

5/ZOO-300 (Th) Syllabus-2023

2 0 2 5

(Nov-Dec)

FYUP : 5th Semester Examination

MAJOR

ZOOLOGY

(**Animal Physiology**)

ZOO-300

Marks : 56

Time : 3 hours

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

Answer Question No. **1** which is compulsory
and *any* **four** from the rest

1. Write in brief on any *four* of the following :

3×4=12

- (a) Homeostasis and its significance
- (b) Structure of a neuron
- (c) ABO blood group
- (d) Structure of haemoglobin
- (e) Neuromuscular junction
- (f) Causes and characteristics of gastritis

(2)

2. Describe the process of urine formation and concentration. Support your answer with a labelled diagram. $8+3=11$
3. Write the help of a diagram, briefly describe the anatomy of the mammalian digestive tract. Discuss the mechanism of nutrients absorption in mammals. $2+3+6=11$
4. (a) With a well-labelled diagram, briefly describe the structure of the mammalian heart. 5
- (b) Describe the cellular components of vertebrate blood. 6
5. (a) Name the respiratory structures in mammals. Describe the transport of oxygen and carbon dioxide in blood. $1+5=6$
- (b) What are the causes and characteristics of asthma? 5
6. What is a nerve impulse? With the help of a diagram explain the generation and transmission of nerve impulse in a non-myelinated nerve fibre. $2+9=11$

(3)

7. Describe with the help of illustrations the ultra-structure of skeletal muscle. Explain the mechanism of muscle contraction. $2+4+5=11$
8. Write short notes on any *two* of the following : $5\frac{1}{2}\times 2=11$
- (a) Erythropoiesis
- (b) Osmoregulation in fish
- (c) Causes and characteristics of muscular dystrophy
- (d) Neurotransmitters
