

OR

Describe the structure of Lampbrush chromosome.

12

5. Describe the following :—
- (m) Significance of mitosis.
 - (n) Types of fertilization.
 - (o) Process of Oogenesis.

OR

- (p) Stages of spermatogenesis.
- (q) Significance of fertilization.
- (r) Pachytene. 12

6. Describe the process of Gastrulation upto the formation of three germ layers in Chick.

OR

Describe cleavage and process of blastulation in Frog. 12

7. Describe the following :—
- (s) Chorioallantoic placenta.
 - (t) Uses of stem cells.
 - (u) Natural parthenogenesis.

OR

- (v) Hormones of placenta.
- (w) Regeneration in planaria
- (x) Significance of parthenogenesis. 12



AR - 519

Second Semester B. Sc. (Part - I) Examination
ZOOLOGY

Paper - (2S) Zoology
(Cell and Developmental Biology)

P. Pages : 4

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) All questions are compulsory.
(2) Question No. one carries **eight** marks and remaining **six** questions carry **twelve** marks each.
(3) Illustrate your answer with suitable diagrams wherever necessary.

1. (A) Fill in the blanks.
- (i) Eukaryotic ribosomes are — s type.
 - (ii) — are called powerhouses of cell.
 - (iii) In — phase, nuclear membrane is formed around each set of chromosome.
 - (iv) The — acts as a reservoir of embryonic excretory waste. 2
- (B) Choose the correct alternative from the following :—
- (v) In — chromosome, centromere occurs at one end and chromosome appears rod like.
(i) Metacentric

(ii) Submetacentric

(iii) Acrocentric

(iv) Telocentric.

(vi) In gametogenesis meiotic division takes place during phase of _____

(i) Growth

(ii) Maturation

(iii) Multiplication

(iv) Enlargement

(vii) F_1-F_0 particles are also called _____

(i) Elementary particles

(ii) Cytochromes

(iii) Cristae

(iv) None of these

(viii) Amnio is an extra embryonic membrane which helps in _____

(i) Nutrition

(ii) Protection

(iii) Respiration

(iv) Excretion. 2

(C) Answer in one sentence.

(ix) At which stage of meiosis synapsis occurs ?

(x) What is fertilization ?

(xi) Define spermiogenesis.

(xii) What is Parthenogenesis ? 4

2. Describe the following :—

(a) Fluid mosaic model of plasma membrane.

(b) Phagocytosis and Pinocytosis.

(c) Functions of Endoplasmic reticulum (Any four)

OR

(d) Differences between prokaryotic and Eukaryotic cells.

(e) Passive transport.

(f) Unit membrane model of plasma membrane. 12

3. Describe the following :—

(g) Structure of 70 S ribosome.

(h) Functions of mitochondria.

(i) Structure of Golgi complex.

OR

(j) Mitochondrial cristae.

(k) Functions of Golgi complex

(l) Functions of Lysosome. 12

4. Describe the structure of polytene chromosome.