

Subject	Topic	Practice Paper - 1	Date
Biology	Complete Syllabus	PU - 12 - B	2017

Max. Marks: 70

Duration: 3hrs 15 mins

General Instructions:

- i) This question paper consists of four parts A, B, C and D. Part D consists of two parts, Section-I and Section-II.
- ii) All the Parts are Compulsory.
- iii) Draw diagrams whenever necessary. Unlabelled diagrams or illustrations do not attract any marks.

Part – A

Answer the following questions in ONE Word or ONE Sentence each.

10 x 1 = 10

1. Define pollution
2. Name the type of antibodies present in the colostrum
3. Define theory of panspermia
4. What is stratification?
5. Define climax community
6. How does statins act as blood cholesterol lowering agent?
7. Mention an example for microbial biocontrol agent.
8. What is transformation in genetic engineering?
9. Define mortality
10. Name the chemicals secreted by mast cells during allergic conditions

Part – B

Answer any FIVE of the following questions in 3 - 5 sentences each

5 x 2 = 10

11. Distinguish between gametogenesis and embryogenesis
12. Mention the two approaches used while sequencing human genome in HGP
13. Write short notes on biofortification
14. Predators in nature are Prudent. Justify the statement
15. Name any two species of *plasmodium* responsible for different types of Malaria.
16. Draw any two pedigree symbols used in the human pedigree analysis.
17. Distinguish between deforestation and reforestation
18. What is rivet popper hypothesis? Mention its significance.

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Part – C

Answer any FIVE of the following questions in 40 - 80 words each.

5 x 3 = 15

19. (a) What is reproduction? Mention its significance. [2]
(b) Offspring's of sexual reproduction have better chances of survival. Why? [1]
20. Briefly explain the structure of a typical dicotyledonous embryo
21. Distinguish between active and passive immunity with a suitable example.
22. Define health. Mention the different criteria for achieving good health.
23. Explain how gene therapy is employed in the treatment of ADA gene deficiency
24. What are age pyramids? Show diagrammatic representation of different age pyramids for human population
25. Describe briefly an experiment that proves semi-conservative model of DNA replication
26. Define apiculture. Mention any two benefits and any two factors to be considered for a successful apiculture practice.

Part – D (i)

Answer any FOUR of the following questions in 200 - 250 words each.

4 x 5 = 20

27. (a) Compare chasmogamous and cleistogamous flowers mentioning suitable example for each. [3]
(b) Name the early stages in the development embryo in angiosperms [2]
28. Distinguish between spermatogenesis and oogenesis.
29. What is population explosion? Mention any four reasons for over population. Suggest any two methods to overcome this.
30. (a) Show pedigree representation for autosomal dominant and autosomal recessive traits [4]
(b) Name the two key concepts of Darwin's theory of evolution? [1]
31. (a) Explain the selection of dark-winged moths in response to industrial revolution in England to illustrate the theory of natural selection as proposed by Darwin [3]
(b) Distinguish between green revolution and blue revolution [2]
32. (a) Differentiate between template and coding strands of DNA [3]
(b) DNA is a better genetic material. Justify the statement [2]

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Part – D (ii)

Answer any THREE of the following questions in 200 - 250 words each. 3 x 5 = 15

33. (a) Define fishery? Mention any two fresh water and marine water food fishes. [3]
 (b) Distinguish between pisciculture and aquaculture [2]
34. (a) What are lymphoid organs? Describe the types of lymphoid organs with example for each [4]
 (b) Draw the chemical structure of morphine [1]
35. Describe species area relationship with a suitable diagram.
36. (a) What is logistic growth? Describe with a logistic growth equation [3]
 (b) Show diagrammatic representation of Logistic and Exponential growth curves in a combined diagram [2]
37. (a) Describe the mechanism of working of electrostatic precipitator with a diagram [3]
 (b) Write a note on catalytic converters. [2]