Sample Paper- 03

Class 11th NEET (2024)

ZOOLOGY

ANSWER KEY

1.	(3)	26.	(3)
2.	(3)	27.	(4)
3.	(1)	28.	(1)
4.	(3)	29.	(3)
5.	(1)	30.	(1)
6.	(3)	31.	(2)
7.	(1)	32.	(1)
8.	(1)	33.	(2)
9.	(3)	34.	(3)
10.	(2)	35.	(4)
11.	(3)	36.	(1)
12.	(2)	37.	(2)
13.	(1)	38.	(4)
14.	(2)	39.	(4)
15.	(1)	40.	(3)
16.	(4)	41.	(1)
17.	(4)	42.	(2)
18.	(1)	43.	(1)
19.	(2)	44.	(2)
20.	(3)	45.	(4)
21.	(3)	46.	(4)
22.	(3)	47.	(1)
23.	(2)	48.	(1)
24.	(3)	49.	(1)
25.	(4)	50.	(2)

Hint & Solution

1. (3)
Parathormone maintains Ca^{2+}concentration in blood and its receptors are present in osteoclast cells.

2. (3)
Metamerism refers to segmentation where external divisions correspond to internal divisions.

3. (1)
Path of water through a sponge is ⇒Ostia → Spongocoel → Osculum

4. (3)
Parasitic adaptation of flatworms is presence of hooks and suckers and absorption of food through body surface.

5. (1)
The space between the visceral hump and dorsal spongy skin is called mantle cavity in which gills are present in case of Molluscs.

6. (3)
Amphibia skin is moist (without scales).

7. (1)
Function of adhering junction is cementing to keep neighbouring cells together.

8. (1)
Cells, fibres and ground substances are the three basic components of all type of connective tissue except blood.

9. (3)
Amphibia; poikilothermic; winter; summer

10. (2)
Cellulose, the most important constituent of plant cell wall is made up of unbranched chain of glucose molecules linked by beta (1 → 4) glycosidic bond.

11. (3)
Sometimes especially neural tissues have lipid rich complex structures.

12. (2)
Nucleic acids are present in acid insoluble fraction of any living tissue.

13. (1)
Each enzyme shows its highest activity at particular temperature and pH respectively called the optimum temperature and optimum pH.

14. (2)
Tidal volume -500-550ml
Inspiratory reserve volume - 2500-3000ml
Expiratory reserve volume -1000-1100ml
Residual volume - 1100-1200ml

15. (1)
Formed element - 45%
plasma - 55%
Number of RBC -5-5.5 million mm^{-3}
Number of wbc -6000-8000 mm^{-3}

16. (4)
Fibrinogen helps in clotting or coagulation of blood.
Globulins involved in defense mechanism of the body.
Albumin helps in osmotic balance.

17. (4)
Reptiles, birds and mammals respire through lungs.

18. (1)
(a), (b), (c), (d), (e)

19. (2)
A large proportion of oxygen is left unused in the human blood even after its uptake by body tissues. This O_2 acts as a reserve during muscular exercise.

20. (3)
Lymph = Blood - (RBCs + Platelets + Plasma proteins of high molecular weight).

21. (3)
Blood capillary is present in closed circulatory system.

22. (3)
190/110 mm Hg may harm vital organs like brain/ kidney.

23. (2)
Aquatic animals are mostly ammonotelic because excretion of ammonia requires large amount of water which is available to these animal.

24. (3)
Left kidney at a higher level than the right one.

25. (4)
All of the given statements are correct.

26. (3)
Sarcomere is the portion of myofibrils between two successive Z lines.

27. (4)
The process of cross-bridge formation and breaking continues till the calcium ions are pumped back to the sarcoplasmic cisternae resulting in the masking of actin filaments.

28. (1)
When concertation of Ca^{2+} is low, the troponin–tropomyosin complex blocks actin's binding site for myosin. When concertation of Ca^{2+} is high, the complex rolls out of the way, allowing myosin to bind to actin and initiate the cross bridge cycle.

29. (3)
Afferent neurons transmit impulses via dorsal nerve root to central nervous system.

30. (1)
During depolarisation of the neuronal membrane, Na^{+} ions rapidly move to the inside of the cell.

31. (2)
The limbic system is formed by hypothalamus, amygdala and hippocampus.

32. (1)
Acidic amino acid - Glutamic acid
Basic amino acid -Lysine
Neutral amino acid -Valine
Aromatic amino acid- Tyrosine, tryptophan, phenylalanine.

33. (2)
Iodine deficiency in our diet results in hypothyroidism and enlargement of thyroid gland, commonly called goitre.

34. (3)
Blood pressure is controlled by adrenal gland.

35. (4)
GI hormones-Gastrin, secretin, cholecystokinin, GIP

36. (1)
All of the given statements are correct.

37. (2)
A diaphragm separating thorax from Abdomen is not a characteristic feature of all the chordate.

38. (4)
(c), (d) represent the mammalian class that represents triploblastic condition with closed circulatory system and true coelom.

39. (4)
All of the given statements are correct.

40. (3)
King crab - *Limulus*
Honey bee - *Apis*
Silk worm - *bombyx*
Lac insect - *laccifer*

41. (1)
Both the statements are true

42. (2)
Lack of pulmonary surfactant produces emphysema.

43. (1)
White cell count increase during the infection

44. (2)
The above characteristics are associated with loop of Henle.

45. (4)
2F, tropomyosin, troponin

46. **(4)**
All of the given statements are true.

47. **(1)**
Both assertion and reason are true and reason is correct explanation of assertion.

48. **(1)**
Endocrine glands are ductless gland. their secretions are called as horomones.

49. **(1)**
Posterior pituitary –> Vasopressin -> Stimulates reabsorption of water in the distal tubules in the nephron.

50. **(2)**
Hormones are intercellular messenger.