



Sample Paper-01

Class 11<sup>th</sup> NEET (2024)

## ZOOLOGY

### ANSWER KEY

1. (1)
2. (2)
3. (2)
4. (3)
5. (1)
6. (4)
7. (1)
8. (4)
9. (4)
10. (1)
11. (2)
12. (3)
13. (2)
14. (4)
15. (3)
16. (3)
17. (2)
18. (3)
19. (4)
20. (4)
21. (3)
22. (3)
23. (2)
24. (3)
25. (1)

26. (2)
27. (4)
28. (3)
29. (4)
30. (4)
31. (1)
32. (3)
33. (3)
34. (4)
35. (3)
36. (2)
37. (3)
38. (3)
39. (4)
40. (2)
41. (1)
42. (4)
43. (2)
44. (2)
45. (4)
46. (2)
47. (3)
48. (3)
49. (2)
50. (1)



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| <p>1. (1)<br/>Given diagrammatic sectional view of:<br/>(a) Coelomate – e.g., annelids, molluscs, arthropods, echinoderms<br/>(b) Pseudocoelomate – e.g., aschelminthes<br/>(c) Acoelomate – e.g., platyhelminthes</p> <p>2. (2)<br/>In some animals, the body is externally and internally divided into segments with a serial repetition of at least some organs and the phenomenon is known as metamerism.</p> <p>3. (2)<br/>Characteristic feature of Echinodermata is spiny skin and radial symmetry.</p> <p>4. (3)<br/>Crocodiles are cold blooded and have four chambered hearts.</p> <p>5. (1)<br/>Diaphragm, four chambered heart, lungs are mammalian characters.</p> <p>6. (4)<br/>Endocrine glands secrete a variety of hormones only.</p> <p>7. (1)<br/>Tight junction prevents leaking of substances across a tissue.</p> <p>8. (4)<br/>Cartilage is present in the tip of nose, outer ear joints, between adjacent bones of the vertebral column.</p> <p>9. (4)<br/>Curcumin is a drug.</p> <p>10. (1)<br/>In a protein, amino acids are linked by a peptide bond, which is formed by the reaction of <math>-\text{COOH}</math> group of one amino acid with <math>-\text{NH}_2</math> group of next amino acid.</p> | <p>11. (2)<br/>Lipids belong to the macromolecule group.</p> <p>12. (3)<br/>X – axis <math>\rightarrow</math> Temperature<br/>Y – axis <math>\rightarrow</math> Enzymatic activity</p> <p>13. (2)<br/><i>Neophron</i> (Vulture) is a bird bears hollow and pneumatic bones.</p> <p>14. (4)<br/>Smooth muscle fibres are non-striated and involuntary in nature and are present in the wall of blood vessels, uterus, gall bladder and alimentary canal etc.</p> <p>15. (3)<br/>Protein - This is a polymer made up of amino acids linked by peptide bonds.<br/>Unsaturated fatty acid - These have one or more <math>\text{C}=\text{C}</math> double bonds in their hydrocarbon chain.<br/>Nucleic acid - These are polymers made up of nucleotides linked by phosphodiester bonds.<br/>Polysaccharide - These are polymers made up of monosaccharides linked by glycosidic bonds</p> <p>16. (3)<br/>During forced expiration, actively contracting muscles include internal intercostal and abdominal muscles.</p> <p>17. (2)<br/>Each cerebral hemisphere is divided into 4 lobes by sulci.</p> <p>18. (3)<br/>The cerebrum wraps around a structure called thalamus, which is a major coordinating centre for sensory and motor signalling.</p> <p>19. (4)<br/>All given statements are true for RBC.</p> <p>20. (4)<br/>Blood differs from real connective tissue because plasma of blood is not entirely secreted by blood cells, blood corpuscles are not formed in blood and fibres are absent in blood.</p> |
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21. (3)  
Mammals are said to have double circulation. It means blood circulates twice through the heart.
22. (3)  
Hormone renin is produced from juxta glomerular apparatus (JGA).
23. (2)  
Mechanism of juxta glomerular apparatus (JGA) in the correct order:  
 $c \rightarrow a \rightarrow b \rightarrow d \rightarrow e$
24. (3)  
The effect of antidiuretic hormone (ADH) on the kidney is to increase the permeability of the distal nephron to water.
25. (1)  
Binding of  $\text{Ca}^{2+}$  with troponin in skeletal muscles leads to the exposure of the binding site for myosin on the filament actin.
26. (2)  
Smooth muscle fibres are spindle-shaped, unbranched, non-striated, uninucleate and involuntary.
27. (4)  
Clavicle is long S-shaped bone with 2 curvatures.
28. (3)  
Nodes of Ranvier are the gaps between two adjacent myelin sheaths.
29. (4)  
All the given statements are true for sodium-potassium pumps.
30. (4)  
PNS is divided into :  
(1) Somatic neural system and autonomic neural system
31. (1)  
Both assertion and reason are correct and reason is correct explanation of assertion.
32. (3)  
PRL  $\rightarrow$  Mammary glands  
TSH  $\rightarrow$  Thyroid hormone  
ACTH  $\rightarrow$  Glucocorticoids  
LH and FSH  $\rightarrow$  Gonadotropins
33. (3)  
Thymosin – Promotes production of antibodies to provide humoral immunity also.
34. (4)  
Antagonistic hormones are those pairs of hormones that have opposite effects on one another.  
Antagonistic hormones are insulin and glucagon, calcitonin and parathormone.
35. (3)  
The secretin promotes the release of water and bicarbonates ions in pancreatic juice.
36. (2)  
Above characters belong to Dogfish, Sawfish, *Torpedo* and *Trygon*.
37. (3)  
Muscle fibre tapers at both ends in smooth muscle not in bicep or skeletal muscle.
38. (3)  
Apoenzyme is an enzymatically inactive protein part of an enzyme.
39. (4)  
Vital capacity includes ERV, TV and IRV.  
Vital capacity is the maximum volume of air a person can breathe in after a forced expiration or the maximum volume of air a person can breathe out after a forced inspiration.  
Total volume of air a person can inspire after a normal expiration is termed as inspiratory capacity (IC).  
ERV, RV, IRV and TV comprise total lung capacity.
40. (2)  
During coagulation of blood, an enzyme complex thrombokinase helps in the conversion of prothrombin (present in plasma) into thrombin. Thrombin further helps in the conversion of inactive fibrinogens into fibrins which form a network of threads.



41. (1)  
Angina is acute chest pain when the blood circulation to the heart is reduced. Persons with blood group AB can accept blood from any person with any blood group under the ABO system.
42. (4)  
Hypertension is caused by vasoconstriction which results in increased resistance to blood flow.
43. (2)  
Podocytes – Create slit pores for filtration of blood into Bowman's capsule.
44. (2)  
Steps of dialysis are:  
(d) → (b) → (e) → (f) → (c) → (a)
45. (4)  
Skeletal muscles are voluntary muscles.
46. (2)  
11<sup>th</sup> and 12<sup>th</sup> pairs of ribs are floating ribs in all humans.
47. (3)  
Chemical synapses pass electrical signal between cells with the use of acetylcholine.
48. (3)  
Length of A band remains unchanged during muscle contraction.  
Actin filaments slide towards A-band.  
Length of sarcomere decreases during muscle contraction.  
Length of I-band decreases during muscle contraction.
49. (2)  
Sequence of action of work of FSH is  
(a) → (c) → (b) → (d)
50. (1)  
All statements are correct.



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