

D 40080

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2018

(CUCBCSS—UG)

Zoology

ZOL 6B 13—REPRODUCTIVE BIOLOGY, DEVELOPMENTAL BIOLOGY AND
TERATOLOGY

Time : Three Hours

Maximum : 80 Marks

(A) Answer *all* questions. Each carries 1 mark :

- 1 Name two primary egg membranes.
- 2 What is ontogeny ?
- 3 What is blastopore ?
- 4 What is archenteron ?
- 5 What is inguinal canal ?
- 6 What are seminiferous tubules ?
- 7 What is the function of Leydig cells ?
- 8 What is the normal range of sperm count per ml ?
- 9 What is amphimixis ?
- 10 Which part of a blastocyst develops into the embryo proper ?

(10 × 1 = 10 marks)

(B) Answer any *ten* questions in two or three sentences each. Each carries 2 marks :

- 11 What is meant by “secondary sexual characteristics” ? Give one male and one female characteristics.
- 12 What is gestation ?
- 13 What is in vitro fertilization ?
- 14 What is GIFT ?
- 15 What is capacitation ?
- 16 Differentiate microlecithal, mesolecithal and megalecithal eggs with examples.
- 17 Distinguish between meridional and equatorial cleavage.

Turn over

- 18 Comment on germ layers.
- 19 What is amnion ? Give its two functions.
- 20 Distinguish between pluripotency and totipotency.
- 21 Explain arrhenotoky and thelytoky.
- 22 What is grey crescent ?

(10 × 2 = 20 marks)

(C) Answer any *five* questions in not more than a paragraph each. Each carries 6 marks.

- 23 Write notes on test tube babies.
- 24 Describe spermatogenesis with the help of a figure.
- 25 What are morphogenetic movements ? Explain the different types.
- 26 Describe the structure of a hen's egg with the help of a figure.
- 27 Describe the primitive streak stage embryo of chick with the help of a diagram.
- 28 What is a blastocyst ? Describe the structure of a blastocyst with the help of a labelled sketch.
- 29 What are stem cells ? Comment on their significance and applications.
- 30 Describe Spemann's Constriction experiment.

(5 × 6 = 30 marks)

(D) Write essays on any *two* of the following. Each carries 10 marks :

- 31 What is Parthenogenesis ? Explain different types.
- 32 What is a Fate map ? Explain the common practices used for the construction of fate map.
- 33 Briefly describe the development of *Amphioxus* up to gastrula stage with labelled sketches.
- 34 Describe the development of Brain in frog with suitable diagrams.

(2 × 10 = 20 marks)