Model Question Paper

Class-XII (SOS)

Subject-Biology

Time Allowed : 3 hrs **Maximum Marks : 75**

Instructions:

Conditions are required to give answers in their own words as far as practicable.

Marks alloted to each question are indicated against it.

Special Instructions:

(i) You must write question paper series in the circle at the top left side of title page of your answer-book.

(ii) All the questions are compulsory and divided into four-sections.

(iii) Do not leave blank page/pages in your answer-book.

(iv) Answer should be brief and to the point.

(v) Question nos 1-10 (Section-A) are of 1 mark each and are of MCQ type.

(vi) Question nos 11-20 (Section-B) are of 3 mark each and answer them in 40-50 words.

(vii) Question nos 21-25 (Section-C) are of 4 mark each. Answer them in 80-90 words.

(viii) Question nos 26-28 (Section-D) are of 5 marks each. Answer them in 150-180 words.

(ix) Draw neat and clean diagram where ever necessary.

Section-A 1 Mark each

MCQ:

1. Empty Graffian follicle transforms into-
   (a) Ovum (b) Primary follicle
   (c) Egg nest (d) Corpus luteum
2. When body of ovule, embryo sac, micropyle and funicle all lies in one vertical plane, the ovule is:
   (a) Camphylotropous (b) Amphitropous
   (c) Orthotropous (d) Anatropous
3. Sporopollenin is present in:
   (a) Exine (b) Intine
   (c) Both a and b (d) None of above
4. Number of characters considered by Mendel in Pea plant:
   (a) –7 (b) –12
   (c) –8 (d) –14
5. Father of experimental genetics:
   (a) Mendel (b) Batezon
   (c) Morgon (d) Johnson
6. Widal test is used in the diagnose for
   (a) Malaria (b) Pneumonia
   (c) Typhoid (d) Tuberculosis
7. Stimulant present in tea is:-
   (a) Tannin (b) Caffeine
   (c) Coke (d) Cocaine

8. Bt. Cotton is resistant to :
   (a) Insects (b) Herbicides
   (c) Salt (d) Drought
9. Sun adapted plants are called:-
   (a) Halophyte (b) Xerophyte
   (c) Heliophyte (d) Sciophyte
10. Red list contains information about:
   (a) Red coloured flower (b) Red coloured fishes
   (c) Red coloured insects (d) Endangered plants and animals

Section-B **3 Marks each**

11. Draw a well labelled diagram of L.S of Anatropous ovule.

Or

Expand:- (1) ZIFT (2) IUD's (3) RTI

12. What is triple fusion? What is its significance.
13. Differentiate between Oogenesis and Spermatogenesis.

Or

Mention two strategies evolved to prevent self-pollination in flowers.

14. Describe briefly Griffith's experiment.

Or

What is Test cross and how does it differ from Back cross.

15. Describe semiconservative nature of DNA replication.
16. Write the name of causal organism and mode of transmision of Ascariasis.
17. What are Hallucinogens? Give examples and its effects.

18. Write short note on Genetic engineering and Bio-piracy.

Or

What does PCR stands for? Name the different steps in PCR.

19. (a) What is the function of Restriction Endonuclease?
    (b) Define Gene Therapy? 1+2=3

20. What is deforestation? Write any four consequences of deforestation.

Or

Define : Parasitism, Hibernation, Nocturnal animals.

Section-C **4 marks each**

21. (a) Describe the structure of mammalian sperm.
    (b) Describe the structure of typical Embryo sac. 2+2

Or

(a) Differentiate between Morula and Blastula.
(b) Differentiate between Hydrophily and Anemophily.

22. (a) Define sex determination in Human beings.
    (b) Define Incomplete Dominance with example. 2+2=4

Or

(a) How is down's syndrome produced?
(b) What are multiple alleles? Give example.

23. (a) List any four danger signals of cancer.
    (b) Explain the principle and function of ELISA. 2+2=4

24. (a) Differentiate between communicable and non-communicable diseases.
    (b) What are biopesticides? Mention their two advantages. 2+2=4

Or

(a) Differentiate between Innate and Acquired Immunity.

(b) What are biofertilizers? Give two examples.

25. (a) What are National parks? Give examples in India.

(b) Differentiate between competition and predation. 2+2=4

Section-D

26. Differentiate between DNA and RNA. 5

Or

Describe briefly the mechanism of DNA replication.

27. (a) What are cry proteins? Name the organism that produces them. Give one example in which they are used.

(b) "Transgenic organisms are useful." Give two examples with their useful characters. 2½+2½=5

Or

(a) What is Antibiotic Resistance? Explain with reference to pBR322.

(b) Write brief account of genetically engineered. Insuline.

28. (a) How is diapause different from hibernation?

(b) Define followings:

(i) Scavenging

(ii) Symbiosis

(iii) Commensalism 2+3=5