

D 40078

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2018

(CUCBCSS—UG)

Zoology

ZOL 6B 11—PHYSIOLOGY AND ENDOCRINOLOGY

Time : Three Hours

Maximum : 80 Marks

A. Answer *all* questions. Each carries 1 mark :

- 1 Name the metal present in haemoglobin.
- 2 What is anorexia ?
- 3 What is jaundice ?
- 4 What is haemostasis ?
- 5 Name the vitamin essential for blood clotting.
- 6 Name the most common neurotransmitter.
- 7 What is resting potential?
- 8 Name the most common second messenger molecule involved in hormone action.
- 9 Name two hormones that contain iodine.
- 10 Name two hormones that directly control normal growth and differentiation of body parts.

(10 × 1 = 10 marks)

3. Answer any *ten* questions in two or three sentences each. Each carries 2 marks :

- 11 What are formed elements ?
- 12 What is ESR ? Comment on its clinical significance.
- 13 Explain tachycardia and bradycardia.
- 14 Write notes any two abnormal constituents in human urine.
- 15 What is rigor mortis ?
- 16 Differentiate electrical transmission and chemical transmission of nerve impulse.
- 17 What are electric organs ? Give an example.
- 18 Comment on acromegaly.
- 19 What are granulocytes ?

Turn over

- 20 Name two hormones secreted by islets of Langerhans and their functions.
- 21 Explain muscle fatigue.
- 22 What is cretinism ?

(10 × 2 = 20 marks)

C. Answer any *five* questions in not more than a paragraph each. Each carries 6 marks :

- 23 Describe the structure of haemoglobin with a diagram.
- 24 Write notes on ECG with the help of a diagram.
- 25 Explain urea cycle with a diagram.
- 26 Explain the mechanism of transmission of impulse across a synapse.
- 27 With the help of a labelled sketch, describe the structure of a synapse.
- 28 Explain the negative feedback mechanism of hormone regulation.
- 29 Explain the process of osmoregulation in freshwater and marine animals.
- 30 Describe the different types of heart.

(5 × 6 = 30 marks)

D. Write essays on any *two* of the following. Each carries 10 marks :

- 31 Describe the ultrastructure of a striated muscle fibre. Explain the physiology and chemistry of muscle contraction. Illustrate your answer with suitable diagrams.
- 32 Discuss the various mechanisms of hormone action in vertebrates.
- 33 Describe the process of urine formation in man with suitable diagrams.
- 34 Explain the method of transport of carbon dioxide between the lungs and tissue.

(2 × 10 = 20 marks)