

2019

B.Sc. (General)

2nd Semester Examination

ZOOLOGY

Paper - DSC 1BT

(Comparative Anatomy and
Development Biology of Vertebrates)

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

1. Answer any *five* questions of the following : $2 \times 5 = 10$
 - (a) State the functions of swim bladder.
 - (b) Define spermatogenesis.
 - (c) Name the valves found in a mammalian heart.
 - (d) State functions of placenta.
 - (e) State the main parts of a mammalian brain.

[Turn Over]

(f) What do you mean by 'cell death' in developmental process?

(g) What is nephron?

(h) Name any two glands found in vertebrate skin.

2. Answer any *four* questions of the following: $4 \times 5 = 20$

(a) Write a note on visceral arches.

(b) How many air-sacs are there in a bird? Draw the structure of the air-sacs and label the same.

(c) Define cleavage. State different types of cleavages with example.

(d) Explain the role of liver as a digestive gland.

(e) State the role of hormones in metamorphic events in frog's life cycle.

(f) Explain the process of implantation of embryo in humans.

3. Answer any *one* question of the following : $1 \times 10 = 10$

(a) Give an account of evolution of heart and aortic arches in vertebrates.

(b) Explain any *two* of the following :

- (i) Vitellogenesis in birds
 - (ii) Types of gills in fishes
 - (iii) Gene activation and induction in respect to the process of development.
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