

CBSE QUESTION PAPER CLASS-XII

SUMMATIVE ASSESSMENT-I SUBJECT: BIOLOGY

Time : 3 hrs.

Maximum Marks. : 70

Instructions :-

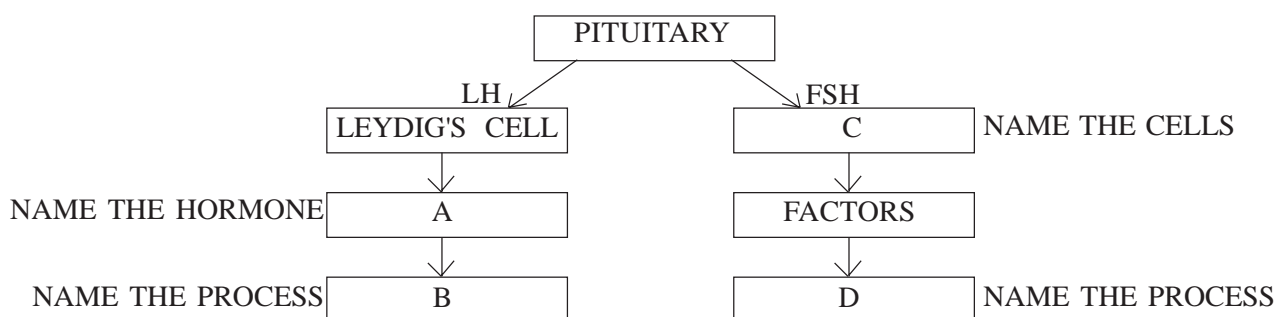
- (i) Question paper contains four sections A, B, C and D.
- (ii) Section-A contains 8 Qs. of 1 mark each.
- (iii) Section-B contains 10 Qs. of 2 marks each.
- (iv) Section-C contain 9 Qs. of 3 marks each and
- (v) Section-D contains 3 Qs. of 5 marks each.
- (vi) All questions are compulsory however internal choices are given.

SECTION-A

1. Name the asexually reproducing structure formed in —
(i) Chlamydomonas (ii) Sponge
2. Name the parts of an angiosperm flower in which development of male and female gametophyte take place.
3. The spermatogonia of an animal contains 32 chromosomes. What will be the number of chromosomes in its — (i) secondary spermatocytes (ii) spermatids
4. Name two viral STDs that are incurable.
5. What kind of test will you perform to find out whether the given plant is homozygous dominant or heterozygous.
6. High fever, loss of appetite, stomach pain and constipation are some of the symptoms seen in patient how would the doctor confirm that the patient is suffering from typhoid and not amoebiasis.
7. Mention the strategy used to increase homozygosity in cattle for desired traits.
8. Name a genus of fungus that forms mycorrhiza.

SECTION-B

9. Name the plant known as 'Terror of Bengal' why is it called so.
10. Draw a diagrammatic sketch of a dicot embryo at the final stage of development and label any four parts in it.
11. Observe the given chart the blank places A, B, C and D.



12. LNG -20 is an IUD. Name the type of it. In what additional way does it function as contraceptive.

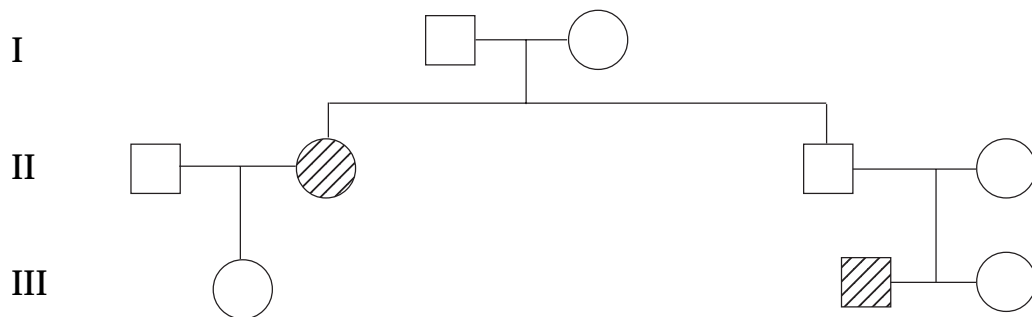
OR

Mention any four aspects which indicate the improved reproductive health of the society.

13. Give the chromosomal constitution and the resulting sex in each of the following syndromes — (i) Turner's syn. (ii) Klinefelter's syn.
14. Give a schematic structure of a transcription unit.
15. What is adaptive radiation? Give an example.
16. Enumerate four common warning signals of drug and alcohol abuse among youth.
17. Justify the statement that SCP production reduces environmental pollution.
18. Name —
 - (i) The pests, Ladybird and dragonflies help to get rid of respectively.
 - (ii) The physical process employed in the primary treatment of sewage.

SECTION-C

19. Define — (i) Juvenile phase (ii) Oestrous cycle (iii) monoecious plant
20. Describe briefly the process of microsporogenesis.
21. Explain any three methods to assist infertile couples to have children.
22. Study the following pedigree and answer the following questions —



- (i) Give the genotype of the parents shown in generation-I and of the son and daughter in generation II.
- (ii) Is the trait sex linked or autosomal justify your answer
- (iii) Is the trait dominant or recessive justify your answer

OR

State Mendel's laws of inheritance.

23. How nucleosome is formed? Draw diagram also.
24. State Hardey Weinberg principle of genetic equilibrium. List any two factors which disturb the stability of a population. How does this disturbance affect the population.
25. When DDT was used first, it was very effective and killed most of the mosquitoes. But now a days it is not effective in all. Explain this with reference to evolution.
26. Differentiate between
 - (i) Innate and acquired immunity
 - (ii) Active and passive immunity

27. Name the following —

- (i) The fungus used to kill plant pathogens.
- (ii) The fungus used to produce cyclosporin—A.
- (iii) A virus used as insecticide.
- (iv) The bacterium used to produce swiss cheese.
- (v) The microbe widely used to produce fermented beverages.
- (vi) Yeast used to produce statins.

SECTION-D

28. Give schematic representation of spermatogenesis and oogenesis in humans.

OR

Explain briefly the menstrual cycle in human female with help of a diagram.

29. Schematically represent the *lac* operon in *E. coli*. Mention the role of lactose in this operon.

OR

Briefly explain the process of translation.

30. Briefly describe the various steps involved in plant breeding.

OR

What is inbreeding? Write advantages and disadvantages of this process.