



Roll No.

Total No. of Questions : 9]
(2042)

[Total No. of Printed Pages : 4

**UG (CBCS) Ist Year Annual Examination
2012**

B.Sc. ZOOLOGY

**(Comparative Anatomy and Developmental
Biology of Vertebrates)**

(Core)

Paper : ZOOL-102 TH

Time : 3 Hours]

[Maximum Marks : 50

Note :- Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is compulsory.

Section-A

(Compulsory Question)

1. (A) Do as required :

(i) Acrosome is formed from the :

- (a) Golgi apparatus
- (b) Mitochondria
- (c) Cytoplasm
- (d) Lysosomes

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(1)

Turn Over

(ii) Foetal hairy coat is called as :

(a) Pelage (b) Lanugo

(c) Vellus (d) Underfur

(iii) Nervous system develops from :

(a) Mesoderm (b) Blastocoel

(c) Ectoderm (d) Endoderm

(iv) The opening of coronary sinus is guarded by valve.

(v) If gland is removed the tadpole fail to turn into frog.

(vi) The formation and deposition of yolk is called as
1×6=6

(B) Write short notes on the following :

(i) Polyspermy

(ii) Capacitation
2×2=4

Section-B

2. (a) Describe the structure and functions of feathers or hair.

(b) Draw a well labelled diagram of V.S. of mammalian skin. Discuss the functions of skin. 5,5

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(2)

3. (a) Give a detailed account of visceral arches in birds.

(b) Discuss in detail the liver of different vertebrates. 5,5

Section-C

4. (a) Draw a well labelled diagram and discuss in detail the air sacs in pigeon.

(b) Write short notes on swim bladder and holobranch. 5,5

5. (a) Give a comparative account of aortic arches of vertebrates.

(b) Explain the internal structure of mammalian heart with the help of neat and labelled diagram. 5,5

Section-D

6. (a) Give a detailed account of urinogenital ducts in reptiles and mammals.

(b) Enumerate morphology of mammalian brain with the help of neat and labelled diagram. 5,5

7. (a) Write short notes on skin receptors and protective structures of eyes.

(b) Give a comparative account of ear in reptiles and mammals. 5,5

CH-731

(3)

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Section-E

8. (a) Write short notes on fate maps and cortical reaction.
- (b) Explain the hormonal control of spermatogenesis and oogenesis. 5,5
9. (a) Define Apoptosis. Explain the regulatory mechanism of apoptosis. State the benefits of apoptosis.
- (b) Define Implantation. Explain mechanism and hormonal control of implantation. 5,5