

Guess Paper – 2014

Class – XII

Subject – Biology

Time : 3 Hrs

MM:70

General Instructions:

1. All questions are compulsory.
2. The question paper consists of four sections A, B, C and D. **Section-A** contains 8 questions of 1 mark each, **Section-B** contains 10 questions of 2 marks each, **Section-C** has 9 questions of 3 marks each and **Section-D** contains 3 questions of 5 marks each.
3. There is no overall choice. However, an internal choice has been provided in one question of 2 marks, one question of 3 marks, and all the three questions of 5 marks weightage. A student has to attempt only one of the alternatives in such questions.
4. Wherever necessary, the diagrams drawn should be neat and properly labeled.

SECTION-A

1. In the figure given below, mark the ovule and pericarp.



2. Mother and father of a person with 'O' blood group have 'A' and 'B' blood group respectively. What would be the genotype of both mother and father?
3. Many diseases can be diagnosed by observing the symptoms in the patient. Enlist the group of symptoms indicative of pneumonia?
4. What does Hind and 'III' refer to in the enzyme HindIII?
5. How are big holes in Swiss cheese made.
6. Name the parts of pistil which develop into fruit and seeds.
7. Which type of selection is industrial melanism observed in moth, *Biston Bitularia*.
8. Can gamma rays used for crop improvement programmes prove to be harmful for health? Discuss.

SECTION-B

9. Why are menstrual cycles absent during pregnancy.
10. The present population growth rate in India is alarming. Suggest ways to check it.

OR

STDs can be considered as self-invited diseases. Comment.

11. Why is mother's milk considered the most appropriate food for a new born infant?
12. Describe the role of CaCl_2 in the preparation of competent cells?
13. What is founder effect?
14. What are biofertilisers? Give two examples.
15. Sometimes cattle or even human beings give birth to their young ones that are having extremely different sets of organs like limbs/position of eye(s) etc. Comment.
16. When a foreign DNA is introduced into an organism, how is it maintained in the host and how is it transferred to the progeny of the organism?
17. Who was the first patient who was given gene therapy? Why was the given treatment recurrent in nature?
18. You are planning to set up a Dairy Farm. Describe the various aspects you would consider before you start the venture.

SECTION-C

19. Give a schematic labelled diagram to represent oögenesis (without descriptions).
20. Do you justify the statutory ban on aminocentesis in our country? Give reasons.
21. Differentiate between benign tumor and malignant tumor.
22. You have studied the story of Pepper moths in England. Had the industries been removed, what impact could it have on the moth population? Discuss.
23. "Genes contain the information that is required to express a particular trait." Explain.

OR

What is Down's syndrome? Give its symptoms and cause. Why is it that the chances of having a child with Down's syndrome increases if the age of the mother exceeds forty years?

24. Enumerate and describe any three reasons for introducing sex education to school-going children.
25. Draw a diagrammatic sketch of biogas plant, and label its various components given below: Gas Holder, Sludge Chamber, Digester, Dung+water chamber.
26. With the help of an example differentiate between incomplete dominance

and co-dominance.

27. Define transgenic animals. Explain in detail any four areas where they can be utilized.

SECTION-D

28. Give an account of the methods used in sequencing the human genome.

OR

Discuss the process of translation in detail.

29. What are the Assisted Reproductive Techniques practised to help infertile couples? Describe any three techniques

OR

The zygote passes through several developmental stages till implantation, Describe each stage briefly with suitable diagrams.

30. 'Modern methods of breeding animals and plants can alleviate the global food shortage'. Comment on the statement and give suitable examples.

OR

You are a Botanist working in the area of plant breeding. Describe the various steps that you will undertake to release a new variety.

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