

Exam.Code:0005

Sub. Code: 0456

2012

B.A./B.Sc. (General) Fifth Semester

Zoology

Paper – I: Developmental Biology (ZOO-501)

Time allowed: 3 Hours

Max. Marks: 36

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question each from Unit. Draw relevant diagrams wherever necessary.

x-x-x

I. Explain the following in briefly:-

- a) Aerosome reaction
- b) Capacitation of sperm
- c) Organizer
- d) Discoblastula
- e) Fate maps
- f) Anisogamy
- g) Indeterminate cleavage
- h) Inducers

(8x1)

#### UNIT – I

II. Describe spermatogenesis and discuss major events that occur during spermatogenesis. (7)

III. Write notes on:-

- a) Egg membranes
- b) Polarity of egg

(4,3)

#### UNIT – II

IV. Describe the type of cleavage patterns depending upon distribution of yolk. (7)

V. a) Draw and discuss the fate maps of frog embryo

b) Steroblastula

(5,2)

#### UNIT – III

VI. Discuss the development of Rabbit upto three germ layers. (7)

P.T.O.

(2)

- VII. Discuss the concepts of organizers and inducers and their role. (7)

**UNIT – IV**

- VIII. Discuss the formation, types and functions of placenta. (7)

- IX. Explain the metamorphosis in frog. Discuss the morphological and physiological changes that occur during metamorphosis of tadpole to adult frog. (7)

x-x-x