



JAZ-003-1183004 Seat No. _____

M. Sc. (Zoology) (Sem. III) (CBCS)

(W.E.F. 2016) Examination

December – 2019

**ZOOL - 316 : Developmental Biology & Adaptation
(New Course)**

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 telolecithal eggs.
- (b) What is cell differentiation ?
- (c) What is fertilization ?
- (d) Define leydig cells.
- (e) Give the typical measurements done in semen analysis.
- (f) What is gastrulation ?
- (g) What is gametogenesis ?
- (h) Define adaptation.
- (i) What is environmental stress ?
- (j) Define ecological resistances.

2 Answer of the following : (any two) **7×2=14**

- (a) Give a detailed account on the parasitic adaptation.
- (b) Give a complete illustrated account on ovulation, production of corpus luteum and its functions.
- (c) Give a detailed account of the role of maternal contribution in early development.

- 3** Answer the following : **7×2=14**
- (a) Describe the blastulation of frog and chick.
 - (b) Describe the physiological adaptation to shore and estuarine environment.

OR

- (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 events of sexual reproduction
 - (b) Describe the physiological adaptations in extreme terrestrial environment.

- 5** Answer the following : (any two) **7×2=14**
- (a) Write a short note on oogenesis.
 - (b) Describe the early embryonic development.
 - (c) Briefly describe the leydig cells and its regulation.
 - (d) Describe the physiological adaptations in aquatic environment.
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