



Sample Paper-03

Class 12<sup>th</sup> NEET (2024)

**ZOOLOGY**

**ANSWER KEY**

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



## HINTS AND SOLUTION

- |  |   |
|--|---|
| <p>1. (3)<br/>Formation of sperm takes place in seminiferous tubules of testes. Seminiferous tubules lined with male germ cells and sertoli cells.</p> | <p>13. (4)<br/>Pasteur's swan-necked flasks ruled out the objection that spoiled air could have contaminated his experiments.</p>   |
| <p>2. (3)<br/>Sertoli cells, Seminiferous tubules, Leydig cells are the correct constituents of mammalian testes.</p>                                  | <p>14. (2)<br/>Life cannot originate from inorganic materials at present because of very high amount of oxygen in the atmosphere.</p>   |
| <p>3. (1)<br/>Layers of an ovum from outside to inside are corona radiata, zona pellucida and vitelline oolemma.</p>                                   | <p>15. (3)<br/>(a) and (c)</p>  |
| <p>4. (1)<br/>Spermatid – 23 chromosomes</p>   | <p>16. (4)<br/>Their fossils were discovered in Java in 1891.</p>   |
| <p>5. (2)<br/>No menstruation cycle occurs before puberty, after 50 years and during lactation.</p>  | <p>17. (2)<br/>The unit of natural selection is the individual.</p>   |
| <p>6. (4)<br/>At the time of pregnancy, the corpus luteum secretes progesterone which maintains pregnancy.</p>   | <p>18. (3)<br/>Transgenic rice having the gene for beta-carotene.</p>   |
| <p>7. (4)<br/>Accessory membranes are absent in sperm but present in eggs.</p>   | <p>19. (3)<br/>(a), (c) and (d)</p>   |
| <p>8. (2)<br/>(a), (c), (d) and (e)</p>  | <p>20. (4)<br/>Both (2) and (3)</p>   |
| <p>9. (3)<br/>(a), (b) and (c)</p>   | <p>21. (4)<br/>Interferons are the proteins released by the cells in response to a viral infection which they help to combat. These interferons do not inactivate the virus, but they make the unattacked cells less susceptible so they are prevented from the attack of virus. They also prevent the viruses from taking over the cellular machinery.</p> |
| <p>10. (1)<br/>Sterilisation in male is vasectomy and in female is tubectomy.</p>  | <p>22. (4)<br/>The microparticles coated with DNA to be bombarded with gene guns for transformation are composed of gold and tungsten</p>   |
| <p>11. (3)<br/>Ova and sperms are induced to fuse to form zygote under controlled conditions.</p>  | <p>23. (3)<br/><i>Rhizopus</i>, a mould, belongs to the same kingdom to which <i>Microsporum</i> belongs.</p>   |
| <p>12. (4)<br/>By the statement survival of the fittest, Darwin meant that the species most adaptable to changes survives.</p>                         |   |



- |  |  |
|--|--|
| <p>24. (3)<br/>RNAi is the silencing of a specific mRNA.</p> <p>25. (2)<br/>In colostrum, the antibodies that protect the newborn from certain diseases are IgA type.</p> <p>26. (3)<br/>GAATTC is the nitrogen sequence cleaved by EcoR I.</p> <p>27. (4)<br/>Integration of natural science and organisms cells, parts thereof and molecular analogies for products and services</p> <p>28. (4)<br/>All of these.</p> <p>29. (2)<br/>Function of ori site in a vector is to initiate replication.</p> <p>30. (4)<br/>Gel electrophoresis is used for separation of DNA fragments according to their size or length.</p> <p>31. (4)<br/>All of these.</p> <p>32. (4)<br/>Periodic abstinence is a natural method in which the couples avoid or abstain from coitus from day 10 to 17 of the menstrual cycle when ovulation could be expected. The effectiveness of this method is limited because only a few women have regular menstrual cycles and the actual time of ovulation can be produced as the ovulation in humans occurs about 14 days before the onset of the next menstruation.</p> <p>33. (2)<br/>(A) – (III), (B) – (IV), (C) – (I), (D) – (II)</p> <p>34. (3)<br/>Insulin used for diabetes was earlier extracted from pancreas of slaughtered cattle and pigs.</p> | <p>35. (2)<br/>Rosie's milk contained human alpha lactalbumin.</p> <p>36. (4)<br/>Rest of the eggs break down and are absorbed, that is, degenerative follicular atresia.</p> <p>37. (4)<br/>A regular cycling woman is not menstruating, fertilisation of the ovum is the most likely root cause of this.</p> <p>38. (4)<br/>(a) and (b)</p> <p>39. (4)<br/>Conceptual</p> <p>40. (4)<br/>(a) and (c)</p> <p>41. (3)<br/>Only (d)</p> <p>42. (2)<br/>(a), (c) and (d)</p> <p>43. (3)<br/>Single-step large mutation.</p> <p>44. (2)<br/>Typhoid infection doesn't promote formation of interferons.</p> <p>45. (1)<br/>Sexual contact with uninfected person is not a means of transmission of AIDS.</p> <p>46. (4)<br/>Innate immunity is a non-specific type of defence that is present at the time of birth.</p> <p>47. (1)<br/>In the case of peppered moth (<i>Biston betularia</i>) the black coloured form became dominant over the light coloured form in England during industrial revolution. This is an example of natural selection. This group is about species that gain protection from predators due to selection caused by nature.</p> |
|--|--|



48. (1)

The role of DNA ligase in the construction of a recombinant DNA molecule involves formation of phosphodiester bond between two DNA fragments.

49. (1)

(a) and (b)

50. (4)

All of these.



PW Web/App - <https://smart.link/7wwosivoicgd4>

Library- <https://smart.link/sdfez8ejd80if>