

First Mock Examination – December 2017

Roll No.

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Series SSR / 1

Code No. 044/ 1 / 2

- Please check that this question paper contains 5 printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains 26 questions.
- Please write down the serial number of the question before attempting it.

BIOLOGY

Class : XII

Date : 30-12-2017

Time allowed : 3 hrs.

Max marks : 70

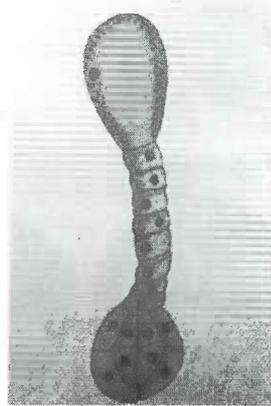
General Instructions:

1. There are a total of 26 questions and five sections in the question paper.
All questions are compulsory.
2. Section A contains question number 1 to 5, Very Short Answer type questions of one mark each.
3. Section B contains question number 6 to 10, Short Answer type I questions of two marks each.
4. Section C contains question number 11 to 22, Short Answer type II questions of three marks each.
5. Section D contains question number 23, Value Based Question of four marks.
6. Section E contains question number 24 to 26, Long Answer type questions of five marks each.
7. There is no overall choice in the question paper; however, an internal choice is provided in one question of two marks, one question of three marks and all three questions of five marks. An examinee is to attempt any one of the questions out of the two given in the question paper with the same question number

Section-A

1. Name the cells that nourish the germ cells in the testes. Where are these cells located in the testes?
2. Name the two amino acids that provide positive charges to histone proteins.

3. Identify below given diagram, Name the initial cell from which this structure has developed.



4. Mention the host organism of the cry1Ac gene and its target pest.
5. State the role of transposons in silencing mRNA in Eukaryotic Cells.

Section-B

6. Give any four functions of placenta.
7. How do normal cells get transformed into cancerous neoplastic cells?
Mention the differences between viral oncogenes and cellular oncogenes.
8. What is interspecific hybridization? Give one example of crop in which it is practiced and mention one advantage.
9. During global warming which type of organism can cope up better – Eurythermal or stenothermal? Why?
10. Why does the logistic growth curve becomes S shaped?

OR

What is hydrarch succession? Name the pioneer and climax communities of a hydrarch succession.

Section-C

11. Give a brief account on Active immunity and Passive immunity, What is Colostrum?
12. Describe the structure of Human Sperm cell with the help of neat labeled diagram.
(Any 4 labels)
13. Bring out the differences between Turner's syndrome and Klinefelter's syndrome.

14. What is satellite DNA? Name their types. Mention their basis for classification of satellite DNA.
15. Linkage or crossing-over of genes is alternatives of each other. Justify with the help of an example.
16. Describe the discontinuous synthesis of DNA.
17. Explain the procedure of MOET technique in cattle.
18. Explain the structure of t-RNA with the help of a diagram. Describe its role in the process of translation
19. Describe how biogas is generated from activated sludge. List the components of biogas.
20. A) Name the respective forms in which the malarial parasite gains entry into
 I) Human body and li) Body of female Anopheles
 B) Name the hosts where the sexual and the asexual reproduction of malarial parasite occur respectively.
 C) Name the toxin responsible for the appearance of symptoms of malaria in humans. Why do these symptoms occur periodically?
21. How did an American company, Eli Lilly use the knowledge of r-DNA technology to produce human insulin? Why is proinsulin so called?
22. Species facing competition might evolve mechanism that promotes coexistence rather than exclusion. Justify this statement in light of Gause's competitive exclusion principle, citing suitable examples

OR

Enlist the three biological diversity with the help of suitable examples

Section-D

23. Harman was going home from school. On his way he saw a pani puri vendor cleaning the dishes with bare hands and then serving the customers with the same hands without washing hands with a soap or wearing plastic gloves. Harman went to the vendor and told him the need for washing hands before touching any eatable. The vendor hushes him away and tells him there is no harm as he has rinsed his hands with water.

Answer the following questions based on the above information:

- (i) In the given situation, who do you think has the correct prospective?

- (ii) Justify your answer with reasons.
- (iii) Suggest few ways by which cleanliness can be promoted.

Section-E

24. a) Where are corpus luteum and corpus albicans present? Do they have any specific function?
b) Draw a well labeled diagram of mature graafian follicle.
c) Describe the endocrine functions of human placenta.

OR

- a) With the help of diagrammatic representation explain in detail all the events that occur during menstrual cycle
b) What is menarche and menopause?

25. Describe the detailed structure of a eukaryotic chromosome with reference to packaging of DNA within that chromosome.
How is the packaging different from a prokaryote?

OR

- (a) Provide genetic explanation for the observation in which the flower colour in F1 generation of snapdragon did not resemble either of two parents. However parental characters reappeared when F1 pro were selfed.
(b) State the three principles of Mendel's laws of inheritance.

26. Describe in detail the ecosystem services. Discuss the role played by biodiversity in maintenance of ecosystem services.

OR

- (a) Explain the specificity of energy flow in the ecosystem with reference to ecological pyramids. (b) What is standing crop?
(c) Discuss the role played by biotic factors in nutrient cycling within the ecosystem.

