



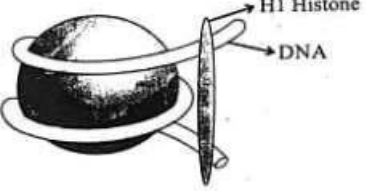


# KCET 2022 Question Paper

## Biology (Code- C4)

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

11. Which aspect forms the basis of DNA fingerprinting?  
 1) The amount of DNA found in samples of blood, saliva and skin.  
 2) The ratio of purines and pyrimidines present in DNA.  
 3) The Sequence of DNA present in the ridges and grooves of finger-prints  
 4) The Satellite DNA showing high degree of repetition in DNA segments
12. Identify the most infectious and fatal type of malarial parasite:  
 1) Plasmodium ovale  
 2) Plasmodium vivax  
 3) Plasmodium malariae  
 4) Plasmodium falciparum
13. The type of antibodies produced during the allergic reaction  
 1) Ig M      2) Ig A      3) Ig E      4) Ig G
14. One of the side-effect of the use of anabolic steroids in females  
 1) Masculinisation      2) Loss of memory  
 3) Hallucination      4) Cirrhosis of liver
15. Which one of the following is a opiate narcotics?  
 1) LSD      2) Barbiturates  
 3) Morphine      4) Amphetamines
16. The large holes in 'Swiss-Cheese' are made by a  
 1) Fungus that releases a lot of gases during metabolic activities  
 2) Machine  
 3) Bacterium that produces methane gas  
 4) Bacterium producing a large amount of CO<sub>2</sub>
17. Which vitamin is increases by 'LAB' in curd?  
 1) Vitamin E      2) Vitamin C  
 3) Vitamin B      4) Vitamin B<sub>12</sub>
18. Enzyme which is useful to remove the oily stains in laundry?  
 1) Lipase      2) Renin  
 3) Protease      4) Amylase
19. DNA replicates semiconservatively was first shown in:  
 1) Higher animals      2) Escherichia coli  
 3) Human cell      4) Plants
20. A series of experiments were conducted by Frederick Griffith in 1928, on transforming principle with:  
 1) Streptococcus pneumoniae  
 2) Escherichia coli  
 3) Bacillus thuringiensis  
 4) Salmonella typhimurium
21. The number of codons effective in coding twenty amino acids:  
 1) 20      2) 61      3) 32      4) 64
22. An antibiotic resistance gene in a vector usually helps in the selection of  
 1) Non-competent cells  
 2) Competent cells  
 3) Transformed cells  
 4) Non-recombinant cells
23. Silencing of specific mRNA in RNAi is by  
 1) dsDNA      2) SSRNA  
 3) dsRNA      4) ssDNA
24. Cry-IAC effectively controls,  
 1) Ring worm      2) Cotton bollworms  
 3) Corn borer      4) Root nematode
25. ADA deficiency can be cured by  
 1) Heart Transplantation  
 2) Bone-marrow Transplantation  
 3) Liver Transplantation  
 4) Kidney Transplantation

26. Average natality rate in our village is 25, average mortality is 24, immigration 2 and emigration 3 and the net increase M population is:  
 1) 27      2) 0      3) 5      4) 10

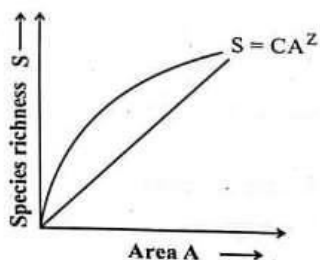
27. The term "Molecular Scissors" refers to  
 1) Taq polymerase      2) Polymerase-I  
 3) Polymerase-II      4) Restriction enzyme

28. What does the sample of given base sequence represent?  
 5' - GAATTC - 3'  
 3' - CTTAAG - 5'  
 1) Palindromic sequence  
 2) Initiator codon at 5' end  
 3) Deletion mutation  
 4) Completion of replication

29. Gel electrophoresis is used for  
 1) Cutting of DNA into fragments  
 2) Construction of recombinant DNA by joining with cloning vectors  
 3) Isolation of DNA molecule  
 4) Separation of DNA fragments according to their size

30. The amount of Photosynthetically active radiation captured by plants is  
 1) 12 - 20 percent      2) 20 - 30 percent  
 3) 2 - 10 percent      4) 60 - 70 percent

31. The given graph represents



- 1) Species area relationship
- 2) Enzyme activity
- 3) Growth of organisms
- 4) Population growth

32. Cuscuta is an example of  
 1) Predation      2) Broad Parasitism  
 3) Endoparasitism      4) Ectoparasitism

33. Particulates of \_\_\_ size pose greatest risk to human health.  
 1) Less than 7.5 micrometers in diameter  
 2) Less than 2.5 micrometers in diameter  
 3) Less than 4.5 micrometers in diameter  
 4) Less than 3.5 micrometers in diameter

34. Maintenance of constant internal environment is called as  
 1) Osmoregulation      2) Metastasis  
 3) Homeostasis      4) Thermoregulation

35. The animals which are active during day time:  
 1) Cresporal      2) Diurnal  
 3) Auroral      4) Vesporal

36. Which of the following statement is incorrect related to biomes?  
 1) Low temperature and less rainfall is a characteristics of Tundra biomes.  
 2) Variation in temperature and mean precipitation accounts for the major biomes.  
 3) More rainfall and low temperature is the characteristics of deserts.  
 4) High temperature and minimum rainfall help to form grasslands.

37. Different types of respiratory organs like gills, book gills, book lugs and trachea are present in  
 1) Annelids      2) Sponges  
 3) Molluscs      4) Arthropods

38. Which of the following plants is used to extract Colchicine?  
 1) Tulip      2) Colchicum  
 3) Aloe      4) Asparagus

39. Rows of S-shaped setae in the body of earthworm are present in all the segments, except
- 1) The first segment
  - 2) The last segment
  - 3) The first and last segment
  - 4) The first, last and clitellum
40. Cell theory was formulated by
- 1) Schwann and Robert Brown
  - 2) Schleiden and Schwann
  - 3) Robert Hook and Robert Brown
  - 4) Schleiden and Robert Brown
41. The type of Polysaccharide present in a cotton fibre
- 1) Glycogen
  - 2) Starch
  - 3) Insulin
  - 4) Cellulose
42. Enzyme involved in crossing over
- 1) Lygase
  - 2) Recombinase
  - 3) Polymerase
  - 4) Endonuclease
43. Kranz anatomy can be seen in
- 1) Maize
  - 2) Tomato
  - 3) Potato
  - 4) Pea
44. Respiratory quotient of glucose is
- 1) 1.0
  - 2) 0
  - 3) 0.7
  - 4) 0.9
45. A person suddenly starts coughing while swallowing food. This coughing would have been due to improper movement of
- 1) Tongue
  - 2) Epiglottis
  - 3) Diaphragm
  - 4) Neck
46. Binomial nomenclature is introduced by
- 1) John Ray
  - 2) Carolus Linnaeus
  - 3) Lamarck
  - 4) Bentham and Hooker
47. Bovine spongiform encephalopathy is caused by
- 1) Fungi
  - 2) Viroids
  - 3) Prions
  - 4) Virus
48. Phycoerythrin and Floridean starch is found in
- 1) Red algae
  - 2) Blue – green algae
  - 3) Green algae
  - 4) Brown algae
49. Menstrual cycle exhibited by
- 1) Tiger
  - 2) Cow
  - 3) Rat
  - 4) Apes
50. An example of dioecious plant
- 1) Papaya
  - 2) Cucurbita
  - 3) Coconut
  - 4) Mango
51. Stalk of the Stamen is
- 1) Peduncle
  - 2) Filament
  - 3) Pedicel
  - 4) Petiole
52. The ovule of angiosperm is technically known as
- 1) Megaspore
  - 2) Megasporangium
  - 3) Megasporophyl
  - 4) Megaspore mother cell
53. Typical mature embryosac of angiosperm is
- 1) 8 nucleated 1 celled structure
  - 2) 8 nucleated 8 celled structure
  - 3) 8 nucleated 7 celled structure
  - 4) 7 nucleated 8 celled structure
54. One of the 2000 years old viable seed, discovered during the archeological excavation an King Herold's near dead sea.
- 1) Lupin
  - 2) Sunflower
  - 3) Phoenix dactylifera
  - 4) Maize
55. The testis are situated outside the abdominal cavity in scrotum as it helps to
- 1) Regulates hormone secretion
  - 2) Store sperm
  - 3) Release sperm
  - 4) Maintain the low temperature

56. Identify the odd one from the following  
1) Isthamus                      2) Fimbriae  
3) Labia minora                4) Infundibulum
57. In which month of gestation, the first movements of foetus and appearance of hair on its head is observed?  
1) 8<sup>th</sup> month                      2) 1<sup>st</sup> month  
3) 4<sup>th</sup> month                      4) 5<sup>th</sup> month
58. The most abundant type of WBC cells  
1) monocytes                      2) Basophils  
3) Neutrophils                    4) Eosinophils
59. Filtration of blood during urine formation takes place in  
1) Glomerulus                    2) DCT  
3) PCT                                4) Collecting duct
60. Corpus callosum connects the  
1) Spinal cord with the brain  
2) Two lobes of cerebellum  
3) Two cerebral hemispheres  
4) Cerebrum and cerebellum