DU MSc Zoology

Topic:- DU_J18_MSC_ZOO

1) Which of the following is NOT a characteristic of lakes suffering from organic pollution?

[Question ID = 582]

1. High microbial concentration [Option ID = 2325]
2. High biochemical oxygen demand [Option ID = 2327]
3. Low phosphate levels [Option ID = 2328]
4. Frequent algal blooms [Option ID = 2326]

Correct Answer :-

- Low phosphate levels [Option ID = 2328]

2) Which of the following was probably absent at the time of origin of life ?

[Question ID = 546]

1. Oxygen [Option ID = 2182]
2. Hydrogen [Option ID = 2181]
3. Methane [Option ID = 2183]
4. Carbon dioxide [Option ID = 2184]

Correct Answer :-

- Oxygen [Option ID = 2182]

3) Which of the following genotypes causes Klinefelter syndrome?

[Question ID = 530]

1. XYY [Option ID = 2120]
2. XO [Option ID = 2117]
3. XXY [Option ID = 2118]
4. XX [Option ID = 2119]

Correct Answer :-

- XXY [Option ID = 2118]

4) Which of the following is wrong match for enzyme classification?

[Question ID = 601]

1. EC 2 – Trasnferases [Option ID = 2402]
2. EC 3- Hydrolases [Option ID = 2403]
3. EC 1 - Oxidoreductases [Option ID = 2401]
4. EC 4- Ligases [Option ID = 2404]

Correct Answer :-

- EC 4- Ligases [Option ID = 2404]

5) Which of the following is not a possible explanation for the rapid rate of evolution of beak shape in Darwin's finches?

[Question ID = 614]

1. Strong selection pressure [Option ID = 2455]
2. Small population size [Option ID = 2456]
3. High mutation rate [Option ID = 2453]
4. High emigrations and immigration rate [Option ID = 2454]

Correct Answer :-

- High mutation rate [Option ID = 2453]

6) Which of the following animals is primarily an ectotherm?

[Question ID = 542]

1. Hawk [Option ID = 2165]
2. Lizard [Option ID = 2166]
3. Elephant [Option ID = 2168]
4. Shrew [Option ID = 2167]

Correct Answer :-

- Lizard [Option ID = 2166]

7) Which of the following technique was used by Messelon and Stahl to separate DNA labeled with 15^N from 14^N?

[Question ID = 609]

1. Ion-exchange chromatography [Option ID = 2436]
2. Molecular-sieve filtration chromatography [Option ID = 2435]
3. Agarose Gel electrophoresis [Option ID = 2434]
4. CsCl density gradient centrifugation [Option ID = 2433]

Correct Answer :-

- CsCl density gradient centrifugation [Option ID = 2433]

8) Which of the following molecule is most abundant in living system?

[Question ID = 608]

1. Water [Option ID = 2432]
2. Cellulose [Option ID = 2430]
3. Protein [Option ID = 2429]
4. Starch [Option ID = 2431]

Correct Answer :-

- Water [Option ID = 2432]

9) Which system is active under stress?

[Question ID = 536]

1. Sympathetic nervous system [Option ID = 2142]
2. Somatic nervous system [Option ID = 2143]
3. Parasympathetic nervous system [Option ID = 2141]
4. Complete autonomic nervous system [Option ID = 2144]

Correct Answer :-

- Sympathetic nervous system [Option ID = 2142]

10) Which is the first National park established in India:

[Question ID = 583]

1. Jim Corbet National Park [Option ID = 2329]
2. Periyar National Park [Option ID = 2332]
3. Kanziranga National Park [Option ID = 2330]
4. Kanha National Park [Option ID = 2331]

Correct Answer :-

- Jim Corbet National Park [Option ID = 2329]

11) Doubling time for E. coli is 20 min. If the initial number of bacterium in a culture is 100, what would be number of bacterium after 60 min. [Question ID = 606]

1. 300 [Option ID = 2422]
2. 400 [Option ID = 2423]
3. 100 [Option ID = 2421]
4. 800 [Option ID = 2424]

Correct Answer :-

- 800 [Option ID = 2424]

12) X-chromosome inactivation

[Question ID = 527]

1. Is the cause of the y chromosome being genetically inactive [Option ID = 2106]
2. Takes place in humans so that the same X chromosome is inactive in all the cells of a female [Option ID = 2107]
3. Normally takes place in males but not in females [Option ID = 2105]
4. Results in genetically turning off one of the two X chromosome in female mammals [Option ID = 2108]

Correct Answer :-

- Results in genetically turning off one of the two X chromosome in female mammals [Option ID = 2108]

13) In ecological succession from pioneer to climax community, the biomass shall:

[Question ID = 584]

1. Increase and then decrease [Option ID = 2334]
2. Increase continuously [Option ID = 2336]
3. Decrease [Option ID = 2333]
4. No relation [Option ID = 2335]

Correct Answer :-

- Increase continuously [Option ID = 2336]

14) Import of glucose by the liver cell:

[Question ID = 569]

1. Is dependent on hydrolysis of ATP [Option ID = 2273]
2. Is facilitated by GLUT2 [Option ID = 2276]
3. Occurs throughout the phospholipid bilayer [Option ID = 2275]
4. Requires expression of GLUT1 on the plasma membrane [Option ID = 2274]

Correct Answer :-

- Is facilitated by GLUT2 [Option ID = 2276]

15) The origin of the jaw in the gnathostomes is the

[Question ID = 524]

1. hyoid [Option ID = 2096]
2. gill arch [Option ID = 2093]
3. notochord [Option ID = 2095]
4. bones supporting the cranium [Option ID = 2094]

Correct Answer :-

- gill arch [Option ID = 2093]

16) The dynamics of which cytoskeletal element changes in a moving amoeba?

[Question ID = 568]

1. Intermediate filaments [Option ID = 2271]
2. MreB [Option ID = 2272]
3. Microtubules [Option ID = 2269]
4. Microfilaments [Option ID = 2270]

Correct Answer :-

- Microfilaments [Option ID = 2270]

17) Repeat core sequences consisting of 2, 3, or 4 base pairs are known as what?

[Question ID = 531]

1. Single nucleotide polymorphisms (SNPs) [Option ID = 2121]
2. Minisatellites [Option ID = 2123]
3. Telomeres [Option ID = 2124]
4. Microsatellites [Option ID = 2122]

Correct Answer :-

- Microsatellites [Option ID = 2122]

18) A haltere is a

[Question ID = 551]

1. Device used by a male insect to attract female for mating [Option ID = 2204]
2. balancing organ of housefly [Option ID = 2203]
3. sense organ of butterfly [Option ID = 2201]
4. modified forewing of beetle [Option ID = 2202]

Correct Answer :-

- balancing organ of housefly [Option ID = 2203]

19) Linolenic (C18: 9,12,15) is an essential fatty acid for human because:

[Question ID = 555]

1. Lenolenic acid is available in fruits [Option ID = 2217]
2. Lenolenic acid gives much energy that palmitic acid [Option ID = 2219]
3. It is unsaturated fatty acid [Option ID = 2220]
4. Human cannot introduce double bond beyond 9-10 carbon of fatty acids [Option ID = 2218]

Correct Answer :-

- Human cannot introduce double bond beyond 9-10 carbon of fatty acids [Option ID = 2218]

20) Passive immunity is obtained by:

[Question ID = 589]

1. Injecting the serum of another animal/individual containing antitoxin [Option ID = 2354]
2. Our own body cells preparing antibodies [Option ID = 2353]
3. Blood transfusion and blood clotting [Option ID = 2356]
4. Drinking medicinal concoctions [Option ID = 2355]

Correct Answer :-

- Injecting the serum of another animal/individual containing antitoxin [Option ID = 2354]

21) 2-amino-3 hydroxy propionic acid is the chemical name for which of the following amino acid:

[Question ID = 580]

1. serine [Option ID = 2320]
2. valine [Option ID = 2319]
3. glycine [Option ID = 2317]
4. alanine [Option ID = 2318]

Correct Answer :-

- serine [Option ID = 2320]

22) Low pH of the lysosomal compartment is maintained by

[Question ID = 613]

1. Glycolysis [Option ID = 2452]
2. Electron transport chain [Option ID = 2449]
3. Proton ATPase at the membrane [Option ID = 2450]
4. Luminal acid production [Option ID = 2451]

Correct Answer :-

- Proton ATPase at the membrane [Option ID = 2450]

23) Kidney of the vertebrate embryo develops from:

[Question ID = 591]

1. Mesoderm [Option ID = 2363]
2. Archenteron [Option ID = 2364]
3. Endoderm [Option ID = 2362]
4. Ectoderm [Option ID = 2361]

Correct Answer :-

- Mesoderm [Option ID = 2363]

24) DNA is genetic material in

[Question ID = 563]

1. Only eukaryotes [Option ID = 2251]
2. Only Prokaryotes and eukaryotes [Option ID = 2250]
3. All viruses, prokaryotes, eukaryotes [Option ID = 2249]
4. Some viruses, all prokaryotes and eukaryotes [Option ID = 2252]

Correct Answer :-

- Some viruses, all prokaryotes and eukaryotes [Option ID = 2252]

25) Which of the following statement is NOT TRUE for a competitive inhibitor in an enzyme catalysed reaction?

[Question ID = 600]

1. Their inhibition can be reversed by increasing the substrate concentration [Option ID = 2400]
2. They compete with substrate for binding to the active site. [Option ID = 2398]
3. They are structural analogues of the substrate. [Option ID = 2397]
4. They increase the Km, and decrease the Vmax. [Option ID = 2399]

Correct Answer :-

- They increase the Km, and decrease the Vmax. [Option ID = 2399]

26) Knee joint is a

[Question ID = 548]

1. fibrous joint [Option ID = 2192]
2. cartilaginous joint [Option ID = 2191]
3. collagenous joint [Option ID = 2189]
4. synovial joint [Option ID = 2190]

Correct Answer :-

- synovial joint [Option ID = 2190]

27) The heaviest organelle in cell is:

[Question ID = 556]

1. Lysosomes [Option ID = 2223]
2. Ribosomes [Option ID = 2224]
3. Nucleus [Option ID = 2222]
4. Mitochondria [Option ID = 2221]

Correct Answer :-

- Nucleus [Option ID = 2222]

28) Wallace's line is present in between

[Question ID = 544]

1. Oriental and Australian regions [Option ID = 2173]
2. Palaearctic and Ethiopian regions [Option ID = 2176]
3. Neotropical and Nearctic regions [Option ID = 2175]
4. Ethiopian and Oriental regions [Option ID = 2174]

Correct Answer :-

- Oriental and Australian regions [Option ID = 2173]

29) In bivalves, which structure secretes pearl?

[Question ID = 598]

1. Nacreous gland. [Option ID = 2392]
2. Nacreous layer [Option ID = 2391]
3. Prismatic layer [Option ID = 2390]
4. Periostracum layer [Option ID = 2389]

Correct Answer :-

- Nacreous layer [Option ID = 2391]

30) Ampicillin inhibits:

[Question ID = 559]

1. Cell wall synthesis in bacterial cells [Option ID = 2236]
2. RNA synthesis in Bacterial cells [Option ID = 2234]
3. DNA synthesis in bacterial cells [Option ID = 2233]
4. Protein synthesis in mammalian cell [Option ID = 2235]

Correct Answer :-

- Cell wall synthesis in bacterial cells [Option ID = 2236]

31) Hiccups can be best described as _____.

[Question ID = 534]

1. sign of somebody remembering you [Option ID = 2136]
2. vibration of the soft palate during breathing while sleeping [Option ID = 2135]
3. jerky incomplete inspiration [Option ID = 2134]
4. forceful sudden expiration [Option ID = 2133]

Correct Answer :-

- jerky incomplete inspiration [Option ID = 2134]

32) At Isoelectric pH the charge on protein is:

[Question ID = 553]

1. Positive charge on protein [Option ID = 2210]
2. Negative charge on protein [Option ID = 2211]
3. No charge on protein [Option ID = 2209]
4. Net charge on protein is zero [Option ID = 2212]

Correct Answer :-

- Net charge on protein is zero [Option ID = 2212]

33) Lac is a material which is

[Question ID = 552]

1. hardened fecal matter of lac insect [Option ID = 2205]
2. protective secretion deposited by female lac insect [Option ID = 2206]
3. protective covering secreted by larva [Option ID = 2207]
4. resin secreted by the plant [Option ID = 2208]

Correct Answer :-

- protective secretion deposited by female lac insect [Option ID = 2206]

34) Hardy-Weinberg's law gives the concept of

[Question ID = 586]

1. natural selection. [Option ID = 2344]
2. genetic drift [Option ID = 2341]
3. genetic equilibrium [Option ID = 2343]
4. mutation [Option ID = 2342]

Correct Answer :-

- genetic equilibrium [Option ID = 2343]

35) The vertical migration of plankton is an instance of

[Question ID = 579]

1. Circadian rythmes [Option ID = 2313]
2. Circannual rythmes [Option ID = 2314]
3. photopriodism [Option ID = 2315]
4. photokinesis. [Option ID = 2316]

Correct Answer :-

- Circadian rythmes [Option ID = 2313]

36) Treadmilling of actin filaments in the steady state occurs at G-actin concentration

[Question ID = 565]

1. Below the Cc of the (-) end [Option ID = 2257]
2. Above the Cc of the (-) end but below the Cc of the (+) end [Option ID = 2259]
3. Above the Cc of the (+) end but below the Cc of the (-) end [Option ID = 2260]
4. Above the Cc of the (+) end [Option ID = 2258]

Correct Answer :-

- Above the Cc of the (+) end but below the Cc of the (-) end [Option ID = 2260]

37) Exon skipping is associated with:

[Question ID = 528]

1. regulatory mutations [Option ID = 2110]
2. RNA processing mutations [Option ID = 2111]
3. nonsense mutations [Option ID = 2109]
4. silent mutations [Option ID = 2112]

Correct Answer :-

- RNA processing mutations [Option ID = 2111]

38) Bile is produced in our body which

[Question ID = 557]

1. Act as a surfactant to emulsify lipids in intestine. [Option ID = 2226]
2. It has no role associated with our body [Option ID = 2228]
3. Helps in digestion of starch in intestinbe [Option ID = 2227]
4. Helps in controlling blood pressure [Option ID = 2225]

Correct Answer :-

- Act as a surfactant to emulsify lipids in intestine. [Option ID = 2226]

39) The inner cell mass of mammalian blastocyst develops into,

[Question ID = 578]

1. all embryonic structures [Option ID = 2311]
2. embryonic endoderm [Option ID = 2309]
3. chorio-allantoic placenta [Option ID = 2312]
4. yolk-sac placenta [Option ID = 2310]

Correct Answer :-

- all embryonic structures [Option ID = 2311]

40) The isoform/s of actin present in muscle cells

[Question ID = 566]

1. beta-actin [Option ID = 2263]
2. beta-and gamma-actin [Option ID = 2264]
3. alpha-actin [Option ID = 2261]
4. alpha and beta-actin [Option ID = 2262]

Correct Answer :-

- alpha-actin [Option ID = 2261]

41) The four postulates of the Chemiosmotic hypothesis accounted for:

[Question ID = 574]

1. ETC, F1-F0 ATPase, cardiolipin and pmf generators [Option ID = 2295]
2. ETC, F1-F0 ATPase, cardiolipin and anion exchangers [Option ID = 2296]
3. Cardiolipin [Option ID = 2294]
4. The four complexes of the electron transport chain (ETC). [Option ID = 2293]

Correct Answer :-

- ETC, F1-F0 ATPase, cardiolipin and anion exchangers [Option ID = 2296]

42) Cilia and flagella contains a contractile protein called:

[Question ID = 575]

1. Myosin [Option ID = 2300]
2. Tubulin [Option ID = 2298]
3. Actin [Option ID = 2299]
4. Dyenin [Option ID = 2297]

Correct Answer :-

- Dyenin [Option ID = 2297]

43) Insects such as Drosophila undergo three molts before undergoing metamorphosis. Molting is controlled by which of the following hormone?

[Question ID = 532]

1. juvenile hormone [Option ID = 2126]
2. growth hormone [Option ID = 2128]
3. auxin [Option ID = 2127]
4. ecdysone [Option ID = 2125]

Correct Answer :-

- ecdysone [Option ID = 2125]

44) Injection of anti-venom to a patient for snake bite is an example of

[Question ID = 562]

1. Artificially acquired active immunity [Option ID = 2246]
2. Artificially acquired passive immunity [Option ID = 2248]
3. Naturally acquired active immunity [Option ID = 2245]
4. Naturally acquired passive immunity [Option ID = 2247]

Correct Answer :-

- Artificially acquired passive immunity [Option ID = 2248]

45) Steroid hormones are synthesized from

[Question ID = 558]

1. Glycogen [Option ID = 2232]
2. Tryptophan [Option ID = 2229]
3. Stearic acid [Option ID = 2231]
4. Cholesterol [Option ID = 2230]

Correct Answer :-

- Cholesterol [Option ID = 2230]

46) When a heterozygous offspring is crossed to homozygous recessive parent, it is called as

[Question ID = 533]

1. Test cross [Option ID = 2129]
2. Reciprocal cross [Option ID = 2130]
3. Dihybrid cross [Option ID = 2132]
4. Monohybrid cross [Option ID = 2131]

Correct Answer :-

- Test cross [Option ID = 2129]

47) Identify the statement that is NOT TRUE for Iron-sulphur clusters

[Question ID = 573]

1. These are prosthetic groups of succinate-coenzyme Q reductase complex. [Option ID = 2289]
2. These accept and release electrons one at a time [Option ID = 2291]
3. They contain Fe bonded to inorganic S atoms and S atoms on cysteine residues of proteins [Option ID = 2290]
4. They are always associated with cytochromes. [Option ID = 2292]

Correct Answer :-

- They are always associated with cytochromes. [Option ID = 2292]

48) Of the early fish, which led to the extant fish of today?

[Question ID = 525]

1. cephalochordates [Option ID = 2099]
2. acanthodians [Option ID = 2100]
3. placoderms [Option ID = 2098]
4. heterostracans [Option ID = 2097]

Correct Answer :-

- acanthodians [Option ID = 2100]

49) Water is a good solvent for inorganic salts because

[Question ID = 615]

1. hydrogen bond [Option ID = 2459]
2. dielectric constant [Option ID = 2457]
3. polarity [Option ID = 2458]
4. conductivity [Option ID = 2460]

Correct Answer :-

50) If the sequence of coding strand in a transcription unit is as follows: 5'-GAATTGCCAATTGCAGTC-3', the sequence of mRNA transcribed from the transcription unit would be, [Question ID = 604]

1. 3'-GAAUUGCCAAUUGCAGUC-5' [Option ID = 2416]
2. 5'-CUUAACGGUUAACGUCAG-3' [Option ID = 2414]
3. 5'-GAAUUGCCAAUUGCAGUC-3' [Option ID = 2413]
4. 5'-GACUGCAAUUGGCAAUUC-3' [Option ID = 2415]

Correct Answer :-

- 5'-GAAUUGCCAAUUGCAGUC-3' [Option ID = 2413]

51) In a Robertsonian translocation fusion occurs at the:

[Question ID = 529]

1. centromeres [Option ID = 2114]
2. histones [Option ID = 2115]
3. telomeres [Option ID = 2113]

4. ends of the long arms [Option ID = 2116]

Correct Answer :-

- centromeres [Option ID = 2114]

52) Symporters are cotransporters that transport:

[Question ID = 570]

1. Cations and anions in the opposite direction. [Option ID = 2278]
2. Glucose against its concentration gradient. [Option ID = 2280]
3. Small molecules and gases in the same direction. [Option ID = 2277]
4. Na+ ions and glucose against the concentration gradient. [Option ID = 2279]

Correct Answer :-

- Glucose against its concentration gradient. [Option ID = 2280]

53) Bidirectional movement of vesicles requires

[Question ID = 567]

1. Kinesin I [Option ID = 2265]
2. Association of (+) and (-) end-directed motors [Option ID = 2268]
3. A flexible neck region on the motor protein [Option ID = 2267]
4. Microtubules and microfilaments [Option ID = 2266]

Correct Answer :-

- Association of (+) and (-) end-directed motors [Option ID = 2268]

54) Pharyngeal gill slits

[Question ID = 521]

1. are not found in protochordates, but are present in vertebrates, at least during the embryonic life [Option ID = 2084]
2. are found in higher inverterates and vertebrates [Option ID = 2083]
3. are found in fishes, crabs, snails, aquatic insects [Option ID = 2082]
4. are unique chordate characteristic [Option ID = 2081]

Correct Answer :-

- are unique chordate characteristic [Option ID = 2081]

55) Three pg of a hypothetical protein-X is present in a cell. How many molecules of protein-X would be present in a cell, if the molecular weight of the protein is 30000? (Given, Avogaro's number is 6×10^{23})

[Question ID = 610]

1. 6×10^{15} [Option ID = 2439]
2. 6×10^{7} [Option ID = 2438]
3. 6×10^{23} [Option ID = 2440]
4. 6×10^{6} [Option ID = 2437]

Correct Answer :-

- 6×10^{7} [Option ID = 2438]

56) Ciliated pseudostratified columnar epithelia are found in

[Question ID = 537]

1. membranous part of male vas deferens [Option ID = 2147]
2. linings of the trachea & upper respiratory tract [Option ID = 2146]
3. lining of the trachea [Option ID = 2145]
4. Vagina [Option ID = 2148]

Correct Answer :-

- linings of the trachea & upper respiratory tract [Option ID = 2146]

57) In vertebrates, which one of the following structures is believed to have been transformed into thyroid gland? [Question ID = 592]

1. Pygostyle [Option ID = 2365]
2. Analstyle [Option ID = 2367]
3. Endostyle [Option ID = 2368]
4. Urostyle [Option ID = 2366]

Correct Answer :-

- Endostyle [Option ID = 2368]

58) DNA double helix is stabilized by: [Question ID = 602]

1. Hydrophobic interactions only [Option ID = 2408]
2. H-bonds only [Option ID = 2405]
3. H-bonds and base stacking interactions [Option ID = 2406]
4. Electrostatic interactions [Option ID = 2407]

Correct Answer :-

- H-bonds and base stacking interactions [Option ID = 2406]

59) Three forms of Daphnia are found in varying seasons. This phenomenon is called: [Question ID = 593]

1. Poly morphism [Option ID = 2369]
2. Seasonal peroidicity [Option ID = 2371]
3. Adaptation [Option ID = 2372]
4. Cyclomorphism [Option ID = 2370]

Correct Answer :-

- Cyclomorphism [Option ID = 2370]

60) A gene showing co-dominance

[Question ID = 526]

1. Has alleles tightly linked on the same chromosome [Option ID = 2103]
2. Has alleles expressed at the same time in development [Option ID = 2104]
3. Has one allele dominant to the other [Option ID = 2101]
4. Has both alleles independently expressed in heterozygote [Option ID = 2102]

Correct Answer :-

- Has both alleles independently expressed in heterozygote [Option ID = 2102]

61) If the atrioventricular node could be surgically removed from the heart without disrupting signal transmission to bundle of His, then...

[Question ID = 587]

1. atria & ventricle would contract almost simultaneously [Option ID = 2348]
2. the heart rate would be decreased. [Option ID = 2345]
3. only artia would contract. [Option ID = 2346]
4. only ventricle would contract. [Option ID = 2347]

Correct Answer :-

- atria & ventricle would contract almost simultaneously [Option ID = 2348]

62) A double stranded DNA has 30 mole percent of cytosine. What would be the mole percent of adenine in it?

[Question ID = 605]

1. 40 [Option ID = 2419]
2. 20 [Option ID = 2417]
3. 60 [Option ID = 2420]
4. 30 [Option ID = 2418]

Correct Answer :-

- 20 [Option ID = 2417]

63) A protein having both structural and enzymatic properties is

[Question ID = 535]

1. Histone [Option ID = 2140]
2. Trypsin [Option ID = 2138]
3. Myosin [Option ID = 2139]
4. Collagen [Option ID = 2137]

Correct Answer :-

- Myosin [Option ID = 2139]

64) Bilateral symmetry in certain group of Phylum Mollusca is lost due to

[Question ID = 595]

1. reversion and rotation [Option ID = 2379]
2. expansion and torsion [Option ID = 2380]
3. torsion [Option ID = 2378]
4. rotation [Option ID = 2377]

Correct Answer :-

- torsion [Option ID = 2378]

65) Bilaterally symmetrical, acoelomate organisms are:

[Question ID = 577]

1. platyhelminthes [Option ID = 2306]
2. sponges [Option ID = 2305]
3. acinadia [Option ID = 2308]
4. nemathelminthes [Option ID = 2307]

Correct Answer :-

- platyhelminthes [Option ID = 2306]

66) Honey bee society is [Question ID = 549]

1. Eusocial [Option ID = 2196]
2. Subsocial [Option ID = 2195]
3. Communal [Option ID = 2193]
4. Parasocial [Option ID = 2194]

Correct Answer :-

- Eusocial [Option ID = 2196]

67) DNA finger-printing employs

[Question ID = 588]

1. pseudo-genes as probes. [Option ID = 2352]
2. unique and house-keeping genes as probes [Option ID = 2349]
3. variable number tandem repeats as probes [Option ID = 2351]
4. specific metabolic genes as probes [Option ID = 2350]

Correct Answer :-

- variable number tandem repeats as probes [Option ID = 2351]

68) BLAST program is used in

[Question ID = 564]

1. DNA sequencing [Option ID = 2253]
2. DNA bar coding [Option ID = 2255]
3. Amino Acid sequencing [Option ID = 2254]
4. Bioinformatics [Option ID = 2256]

Correct Answer :-

- Bioinformatics [Option ID = 2256]

69) Hemophilia is an example of a trait that is carried as a _____.

[Question ID = 543]

1. Autosomal dominant [Option ID = 2169]
2. Autosomal recessive [Option ID = 2170]
3. Sex-linked dominant [Option ID = 2171]
4. Sex linked recessive [Option ID = 2172]

Correct Answer :-

- Sex linked recessive [Option ID = 2172]

70) Schizocoelic phyla are

[Question ID = 520]

1. Annelida, Arthropoda, and Mollusca [Option ID = 2079]
2. Arthropoda, Mollusca and Echinodermata [Option ID = 2080]
3. Platyhelminthes, Aschelminthes and Annelida [Option ID = 2078]
4. Protozoa, Porifera, Cnidarians, and Platyhelminthes [Option ID = 2077]

Correct Answer :-

- Annelida, Arthropoda, and Mollusca [Option ID = 2079]

71) In terrestrial vertebrates, which of the following structures did not arise from the pharyngeal pouches?

[Question ID = 522]

1. intervertebral discs [Option ID = 2087]
2. Eustachian tube [Option ID = 2085]
3. parathyroid gland [Option ID = 2088]
4. middle ear [Option ID = 2086]

Correct Answer :-

- intervertebral discs [Option ID = 2087]

72) Species inhabiting in different geographical regions are known as

[Question ID = 545]

1. allopatric [Option ID = 2177]
2. biospecies [Option ID = 2180]
3. sibling species [Option ID = 2178]
4. sympatric [Option ID = 2179]

Correct Answer :-

- allopatric [Option ID = 2177]

73) Frog oocytes do not swell in hypotonic solutions. The most plausible explanation for this is the absence of:

[Question ID = 571]

1. Aquaporins [Option ID = 2282]
2. K+ channels [Option ID = 2284]
3. Na+ channels [Option ID = 2283]
4. Na+ K+ ATPase [Option ID = 2281]

Correct Answer :-

- Aquaporins [Option ID = 2282]

74) Nucleosome core is a structural unit of chromomatin

[Question ID = 616]

1. consisting of 8 histones molecules and a specific length of DNA [Option ID = 2463]
2. consisting of 8 histones molecules and a specific sequence of DNA [Option ID = 2462]
3. consisting of 4 histones molecules and a specific length of DNA [Option ID = 2461]
4. consisting of 4 histones molecules and a specific sequence of DNA [Option ID = 2464]

Correct Answer :-

- consisting of 8 histones molecules and a specific length of DNA [Option ID = 2463]

75) Melting temperature (Tm) of double stranded DNA increases with

[Question ID = 554]

1. Increases by modified bases [Option ID = 2216]
2. Increase in number of adenine/thymine bases [Option ID = 2214]
3. Increase number of guanine/cytosine bases [Option ID = 2213]
4. Bases have no effect on Tm of DNA [Option ID = 2215]

Correct Answer :-

- Increase number of guanine/cytosine bases [Option ID = 2213]

76) Unfolded or misfolded proteins are degraded in:

[Question ID = 560]

1. Golgi [Option ID = 2239]
2. Endoplasmic reticulum [Option ID = 2240]
3. Mitochondria [Option ID = 2237]
4. Proteasomes [Option ID = 2238]

Correct Answer :-

- Proteasomes [Option ID = 2238]

77) Which of the following communicable diseases is NOT transmitted by Aedes? [Question ID = 539]

1. Dengue haemorrhagic fever [Option ID = 2153]
2. Yellow fever [Option ID = 2156]
3. Chikungunia [Option ID = 2155]
4. Sleeping sickness [Option ID = 2154]

Correct Answer :-

- Sleeping sickness [Option ID = 2154]

78) Which of the following is semiautonomous organelle? [Question ID = 541]

1. Golgi complex [Option ID = 2163]
2. Mitochondria [Option ID = 2162]
3. Nucleus [Option ID = 2161]
4. Ribosomes [Option ID = 2164]

Correct Answer :-

- Mitochondria [Option ID = 2162]

79)

Match the following: Select the correct answer using the codes given below:

A. Phylum	1. Anura
B. Class	2. Ranidae
C. Order	3. Chordata
D. Family	4. Amphibia

Codes:

[Question ID = 612]

1. A B C D
   4 1 2 3 [Option ID = 2448]
2. A B C D
   1 2 3 4 [Option ID = 2446]
3. A B C D
   3 4 1 2 [Option ID = 2445]

	A	B	C	D	
4.	4	2	1	3	[Option ID = 2447]

Correct Answer :-

	A	B	C	D	
•	3	4	1	2	[Option ID = 2445]

80)

Match the list I with list II and select the correct answer using codes given below;

List I	List II
A. Taenia	1. Hexacanth
B. Obelia	2. Glochidium
C. Unio	3. Planula
D. Balanoglossus	4. Tornaria
	5. Miracidium

Codes:

[Question ID = 599]

	A	B	C	D	
1.	2	5	3	4	[Option ID = 2396]
2.	3	2	1	5	[Option ID = 2394]
3.	1	2	3	5	[Option ID = 2393]
4.	1	3	2	4	[Option ID = 2395]

Correct Answer :-

	A	B	C	D	
•	1	3	2	4	[Option ID = 2395]

81)

Match the following stains used for staining given subcellular architecture/molecule/organelles:

A. Ganus Green	1. Cytoplasm
B. Methyl blue	2. Centriole
C. Feulgen	3. Mitochondria
D. Iron Haematoxylin	4. DNA

Which of the following is correct match:

[Question ID = 576]

	A	B	C	D	
1.	3	1	4	2	[Option ID = 2304]
2.	1	2	3	4	[Option ID = 2301]
3.	2	3	4	1	[Option ID = 2302]
4.	4	3	2	1	[Option ID = 2303]

Correct Answer :-

A	B	C	D
3	1	4	2

- [Option ID = 2304]

82) The pH of a 10^{-8} M hydrochloric acid solution would be

[Question ID = 597]

1. 8.25 [Option ID = 2385]
2. 6.98 [Option ID = 2388]
3. 7.05 [Option ID = 2386]
4. 6.58 [Option ID = 2387]

Correct Answer :-

- 6.98 [Option ID = 2388]

83) If a colour blind female marries a normal male, their children will be [Question ID = 547]

1. normal sons and normal daughters [Option ID = 2188]
2. normal sons and carrier daughters [Option ID = 2187]
3. colour blind sons and colour blind daughters [Option ID = 2185]
4. colour blind sons and carrier daughters [Option ID = 2186]

Correct Answer :-

- colour blind sons and carrier daughters [Option ID = 2186]

84) Y-shaped chaveron bone is present in [Question ID = 550]

1. thoracic vertebrae of mammal [Option ID = 2197]
2. caudal vertebrae of reptile [Option ID = 2199]
3. cervical vertebrae of bird [Option ID = 2198]
4. lumbar vertebrae of amphibian [Option ID = 2200]

Correct Answer :-

- caudal vertebrae of reptile [Option ID = 2199]

85) The heart is not ventral in position in [Question ID = 519]

1. Fish [Option ID = 2074]
2. Frog [Option ID = 2073]
3. Lamprey [Option ID = 2075]
4. Crabs [Option ID = 2076]

Correct Answer :-

- Crabs [Option ID = 2076]

86) What would be the phenotype of E. coli for lac-operon, if the genotype is i+ o- z+ y+ a+?

[Question ID = 603]

1. It would be repressed but inducible by IPTG. [Option ID = 2409]
2. It would be repressed and not induced by IPTG. [Option ID = 2411]
3. It would show constitutive expression of structural genes. [Option ID = 2410]
4. It would show constitutive expression of structural genes whose expression would further be enhanced by IPTG. [Option ID = 2412]

Correct Answer :-

- It would show constitutive expression of structural genes. [Option ID = 2410]

87) Non-disjunction means:

[Question ID = 594]

1. one chromosome being lost [Option ID = 2376]
2. loss of a part of chromosome [Option ID = 2373]
3. duplication of a segment of a chromosome [Option ID = 2374]
4. failure of chromosome pairs to separate during anaphase [Option ID = 2375]

Correct Answer :-

- failure of chromosome pairs to separate during anaphase [Option ID = 2375]

88) Marsupial mammals moved from South America to Australia via [Question ID = 540]

1. Antarctica [Option ID = 2157]
2. Madagascar [Option ID = 2160]
3. the Galapagos Archipelago [Option ID = 2159]
4. Africa [Option ID = 2158]

Correct Answer :-

- Antarctica [Option ID = 2157]

89) Gap junctions are not essential for:

[Question ID = 572]

1. Skeletal muscle contraction [Option ID = 2288]
2. Metabolic coupling [Option ID = 2286]
3. Peristalsis [Option ID = 2287]
4. Transfer of second messengers [Option ID = 2285]

Correct Answer :-

- Skeletal muscle contraction [Option ID = 2288]

90) Bilateral symmetry is seen in the body organization of [Question ID = 517]

1. annelids, arthropods and vertebrates [Option ID = 2068]
2. Vertebrates only [Option ID = 2066]
3. Vertebrates, annelids, arthropods, and cnidarians [Option ID = 2067]
4. Only chordates [Option ID = 2065]

Correct Answer :-

- annelids, arthropods and vertebrates [Option ID = 2068]

91) The absorbance of UV light (280nm) by a protein is largely due to the presence of amino acids with

[Question ID = 596]

1. Acidic R group [Option ID = 2382]
2. Aromatic R group [Option ID = 2383]
3. Basic R group [Option ID = 2384]
4. Aliphatic R group [Option ID = 2381]

Correct Answer :-

- Aromatic R group [Option ID = 2383]

92) The name of the process by which oil glands in mammalian skins secrete oils is:

[Question ID = 538]

1. holocrine secretion [Option ID = 2151]
2. osmosis [Option ID = 2152]
3. apocrine secretion [Option ID = 2150]
4. active transport [Option ID = 2149]

Correct Answer :-

- holocrine secretion [Option ID = 2151]

93) The transition from water to land in the evolution of land vertebrates occurred during:

[Question ID = 585]

1. Cambrian [Option ID = 2337]
2. Devonian [Option ID = 2340]
3. Jurassic [Option ID = 2338]
4. Carboniferous [Option ID = 2339]

Correct Answer :-

- Devonian [Option ID = 2340]

94) The alarming rate of depletion of biodiversity in recent years is mostly due to

[Question ID = 581]

1. ozone depletion. [Option ID = 2324]
2. pollution by pesticides and heavy metals [Option ID = 2323]
3. global warming [Option ID = 2321]
4. habitat destruction [Option ID = 2322]

Correct Answer :-

95) The scales in shark belong to the type

[Question ID = 607]

1. Cycloid [Option ID = 2426]
2. Ctenoid [Option ID = 2427]
3. Ganoid [Option ID = 2428]
4. Placoid [Option ID = 2425]

Correct Answer :-

- Placoid [Option ID = 2425]

96) The term tunicate makes reference to the urochordate test, or tunic, which is composed of

[Question ID = 523]

1. cellulose [Option ID = 2090]
2. calcium carbonate [Option ID = 2092]
3. silicon dioxide [Option ID = 2089]
4. chitin [Option ID = 2091]

Correct Answer :-

- cellulose [Option ID = 2090]

97) The notochord does not persist throughout life in

[Question ID = 518]

1. Tunicates [Option ID = 2070]
2. Amphioxus [Option ID = 2069]
3. Petromyzon [Option ID = 2071]
4. Myxine [Option ID = 2072]

Correct Answer :-

- Tunicates [Option ID = 2070]

98) At what stage of eukaryotic cell cycle you would expect the DNA to be least compact?

[Question ID = 611]

1. G I-Phase [Option ID = 2441]
2. Leptotene [Option ID = 2444]
3. S-Phase [Option ID = 2443]
4. Mitosis [Option ID = 2442]

Correct Answer :-

- S-Phase [Option ID = 2443]

99) Nicotinamide adenine dinucleotide phosphate is generated in [Question ID = 561]

1. Fatty acid degradation pathway [Option ID = 2244]
2. Glycolysis [Option ID = 2242]
3. Pentose Phosphate pathway [Option ID = 2241]
4. Tricarboxylic acid pathway [Option ID = 2243]

Correct Answer :-

- Pentose Phosphate pathway [Option ID = 2241]

100) Haemophilia or bleeder's disease is due to a defective gene which does not produce:

[Question ID = 590]

1. Thromboplastin [Option ID = 2359]
2. Prothrombin [Option ID = 2360]
3. Fibrinogen [Option ID = 2357]
4. Calcium salts [Option ID = 2358]

Correct Answer :-