JAZ-003-018304 Seat No. _____

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

December - 2019

Z - 316 : Developmental Biology and Adaptation

(Old Course)

Faculty Code : 003

Subject Code : 018304

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 blastosphere.

(e) Give the typical measurements done in semen analysis.

(f) What is gastrulation?

(g) What is area pellucida?

(h) Define hCG.

(i) What is environmental stress?

(j) Define ecological resistance

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

(a) Give a detailed account of the placenta.

(b) Give a complete illustrated account on ovulation, production of corpus luteum and its functions.

(c) Give a detailed account on the early embryonic development.

3 Answer the following : **7×2=14**

(a) Describe the gastrulation of chick.

(b) Describe the physiological adaptation to shore and estuarine environment.

OR

(a) Describe the parasitic adaptations.

(b) Describe the semen composition, its functions and assessment of sperm functions.

4 Answer the following : **7×2=14**

(a) Describe the semen composition, its functions and assessment of sperm functions.

(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 basic concept of environmental stress and strain.