

AP-430

(n) Cleavage in chick 4

(o) Amnion 4

OR

(p) Yolk sac 4

(q) Fate map of frog (Diagram only) 4

(r) Cleavage in Amphioxus 4

7. Attempt the following :

(s) Chorio-allantoic placenta 4

(t) Regeneration in invertebrates 4

(u) Sources of stem cells 4

OR

(v) Types of parthenogenesis 4

(w) Functions of placenta 4

(x) Regeneration in vertebrates 4

B.Sc. (Part-I) Semester-II Examination**2S : ZOOLOGY****(Cell & Developmental Biology)**

Time : Three Hours]

[Maximum Marks : 80

Note :- (1) **ALL** questions are compulsory.(2) Question No. 1 carries **8** marks and remaining **SIX** questions carries 12 marks each.

(3) Illustrate your answer with suitable diagram.

1. (a) Fill in the blanks :

(i) Primary constriction on the chromosome is called ____.

(ii) Mitosis takes place in the ____ cells of the body.

(iii) ____ consists of an interconnected system of membrane bound channels in the cytoplasm.

(iv) At the anterior extremity of the sperm is special structure called ____.

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(b) Choose the correct alternative :

(i) Chromosomes are found in ____.

(a) Lysosome (b) Endoplasmic reticulum

(c) Nucleus (d) All of the above

(ii) Cleavage in chick _____.

- (a) Holoblastic (b) Meroblastic
(c) Ablastic (d) Diploblastic

(iii) Oogenesis takes place in _____.

- (a) Testis (b) Ovary
(c) Somatic cells (d) Oviduct

(iv) Balbiani rings are found in _____.

- (a) Lampbrush chromosome
(b) Polytene chromosome
(c) Lysosome
(d) None of the above

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(c) Answer in **ONE** sentence :

- (i) Give one function of Allantois.
(ii) Write one function of lysosome.
(iii) What is placenta ?
(iv) Which type of cell division occurs during gametogenesis ?

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2. Describe the functions of plasma membrane. 12

OR

Describe the structure and functions of Endoplasmic reticulum. 12

3. Write an account of :

- (a) Structure of Golgi complex 4
(b) Functions of Ribosomes 4
(c) Functions of Mitochondria 4

OR

- (d) Functions of Golgi complex 4
(e) Structure of Mitochondria 4
(f) Structure of Lysosome 4

4. Describe ultrastructure and functions of nucleolus. 12

OR

Describe the structure of chromosome. 12

5. Attempt the following :-

- (g) Significance of meiosis 4
(h) Prophase in mitosis 4
(i) Stages of spermatogenesis 4

OR

- (j) Anaphase 4
(k) Types of fertilization 4
(l) Aerosome reaction 4

6. Describe the following :

- (m) Formation of coelom in Amphioxus (Diagram only) 4