

## BIOLOGY

- Which aspect forms the basis of DNA finger-printing ?  
(A) The Satellite DNA showing high degree of repetition in DNA segments.  
(B) The ratio of purines and pyrimidines present in DNA.  
(C) The amount of DNA found in samples of blood, saliva and skin.  
(D) The Sequence of DNA present in the ridges and grooves of finger-prints.
- Identify the most infectious and fatal type of malarial parasite :  
(A) *Plasmodium falciparum* (B) *Plasmodium vivax*  
(C) *Plasmodium ovale* (D) *Plasmodium malariae*
- The type of antibodies produced during the allergic reaction  
(A) Ig G (B) Ig A (C) Ig M (D) Ig E
- One of the side-effect of the use of anabolic steroids in females  
(A) Cirrhosis of liver (B) Loss of memory (C) Masculinisation (D) Hallucination
- Which one of the following is a opiate narcotics ?  
(A) Amphetamines (B) Barbiturates (C) LSD (D) Morphine
- The large holes in 'Swiss - Cheese' are made by a  
(A) Bacterium producing a large amount of CO<sub>2</sub>  
(B) Machine  
(C) Fungus that releases a lot of gases during metabolic activities  
(D) Bacterium that produces methane gas
- Which vitamin is increased by 'LAB' in curd ?  
(A) Vitamin B<sub>12</sub> (B) Vitamin C (C) Vitamin E (D) Vitamin B
- Enzyme which is useful to remove the oily stains in laundry ?  
(A) Amylase (B) Renin (C) Lipase (D) Protease
- DNA replicates semiconservatively was first shown in :  
(A) Plants (B) *Escherichia coli* (C) Higher animals (D) Human cell
- A series of experiments were conducted by Frederick Griffith in 1928, on transforming principle with :  
(A) *Salmonella typhimurium* (B) *Escherichia coli*  
(C) *Streptococcus pneumoniae* (D) *Bacillus thuringiensis*
- The number of codons effective in coding twenty amino acids :  
(A) 64 (B) 61 (C) 20 (D) 32



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12. An antibiotic resistance gene in a vector usually helps in the selection of  
 (A) Non-recombinant cells (B) Competent cells  
 (C) Non-competent cells ~~(D) Transformed cells~~
13. Silencing of specific mRNA in RNAi is by  
 (A) ssDNA (B) SSRNA  
 (C) dsDNA ~~(D) dsRNA~~
14. Cry-IAC effectively controls,  
 (A) Root nematode ~~(B) Cotton bollworms~~ (C) Ring worm (D) Corn borer
15. ADA deficiency can be cured by  
 (A) Kidney Transplantation ~~(B) Bone-marrow Transplantation~~  
 (C) Heart Transplantation (D) Liver Transplantation
16. Average natality rate in our village is 25, average mortality is 24, immigration 2 and emigration 3 and the net increase in population is :  
 (A) 10 ~~(B) 0~~ (C) 27  $\begin{matrix} 25 + 2 \\ 1 \end{matrix}$  (D) 5  $\begin{matrix} 24 + 3 \\ 0 \end{matrix}$
17. The term "Molecular Scissors" refers to  
~~(A) Restriction enzyme~~ (B) Polymerase-I  
 (C) Taq polymerase (D) Polymerase-II  $(B+2) \rightarrow (0+E)$
18. What does the sample of given base sequence represent ?  
 5' - GAATTC - 3'  
 3' - CTTAAG - 5'  
 (A) Completion of replication (B) Initiator codon at 5' end  
~~(C) Palindromic sequence~~ (D) Deletion mutation
19. Gel electrophoresis is used for  
~~(A) Separation of DNA fragments according to their size.~~  
 (B) Construction of recombinant DNA by joining with cloning vectors.  
 (C) Cutting of DNA into fragments.  
 (D) Isolation of DNA molecule.

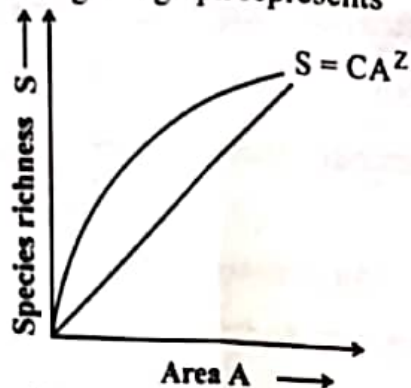
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20. The amount of Photosynthetically active radiation captured by plants is  
 (A) 60 – 70 percent  
 (B) 20 – 30 percent  
 (C) 12 – 20 percent  
~~(D) 2 – 10 percent~~

21. The given graph represents



- (A) Population growth  
~~(C) Species area relationship~~  
 (B) Enzyme activity  
 (D) Growth of organisms
22. Cuscuta is an example of  
~~(A) Ectoparasitism~~  
 (C) Predation  
 (B) Broad Parasitism  
 (D) Endoparasitism
23. Particulates of \_\_\_\_\_ size pose greatest risk to human health.  
 (A) Less than 3.5 micrometers in diameter  
~~(B) Less than 2.5 micrometers in diameter~~  
 (C) Less than 7.5 micrometers in diameter  
 (D) Less than 4.5 micrometers in diameter
24. Maintenance of constant internal environment is called as  
 (A) Thermoregulation (B) Metastasis (C) Osmoregulation ~~(D) Homeostasis~~
25. The animals which are active during day time :  
 (A) Vesporal ~~(B) Diurnal~~ (C) Cresporal (D) Auroral
26. Which of the following statement is incorrect related to biomes ?  
 (A) High temperature and minimum rainfall help to form grasslands.  
 (B) Variation in temperature and mean precipitation accounts for the major biomes.  
 (C) Low temperature and less rainfall is a characteristics of Tundra biomes.  
~~(D) More rainfall and low temperature is the characteristics of deserts.~~



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27. Different types of respiratory organs like gills, book gills, book lungs and trachea are present in  
~~(A)~~ Arthropods (B) Sponges (C) Annelids (D) Molluscs
28. Which of the following plant is used to extract Colchicine ?  
 (A) Asparagus ~~(B)~~ Colchicum (C) Tulip (D) Aloe
29. Rows of S-shaped setae in the body of earthworm are present in all the segments, except  
~~(A)~~ the first, last and clitellum (B) the last segment  
 (C) the first segment (D) the first and last segment
30. Cell theory was formulated by  
 (A) Schleiden and Robert Brown ~~(B)~~ Schleiden and Schwann  
 (C) Schwann and Robert Brown (D) Robert Hook and Robert Brown
31. The type of Polysaccharide present in a cotton fibre  
~~(A)~~ Cellulose (B) Starch (C) Glycogen (D) Insulin
32. Enzyme involved in crossing over  
 (A) Endonuclease ~~(B)~~ Recombinase (C) Lygase (D) Polymerase
33. Kranz anatomy can be seen in  
 (A) Pea (B) Tomato ~~(C)~~ Maize (D) Potato
34. Respiratory quotient of glucose is  
 (A) 0.9 (B) 0 ~~(C)~~ 1.0 (D) 0.7
35. A person suddenly starts coughing while swallowing food. This coughing would have been due to improper movement of  
 (A) Neck ~~(B)~~ Epiglottis (C) Tongue (D) Diaphragm
36. Binomial nomenclature is introduced by  
 (A) Bentham and Hooker ~~(B)~~ Carolus Linnaeus  
 (C) John Ray (D) Lamarek
37. Bovine spongiform encephalopathy is caused by  
 (A) Virus (B) Viroids (C) Fungi ~~(D)~~ Prions
38. Phycoerythrin and Floridean starch is found in  
 (A) Brown algae (B) Blue – green algae ~~(C)~~ Red algae (D) Green algae

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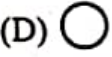





39. Menstrual cycle is exhibited by :  
~~(A)~~ Apes (B) Cow (C) Tiger (D) Rat
40. An example of dioecious plant :  
 (A) Mango (B) Cucurbita ~~(C)~~ Papaya (D) Coconut
41. Stalk of the Stamen is :  
 (A) Petiole ~~(B)~~ Filament (C) Peduncle (D) Pedicel
42. The ovule of angiosperm is technically known as :  
 (A) Megaspore mother cell ~~(B)~~ Megasporangium  
 (C) Megaspore (D) Megasporophyll
43. Typical mature embryo sac of angiosperm is  
 (A) 7 nucleated 8 celled structure (B) 8 nucleated 8 celled structure  
 (C) 8 nucleated 1 celled structure ~~(D)~~ 8 nucleated 7 celled structure
44. One of the 2000 years old viable seed, discovered during the archeological excavation at King Herold's near dead sea.  
 (A) Maize ~~(B)~~ Sunflower  
 (C) Lupin ~~(D)~~ Phoenix dactylifera
45. The testis are situated outside the abdominal cavity in scrotum as it helps to  
~~(A)~~ Maintain the low temperature (B) Store sperm  
 (C) Regulates hormone secretion (D) Release sperm
46. Identify the odd one from the following :  
 (A) Infundibulum (B) Fimbriae (C) Isthmus ~~(D)~~ Labia minora
47. In which month of gestation, the first movements of foetus and appearance of hair on its head is observed ?  
~~(A)~~ 5<sup>th</sup> month (B) 1<sup>st</sup> month (C) 8<sup>th</sup> month (D) 4<sup>th</sup> month
48. The most abundant type of WBC cells  
 (A) Eosinophils (B) Basophils (C) Monocytes ~~(D)~~ Neutrophils
49. Filtration of blood during urine formation takes place in  
 (A) Collecting duct (B) DCT ~~(C)~~ Glomerulus (D) PCT
50. Corpus Callosum connects the  
 (A) Cerebrum and cerebellum (B) Two lobes of cerebellum  
 (C) Spinal cord with the brain ~~(D)~~ Two cerebral hemispheres

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51. Amniocentesis is a process to :  
 (A) To grow cell on culture medium (B) Determine any disease of heart  
 (C) Determine the sex of the foetus (D) Know about the disease of brain
52. The first human like being is  
 (A) Homo sapiens (B) Homo erectus (C) Homo menthus (D) Homo habilis
53. XO type of sex determination and XY type of sex determination are the examples of  
 (A) Male Homogamety (B) Male Heterogamety  
 (C) Female Homogamety (D) Female Heterogamety
54. Example for Non-Mendelian disorder :  
 (A) Thalassemia (B) Haemophilia (C) Cystic fibrosis (D) Down's syndrome
55. Gynecomastia is a symptom of  
 (A) Turner's syndrome (B) Down's syndrome  
 (C) Cri-du-chat syndrome (D) Kline Felter's syndrome
56. The affected male in the pedigree chart is symbolized by :  
 (A)  (B)  (C)  (D) 
57. The given diagram represents :  
  
 (A) Nucleosome (B) Chromosome (C) Mesosome (D) Ribosome
58. Which of the following hormones is not secreted by human placenta ?  
 (A) Progesteron (B) hCG (C) FSH (D) Relaxin
59. Which of the following is correctly matched ?  
 (A) Bulbil - Agave (B) Conidia - Hydra  
 (C) Spores - Sponge (D) Gemmules - Amoeba
60. The technique advised by a doctor to overcome the problem of infertility :  
 (A) RCH (B) MTP (C) RTI (D) ART

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