

**ROY'S INSTITUTE OF COMPETITIVE EXAMINATION**

**The West Bengal Central School Service Commission**

**2nd SLST 2025**

**LIFE SCIENCE**

**[CLASSES : IX - X]**

1. Loss of accommodation power with ageing is called  
(A) Astigmatism  
**(B) Presbyopia**  
(C) Cataract  
(D) Myopia
2. Which of the following is not a part of sarcotubular system of muscle?  
(A) Sarcoplasmic reticulum  
(B) T-tubules  
(C) Terminal cisternae  
**(D) Epimysium**
3. What is the main role of nucleolus?  
(A) DNA replication  
**(B) Ribosome synthesis**  
(C) Protein packaging  
(D) Cell division
4. The Bachmann's bundle carries cardiac impulse from  
(A) Bundle of His to Purkinje fibre  
(B) AV node to Bundle of His  
(C) Purkinje fibre to papillary muscle  
**(D) SA node to AV node**
5. 'Portuguese man of war' is  
(A) *Hydra* sp.  
**(B) *Physalia* sp.**  
(C) *Obelia* sp.  
(D) *Paramoecium* sp.
6. Inheritance of colour blindness is due to  
**(A) X linked gene**  
(B) X-Y linked gene  
(C) Y linked gene  
(D) Autosomal gene

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7. Genes located on 'Y' chromosome is called  
(A) Mutant gene  
(B) Sex linked gene  
(C) Autosomal gene  
**(D) Holandric gene**
8. Humoral immunity system is mediated by  
(A) T cell  
(B) B cell  
(C) NK cell  
(D) Plasma cell  
**(Note : B-Cell and Plasma Cell both are possible options.)**
9. Biodiversity loss occurs due to the reason given below:  
**(A) Habitat loss and fragmentation**  
(B) Over exploitation  
(C) Co-extinction  
(D) Allien species invasion
10. The phenotypic ratio of F<sub>2</sub>-generation obtained according to Mendel's dihybrid cross and law of independent assortment is  
(A) 9 : 5 : 1 : 1  
**(B) 9 : 3 : 3 : 1**  
(C) 9 : 5 : 5 : 2  
(D) 9 : 3 : 5 : 2
11. Bombay duck and Hilsha are example of  
(A) fresh water fish  
**(B) marine fish**  
(C) breeds of duck  
(D) breeds of sheep
12. The disease caused by hypoactivity of thyroid gland in children —  
(A) Myxoedema  
(B) Goitre  
**(C) Cretinism**  
(D) Acromegaly
13. Serum agglutinin present in a person having blood group-B —  
**(A) Only alpha ( $\alpha$ )**  
(B) Only beta ( $\beta$ )  
(C) Both alpha ( $\alpha$ ) and beta ( $\beta$ )  
(D) No agglutinin present
14. Hormone secreted from corpus luteum —  
(A) Estrogen  
**(B) Progesterone**  
(C) Oxytocin  
(D) HCG

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15. Megaloblastic anaemia is caused by the deficiency of which vitamin:  
(A) Pyridoxine  
(B) Riboflavin  
(C) Thiamine  
**(D) Cyanocobalamin**
16. One-seeded caryopsis type of fruit is found in  
(A) Fabaceae  
**(B) Poaceae**  
(C) Solanaceae  
(D) Rubiaceae
17. Amber is  
(A) Fossilized lignin  
(B) Fossilized suberin  
(C) Fossilized cutin  
**(D) Fossilized resin**
18. Which one of the following is an example of in-situ conservation of biological resources?  
(A) Botanical garden  
(B) Zoo  
(C) Breeding center  
**(D) National park**
19. The group of plants where viviparous germination is found:  
**(A) Halophytes**  
(B) Xerophytes  
(C) Epiphytes  
(D) Hydrophytes
20. 'Aristotle lantern' is found in  
**(A) Echinodermata**  
(B) Chordata  
(C) Mollusca  
(D) Annelida
21. Excess consumption of which of the following vitamins causes hypervitaminosis?  
(A) Vitamin-C  
**(B) Vitamin-A**  
(C) Vitamin-B<sub>1</sub>  
(D) Vitamin-B<sub>12</sub>
22. Flame cell is found in  
(A) Annelida  
(B) Chordata  
(C) Porifera  
**(D) Platyhelminthes**

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23. Octopus is a  
(A) Squid  
**(B) Devil fish**  
(C) Locust  
(D) Tusk shell
24. The camel's hump is composed of a tissue that provides water when oxidised. Mention its source —  
(A) Skeletal  
(B) Areolar  
(C) Muscular  
**(D) Adipose**
25. Mass meristem, plate meristem and rib meristem are types of meristematic tissue, which are classified on the basis of  
**(A) Plane of division**  
(B) Origin  
(C) Function  
(D) Position in the plant body
26. Which microbe converts ammonia to nitrite?  
(A) *Nitrobacter*  
**(B) *Nitrosomonas***  
(C) *Thiobacillus*  
(D) *Micrococcus*
27. Reproduction in larval stage is called  
**(A) Paedogenesis**  
(B) Neoteny  
(C) Parthenogenesis  
(D) Parthenocarp
28. Which of the following enzymes catalyzes the  $\text{FADH}_2$ -producing reaction of Krebs's cycle?  
(A)  $\alpha$ -ketoglutarate dehydrogenase  
**(B) Succinate dehydrogenase**  
(C) Malate dehydrogenase  
(D) Isocitrate dehydrogenase
29. Neural cell responsible for myelin formation in peripheral nervous system —  
**(A) Schwann cell**  
(B) Astrocyte  
(C) Oligodendroglia  
(D) Pyramidal cell
30. The endosperm in Gymnosperm is  
(A)  $2n$   
(B)  $3n$   
**(C)  $n$**   
(D)  $4n$

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31. Which plant group commonly shows CAM photosynthesis?  
(A) Hydrophytes  
(B) Epiphytes  
**(C) Xerophytes**  
(D) Halophytes
32. Choanocyte cells are also called as  
(A) Flagellated cell  
**(B) Collar cell**  
(C) Amoeboid cell  
(D) Epidermal cell
33. Phylum 'Porifera' is classified based on —  
(A) Branching  
(B) Symmetry  
**(C) Spicules**  
(D) Reproduction
34. Signet ring stage is found in  
**(A) *Plasmodium vivax***  
(B) *Giardia intestinalis*  
(C) *Leishmania donovani*  
(D) *Trypanosoma gambiensi*
35. Factor that does not influence enzyme activity —  
(A) Substrate concentration  
**(B) Product concentration**  
(C) pH of the medium  
(D) Osmolarity of the medium  
**(Note :** Both B and D are possible. However, B seems closer than D)
36. The part of the brain in which 'feeding centre' is located —  
(A) Thalamus  
**(B) Hypothalamus**  
(C) Basal ganglia  
(D) Amygdala
37. Taq Polymerase enzyme is used in PCR is isolated from  
**(A) *Thermus aquaticus***  
(B) *Salmonella typhimurium*  
(C) *Escherechia coli*  
(D) *Vibrio cholerae*
38. Which of the following statement is true for smooth muscle?  
(A) It is a voluntary muscle.  
(B) It can contract in response to motor nerve stimulation.  
(C) It is a striated muscle.  
**(D) It is controlled by autonomic nervous system.**

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39. Which group does not contain polyp stage?  
(A) Anthozoa  
(B) Hydrozoa  
(C) Schyphozoa  
**(D) Calcareia**
40. Phylogenetic classification is based on  
(A) Morphology  
**(B) Evolutionary history**  
(C) Reproductive features  
(D) Seed structure
41. Which of the following dye-yielding plants belongs to Fabaceae family?  
(A) *Crocus sativus*  
**(B) *Indigofera tinctoria***  
(C) *Lawsonia inermis*  
(D) *Rubia tinctorium*
42. A hormone produced by kidney —  
(A) Gastrin  
(B) Aldosterone  
**(C) Erythropoietin**  
(D) ADH
43. The micro-organism which mediates denitrification is  
(A) Nitrosomonas  
(B) Azotobacter  
**(C) Thiobacillus**  
(D) Rhizobium
44. Respiratory quotient (R.Q.) of mixed diet —  
**(A) 0-85**  
(B) 0-70  
(C) 1-00  
(D) 0-95
45. What will happen if RBC is immersed in 0.9% NaCl solution?  
(A) RBC will swell.  
(B) RBC will shrink.  
**(C) No change in shape of RBC.**  
(D) Hemolysis will occur.
46. Air bladder is present in  
(A) *Scoliodon* sp.  
**(B) *Exocoetus* sp.**  
(C) *Trygon* sp.  
(D) *Pristis* sp.

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47. In Bryophytes, number of flagella present in each antherozoid is  
(A) 1  
(B) 4  
(C) Many  
**(D) 2**
48. A synthetic plant hormone used as herbicide is  
(A) IAA  
(B)  $GA_3$   
**(C) 2, 4-D**  
(D) Kinetin
49. The study of fish culture is called  
(A) Ophiology  
(B) Ichthyology  
(C) Herpetology  
**(D) Pisciculture**
50. Microfibrils are comprised of  
(A)  $(1 \rightarrow 3)$   $\beta$ -D Glucan chain  
**(B)  $(1 \rightarrow 4)$   $\beta$ -D Glucan chain**  
(C)  $\alpha$ -L Arabinose  
(D)  $\beta$ -D Galactose
51. The enzyme involved in digestion of carbohydrate inside the alimentary tract is  
(A) Nucleotidase  
(B) Carboxypeptidase  
**(C) Amylase**  
(D) Gelatinase
52. Kupffer cell is found in  
(A) Pancreas  
**(B) Liver**  
(C) Parotid gland  
(D) Large intestine
53. The shape of  $O_2$ -dissociation curve of hemoglobin —  
(A) Oval  
**(B) Sigmoid**  
(C) Circular  
(D) Hyperbolic
54. Example of an inorganic fungicide is  
(A) Ziram (Zerlate)  
**(B) Bordeaux mixture**  
(C) Zineb (Dithane Z-78)  
(D) Ferbam (Fermate)

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55. When single placenta develops along the junction of two fused margins of a monocarpellary single-chambered ovary, it is called  
**(A) Marginal placentation**  
(B) Parietal placentation  
(C) Axile placentation  
(D) Basal placentation
56. Volume of air that can be inspired by maximum effort above the tidal volume is called  
(A) Expiratory Reserve Volume (ERV)  
**(B) Inspiratory Reserve Volume (IRV)**  
(C) Functional Residual Capacity (FRC)  
(D) Residual Volume (RV)
57. Bast fibres are components of  
(A) Xylem tissue  
(B) Meristematic tissue  
**(C) Phloem tissue**  
(D) Secretory tissue
58. Which of the following organisms breath from skin?  
(A) Snake  
**(B) Earthworm**  
(C) Monkey  
(D) Human
59. Betz cell is found in —  
(A) Pons  
(B) Thalamus  
(C) Cerebellum  
**(D) Cerebrum**
60. A process ensuring self-pollination is  
(A) Dichogamy  
(B) Self-sterility  
**(C) Cleistogamy**  
(D) Herkogamy
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