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Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, April 2019
First Degree Programme Under CBCSS
ZOOLOGY
Core Course – IX
ZO 1641 : Developmental Biology and Experimental Embryology
(2015 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

I. Answer the following questions (in **one** or **two** sentences. **One** mark **each**).

1) Epigenesis
2) Macrolecithal eggs
3) Tertiary egg membranes
4) Manchette
5) Discoblastula
6) Amphimixis
7) Hox genes
8) Implantation
9) Morula
10) CVS.

(10×1=10 Marks)

II. Answer **any eight** of the following (**Not** to exceed **one** paragraph. **Each** carries **two** marks).

11) Blastocyst
12) Notogenesis
13) Ultrasound scanning
14) Differentiation

P.T.O.

15) Graffian follicle

16) Classify eggs based on distribution of yolk

17) Capacitation

18) Amniocentesis

19) Primary organisers

20) Distinguish between totipotency and pleuripotency

21) Primitive streak

22) Fate map of amphioxus. **(8×2=16 Marks)**

III. Answer **any six** of the following (**Not** to exceed **120** words. **Each** carries **4** marks).

23) What are the major steps involved in Oogenesis ?

24) What is Parthenogenesis ? Mention the major types of parthenogenesis.

25) Explain the action of genes involved in segmentation and body pattern in Drosophila.

26) Write notes on 24 hours chick embryo.

27) Briefly explain the different kinds of egg envelopes.

28) Enlist the physiological and biochemical changes during fertilization.

29) Classify placentation according to the distribution of chorionic villi.

30) Write an account of hormonal control of amphibian metamorphosis.

31) Briefly describe cell lineage in *Planocera*. **(6×4=24 Marks)**

IV. Answer **any two** of the following (**Each** carries **15** marks).

32) Write an essay on Spemann's constriction experiments.

33) Explain different types of cleavage.

34) Write an essay on development of brain in frog.

35) What is gastrulation ? Explain the different kinds of morphogenetic movements. **(2×15=30 Marks)**