BIOLOGY

BOOKS - SRIJAN BIOLOGY (ENGLISH)

SAMPLE QUESTION PAPER 4

Part I

1. Answer the question briefly in one or two sentence:

What are hermaphrodite?

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2. Answer the question briefly in one or two sentence:

Where are the sperms stored in the male?

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3. What is aneuploidy and polyploidy? Give one example of each.

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4. Answer the question briefly in one or two sentence:

List any two industrially important enzymes.

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5. Define carrying capacity

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6. Briefly explain the principle, procedure and the role of ELISA.

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7. Answer the question briefly in one or two sentence:

Define the Red data Book.

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8. Answer the question briefly in one or two sentence:

What is a fermentor?

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9. Spot the odd one out from the following structures with reference to the male reproductive system

A. Rete testis

B. Epididymis

C. Vasa efferentia

D. Isthmus

Answer: D

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10. Embryo sac is located in

A. Microgametophyte

B. Megagametophyte

C. Microsporangium

D. Megasporangium

Answer: B

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11. Both deoxyribose and ribose belong to a class of sugars called

A. Trioses

B. Hexoses

C. Pentoses

D. Polysaccharides

Answer: C

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12. Which of the following is not a lymphoid tissue?

A. Spleen

B. Tonsils

C. Appendix

D. Thymus

Answer: C

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13. Differentiate between YAC and BAC.

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14. Expand the abbreviation:

HGP

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15. Differentiate between YAC and BAC.

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16. Expand the abbreviation:

SNP

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17. Explain the following terms:

Parthenocarpy

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18. Define and give the role of amniocentesis.

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19. The exine of a pollen grain is composed of one of the most resistant biological matieral

by which pollen grains are able to withstand extremes of temperature and dessication and cannot be degraded by any enzyme is

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20. Give technical term :

The canal through which the testes descend into the scrotum just before the birth of a male baby.

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Part Ii

1. Draw a labelled diagram of a section of an enlarged view of microsporangium of an angiosperm.

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2. (a) Draw a schematic labelled diagram of a fertilised embryo sac of an Angiosperm.

(b) Describe the stage in embryo development in a dicto plant.

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3. What is meant by sex-linked inheritance ? Give few examples in man.

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4. _____produced by bacterium Streptococcus and midified by genetic engineering is used as a clot buster for removing clots from the blood vessels of

patients who have undergone myocardial infarction leading to heart attack.

5. Write two differences between: B cells and T cells

6. Write two differences between: Antibodies and interferons

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7. An organism has to overcome stressful condition for a limited period of time. Which strategies can it adopt to do so?

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8. Write the importance of species diversity to the Exosystem. Support your answer with the finding of Tilman.

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9. Explain with suitable examples of ectoparasites and endoparasites.

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10. Why is the polar region not a suitable habitat for tiny humming birds ?

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11. What are Sex chromosomes?

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12. What is recombination? Mention its applications with reference to genetic engineering.

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13. Name the causative organism, transmission and symptoms of pneumonia.

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14. Describe the characteristics a cloning vector must possess.

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15. Define

Parasitism

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16. In commensalism

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17. Define and give one examples of each:

Mutualism

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18. Describe the termination process of transcription in bacteria.

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19. What is single cell protein ? Give its source and significance.

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20. Define sacred groves. What is their role in the conservation of biodiversity?

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21. Explain the birth rate and death rate in population with the help of an example.

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22. Represent diagrammatically three kinds of age - pyramids for humnan populations

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23. How has biotechnology been useful in controlling nematode infection in plants ?

Explain the technique involved in this process.

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24. What are areas which have been responsible for the recent advances in biotechnology.

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25. Why is Taq polymerase preferred in PCR ? Mention the source of this enzyme.

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26. Name three assisted reproductive technologies that help infertile couples to have children

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27. Explain how this act as contraceptive:

Cu-T

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28. Explain how the act as contraceptive:

Saheli

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29. (a) List any four characteristics of an ideal contraceptive.

(b) Name two intrauterine contraceptive devices that affect the motility of sperms.

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30. Give any four reasons for Mendel's success.

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31. Give scientific terms for the following:

Flower having both male and female reproductive structures.

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32. How are the following formed and involved in DNA packaging in a nucleus of a cell ?

(a) Histone octamer

(b) Nucleosome

(c) Chromatin

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33. Differentiate between Euchromatin and Heterochromatin.

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