

MODEL QUESTION PAPER CLASSICAL BIOLOGY

MAJOR-1 for Biological Sciences

COURSE-1 INTRODUCTION TO CLASSICAL BIOLOGY

FIRST SEMESTER

MODEL QUESTION PAPER for 2023-24 Admitted batch

Time: 3 hrs

Max Marks: 70

Answer ALL Questions. Each question carries ONE mark.

I Multiple Choice Questions (MCQs)

1. The ecosystem that contains this food chain

Phytoplankton → Water fleas → Small fish → Large fish → Birds.

A). Lentic ecosystem B). Grassland ecosystem C). Desert ecosystem D). Forest ecosystem

2. The scientist who first proposed the term "Taxonomy" ?

A). Engler B). Hutchinson C). de Candolle D). Bentham

3. One of the following mainly causes water pollution

A). Industrial wastes B). Smoke C). Detergents D). Ammonia

4. The requirement of assimilatory power for the fixation of 6 molecules of CO₂ through calvin (C₃) cycle

A). 6 ATP, 6 NADPH B). 12 ATP, 18 NADPH C). 18 ATP, 12 NADPH D). 18 ATP, 18 NADPH

5. The substance responsible for ozone hole is

A). DDT B). CO C). CH₃ D). CFC

6. Who is the father of Binomial nomenclature

A). Linnaeus B). Bentham C). Engler D). de Candolle

7. What is the smallest taxon ?

A). Family B). Kingdom C). Species D). Genera

8. The inner wall of pollen grain which gives rise to the pollen tube

A). Exine B). Sexine C). Intine D). Nexine

9. The animal related to Chiropterophily

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- A). Bats B). Birds C). Bugs D). Bees
10. Double fertilization is seen in
A). Gymnosperms B). Angiosperms C). Algae D). Pteridophytes
11. Spawn is a
A). Plant seed B). Mushroom seed C). Sea weed D). None
12. The study of growing and marketing flowers and foliage plants
A). Horticulture B). Floriculture C). Olericulture D). All the above
13. Any activity that modifies the visible features of an area of land
A). Horticulture B). Beautification C). Landscaping D). All the above
14. Which element is essential for the formation of Hemoglobin in the Blood
A). Sodium B). Potassium C). Iron D). Calcium
15. What is the primary component of Earth's atmosphere, making up approximately 78% of it
A). Oxygen B). Carbon Monoxide C). Argon D). Nitrogen
16. The commonly used Polymer in the production of Plastic bottles and containers
A). Polypropylene B). Polystyrene C). Polyethylene D). Poly vinylchloride
17. What is the primary chemical compound in Natural gas, commonly used for cooking and heating
A). Ethane B). Butane C). Methane D). Propane
18. Sponges belongs to which phylum
A) protozoa B) Porifera C) Cnidaria D) Annelida
19. Principal characters of chordata
A) Notochord B) Dorsal tubular nerve cord C) Pharyngeal gill slits D) All of the above
20. The end products of protein digestion are
A) Amino acids B) Fatty acids C) Dipeptides D) Glucose
21. Blood pressure is measured using
A) Sphygmomanometer B) Calorimeter C) Spirometer D) Haemocytometer
22. Flight or fight hormone is secreted by
A) Thyroid gland B) Adrenal gland C) Thymus gland D) Pineal gland
23. Dwarfism due to hypo secretion of

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A) Growth hormone B) Insulin C) Thyroxine D) Prolactin

24. The number of queen bees in a bee colony is

A) Two B) One C) Four D) Sixteen

25. Culture fishery is referred to as

A) Aquatics B) Aquaculture C) Aquaphonics D) Apiculture

26. Arrange the following events in correct order.

1. Fertilization 2. Implantation 3. Gametogenesis 4. Parturition

A) 1,2,3,4 B) 4,3,2,1 C) 3,1,2,4 D) 3,2,1,4

27. Who was the father of Cell biology?

A). Rober Koch B). Robert Brown C). Robert Hooke D). Robertson

28. What is the nature of inner envelop of Chloroplast & Mitochondrion?

A). Permeable B). Impermeable C). Semi permeable D). Selectively permeable

29. In Eukaryotes, Ribozymes are synthesized in

A). Chloroplast B). Mitochondrion C). Nucleus D). All of these

30. The main site of cellular activities in Living cell is

A). Nucleus B). Cytoplasm C). Cytosol D). Mitochondrion

II. Fill in the blanks

31. _____ biochemical substance (a fungal product) that makes the stomata's always open

32. _____ mineral is part of chlorophyll molecule

33. In an aquatic ecosystem _____ are primary producers

34. Sunken stomata is present in _____ Leaves,

35. Diabetes is caused by _____ Hormone

36. Human beings belongs to _____ group.

37. _____ is the Father of Evolution

38. The genetic information flows from DNA to _____

39. The chemical compound _____ is used for baking powder

40. _____ bonds hold together the hydrogen and oxygen in water.

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III Very Short Questions

41. ICZN stands for
42. What is Biodiversity
43. Which organisms are included in monera
44. The branch of chemistry that deals with carbon containing compounds.
45. Define fertilization
46. Name two Hormonal disorders
- 47- What type of animals growing in aquaculture
48. How do identify poisonous Mushrooms?
49. Process of separating a mixture based on differences in boiling points.
50. Sickle cell disease is caused by

IV Matching:

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| 51. Sericulture – | a) Study of the Cell |
| 52. Apiculture - | b) study of chromosomes |
| 53. Aquaculture – | c) Relationships among organisms |
| 54. Floriculture – | d) study of Embryo |
| 55. Anatomy – | e) Sustainable Chemistry |
| 56. Ecology- | f) Fish, Prawn |
| 57. Embryology- | g) The study of the body' structure |
| 58. Cytology - | h)The cultivation of Silkworms to produce silk |
| 59. Cytogenetics - | i) Flowers |
| 60. Green chemistry- | j) Honey bee |

V) True or False

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61. Family is the highest level of taxonomic hierarchy.
62. Botanical nomenclature is independent of zoological nomenclature.
63. Oxygen is Comes from CO₂ in Photosynthesis
64. Muscarine is a Poisonous alkaloid
65. Tonoplast is an envelope of vacuole
66. Robert brown is the father of cell biology
67. Whale is a fish.
68. In the lungs, the blood is purified
69. Antacids are used to neutralizing excess stomach acids.
70. Green Chemistry Principles are only relevant to Pharmaceutical industry