

AP-475

- (p) Gene probe
 - (q) Chorionic villus sampling
 - (r) Male birth control measures. 12
6. Give an account on water problems in terrestrial habitat.

OR

Explain the biological effects of light with reference to reproduction, pigmentation, photokinesis and photoperiodism. 12

7. Write an account on the following :

- (s) Characters of lentic ecosystem
- (t) Characteristics of estuary
- (u) Food web.

OR

- (v) Ecotype
- (w) Component of a fresh water lentic ecosystem
- (x) Food chain. 12

B.Sc. Part-II (Semester-IV) Examination

4S : ZOOLOGY

(Advanced Genetics and Animal Ecology)

Time—Three Hours]

[Maximum Marks—80

N.B. :— (1) All questions are compulsory.

(2) Question No. 1 carries 8 marks and remaining questions carry 12 marks each.

(3) Draw labelled diagram wherever necessary.

1. (A) Fill in the blanks : 2

- (i) _____ is the study of the interrelationship that exists between organism and its surrounding.
- (ii) Each character of a pair of contrasting characters is represented by an/a _____.
- (iii) On the basis of sex chromosomes a man produces _____ types of sperm/s.
- (iv) Aestivation is also called as _____ sleep.

(B) Choose the correct alternative :

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(v) _____ is the largest of all ecosystems on earth.

- (a) Terrestrial ecosystem
- (b) Fresh water ecosystem
- (c) Marine ecosystem
- (d) Lentic ecosystem

(vi) An albino person does not produce _____ enzyme.

- (a) Albinase
- (b) Milaniase
- (c) Tyrosinase
- (d) None of these

(vii) The number of chromosomes are _____ than the number of genes in a cell.

- (a) More
- (b) Less
- (c) Equal to
- (d) None of these

(viii) _____ is a positively phototactic animal.

- (a) Planaria
- (b) Euglena
- (c) Earthworm
- (d) Sycon

(C) Answer in **one** sentence :

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(ix) When is the synapsis initiated ?

(x) What is Autecology ?

(xi) According to Mendel, what is a recessive character ?

(xii) What do you mean by *Dizygotic Twins* ?

2. Give an account of law of Independent assortment.

OR

Explain supplementary factor.

12

3. Explain the following :

- (a) Synapsis
- (b) Erythroblastosis foetalis
- (c) Types of crossing over.

OR

- (d) Incomplete linkage
- (e) Significance of crossing over
- (f) Multiple alleles.

12

4. Describe the following :

- (g) Inheritance of Haemophilia
- (h) Down's syndrome
- (i) Types of Gynandromorph.

OR

- (j) Autosome and sex chromosome
- (k) Sex determination in human
- (l) Klinefelter's syndrome.

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5. Explain the following :

- (m) Fraternal Twins
- (n) Amniocentesis
- (o) Inheritance of eye colour in Man.

OR