



**HDY-003-1183004** Seat No. \_\_\_\_\_

**M. Sc. (Sem. III) (CBCS) Examination**

**November / December – 2017**

**Zoology : ZOO - 316**

***(Developmental Biology & Adaptation)***

***(Elective)***

**Faculty Code : 003**

**Subject Code : 1183004**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

**1 Answer the following very briefly : (Any Seven) 2×7=14**

- (a) Define blastulation
- (b) What is corpus luteum?
- (c) Give some functions of semen.
- (d) State fate map of mesoderm.
- (e) Define acclimation.
- (f) Define meroblastic cleavage.
- (g) What is fertilization?
- (h) Define placenta.
- (i) What is epiblast?
- (j) Define ecological resistance.

**2 Answer the following : (Any Two) 7×2=14**

- (a) Give a detailed account on the process of spermatogenesis.
- (b) Give a complete illustrated account of early embryonic development.
- (c) Give a detailed account on the parasitic adaptation.

**3** Answer the following : **7×2=14**

- (a) Describe the role of maternal contribution in early development.
- (b) Describe the blastulation of frog and chick.

**OR**

**3** Answer the following : **7×2=14**

- (a) Describe the pre-fertilization, fertilization and post-fertilization events.
- (b) Describe the physiological adaptations to terrestrial environment.

**4** Answer the following : **7×2=14**

- (a) Describe the semen composition, its functions and assessment of sperm functions.
- (b) Describe the physiological adaptations to estuarine environment.

**5** Answer the following : (Any **Two**) **7×2=14**

- (a) Write a short note on cell differentiation.
- (b) Describe the placenta.
- (c) Briefly describe the cleavage patterns and fate map.
- (d) Describe the physiological adaptations in aquatic environment.

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