**Correct Answer :-**

- 14 days [Option ID = 4709]

**82) Sucrose is composed of**

**[Question ID = 1126]**

1. Mannose and glucose [Option ID = 4504]
2. Galactose and mannose [Option ID = 4503]
3. Fructose and galactose [Option ID = 4502]
4. Fructose and glucose [Option ID = 4501]

**Correct Answer :-**

- Fructose and glucose [Option ID = 4501]

**83) Muscular dystrophy is a result of mutation in the**

**[Question ID = 1168]**

1. Mutation in glycophorin A [Option ID = 4672]
2. Mutation in Ankyrin [Option ID = 4671]
3. Mutation in band 3 protein [Option ID = 4670]
4. Mutation in dystrophin [Option ID = 4669]

**Correct Answer :-**

- Mutation in dystrophin [Option ID = 4669]

**84) The immunoglobulin fold primarily comprises of:**

**[Question ID = 1198]**

1. Gamma turn [Option ID = 4791]
2. Alpha helices [Option ID = 4790]
3. Beta sheets [Option ID = 4789]
4. Unstructured loop [Option ID = 4792]

**Correct Answer :-**

- Beta sheets [Option ID = 4789]

**85) The disease commonly called 'LOCK JAW' is caused by**

**[Question ID = 1160]**

1. *Clostridium tetani* [Option ID = 4638]
2. *Mycobacterium leprea* [Option ID = 4640]
3. *Treponema pallidum* [Option ID = 4637]
4. *Bacillus pertussis* [Option ID = 4639]

**Correct Answer :-**

- *Clostridium tetani* [Option ID = 4638]

**86) The extinction coefficient of a protein at 280 nm is  $20 \text{ mM}^{-1}\text{cm}^{-1}$ . The absorbance of the protein solution at 280nm, appropriately diluted, measured in a cuvette with a path length of 1cm is 100. What is the concentration of the protein solution?**

**[Question ID = 1155]**

1. 5 mM [Option ID = 4618]
2. 0.2 M [Option ID = 4619]
3. 0.2 mM [Option ID = 4620]
4. 5 M [Option ID = 4617]

**Correct Answer :-**

- 5 mM [Option ID = 4618]

**87) The value of ionic product of water at 25°C is:**

**[Question ID = 1121]**

1.  $1 \times 10^{-7}$  [Option ID = 4484]
2.  $1 \times 10^{14}$  [Option ID = 4481]
3.  $1 \times 10^{-14}$  [Option ID = 4483]
4.  $1 \times 10^7$  [Option ID = 4482]

**Correct Answer :-**

- $1 \times 10^{-14}$  [Option ID = 4483]

**88) The effect  $\text{IP}_3$  activation is**

**[Question ID = 1166]**

1. Increase in intracellular calcium levels [Option ID = 4662]
2. Increase in extracellular calcium levels [Option ID = 4661]
3. Closure of calcium channels in ER [Option ID = 4664]
4. Activation of calmodulin [Option ID = 4663]

**Correct Answer :-**

- Increase in intracellular calcium levels [Option ID = 4662]

**89) The mammalian cells are routinely cultured under in *vitro* conditions at:**

**[Question ID = 1216]**

1.  $37^\circ\text{C}$ , 5%  $\text{O}_2$  [Option ID = 4864]



2. 37°C, 5% CO<sub>2</sub> [Option ID = 4863]
3. 25°C, 5% O<sub>2</sub> [Option ID = 4862]
4. 25°C, 5% CO<sub>2</sub> [Option ID = 4861]

**Correct Answer :-**

- 37°C, 5% CO<sub>2</sub> [Option ID = 4863]

**90) The role of cholecystokinin is to:**

**[Question ID = 1164]**

1. Stimulate gastric motility [Option ID = 4653]
2. Stimulate enzyme secretion from pancreas [Option ID = 4655]
3. Inhibit enzyme secretion from pancreas [Option ID = 4656]
4. Inhibit gastric motility [Option ID = 4654]

**Correct Answer :-**

- Stimulate enzyme secretion from pancreas [Option ID = 4655]

**91) The salt which is commonly used for salting out effect during extraction of proteins is :**

**[Question ID = 1218]**

1. NH<sub>4</sub> NO<sub>3</sub> [Option ID = 4869]
2. (NH<sub>4</sub>)<sub>2</sub> SO<sub>4</sub> [Option ID = 4870]
3. K<sub>2</sub>SO<sub>4</sub> [Option ID = 4871]
4. NaCl [Option ID = 4872]

**Correct Answer :-**

- (NH<sub>4</sub>)<sub>2</sub> SO<sub>4</sub> [Option ID = 4870]

**92) The most abundant phospholipid in bacterial cell membrane is**

**[Question ID = 1171]**

1. Phosphatidylcholine [Option ID = 4681]
2. Phosphatidylserine [Option ID = 4682]
3. Phosphatidylethanolamine [Option ID = 4683]
4. Cholesterol [Option ID = 4684]

**Correct Answer :-**

- Phosphatidylethanolamine [Option ID = 4683]

**93) The only enzyme belonging to Krebs cycle that is attached to inner mitochondrial membrane**

**[Question ID = 1167]**

1. Isocitrate dehydrogenase [Option ID = 4666]
2. Malate dehydrogenase [Option ID = 4668]
3. NADH dehydrogenase [Option ID = 4665]
4. Succinate dehydrogenase [Option ID = 4667]

**Correct Answer :-**

- Succinate dehydrogenase [Option ID = 4667]

**94) The cooperativity phenomenon of protein-ligand interaction was first determined in:**

**[Question ID = 1125]**

1. Hemoglobin-O<sub>2</sub> [Option ID = 4497]
2. Peroxidase-H<sub>2</sub>O<sub>2</sub> [Option ID = 4500]
3. ATCase-Aspartate [Option ID = 4499]
4. Myoglobin-O<sub>2</sub> [Option ID = 4498]

**Correct Answer :-**

- Hemoglobin-O<sub>2</sub> [Option ID = 4497]

**95) The bond angle between H-O-H in water molecule is?**

**[Question ID = 1203]**

1. 55° [Option ID = 4810]
2. 105.4° [Option ID = 4811]
3. 104.5° [Option ID = 4809]
4. 110° [Option ID = 4812]

**Correct Answer :-**

- 104.5° [Option ID = 4809]

**96) The class of immunoglobulin present in highest concentration in the blood of a human newborn is**

**[Question ID = 1181]**

1. IgA [Option ID = 4723]
2. IgM [Option ID = 4722]
3. IgE [Option ID = 4724]
4. IgG [Option ID = 4721]

**Correct Answer :-**

- IgG [Option ID = 4721]

**97) Chemical messengers that are secreted by cells into the extracellular fluid and affect neighbouring target cells of a different type are typically known as?**

**[Question ID = 1204]**

1. Autocrines [Option ID = 4813]
2. Neurotransmitters [Option ID = 4816]
3. Paracrines [Option ID = 4814]
4. Endocrines [Option ID = 4815]

**Correct Answer :-**

- Paracrines [Option ID = 4814]

**98) A regulatory control site of a gene**



**[Question ID = 1188]**

1. Must be very close to the gene it affects. [Option ID = 4749]
2. Must lie upstream of the gene it affects. [Option ID = 4750]
3. Is *trans*-acting [Option ID = 4752]
4. Is *cis*-acting [Option ID = 4751]

**Correct Answer :-**

- Is *cis*-acting [Option ID = 4751]

**99) IgM antibody can bind to:**

**[Question ID = 1159]**

1. Two epitopes [Option ID = 4633]
2. Ten epitopes [Option ID = 4635]
3. Four epitopes [Option ID = 4634]
4. One epitope [Option ID = 4636]

**Correct Answer :-**

- Ten epitopes [Option ID = 4635]

**100) Calcitonin is secreted by:**

**[Question ID = 1202]**

1. Parathyroid hormone [Option ID = 4806]
2. Pituitary gland [Option ID = 4807]
3. Adrenal gland [Option ID = 4808]
4. Thyroid hormone [Option ID = 4805]

**Correct Answer :-**

- Thyroid hormone [Option ID = 4805]