

Model Question Paper
Class-XII (Regular) (Session : 2020-21)
Subject-Biology

Time Allowed : 3 hrs

Maximum Marks :60

Instructions:

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

Marks allotted 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) While answering your questions, you must indicate on your answer-book the same Question no. as appears in your question-paper.
- (iii) Do not leave blank page/pages in your answer-book.
- (iv) All questions are compulsory and are divided into four sections.
- (v) Answer should to be the point.
- (vi) Question nos. 1-10 are of one mark each. (MCQ type)
- (vii) Question nos 11-20 are of two mark each (30-40 words)
- (viii) Question nos 21-25 are of three marks each (80-90 words)
- (ix) Question nos 26-28 are of five marks each. (150-180 words)
- (x) Draw neat and clean diagrams wherever necessary.

Section-A

1 Mark each

MCQ:

1. Beginning of first menstruation is called: 1×10=10
(a) Menarche (b) Capacitation
(c) Menopause (d) None of these
2. Syngamy means:
(a) Fusion of gametes (b) Fusion of similar spores
(c) Fusion of dissimilar spores (d) Fusion of cytoplasm
3. Trisomy of chromosome 21 causes:
(a) Klinefetter's syndrome (b) Turner's syndrome
(c) Sickle cell anaemia syndrome (d) Down Syndrome
4. Self replication property of DNA is called:
(a) Transcription (b) Replication
(c) Oncogenesis (d) Translation
5. Cirrhosis of liver is caused by:-
(a) Opium (b) Bhang
(c) Tobacco chewing (d) Alcohol
6. Ring worm in human is caused by:
(a) Bacteria (b) Fungi
(c) Nematode (d) Virus
7. Which organism serves as biofertilizer:
(a) Azolla (b) E.Coli
(c) Spirogyra (d) None of these
8. Ti plasmid used for making transgenic plants, is found in:
(a) Rhizobium (b) Agrobacterium
(c) Yeast (d) Agrobacter

9. Wild life is conserved:
 (a) In-situ conservation (b) Ex-situ conservation
 (c) Both a and b (d) Selective hunting of predators
10. Under unfavourable condition many zooplankton species in lake and ponds are known to enter:-
 (a) Hibernation (b) Aestivation
 (c) Diapause (d) None of above

Section-B

11. Discuss the characteristics of Entomophilous flower.

Or

Define the following:

- | | | |
|---------------------|-------------------------|---|
| (i) Anemophily | (ii) Viviparous animals | |
| (iii) Parthenocarpy | (iv) Porogamy | 2 |

12. What is Colostrum? What are its main function?

Or

What are Leydig's cells? What are their functions? 2

13. What is double fertilization? What is its significance?

Or

Enlist main methods of birth control. 2

14. Discuss the mechanism of sex-determination in human-beings. 2

15. Define the term co-dominance with example.

Or

Define the term incomplete dominance with example. 2

16. Describe the role of microbes in sewage treatment. 2

17. Name the pathogen of Amoebiasis. Write its symptoms and preventive measures.

Or

Differentiate between Active immunity and passive immunity.2

18. Define the followings:

- | | | |
|---------------|----------------|---|
| (i) Biopatent | (ii) Biopiracy | |
| (iii) GMO | (iv) Biowar | 2 |

19. What are plasmids? What are their role in biotechnology?

Or

What are molecular scissor? Explain their roles. 2

20. Distinguish between:

- (i) Ectotherms and Endotherms
- (ii) Hibernation and Aestivation

Or

Write short note on Hot spots of biodiversity. 2

Section-C

21. (a) Draw a well labelled diagram of Human sperm. 2+1=3
(b) Define Implantation.

Or

Describe menstrual cycle in human female.

22. Define and explain the law of Independent Assortment in terms of dihybrid cross with suitable example.

Or

Who proposed chromosomal theory of inheritance. What are the main postulates of this theory. 3

23. How did Hershey and Chase prove that DNA is the genetic material? 3
24. What are stimulants? Give its examples and effects.

Or

Explain the followings:

- (i) CMIS
(ii) Vaccine
(iii) Allergy 3
25. Define followings:
(i) Scavenging
(ii) Commensalism
(iii) Protocooperation 3

Section-D

26. What is replication? Explain the mechanism of DNA replication in detail.

Or

What is transcription? Explain the mechanism of transcription. 5

27. (a) Differentiate between YAC and BAC.
(b) What are bio reactors and its utility?
(c) Define selectable marker. 2+2+1=5

Or

- (a) Write a note on golden rice.
(b) Write the applications of recombinant DNA technology. 2+3=5
28. (a) What is extinction? List any four causes of wild life extinction?
(b) Explain Sigmoid-shaped growth curve. 3+2=5