



Sample Paper-02

Dropper NEET (2024)

**ZOOLOGY**

**ANSWER KEY**

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

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



## HINTS AND SOLUTION

1. (4)  
Hepatitis B is transmitted through Blood transfusion, intimate physical contact and sexual contact.
2. (4)  
A-III; B-V; C-I; D-II; E-IV
3. (4)  
The exaggerated response of the immune system to certain antigens is called allergy.
4. (4)  
Techniques like radiography, CT and MRI are very useful to detect cancers of internal organs
5. (2)  
The chorionic villi and uterine tissue become interdigitated with each other to form placenta.
6. (1)  
A-Head: Its anterior portion is covered by a structure filled with enzymes that helps in the fusion of male and female gametes.
7. A-3, B-1, C-4, D-2
8. (4)  
Synaptic knob contain neurotransmitters.
9. (1)  
Inorganic compounds like sulphate, phosphate, etc. are found in acid-soluble pools.
10. (4)  
Open circulatory system is found in cockroach, prawn, silver fish and snail.
11. (2)  
In convergent evolution, different structures evolving for the same function and hence having similarity.  
**Example:** Wings of butterfly and of birds look alike but they are not anatomically similar structure though they perform similar functions.
12. (4)  
Hisardale is a new breed of sheep developed in Punjab by crossing Bikaneri ewes and Marino rams.
13. (1)
  - Structure A - Adenine (purine)
  - Structure B - Uracil (pyrimidine)
  - Both are nitrogenous base.
14. (3)
  - Sweet-tasting carbohydrates are called sugars.
  - Monosaccharides (like glucose and fructose) are made up of one unit of simple sugar, whereas disaccharides (like maltose and sucrose) are made up of two units of simple sugar.
  - Monosaccharides and disaccharides are sweet in taste.
  - Polysaccharides like starch and glycogen are long polymers of monosaccharide units.
  - Polysaccharides are amorphous and insoluble in water. Because they are insoluble in water, they do not alter the osmotic balance of the cell storing them.
15. (1)  
Organism which possess 2 layer ectoderm and endoderm are diploblastic the organism which possess 3 layer ectoderm, endoderm, mesoderm are triploblastic organism.
16. (3)  
Asymmetrical eg; Sponge  
Radial symmetry eg; Coelenterates, Ctenophores  
Bilateral eg; Annelids, Arthropoda, Platyhelminthes
17. (4)  
Hugo de Vries believed mutation caused speciation and hence called it Saltation (single step large mutation).
18. (1)  
Both statements 1 and 2 are correct.
19. (3)  
Lippes loop is a non-medicated IUD while multiload 375 is a copper releasing IUD. Surgical methods of contraception are also called as sterilisation methods. High MMR and IMR play a significant role in decreasing human population.



20. (3)  
Rosie - Transgenic cow producing human alpha-lactalbumin.
21. (4)  
For conversion of prothrombin into thrombin thrombokinase is necessary.
22. (3)  
Atrial systole increases the flow of blood into ventricles by 30%.
23. (3)  
Anaerobic work become painful due to accumulation of lactic acid.
24. (2)  
Contractile unit of muscle is a part of myofibril between z-line and z-line.
25. (3)  
Prolactin is lactotroph and FSH is a gonadotroph.
26. (2)  
If over secretion of growth hormone occur after puberty than individual suffers from acromegaly.
27. (2)  
The development of *Periplaneta americana* is paurometabolous, paurometabolous mean metamorphosis that involve nymphal stage. The embryo develop into a mature individual without involving a larval stage.
28. (4)  
Plasma cells have cart-wheel like nucleus  
Adipocytes are fat cells
29. (4)  
Epimysium is the covering of muscle.  
Heart covering = Pericardium  
Bone cells covering = Periosteum  
Cartilage cells covering = Perichondrium
30. (4)  
Bt-cotton - *Bacillus thuringiensis*  
ADA (adenosine deaminase deficiency)-gene therapy  
RNAi - gene silencing  
PCR- Detection of HIV infection
31. (2)  
A – (iii), B – (iv), C – (i), D – (ii)
32. (2)  
Lungs are enclosed by pleural membrane cells are enclosed by plasma membranes.
33. (2)  
In human, the thoracic chamber is formed dorsally by vertebral column and ventrally by the sternum.
34. (4)  
Cortical portion of kidney projecting between the medullary pyramids in human kidney are called column of bertini.
35. (3)  
Joint between carpal and metacarpal of thumb is saddle joint. Shoulder and hip joint are ball and socket joint. Elbow and knee joint are hinge joint and gliding joints are found in tarsals and carpals.
36. (3)  
*Coelacanth* are thought to be evolved into first amphibians.
37. (4)  
Biotechnology reveals use of microorganism in industrial process, rDNA and engineered bacteria for production of antibiotics and antibodies.
38. (1)  
The most important factor that would leads to increased milk yield in cattle is selection of good breeds.
39. (4)  
Crystalline proteins synthesised by *Bacillus thuringiensis* is activated by alkaline pH in insect midgut.
40. (4)  
Kwashiorkar is produced by protein deficiency unaccompanied by calorie deficiency.  
Extensive oedema and swelling of body parts are seen in Kwashiorkar.



41. (3)  
In the given diagram  
Stage A = Morula  
Stage B = Blastocyst  
Labelling C = Trophoblast  
Labelling D = Inner cell mass
42. (2)  
Oral contraceptive is the most effective method of birth control which prevent ovulation.
43. (4)  
Notochord is replaced by bony vertebral column in *Labeo* (bony fish).
44. (4)  
Collagen is intercellular ground substance.
45. (2)  
All enzymes are proteinaceous in nature except ribozymes which are non-proteinaceous.
46. (4)  
The maximum volume of air a person can breathe in after forced expiration is vital capacity,  $ERV + TV + IRV$  and  $TLC - RV$ .
47. (2)  
Both assertion and reason are true, but reason is not the correct explanation of assertion.
48. (2)  
Saliva in mouth is the example of physiological barriers.
49. (1)  
Scrotum help in maintaining the low temperature of the testis necessary for spermatogenesis.
50. (3)  
Thyroid hormone regulate calcium level.

