

HIGHER SECONDARY QUARTERLY EXAMINATION - 2018

11 - STD

BIOLOGY

Time Allowed : 2.30 Hours

SECTION - I

Maximum Marks : 70

Note : Candidate should answer. Part-I(Bio-Botany) & Part-II(Bio-Zoology) in separate answer-books.

PART - I (BIO - BOTANY) (MARKS : 35) SECTION - I

Note: (i) Answer all the questions. (ii) Choose the most suitable answer from the given four alternatives and write the option code and the corresponding answer. $8 \times 1 = 8$

- Approximate number of capsomeres in TMV is
a) 3120 b) 1203 c) 2130 d) 3021
- Fusion of both morphologically and physiologically dissimilar gametes called
a) Isogamy b) Anisogamy c) Oogamy d) Syngamy
- Which of the following represent gametophytic generation in pteridophytes?
a) Prothallus b) Thallus c) Cone d) Rhizophore
- The type of phyllotaxy found in calotropis is
a) Alternate b) Opposite decussate c) Opposite super posed d) Ternate
- Spike is a type of ----- inflorescence
a) Racemose b) Cymose c) Mixed d) Special type
- Artificial system of classification is also known as ----- of classification
a) Natural system b) Phylogenetic system c) Bio-systematic d) Sexual system
- German botanist Matthias Schleiden and German zoologist Theodor Schwann proposed cell theory in
a) 1833 b) 1883 c) 1864 d) 1933
- The pairing of homologous chromosomes on meiosis is known as
a) Bivalent b) Synapsis c) Disjunction d) Synergids

SECTION - II

Write any four of the following:

$4 \times 2 = 8$

- Define Virion?
- Why Bryophytes are called amphibians of plant kingdom?
- Define Pneumatopores with example.
- What are Monoecious? Give example.
- What is the role of national gardens in conserving bio-diversity -Discuss.
- Draw and label the parts of mitochondria.

SECTION - III

Write any three of the following in which question No.18 is compulsory.

$3 \times 3 = 9$

- Define Polysomes / Polyribosomes.
- Why the venation of Mangifera indica called unicostate pinnately reticulate venation?
- Draw the floral diagram and write floral formula of Ixora coccinea.
- Write the major class of seed plants?
- Distinguish between Prokaryotes and Eukaryotes.

SECTION-IV

Give the answer for the following questions.

$2 \times 5 = 10$

- Write the steps involved in Gram staining Bacteria. (OR)
Write any five economic importance of Algae with examples.
- Draw the flow chart of stem modification. (OR)
Describe the functions of fruit.

PART - II (BIO-ZOOLOGY) (Marks:35) Section - 1

Note: (i) Answer all the questions. (ii) Choose the most suitable answer from the given four alternatives and write the option code and the corresponding answer. 8 X 1 = 8

1. The mind map cladogram was introduced by
(a) Aristotle (b) R.H. Whittaker (c) Earnest Hackel (d) Carlous Linnaeus
2. Find out the mismatched pair
(a) Ascaris - Round worm
(b) Wuchereria - Filarial worm
(c) Enterobius - Hook worm
(d) Taenia - Tape worm
3. Goblet cells secrete (a) Simple protein (b) Structural Protein (c) Derived Protein (d) conjugated protein
4. Find out the wrong statement
(a) Cockroaches also responsible for asthma
(b) Frogs helps in the prevention of malaria (c) Earthworm complete its life cycle in 60 days
(d) As the frog's fertilization is internal large number of tadpoles are formed
5. **Match the items given in the table and choose the correct option**

Vitamins	Functions			
1. Vitamin A	-	(i) Helps in prothrombin synthorisis		
2. Vitamin D	-	(ii) Vital role in visual perception		
3. Vitamin E	-	(iii) Formation of teeth and bones		
4. Vitamin K	-	(iv) Antioxidant		
	1	2	3	4
(a)	(i)	(ii)	(iii)	(iv)
(b)	(ii)	(iii)	(iv)	(i)
(c)	(iii)	(iv)	(i)	(ii)
(d)	(iv)	(i)	(ii)	(iii)
6. An average healthy human breathes
(a) 12-18 times/minutes (b) 17-20 times/minutes (c) 8 -12 times/minutes (d) 12-16 times/minutes
7. Which one of the following is not the function of liver
(a) insulin synthesis (b) Waste removal (c) Glycogen storage (d) Bile synthesis
8. Assertion: Erythropoietin stimulate the bone marrow to produce more RBC
Reason : It is the haemopoiditic adjustment of kidney during long term travel from mountain to sea
(a) Both Assertion and Reason are correct (b) Both Assertion and Reason are wrong
(c) Assertion is correct but reason is wrong (d) Assertion is wrong but reason is correct

SECTION - II

II Answer any four questions.

4 x 2 = 8

9. Differentiate between probiotic and pathogenic bacteria.
10. Mention any two functions of elastic connective tissue.
11. Why is self fertilization is not possible in earthworm?
12. Write down the contribution of frog in agriculture.
13. Why the complete double circulation is more prominent in mammals.
14. Calculate the vital capacity using the following data. Expiratory Reserve Volume: 1100 ml Tidal Volume : 7000 ml Inspiratory Reserve Volume: 3000 ml.

SECTION - III

III Write any three of the following in which question No.18 is compulsory.

3 x 3 = 9

15. Name the molecular taxonomical tool and their application
16. What are enterocoelomate?
17. Draw and label a nerve cell.
18. Write down the two actions of trypsin.
19. When 'O' group person receive blood from AB group, agglutination occur. But agglutination does not takes place when AB group person receive blood from 'O' group why? Give reason.

SECTION - IV

Answer all the questions.

2 x 5 = 10

20. What are the rules of nomenclature? (or) Explain the fundamental distinct features of chordates.
21. How the nervous and endocrine system involve in the human cardiac function? (OR)
Explain the transport of CO₂ from tissues to the lungs.