

SARDAR PATEL UNIVERSITY

B.Sc. VI- SEMESTER EXAM-2016

ZOOLOGY, US06CZ0004
(DEVELOPMENTAL BIOLOGY)

DATE: 4/4/2016, MONDAY

TIME: 2:30 TO 5:30pm

MARKS: 70

Q-1. MULTIPLE CHOICE QUESTIONS.

(10)

1. Mitochondrion is located in which part of sperm?
(a) Head (b) Middle piece (c) Tail (d) All of these
2. Which one is considered as a tertiary egg membrane?
(a) Vitelline (b) Chorion (c) Albumen coat (d) None
3. Haploid Parthenogenesis is also known as
(a) Thelytoky (b) Sexual reproduction (c) Arrhenotoky (d) None of these
4. How many paired gill slits are present at the larval stage of Amphioxus?
(a) 8 pairs (b) 10 pairs (c) 12 pairs (d) 14 pairs
5. The blastula of Amphioxus is called
(a) Coeloblastula (b) Periblastula (c) Steroblastula (d) Discoblastula
6. First cleavage of Amphioxus is
(a) Horizontal (b) Meridional (c) Vertical (d) None of these
7. The third cleavage in Frog is
(a) Marginal (b) Horizontal (c) Meridional (d) Both (a) & (b)
8. The intestine of Tadpole larva is very long because of.....habit.
(a) Herbivorous (b) Carnivorous (c) Insectivorous (d) Omnivorous
9. The Area opaca in Chick embryo is located
(a) Centrally (b) Peripherally (c) Marginally (d) (a) & (b)
10. Formation of Chalaza is a characteristic of..... egg.
(a) Chick (b) Frog (c) Amphioxus (d) Fish

- Q-2 ANSWER THE FOLLOWING SHORT QUESTIONS (ANY TEN). (20)
1. Describe the chorion of insects.
 2. Draw and label the diagram of Human sperm.
 3. Explain the term artificial parthenogenesis with example.
 4. Write about secondary cleavage of Amphioxus.
 5. Describe the egg of Amphioxus.
 6. Explain the fertilization in Amphioxus.
 7. Explain the spawning in Frog.
 8. Draw and label the diagram of Frog Fate-map.
 9. Write about blastula stage of Frog.
 10. Describe the nature of Hen's fertilized egg.
 11. Write about functions of Allantois in Chick embryo.
 12. Draw and label the diagram of extra embryonic membranes of Chick.
- Q-3. Write notes on: (a) Types of eggs. (7)
 (b) Primary egg membranes (3)
 OR
- Q-3. Explain the haploid and diploid parthenogenesis with examples and add a note on its significance. (10)
- Q-4. Describe: (a) Blastula stage in Amphioxus. (3)
 (b) Gastrulation of Amphioxus in detail. (7)
 OR
- Q-4. Explain the process of hatching, larval development and metamorphosis of Amphioxus. (10)
- Q-5. (a) Explain the process of gastrulation in Frog. (7)
 (b) Describe the cleavage in Frog. (3)
 OR
- Q-5. (a) Describe the hatching and formation of Tadpole larva in Frog. (7)
 (b) Write a note on functions of Frog jelly. (3)
- Q-6. Describe: (a) The ovum of Hen's egg with diagram. (5)
 (b) Formation of the primitive streak in chick embryo. (5)
 OR
- Q-6. (a) Describe the 72 hours chick embryo with labeled diagram. (7)
 (b) Write about functions of Amnion. (3)

x=x=x
 (2)