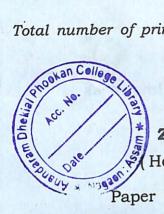
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3 (Sem-4/CBCS) ZOO HC 1

2024

ZOOLOGY

Honours Core)

Paper: ZOO-HC-4016

(Comparative Anatomy of Vertebrates)

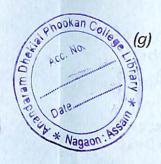
Full Marks: 60

Time: Three hours

The figures in the margin indicate full marks for the questions.

- Choose the correct answer: 1×7=7 1.
 - Hairs and nails are composed mainly of (a)
 - collagen (i)
 - keratin (ii)
 - adipose tissue (iii)
 - (iv) cartilage
 - Foramen of Panizza is seen in (b)
 - crocodile (i)
 - (ii) frog

- (iii) fish
- (iv) cow
- (c) Wolffian body is also known as
 - (i) pronephros
 - (ii) mesonephros
 - (iii) archinephros
 - (iv) metanephros
- (d) The fifth cranial nerve is
 - (i) oculomotor nerve
 - (ii) trochlear nerve
 - (iii) abducens nerve
 - (iv) trigeminal nerve
- (e) Organ of Corti is present within
 - (i) scala media
 - (ii) scala vestibuli
 - (iii) scala tympani
 - (iv) None of the above
- (f) Pain receptors are also called as
 - (i) mechanoreceptor
 - (ii) Merkel's disc
 - (iii) vomeronasal organ
 - (iv) nociceptors



Teeth with well-developed roots set in bony sockets in the jaw are called

- (i) acrodont
- (ii) thecodont
- (iii) pleurodont
- (iv) bunodont
- 2. Write short notes on the following: $2\times4=8$
 - (a) Uropygial gland of birds
 - (b) Adrenergic and cholinergic receptors
 - (c) Stomach of ruminants
 - (d) Role of integument in thermoregulation
- 3. Answer the following questions: (any three) 5×3=15
 - (a) Briefly explain the major components of axial skeleton in mammals.
 - (b) Write a note on the accessory organs of the digestive system.
 - (c) What do you mean by external and internal respiration? Elaborate the structural features of internal or true gills found in adult fishes. 1+4=5
 - (d) Write a note on the structural and functional aspects of rods and cones found in the retina of human eye.

3+2=5

- (e) Briefly explain the functions of sympathetic and parasympathetic nervous systems. 3+2=5
- 4. (a) What are visceral arches? Give a comparative account of the visceral arches in vertebrates. 2+8=10

Or

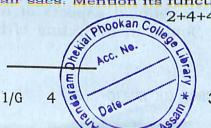
- (b) What is the hilum of kidney in mammals? Discuss the comparative structure of kidney in vertebrates with neat labelled diagrams. 2+8=10
- 5. (a) Give a comparative account on the integument of reptiles, birds and mammals with suitable diagrams. 10

Or

- (b) Write a note on the evolutionary changes in the pattern of heart in vertebrates with appropriate diagrams.
- 6. (a) What is corpus callosum? Describe the structural features of the brain of a reptile and compare it with that of a mammal. 2+8=10

Or

(b) What are air sacs? Write a note on the types of air sacs. Mention its functions.



* Nagaen

3 (Sem-4/CBCS) ZOO HC 1/G

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