

[61/A-17]

SEAT No. _____

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Sardar Patel University
B.Sc. Semester VI Examination 2019
Developmental Biology
US06CZOO 04
1st April, 2019, Monday
10:00 am to 1:00 pm

Total Marks: 70
(10)

Q-I. MULTIPLE CHOICE QUESTIONS.

1. Arrhenotoky is also known as
(a) Diploid parthenogenesis (b) Haploid parthenogenesis (c) Sexual reproduction (d) None of these
2. Eggs containing small amount of yolk is called as
(a) Microlecithal (b) Mesolecithal (c) Macrolecithal (d) Centrolecithal
3. Which of the following is considered as secondary egg membrane?
(a) Chitinous shell (b) Chorion (c) Membrane granulosa (d) All of these
4. How many paired gill slits are present during the larval stage of Amphioxus?
(a) 5 pairs (b) 8 pairs (c) 10 pairs (d) 15 pairs
5. "Wheel organ" is formed in Amphioxus during _____
(a) Blastulation (b) Cleavage (c) Gastrulation (d) Larval development
6. Second cleavage in Amphioxus is
(a) Vertical (b) Meridional (c) Horizontal (d) Longitudinal
7. Gastric and intestinal glands of Frog are formed from
(a) Neural crest (b) Somatic ectoderm (c) Archenteron (d) Mesomere
8. The third cleavage in Frog is
(a) Meridional (b) Horizontal (c) Marginal (d) Peripheral
9. First somite is formed in Chick embryo after
(a) 15 hours (b) 24 hours (c) 20 hours (d) 32 hours
10. Which of the following stage of Chick embryo shows the flexure and torsion?
(a) 48 hours (b) 56 hours (c) 72 hours (d) All of these

①

(P.T.O.)

- Q-II. ANSWER IN SHORT (ANY TEN). (20)**
1. Enlist the name of primary egg membranes.
 2. Write about significance of parthenogenesis.
 3. Draw and label the diagram of mature human sperm.
 4. Write about metamorphosis in Amphioxus.
 5. Sketch and label the diagram of fertilized egg of Amphioxus.
 6. Write about ovum of Amphioxus.
 7. Write about blastula stage of Frog.
 8. Explain the functions of jelly coat in Frog.
 9. Draw a labeled diagram of fate map in Frog.
 10. Write about chemical composition of yolk in Hen's egg.
 11. Explain the second cleavage in Chick embryo.
 12. Explain the formation of sub germinal cavity in Chick development.
- Q-III (a) Define the term parthenogenesis & explain the haploid parthenogenesis with example. (06)**
(b) Explain the oogenesis in Human with diagram. (04)
- OR**
- Q-III (a) Describe the tertiary egg membranes. (06)**
(b) Write about types of eggs according to the distribution of yolk. (04)
- Q-IV (a) Write a note on cleavage in Amphioxus. (05)**
(b) Describe the larval development in Amphioxus. (05)
- OR**
- Q-IV Describe the formation of primary organ rudiments in Amphioxus with labeled diagram. (10)**
- Q-V (a) Explain the gastrulation process in Frog with labeled diagram. (07)**
(b) Describe the neurulation in Frog development. (03)
- OR**
- Q-V Describe the changes taking place during metamorphosis in Frog. (10)**
- Q-VI (a) Describe the extra embryonic membranes of Chick embryo. (06)**
(b) Write a note on cleavage in Chick development. (04)
- OR**
- Q-VI (a) Describe the 48 hours of Chick embryo with labeled diagram. (07)**
(b) Explain the formation of endoderm in Chick development. (03)

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 (2)