

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2015**Sixth Semester****Core Course—REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY**

(Common for B.Sc. Zoology, Model I, Model II, B.Sc. Industrial Microbiology and Zoology
and B.Sc. Biological Techniques and Specimen Preparation)

(2012 Admission)

Time : Three Hours

Maximum Weight : 25

Part A (Objective Type Questions)

Answer all Questions.

Each Bunch of four questions carries a weight of 1.

BUNCH I

1. Number of somites in 48 hour chick embryo :

- (a) 28. (b) 14.
(c) 29. (d) 24.

2. The type of cleavage in frog :

- (a) Holoblastic equal. (b) Holoblastic unequal.
(c) Meroblastic. (d) Superficial.

3. The mesoderm free area anterior to the primitive streak :

- (a) Somite. (b) Neurocoel.
(c) Pro amnion. (d) Primitive streak.

4. Meiotic thelytokey is also known as :

- (a) Mictic parthenogenesis. (b) Automictic parthenogenesis.
(c) Autoferilization. (d) Restitution.

BUNCH II

5. The regeneration of amputated limb of a salamander is an example for :

- (a) Epimorphosis. (b) Mophollaxis.
(c) Heteromorphosis. (d) Super generation.

Turn over

6. In man, male sterilization is also known as :
- (a) Tubectomy. (b) Tubal rings.
(c) Vasectomy. (d) Contraception.
7. The mass of differentiated cells forming as a stumpy outgrowth at the region of amputation are :
- (a) Blastema. (b) Mast cells.
(c) NK cells. (d) Totipotent cells.
8. The practice of terminating or killing a female foetus is called :
- (a) Foeticide. (b) Abortion.
(c) Contraception. (d) Fetoscopy.

BUNCH III

9. Volcher Coiter is :
- (a) Father of embryology. (b) Germplasm theory.
(c) Determinate theory. (d) Founder of embryology.
10. Which one of the following tissue is a primary organizer ?
- (a) Dorsal lip of blastopore. (b) Ventral lip of blastopore.
(c) Epidermal ectoderm. (d) Endoderm.
11. The optic vesicle induces the formation of :
- (a) Iris. (b) Lens placode.
(c) Ciliary body. (d) Cornea.
12. The cleavage in chick is :
- (a) Meroblastic. (b) Superficial.
(c) Holoblastic equal. (d) Holoblastic unequal.

BUNCH IV

13. Blastocyst develop in :
- (a) Mammal. (b) Birds.
(c) Frog. (d) Insects.
14. The white fibrous tissue formed in the ruptured follicle in the absence fertilization :
- (a) Corpus luteum. (b) Corpus haemorrhagicum.
(c) Corpus albicans. (d) Corpora allata.

15. Development without fertilization
- (a) Regeneration. (b) Parthenogenesis.
(c) Morphallaxis. (d) Epimorphosis.
16. Metabolic axial gradient theory was put forward by :
- (a) C/M. Child. (b) Horstadius.
(c) Weisman. (d) Spemann.

(4 × 1 = 4)

Part B (Short Answer Questions)

Answer any five Questions.

Each question carries a weight of 1.

17. What is chorionic villi sampling ?
18. What is epimorphosis ?
19. Comment on human placenta ?
20. Write down the significance of primitive streak.
21. Define fate map.
22. What is obligatory parthenogenesis ?
23. What is neurenteric canal ?
24. What is yolk plug ?

(5 × 1 = 5)

Part C (Short Essays/Problem Solving Type)

Answer any four questions.

Each question carries a weight of 2.

25. Write an account of invasive prenatal diagnostic methods.
26. Explain the procedure of IVF and embryo transfer.
27. With suitable labeled diagram explain the structure of a graafian follicle.
28. Explain flexion and torsion.
29. With suitable diagrams explain the cleavage in chick.
30. What is grey crescent ? Write an experiment that indicates the importance of grey crescent.

(4 × 2 = 8)

Turn over

Part D (Essay Type)

Answer any two Questions.

Each question carries a weight of 4.

31. Explain the development of a human foetus upto the formation of germ layers
32. With suitable diagrams explain the development of eye in frog.
33. Compare the salient features of a 24 and 48 hour chick embryo.

(2 × 4 = 8)