

3 (Sem-3) ZOO M 1

2014

ZOOLOGY

(Major)

Paper : 3.1

Full Marks : 60

Time : 2½ hours

The figures in the margin indicate full marks for the questions

1. Fill in the blanks (any three) : 1×3=3

(a) *collagen fibre* — are the small tunnels seen in bone.

(b) *opercular luncy / pneumatic sac* — is the main protein of connective tissue in animals.

(c) The cell body of a neuron is called *transitional epithelial tissue /* —. *neuron*

(d) — forms the brush border. *aldehyde / glutaraldehyde*

2. Write True or False : 1×2=2

(a) Skeletal muscle creates heat. *True*

(b) The yellow colouration sometimes associated with adult fat is due to the presence of numerous lipid droplets.

False

3. Answer the following questions : 1×2=2

(a) What is the function of adipose tissue?

(b) Which type of cartilage forms the skeleton of the foetus? *acid fuchsin*

4. Answer any *four* from the following questions : 2×4=8

(a) What is mordant? Give an example.

(b) How many types of cartilage are there? Name them.

(c) What are the functions of epithelium?

(d) Draw a neat labelled diagram of a mammalian heart.

(e) What are the four types of tissue found in the body of a mammal?

(f) Name different modes of respiration in amphibia.

5. Answer any *three* from the following questions : 5×3=15

(a) Write the principle and procedure of histological staining of proteins. 5

(b) Give a comparative account of the organs of hearing and balancing in fish and amphibia. 5

- (c) Write a brief note on lymph with its functions. 5
- (d) Describe the basic principle of fixation with its biological importance. 5
- (e) How are dyes classified? Write the chemical composition of acidic dyes and their properties. 2+3=5

6. Answer any *three* from the following questions : 10×3=30

- (a) Give a brief account of embryonic development of kidney and organization of kidney in vertebrate.
- (b) Explain the evolutionary trends in the structure of aortic arches of vertebrates.
- (c) Describe the composition and function of blood.
- (d) Give a comparative account of the brain in vertebrates.
- (e) Write briefly about the different types of epithelial tissue with proper diagrams.

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