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End Semester Examination of Semester–II, 2016
Subject : ZOOLOGY (PG)
Paper : ZOOPG–203
Group : Gr A + Gr B
Full Marks : 40
Time : 2 Hrs

The figures in the margin indicate the marks corresponding to the question

Candidates are requested to give their answers in their own word as far as practicable.

Illustrate the answers wherever necessary.

Use separate Answer scripts for Group A and Group B

Group A (Marks : 20)

Answer **Question No. 1** and
any one out of **Question No. 2** and **Question No. 3**

1. Answer **any five** questions : 2x5=10

   i) Define resting membrane potential.

   ii) Mention the roles played by Na^+ in mammalian system.

   iii) Compare protonephridia with metanephridia.

   iv) What do you mean ureotelism? Cite example.

   v) What is neurogenic heart? Where could you find this?

vi) State the role of cross bridge in muscle contraction.

vii) What do you mean by Haldane effect?

viii) Name the three different structures of Juxtaglomerular apparatus. Which hormones are secreted from them?

2. a) Define cardiac cycle.

b) Describe sliding filament model of muscle contraction with labelled diagram.

c) What are neurotransmitters?

d) Name two neurotransmitters belonging to two different chemical families. 2+5+1+2

3. a) Describe versatile biological roles played by vitamin-D in mammals.

b) Add a note on green gland.

c) What are chemical synapses? 6+2+2

Group B (Marks : 20)

Answer **Question No. 1** and
any one out of **Question No. 2** and **Question No. 3**

1. Answer **any five** questions : 2x5=10

i) What is meant by developmental plasticity?

ii) What is aestivation? How does it differ from torpor?

iii) Distinguish between sweating and panting?

iv) Differentiate adaptation and acclimatization.

v) What is cardiac shunt?

vi) What is TSD?

vii) What do you mean by stress and strain?

viii) Why cold perception is more senore in finger than upper arm?

2. a) Discuss the mechanism of osmoregulation in marine teleosts with neat diagram.

b) Compare 'regulator' with 'conformers'. (5+2)+3

3. a) What are the different types of reaction norms? Explain graphically how the phenotypes changes in each of these norms with change in environment.

b) Explain "Regulation is rather expensive compared to avoidance and conformity". 7+3