

[53]

SEAT No. _____

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SARDAR PATEL UNIVERSITY

B.Sc. VI – SEMESTER EXAM

ZOOLOGY, US06CZOO04 (DEVELOPMENTAL BIOLOGY)

DATE: 2/4/2018, MONDAY

TIME: 10am to 1pm

MARKS: 70

Q-I MULTIPLE CHOICE QUESTIONS.

(10)

1. Which one is considered as a tertiary egg membrane?
(a) Albumen (b) Mermaids purse (c) Calcareous shell (d) All of these
2. Haploid parthenogenesis occurs in
(a) Bees (b) Wasps (c) Rotifers (d) All of these
3. Which one of the following enzymes, produced by the acrosome of Human sperm?
(a) Amylase (b) Hyaluronidase (c) Lipase (d) Protease
4. The egg of Amphioxus is
(a) Microlecithal (b) Mesolecithal (c) Macrolecithal (d) Polylecithal
5. In Amphioxus, hatching occurs after how many hours of fertilization?
(a) 8 hours (b) 12 hours (c) 16 hours (d) 20 hours
6. The third cleavage of Amphioxus is
(a) Verticle (b) Meridional (c) Horizontal (d) None of these
7. The olfactory organ & enamel of teeth of Frog formed from
(a) Marginal zone (b) Vegetal region (c) Epidermal ectoderm (d) Mesoderm
8. The intestine of young Frog is short because of _____ habit.
(a) Herbivorous (b) Carnivorous (c) Insectivorous (d) Parasitic
9. The area opaca in Chick embryo is located
(a) Centrally (b) Horizontal (c) Peripherally (d) Both (a) & (c)
10. If the Chick embryo having '5' somites then what is the age of embryo?
(a) 15 hours (b) 20 hours (c) 25 hours (d) 30 hours

(1)

(P.T.O.)

eggs of hen's egg

Q-II ANSWER THE FOLLOWING QUESTIONS IN SHORT. (ANY TEN) (20)

1. Draw and label the diagram of Human sperm.
2. Write about secondary egg membranes.
3. Write about mermaids purse.
4. Explain the second cleavage in Amphioxus.
5. Write about fertilization of Amphioxus eggs.
6. Explain the metamorphosis in Amphioxus.
7. Draw and label the diagram of Fate map of Frog.
8. Write about egg of Frog.
9. Explain the spawning in Frog.
10. Explain the fertilization of Hen's egg.
11. Draw and label the diagram of extra embryonic membranes of Chick embryo.
12. Write about functions of yolk sac.

Q-III Write notes on: (a) Types of eggs. (7)
(b) Significance of parthenogenesis. (3)

OR

Q-III Write notes on: (a) Diploid parthenogenesis with example. (6)
(b) Primary egg membranes. (4)

Q-IV Describe : (a) Larval development of Amphioxus. (7)
(b) Blastula of Amphioxus. (3)

OR

Q-IV Explain the gastrulation in Amphioxus with diagram. (10)
Q-V Describe the metamorphosis in Frog. (10)

OR

Q-v Write notes on: (a) Fertilization in Frog egg. (b) Cleavage in Frog. (5+5)

Q-VI Describe: (a) 72 hours of embryo with labeled diagram. (7)
(b) Functions of Allantois. (3)

OR

Q-VI Write notes on: (a) Hen's egg with labeled diagram. (6)
(b) Cleavage in Chick development. (4)