2016

ZOOLOGY

(Major)

Paper : 5·1

Full Marks : 60

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer the following/choose the correct answer : 1×7=7

(a) What is erythroblastosis foetalis?

(b) Define balanced diet.

(c) What is Bohr effect?

(d) State the function(s) of angiotensin II.

(e) Group AB blood contains

(i) antigen A

(ii) antigen B

(iii) both antigen A and antigen B

(iv) both antibody A and antibody B

(f) Phylloquinone is

(i) vitamin E

(ii) vitamin K

(iii) vitamin C

(iv) vitamin D

(g) Methionine is

(i) essential amino acid

(ii) nonessential amino acid

(iii) nucleotide

(iv) None of the above

2. Answer the following : 2×4=8

(a) Differentiate between internal respiration and external respiration.

(b) Differentiate between myelinated nerve fibre and nonmyelinated nerve fibre.

(c) Differentiate between open circulation and closed circulation.

(d) Differentiate between smooth muscle and skeletal muscle.

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

(a) Briefly describe about digestion and absorption of fats. 5

(b) Write a short note on O_2-dissociation curve. 5

(c) What is micturition? How is it regulated? 1+4=5

(d) State briefly about the structure and function of pancreas. 5

(e) Discuss, in brief, about the causes, symptoms and treatment of high blood pressure and low blood pressure. 5

4. What do you understand by aerobic respiration? How do exchange and transportation of gases occur? State the name of different respiratory pigments. 1+7+2=10

Or

What do you understand by action potential? Discuss, with neat labelled diagram, the transmission of nerve impulses through myelinated and nonmyelinated nerve fibres. 2+8=10

5. Give an account of the origin and conduction of heartbeat in a myogenic heart. State the nervous regulation of heartbeat. 7+3=10

Or

What is Rh factor? Discuss, in detail, about the blood clotting mechanism explaining both intrinsic and extrinsic pathways. 1+(6+3)=10

6. Briefly describe the composition of urine. Write about the counter-current mechanism of urine formation with neat labelled diagram. 2+8=10

Or

Define osmoregulation. Give an illustrated account of osmoregulation in marine vertebrate animals. 1+9=10

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