

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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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
- What is erythroblastosis foetalis?
  - Define balanced diet.
  - What is Bohr effect?
  - State the function(s) of angiotensin II.
  - Group AB blood contains
    - antigen A
    - antigen B
    - both antigen A and antigen B
    - both antibody A and antibody B

( 2 )

- (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 )

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<sub>2</sub>-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