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

Topic:- BIOSCI MSC S2

**1) Balbiani Rings occur in**
**[Question ID = 9207]**
1. Autosomes [Option ID = 36822]
2. Hetrosomes [Option ID = 36823]
3. Polytene chromosomes [Option ID = 36824]
4. Lampbrush chromosomes [Option ID = 36825]

**Correct Answer :-**
- Polytene chromosomes [Option ID = 36824]

**2) Which of the following is NOT a type of cancer?**

**[Question ID = 9208]**
1. Carcinomas

   [Option ID = 36826]
2. Sarcomas

   [Option ID = 36827]
3. Leukemia

   [Option ID = 36828]
4. Colitis

   [Option ID = 36829]

**Correct Answer :-**
- Colitis

  [Option ID = 36829]

**3) If DNA is damaged, which of the following genes arrest cell cycle?**
**[Question ID = 9209]**
1. Rb [Option ID = 36830]
2. p53 [Option ID = 36831]
3. Hedgehog receptor [Option ID = 36832]
4. p16 [Option ID = 36833]

**Correct Answer :-**
- p53 [Option ID = 36831]

**4) Name the term where a single pre-mRNA is processed into a number of products?**
**[Question ID = 9210]**
1. Alternate splicing [Option ID = 36834]
2. Polyadenylation [Option ID = 36835]
3. Capping [Option ID = 36836]
4. Intron removal [Option ID = 36837]

**Correct Answer :-**
- Alternate splicing [Option ID = 36834]

**5) What is the role of the sigma factor in transcription?**
**[Question ID = 9211]**
1. Helicase action [Option ID = 36838]
2. Transcription initiation [Option ID = 36839]
3. Transcription elongation [Option ID = 36840]
4. Transcription termination [Option ID = 36841]

**Correct Answer :-**
- Transcription initiation [Option ID = 36839]

**6) How many base pairs are there in every helical turn of Watson-Crick double helix model ?**

**[Question ID = 9212]**
1. 32.3

   [Option ID = 36842]
2. 20.6

   [Option ID = 36843]

3. 14.0

[Option ID = 36844]

4. 10.4

[Option ID = 36845]

**Correct Answer :-**

- 10.4

[Option ID = 36845]

**7) A purified DNA sample of leaf contains 20% of guanine. Calculate the approximate percentage of purine residues?**
**[Question ID = 9213]**

1. 30% [Option ID = 36846]
2. 40% [Option ID = 36847]
3. 50% [Option ID = 36848]
4. 60% [Option ID = 36849]

**Correct Answer :-**

- 50% [Option ID = 36848]

**8) How many numbers of replicon are found in E.coli?**
**[Question ID = 9214]**

1. Five replicon [Option ID = 36850]
2. Two replicon [Option ID = 36851]
3. Single replicon [Option ID = 36852]
4. Multiple replicon [Option ID = 36853]

**Correct Answer :-**

- Single replicon [Option ID = 36852]

**9) What is the role of snoRNA in eukaryotes?**
**[Question ID = 9215]**

1. Chemical modification of rRNA [Option ID = 36854]
2. RNA splicing [Option ID = 36855]
3. Act as adaptor RNA [Option ID = 36856]
4. Forms component of the ribosome [Option ID = 36857]

**Correct Answer :-**

- Chemical modification of rRNA [Option ID = 36854]

**10) Which of the following sequence of RNA is recognized by the small subunit of the ribosome?**
**[Question ID = 9216]**

1. Rho utilization site [Option ID = 36858]
2. Downstream sequence [Option ID = 36859]
3. Upstream sequence [Option ID = 36860]
4. Shine-Dalgarno sequence [Option ID = 36861]

**Correct Answer :-**

- Shine-Dalgarno sequence [Option ID = 36861]

**11) Which of the following acts as the major neurotransmitter in substantia nigra?**
**[Question ID = 9217]**

1. Dopamine [Option ID = 36862]
2. Noradrenaline [Option ID = 36863]
3. Acetylcholine [Option ID = 36864]
4. Serotonin [Option ID = 36865]

**Correct Answer :-**

- Dopamine [Option ID = 36862]

**12) The electrochemical equilibrium of a neuron can be calculated using which equation?**
**[Question ID = 9218]**

1. Bernouli equation [Option ID = 36866]
2. Henderson-Hassalbach equation [Option ID = 36867]
3. Leyden's equation [Option ID = 36868]
4. Nernst equation [Option ID = 36869]

**Correct Answer :-**

- Nernst equation [Option ID = 36869]

**13) Which is true about composition of Blood?**
**[Question ID = 9219]**

1. Plasma-55%, Protein/WBC-1%, RBC- 45% [Option ID = 36870]
2. Plasma-50%, Protein/WBC-3%, RBC- 47% [Option ID = 36871]

3. Plasma-45%, Protein/WBC-4%, RBC- 51% [Option ID = 36872]
4. Plasma-35%, Protein/WBC-2%, RBC- 65% [Option ID = 36873]

**Correct Answer :-**

- Plasma-55%, Protein/WBC-1%, RBC- 45% [Option ID = 36870]

**14) Which of the following statement is TRUE about the ear and hearing?**
**[Question ID = 9220]**

1. The range of human hearing is from 20 Hz to 20 kHz [Option ID = 36874]
2. Conductive hearing loss would be evident if a person had a similar degree of hearing loss for air conduction and bone conduction [Option ID = 36875]
3. The ear is most sensitive to frequencies between about 100 Hz and 300 Hz [Option ID = 36876]
4. The endolymph of the scala media is similar in composition to plasma [Option ID = 36877]

**Correct Answer :-**

- The range of human hearing is from 20 Hz to 20 kHz [Option ID = 36874]

**15) During isotonic contraction of a skeletal-muscle fibre, the**

**[Question ID = 9221]**

1. (1) Sarcomeres shorten

   [Option ID = 36878]
2. (2) A bands shorten

   [Option ID = 36879]
3. (3) I bands shorten

   [Option ID = 36880]
4. (4) 1 and 3

   [Option ID = 36881]

**Correct Answer :-**

- (4) 1 and 3

  [Option ID = 36881]

**16) The rate-limiting factor in causing blood coagulation is**
**[Question ID = 9222]**

1. Prothrombin activator [Option ID = 36882]
2. Thrombin [Option ID = 36883]
3. Fibrinogen [Option ID = 36884]
4. Fibrin stabilizing factor [Option ID = 36885]

**Correct Answer :-**

- Prothrombin activator [Option ID = 36882]

**17) In different types of tissue transplantations, the rate of graft rejection in decreasing order is**
**[Question ID = 9223]**

1. Isograft > xenograft > allograft [Option ID = 36886]
2. Allograft > isograft > xenograft [Option ID = 36887]
3. Xenograft > autograft > allograft [Option ID = 36888]
4. Xenograft > allograft > isograft [Option ID = 36889]

**Correct Answer :-**

- Xenograft > allograft > isograft [Option ID = 36889]

**18) Reticulo-endothelial cells are present in**
**[Question ID = 9224]**

1. Kidney, Spleen & Bone marrow [Option ID = 36890]
2. Lung, Spleen & Bone marrow [Option ID = 36891]
3. Liver, Spleen & Bone marrow [Option ID = 36892]
4. Intestine, Spleen & Bone marrow [Option ID = 36893]

**Correct Answer :-**

- Liver, Spleen & Bone marrow [Option ID = 36892]

**19) The central foveal region in eye contains**
**[Question ID = 9225]**

1. Only rods [Option ID = 36894]
2. Both rods and cones [Option ID = 36895]
3. Only cones [Option ID = 36896]
4. Neither rods nor cones [Option ID = 36897]

**Correct Answer :-**

- Only cones [Option ID = 36896]

**20) Osmolality reflects**

**[Question ID = 9226]**

1. 1 osmole of solute dissolved in each g of water [Option ID = 36898]
2. 1 osmole of solute dissolved in each kg of water [Option ID = 36899]
3. 1 osmole of solute dissolved in each L of water [Option ID = 36900]
4. 1 osmole of solute dissolved in each mL of water [Option ID = 36901]

**Correct Answer :-**

- 1 osmole of solute dissolved in each kg of water [Option ID = 36899]

**21) Methioninine Synthase is a _____dependent Enzyme**

**[Question ID = 9227]**

1. Vitamin B3 [Option ID = 36902]
2. Vitamin B6 [Option ID = 36903]
3. Vitamin B12 [Option ID = 36904]
4. Vitamin B61 [Option ID = 36905]

**Correct Answer :-**

- Vitamin B12 [Option ID = 36904]

**22) Hypertension of unknown etiology is represented by**

**[Question ID = 9228]**

1. (1) Essential hypertension

   [Option ID = 36906]
2. (2) Toxemia of pregnancy

   [Option ID = 36907]
3. (3) Acute intermittent porphyria

   [Option ID = 36908]
4. (4) 1 and 3

   [Option ID = 36909]

**Correct Answer :-**

- (1) Essential hypertension

  [Option ID = 36906]

**23) Which of the following drugs is a ganglionic blocker?**

**[Question ID = 9229]**

1. Prazosin [Option ID = 36910]
2. Ydralazine [Option ID = 36911]
3. Mecamylamine [Option ID = 36912]
4. Nicardipine [Option ID = 36913]

**Correct Answer :-**

- Mecamylamine [Option ID = 36912]

**24) Dramatic decrease in systemic availability of a drug following oral administration is most likely due to**

**[Question ID = 9230]**

1. Extreme drug instability at stomach pH [Option ID = 36914]
2. Hepatic "first-pass" effect [Option ID = 36915]
3. Drug metabolized by gut flora [Option ID = 36916]
4. Patient non-compliance [Option ID = 36917]

**Correct Answer :-**

- Hepatic "first-pass" effect [Option ID = 36915]

**25) Type(s) of derivatives associated with phase II metabolic reactions include(s)**

**[Question ID = 9231]**

1. (1) Glucuronide acid derivatives

   [Option ID = 36918]
2. (2) Sulfation derivative

   [Option ID = 36919]
3. (3) Neither

   [Option ID = 36920]
4. (4) Both 1 and 2

   [Option ID = 36921]

**Correct Answer :-**

- (4) Both 1 and 2

[Option ID = 36921]

**26) Which of the following is the characteristic(s) of aspirin overdose?**

**[Question ID = 9232]**

1. (1) Pyloric valve spasm

   [Option ID = 36922]
2. (2) Acidity

   [Option ID = 36923]
3. (3) Both 1 and 2

   [Option ID = 36924]
4. (4) Neither

   [Option ID = 36925]

**Correct Answer :-**

- (3) Both 1 and 2

[Option ID = 36924]

**27) Which of the following is effective in the management of mild to moderate pain, when anti-inflammatory action is not necessary?**

**[Question ID = 9233]**

1. Penicillamine [Option ID = 36926]
2. Sulfasalazine [Option ID = 36927]
3. Acetaminophen [Option ID = 36928]
4. Piroxicam [Option ID = 36929]

**Correct Answer :-**

- Acetaminophen [Option ID = 36928]

**28) Risk differs from hazard in that, the risk**

**[Question ID = 9234]**

1. Includes a consideration of the likelihood and severity [Option ID = 36930]
2. Is determined by toxicity studies [Option ID = 36931]
3. Can only be assessed by trained professionals [Option ID = 36932]
4. Is independent of exposure [Option ID = 36933]

**Correct Answer :-**

- Includes a consideration of the likelihood and severity [Option ID = 36930]

**29) Which of the following drugs work by inhibiting the enzyme acetylcholinesterase?**

**[Question ID = 9235]**

1. Neostigmine [Option ID = 36934]
2. Cyclizine [Option ID = 36935]
3. Montelukast [Option ID = 36936]
4. Fentanyl [Option ID = 36937]

**Correct Answer :-**

- Neostigmine [Option ID = 36934]

**30) Which type of epilepsy is treated with Ethosuximide ?**

**[Question ID = 9236]**

1. Tonic-clonic seizures

   [Option ID = 36938]
2. Lennox-Gastaut syndrome seizures

   [Option ID = 36939]
3. Absence seizures

   [Option ID = 36940]
4. All of these

   [Option ID = 36941]

**Correct Answer :-**

- Absence seizures

[Option ID = 36940]

**31) Which statement is true for competitive inhibition?**

**[Question ID = 9237]**

1. In competitive inhibition, the addition of agonist shifts the dose response curve to the right [Option ID = 36942]
2. In competitive inhibition, the addition of agonist shifts the dose response curve to the left [Option ID = 36943]
3. Competitive inhibition may be irreversible [Option ID = 36944]
4. Competitive inhibition has the ability to activate the receptors [Option ID = 36945]

**Correct Answer :-**

- In competitive inhibition, the addition of agonist shifts the dose response curve to the right [Option ID = 36942]

**32) The enzyme ultimately responsible for the formation of fibrin monomer is**
**[Question ID = 9238]**

1. Plasminogen [Option ID = 36946]
2. Thrombin [Option ID = 36947]
3. Kininogen [Option ID = 36948]
4. Prothrombin [Option ID = 36949]

**Correct Answer :-**

- Thrombin [Option ID = 36947]

**33) Paracrine secretion responsible for inhibiting gastric acid secretion is**
**[Question ID = 9239]**

1. Somatostatin [Option ID = 36950]
2. Gastrin [Option ID = 36951]
3. Histamine [Option ID = 36952]
4. Enterogastrone [Option ID = 36953]

**Correct Answer :-**

- Somatostatin [Option ID = 36950]

**34) The percentage of hemoglobin saturated with oxygen will increase, if**

**[Question ID = 9240]**

1. The arterial $pCO_2$ is increased

   [Option ID = 36954]
2. The temperature is increased

   [Option ID = 36955]
3. The arterial $pO_2$ is increased

   [Option ID = 36956]
4. The arterial pH is decreased

   [Option ID = 36957]

**Correct Answer :-**

- The arterial $pO_2$ is increased

  [Option ID = 36956]

**35) Which of the following statement about spermatogenesis is correct?**
**[Question ID = 9241]**

1. Production and release of spermatozoa is cyclic [Option ID = 36958]
2. LH acts directly on sertoli cells to promote cell division [Option ID = 36959]
3. Sertoli cells are required for mitotic and meiotic activity of germ cells [Option ID = 36960]
4. Spermatogenesis requires continuous release of GnRH [Option ID = 36961]

**Correct Answer :-**

- Sertoli cells are required for mitotic and meiotic activity of germ cells [Option ID = 36960]

**36) Plasma levels of calcium can be increased most rapidly by the direct action of parathyroid hormone on the**
**[Question ID = 9242]**

1. Kidney [Option ID = 36962]
2. Bones [Option ID = 36963]
3. Thyroid gland [Option ID = 36964]
4. Intestine [Option ID = 36965]

**Correct Answer :-**

- Bones [Option ID = 36963]

**37) Transcortical sensory aphasia is most likely to be associated with a lesion of**
**[Question ID = 9243]**

1. The hippocampus [Option ID = 36966]
2. The temporal lobe [Option ID = 36967]
3. The parietal lobe [Option ID = 36968]
4. The limbic system [Option ID = 36969]

**Correct Answer :-**

- The temporal lobe [Option ID = 36967]

**38) When the person is dehydrated, hypotonic solution is found in the**
**[Question ID = 9244]**
1. Glomerular filtrate [Option ID = 36970]
2. Loop of Henle [Option ID = 36971]
3. Cortical collecting tubule [Option ID = 36972]
4. Distal collecting duct [Option ID = 36973]

**Correct Answer :-**
- Loop of Henle [Option ID = 36971]

**39) The principal steroid secreted by the fetal adrenal cortex is**
**[Question ID = 9245]**
1. Dehydroepiandrosterone [Option ID = 36974]
2. Corticosterone [Option ID = 36975]
3. Cortisol [Option ID = 36976]
4. Pregnenolone [Option ID = 36977]

**Correct Answer :-**
- Dehydroepiandrosterone [Option ID = 36974]

**40) Vaccination is a form of**

**[Question ID = 9246]**
1. (1) Active immunization

   [Option ID = 36978]
2. (2) Passive immunization

   [Option ID = 36979]
3. (3) Both

   [Option ID = 36980]
4. (4) Neither

   [Option ID = 36981]

**Correct Answer :-**
- (3) Both

  [Option ID = 36980]

**41) Which of the following diseases is associated with angiogenesis?**
**[Question ID = 9247]**
1. Diabetes [Option ID = 36982]
2. Cancer [Option ID = 36983]
3. Asthma [Option ID = 36984]
4. AIDS [Option ID = 36985]

**Correct Answer :-**
- Cancer [Option ID = 36983]

**42) The F1 particles of mitochondria are**
**[Question ID = 9248]**
1. A type of ribosome that synthesizes mitochondrial proteins [Option ID = 36986]
2. A structural component of the mitochondrial outer membrane [Option ID = 36987]
3. An enzyme complex that synthesizes ATP during respiration [Option ID = 36988]
4. Storage complex for calcium phosphate in the mitochondria [Option ID = 36989]

**Correct Answer :-**
- An enzyme complex that synthesizes ATP during respiration [Option ID = 36988]

**43) Rheumatoid arthritis is an example of**
**[Question ID = 9249]**
1. Type I hypersensitive reaction [Option ID = 36990]
2. Type II hypersensitive reaction [Option ID = 36991]
3. Type III hypersensitive reaction [Option ID = 36992]
4. Type IV hypersensitive reaction [Option ID = 36993]

**Correct Answer :-**
- Type III hypersensitive reaction [Option ID = 36992]

**44) Cystic fibrosis transmembrane conductance regulator (CFTR) is an ion channel specific for**

**[Question ID = 9250]**

1. $K^+$

   [Option ID = 36994]
2. $Na^+$

   [Option ID = 36995]
3. $Cl^-$

   [Option ID = 36996]
4. $H^+$

   [Option ID = 36997]

**Correct Answer :-**

- $Cl^-$

  [Option ID = 36996]

**45) Under which phase of bacterial growth bacteria increases in size but do not divide?**
**[Question ID = 9251]**

1. Lag [Option ID = 36998]
2. Log [Option ID = 36999]
3. Stationary phase [Option ID = 37000]
4. Death phase [Option ID = 37001]

**Correct Answer :-**

- Lag [Option ID = 36998]

**46) Which of the following features of HIV make it different from other members of this family?**

**[Question ID = 9252]**

1. HIV uses reverse transcriptase to convert its RNA genome into cDNA

   [Option ID = 37002]
2. HIV infects human cells that are $CD4^+$

   [Option ID = 37003]
3. HIV is enveloped

   [Option ID = 37004]
4. HIV encoded a number of small proteins such as *tat* and *rev*

   [Option ID = 37005]

**Correct Answer :-**

- HIV uses reverse transcriptase to convert its RNA genome into cDNA

  [Option ID = 37002]

**47) Sulfur oxidizing bacteria belongs to**
**[Question ID = 9253]**

1. Chemoheterotroph [Option ID = 37006]
2. Chemolithoautotroph [Option ID = 37007]
3. Chemolithoheterotroph [Option ID = 37008]
4. Photolithoautotroph [Option ID = 37009]

**Correct Answer :-**

- Chemolithoautotroph [Option ID = 37007]

**48) RNA as a genetic material is found in, which of the following organism?**

**[Question ID = 9254]**

1. Plasmodium

   [Option ID = 37010]
2. *Staphylococcus aureus*

   [Option ID = 37011]
3. *Schizosaccharomycescerevisiae*

   [Option ID = 37012]
4. Poliovirus

   [Option ID = 37013]

**Correct Answer :-**

- Poliovirus

  [Option ID = 37013]

**49) Severe Acute Respiratory Syndrome (SARS) is**

**[Question ID = 9255]**

1. Caused by variant of *Pneumococcus pneumonia*

   [Option ID = 37014]
2. Caused by a variant of common cold virus

   [Option ID = 37015]
3. An acute form of asthma

   [Option ID = 37016]
4. Related to all of these

   [Option ID = 37017]

**Correct Answer :-**

- Caused by a variant of common cold virus

  [Option ID = 37015]

**50) Viruses can be cultured in**

**[Question ID = 9256]**

1. (1) Chemically defined media as that used for bacteria

   [Option ID = 37018]
2. (2) Living system only

   [Option ID = 37019]
3. (3) Non-living matter also

   [Option ID = 37020]
4. (4) Both 1 and 2

   [Option ID = 37021]

**Correct Answer :-**

- (2) Living system only

  [Option ID = 37019]

**51) Which of the following fungi is a rich source of protein?**

**[Question ID = 9257]**

1. Mushroom [Option ID = 37022]
2. Aspergillus [Option ID = 37023]
3. Penicillum [Option ID = 37024]
4. Mucor [Option ID = 37025]

**Correct Answer :-**

- Mushroom [Option ID = 37022]

**52) Streptomycin is obtained from**

**[Question ID = 9258]**

1. Streptomyces capreolus [Option ID = 37026]
2. Streptomyces vanezulae [Option ID = 37027]
3. Streptomyces orchidaceus [Option ID = 37028]
4. Streptomyces griseus [Option ID = 37029]

**Correct Answer :-**

- Streptomyces griseus [Option ID = 37029]

**53) Which cells secrete Tissue plasminogen Activator (tPA)?**

**[Question ID = 9259]**

1. Erythrocytes [Option ID = 37030]
2. Platelets [Option ID = 37031]
3. Endothelial cells [Option ID = 37032]
4. Neutrophils [Option ID = 37033]

**Correct Answer :-**

- Endothelial cells [Option ID = 37032]

**54) Which trace element is most useful in wound healing?**

**[Question ID = 9260]**

1. Manganese [Option ID = 37034]
2. Magnesium [Option ID = 37035]
3. Selenium [Option ID = 37036]
4. Zinc [Option ID = 37037]

**Correct Answer :-**

- Zinc [Option ID = 37037]

**55) What type of mutation occurs in sickle cell anemia?**

**[Question ID = 9261]**

1. (1) Missense

   [Option ID = 37038]
2. (2) Point mutation

   [Option ID = 37039]
3. (3) Both 1 and 2

   [Option ID = 37040]
4. (4) Nonsense

   [Option ID = 37041]

**Correct Answer :-**

- (3) Both 1 and 2

  [Option ID = 37040]

**56) Which of the following enzyme is lactamase inhibitor?**

**[Question ID = 9262]**

1. Clavulanic acid

   [Option ID = 37042]
2. Adipic acid

   [Option ID = 37043]
3. Lysergic acid

   [Option ID = 37044]
4. Salicyclic acid

   [Option ID = 37045]

**Correct Answer :-**

- Clavulanic acid

  [Option ID = 37042]

**57) A twelve-year-old boy measures his height against a small tree by hammering a nail at his height. The boy is 4 feet tall and the tree is 8 feet tall. The boy grows into a 6 feet tall man of 22 and comes back to the tree which has been growing by a feet every 2 years. When he comes back at 22 years and later after 42 years, what is the distance of the nail from the ground?**

**[Question ID = 9263]**

1. 15 & 25 feet [Option ID = 37046]
2. 4 & 4 feet [Option ID = 37047]
3. 19 & 29 feet [Option ID = 37048]
4. 17 & 27 [Option ID = 37049]

**Correct Answer :-**

- 4 & 4 feet [Option ID = 37047]

**58) Recessive inheritance is inferred from**

**[Question ID = 9264]**

1. (1) Phenotype

   [Option ID = 37050]
2. (2) Genotype

   [Option ID = 37051]
3. (3) Both (1) and (2)

   [Option ID = 37052]
4. (4) Only (1)

   [Option ID = 37053]

**Correct Answer :-**

- (4) Only (1)

  [Option ID = 37053]

**59) Recombination frequency is a measure of distance between two genes. It indicates**

**[Question ID = 9265]**

1. Absolute distance in terms of base pairs [Option ID = 37054]
2. Position of the gene from the centromere [Option ID = 37055]

3. Relative distance between the two genes [Option ID = 37056]
4. How often meiosis occurs [Option ID = 37057]

**Correct Answer :-**

- Relative distance between the two genes [Option ID = 37056]

**60) A Test cross in a model organism is carried out between**
**[Question ID = 9266]**

1. A heterozygote and recessive homozygote [Option ID = 37058]
2. Two heterozygotes [Option ID = 37059]
3. A heterozygote and dominant homozygote [Option ID = 37060]
4. Offspring and parent both heterozygous [Option ID = 37061]

**Correct Answer :-**

- A heterozygote and recessive homozygote [Option ID = 37058]

**61) Linkage between loci is**
**[Question ID = 9267]**

1. Confirming Mendel's laws of inheritance [Option ID = 37062]
2. A deviation from Mendel's Laws of inheritance [Option ID = 37063]
3. Reflected in the Law of independent assortment [Option ID = 37064]
4. Because of recombination [Option ID = 37065]

**Correct Answer :-**

- A deviation from Mendel's Laws of inheritance [Option ID = 37063]

**62) For a mutation to be stably inherited**
**[Question ID = 9268]**

1. It should occur in all somatic cells [Option ID = 37066]
2. It should occur on both the homologues in a diploid [Option ID = 37067]
3. It should occur in gametes [Option ID = 37068]
4. It should be random [Option ID = 37069]

**Correct Answer :-**

- It should occur in gametes [Option ID = 37068]

**63) Which of the following statements is untrue?**
**[Question ID = 9269]**

1. Desolvation is an energy expensive process that involves the removal of water from polar functional groups prior to a drug binding to its binding site [Option ID = 37070]
2. Water molecules surrounding a hydrophobic region of a drug form an ordered layer of molecules with low entropy [Option ID = 37071]
3. Interaction between the non polar regions of a drug and the non polar regions of a target require the removal of an ordered water coat and represents a gain in binding energy due to increased entropy [Option ID = 37072]
4. An increase in entropy results in a greater positive value of $\Delta G$ and a greater chance of binding [Option ID = 37073]

**Correct Answer :-**

- An increase in entropy results in a greater positive value of $\Delta G$ and a greater chance of binding [Option ID = 37073]

**64) Which secondary messenger is generated as a result of the action of nitrous oxide?**
**[Question ID = 9270]**

1. GTP [Option ID = 37074]
2. Cyclic GMP [Option ID = 37075]
3. ATP [Option ID = 37076]
4. Cyclic AMP [Option ID = 37077]

**Correct Answer :-**

- Cyclic GMP [Option ID = 37075]

**65) Which of the following is not a G-protein coupled receptor?**
**[Question ID = 9271]**

1. The muscarinic receptor [Option ID = 37078]
2. The glycine receptor [Option ID = 37079]
3. The adrenergic receptor [Option ID = 37080]
4. The glutamate receptor [Option ID = 37081]

**Correct Answer :-**

- The glycine receptor [Option ID = 37079]

**66) Which of the following is not a typical messenger for a tyrosine kinase linked receptor?**
**[Question ID = 9272]**

1. Insulin [Option ID = 37082]
2. Acetylcholine [Option ID = 37083]
3. Growth factors [Option ID = 37084]
4. Cytokines [Option ID = 37085]

**Correct Answer :-**

- Acetylcholine [Option ID = 37083]

**67) Which of the following statements best explains the action of lithium salts in treating manic depressive illness?**
**[Question ID = 9273]**

1. They inhibit adenylatecyclase [Option ID = 37086]
2. They inhibit phospholipase C [Option ID = 37087]
3. They inhibit protein kinase C [Option ID = 37088]
4. They inhibit a glycogen synthase kinase [Option ID = 37089]

**Correct Answer :-**

- They inhibit a glycogen synthase kinase [Option ID = 37089]

**68) Which of the following terms best describes a drug that binds to an active site and inhibits the enzyme, and where inhibition decreases when substrate concentration is increased?**

**[Question ID = 9274]**

1. Allosteric inhibitor

   [Option ID = 37090]
2. Irreversible inhibitor

   [Option ID = 37091]
3. Reversible inhibitor

   [Option ID = 37092]
4. All of these

   [Option ID = 37093]

**Correct Answer :-**

- Reversible inhibitor

  [Option ID = 37092]

**69) Which of the following is not used as a measure of enzyme activity?**

**[Question ID = 9275]**

1. $EC_{50}$

   [Option ID = 37094]
2. $K_i$

   [Option ID = 37095]
3. $IC_{50}$

   [Option ID = 37096]
4. Log P

   [Option ID = 37097]

**Correct Answer :-**

- Log P

  [Option ID = 37097]

**70) Which of the following terms applies to the maximum biological effect resulting from a drug binding to its target?**
**[Question ID = 9276]**

1. Affinity [Option ID = 37098]
2. Efficacy [Option ID = 37099]
3. Potency [Option ID = 37100]
4. Stability [Option ID = 37101]

**Correct Answer :-**

- Efficacy [Option ID = 37099]

**71) Suckling stimulus by the infant during nursing maintains lactation by**
**[Question ID = 9277]**

1. Increasing the secretion of oxytocin [Option ID = 37102]
2. Increasing the secretion of prolactin [Option ID = 37103]
3. Increasing the secretion of LH and FSH [Option ID = 37104]
4. Increasing the secretion of oxytocin and prolactin [Option ID = 37105]

**Correct Answer :-**

- Increasing the secretion of oxytocin and prolactin [Option ID = 37105]

**72) Which one of the following is not a heme protein ?**
**[Question ID = 9278]**

1. Catalase [Option ID = 37106]
2. Cytochrome oxidase [Option ID = 37107]
3. Microsomal P450 drug oxidizing system [Option ID = 37108]
4. Protein Kinase C [Option ID = 37109]

**Correct Answer :-**

- Protein Kinase C [Option ID = 37109]

**73) A shift in the oxygen Haemoglobin Dissociation curve to the right occurs in**
**[Question ID = 9279]**

1. Hypothermia [Option ID = 37110]
2. Carboxyhaemoglobin [Option ID = 37111]
3. Fetal hemoglobin-S [Option ID = 37112]
4. An increase in the 2, 3-Bisphosphoglycerate (2, 3-BPG) [Option ID = 37113]

**Correct Answer :-**

- An increase in the 2, 3-Bisphosphoglycerate (2, 3-BPG) [Option ID = 37113]

**74) The concentration of agar to obtain semi solid media is**

**[Question ID = 9280]**

1. 1.5-20%

   [Option ID = 37114]
2. 0.5% or less

   [Option ID = 37115]
3. >10%

   [Option ID = 37116]
4. >10% but <20%

   [Option ID = 37117]

**Correct Answer :-**

- 0.5% or less

  [Option ID = 37115]

**75) Bleomycin is a drug for the treatment of**
**[Question ID = 9281]**

1. Cancer [Option ID = 37118]
2. Atherosclerosis [Option ID = 37119]
3. Hypertension [Option ID = 37120]
4. Hyperlipidemia [Option ID = 37121]

**Correct Answer :-**

- Cancer [Option ID = 37118]

**76) Emblica officinalis extract is used widely as an**
**[Question ID = 9282]**

1. Antihistamine [Option ID = 37122]
2. Antioxidant [Option ID = 37123]
3. Antipyretic [Option ID = 37124]
4. Analgesic [Option ID = 37125]

**Correct Answer :-**

- Antioxidant [Option ID = 37123]

**77) The vitamin that contains cobalt is**
**[Question ID = 9283]**

1. Vitamin B12 [Option ID = 37126]
2. Vitamin C [Option ID = 37127]
3. Vitamin E [Option ID = 37128]
4. Vitamin k [Option ID = 37129]

**Correct Answer :-**

- Vitamin B12 [Option ID = 37126]

**78) The first virus shown to cause disease was**
**[Question ID = 9284]**

1. Polio [Option ID = 37130]
2. Hepatitis [Option ID = 37131]
3. Tobacco mosaic virus [Option ID = 37132]
4. Potato blight [Option ID = 37133]

**Correct Answer :-**

- Tobacco mosaic virus [Option ID = 37132]

**79) Which of the following is used for the proper maintenance and preservation of pure cultures?**

**[Question ID = 9285]**

1. Periodic transfer to fresh media

   [Option ID = 37134]
2. Preservation by overlaying cultures with mineral oil

   [Option ID = 37135]
3. Preservation by lyophilization

   [Option ID = 37136]
4. All of these

   [Option ID = 37137]

**Correct Answer :-**

- All of these

  [Option ID = 37137]

**80) Name of the mosquito responsible for transmitting chikungunya fever is**
**[Question ID = 9286]**

1. Culex mosquito [Option ID = 37138]
2. Anopheles mosquito [Option ID = 37139]
3. Aedes mosquito [Option ID = 37140]
4. Uranotaenia mosquito [Option ID = 37141]

**Correct Answer :-**

- Aedes mosquito [Option ID = 37140]

**81) The half life period of a radioisotope is 2 hours. After 6 hours, the fraction of the initial quantity of the isotope left behind will be**
**[Question ID = 9287]**

1. 1/6 [Option ID = 37142]
2. 1/3 [Option ID = 37143]
3. 1/8 [Option ID = 37144]
4. 1/4 [Option ID = 37145]

**Correct Answer :-**

- 1/8 [Option ID = 37144]

**82) $PCl_3$ reacts with water to yield**
**[Question ID = 9288]**

1. H3PO4 [Option ID = 37146]
2. H3PO3 [Option ID = 37147]
3. HOCl [Option ID = 37148]
4. POCl3 [Option ID = 37149]

**Correct Answer :-**

- H3PO3 [Option ID = 37147]

**83) The bond angle $120^0$ for $BF_3$ and $109.3^0$ for $CH_4$ accounts for**

**[Question ID = 9290]**

1. $sp^2$, tetrahedral and $sp^3$, trigonal

   [Option ID = 37154]
2. $sp^2$, trigonal and $sp^3$, trigonal

   [Option ID = 37155]
3. $sp^2$, tetrahedral and $sp^3$, tetrahedral

   [Option ID = 37156]
4. $sp^2$, trigonal and $sp^3$, tetrahedral

   [Option ID = 37157]

**Correct Answer :-**

- $sp^2$, trigonal and $sp^3$, tetrahedral

  [Option ID = 37157]

**84) Ultraviolet and visible radiation interacts with matter causing electronic transitions (promotion ofelectrons from the ground state to a high energy state). Which of the following transition falls in UV-Vis range?**
**[Question ID = 9291]**

1. π- π* (pi to pi star transition) and n - π* (n to pi star transition) [Option ID = 37158]
2. σ-σ* (sigma to sigma star transition) and n-σ* (n to sigma star transition) [Option ID = 37159]
3. σ-σ* (sigma to sigma star transition) and π- π* (pi to pi star transition) [Option ID = 37160]
4. n-σ* (n to sigma star transition) and n - π* (n to pi star transition) [Option ID = 37161]

**Correct Answer :-**

- π- π* (pi to pi star transition) and n - π* (n to pi star transition) [Option ID = 37158]

**85) Which of the following statements is not true?**
**[Question ID = 9293]**

1. Pyrrole contains 6π electrons [Option ID = 37166]
2. Pyrrole is an aromatic molecule [Option ID = 37167]
3. Pyrrole is a planar molecule [Option ID = 37168]
4. Pyrrole contains 6 membered N containing heterocyclic ring [Option ID = 37169]

**Correct Answer :-**

- Pyrrole contains 6 membered N containing heterocyclic ring [Option ID = 37169]

**86) Fischer -Tropsch process is**
**[Question ID = 9294]**

1. Decomposition of an alkane in the absence of air [Option ID = 37170]
2. Process to convert kerosene into gasoline [Option ID = 37171]
3. A process to obtain synthetic fuel [Option ID = 37172]
4. Conversion of straight chain alkanes into branched-chain alkanes and aromatic hydrocarbons [Option ID = 37173]

**Correct Answer :-**

- A process to obtain synthetic fuel [Option ID = 37172]

**87) Which one of the following product is not obtained from primary amine?**
**[Question ID = 9295]**

1. Imine [Option ID = 37174]
2. Enamine [Option ID = 37175]
3. Hydrazone [Option ID = 37176]
4. Oxime [Option ID = 37177]

**Correct Answer :-**

- Enamine [Option ID = 37175]

**88) Which one of the following is correct statement?**

**[Question ID = 9296]**

1. The electronegative character decreases in the same group moving down the periodic table

   [Option ID = 37178]
2. The basic character decreases moving from left to right in periodic table

   [Option ID = 37179]
3. The ionization potential increases moving from left to right in periodic table

   [Option ID = 37180]
4. All of these

   [Option ID = 37181]

**Correct Answer :-**

- All of these

  [Option ID = 37181]

**89) Which one of the following rearrangement involves the conversion of oxime to amine?**
**[Question ID = 9297]**

1. Beckmann [Option ID = 37182]
2. Curtius [Option ID = 37183]
3. Hofmann [Option ID = 37184]
4. Wagner-Meerwein [Option ID = 37185]

**Correct Answer :-**

- Beckmann [Option ID = 37182]

**90) The product of the reaction of 1, 3- butadiene and ethylene is**
**[Question ID = 9298]**

1. Hexane [Option ID = 37186]
2. Cyclohexane [Option ID = 37187]
3. Hexene [Option ID = 37188]
4. Cyclohexene [Option ID = 37189]

**Correct Answer :-**

- Cyclohexene [Option ID = 37189]

**91) $LiAlH_4$ is used for one of the following reactions**
**[Question ID = 9299]**
1. Oxidation [Option ID = 37190]
2. Reduction [Option ID = 37191]
3. Condensation [Option ID = 37192]
4. Substitution [Option ID = 37193]

**Correct Answer :-**
- Reduction [Option ID = 37191]

**92) Which of the following violates the octet rule?**

**[Question ID = 9300]**
1. $PCl_3$

   [Option ID = 37194]
2. $CBr_4$

   [Option ID = 37195]
3. $OF_2$

   [Option ID = 37196]
4. $AsF_5$

   [Option ID = 37197]

**Correct Answer :-**
- $AsF_5$

  [Option ID = 37197]

**93) In which one of the following species does the transition metal ion have $d^3$ electronic configuration?**

**[Question ID = 9301]**
1. $[Cr(NH3)6]^{3+}$

   [Option ID = 37198]
2. $[Co(OH2)6]^{2+}$

   [Option ID = 37199]
3. $[CoF6]^{3-}$

   [Option ID = 37200]
4. $[Fe(CN)6]^{3-}$

   [Option ID = 37201]

**Correct Answer :-**
- $[Cr(NH3)6]^{3+}$

  [Option ID = 37198]

**94) Hydrolysis of a fat molecule would yield**
**[Question ID = 9302]**
1. Water and an alkene [Option ID = 37202]
2. Ethanol and propionic acid [Option ID = 37203]
3. Glycerol and soap [Option ID = 37204]
4. A trimester of glycerol with fatty acid [Option ID = 37205]

**Correct Answer :-**
- Glycerol and soap [Option ID = 37204]

**95) In the Hofmann preparation of primary amine, the starting compound is**
**[Question ID = 9304]**
1. Carboxylic acid [Option ID = 37210]
2. Ketone [Option ID = 37211]
3. Amide [Option ID = 37212]
4. Halide [Option ID = 37213]

**Correct Answer :-**
- Amide [Option ID = 37212]

**96) Which of the following IS TRUE about sucrose?**
**[Question ID = 9305]**
1. It is not a reducing sugar [Option ID = 37214]
2. It reduces Fehling's solution [Option ID = 37215]
3. It forms an oxime [Option ID = 37216]

4. It forms an osazone [Option ID = 37217]

**Correct Answer :-**

- It is not a reducing sugar [Option ID = 37214]

**97) The metal present in Wilkinson's catalyst is**

**[Question ID = 9306]**

1. Platinum [Option ID = 37218]
2. Iron [Option ID = 37219]
3. Copper [Option ID = 37220]
4. Rhodium [Option ID = 37221]

**Correct Answer :-**

- Rhodium [Option ID = 37221]

**98) Complete the following reaction.** $_{11}Na^{23} + {}_{1}H^{1} \rightarrow ? + {}_{0}n^{1}$

**[Question ID = 9308]**

1. $_{12}Mn^{23}$

   [Option ID = 37226]
2. $_{12}Mg^{23}$

   [Option ID = 37227]
3. $_{12}C^{23}$

   [Option ID = 37228]
4. None of these

   [Option ID = 37229]

**Correct Answer :-**

- $_{12}Mg^{23}$

  [Option ID = 37227]

**99) Name the following reaction**


**[Question ID = 9309]**

1. Perkin Reaction

   [Option ID = 37230]
2. Aldol condensation

   [Option ID = 37231]
3. Dieckmann condesation

   [Option ID = 37232]
4. None of these

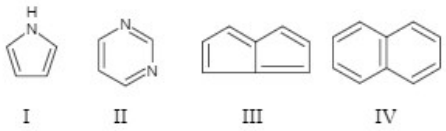
   [Option ID = 37233]

**Correct Answer :-**

- Dieckmann condesation

  [Option ID = 37232]

**100) Which of the following IS NOT aromatic?**




**[Question ID = 9310]**

1. I [Option ID = 37234]
2. II [Option ID = 37235]
3. III [Option ID = 37236]
4. IV [Option ID = 37237]

**Correct Answer :-**

- III [Option ID = 37236]