Total Pages : 3

End Semester Examination of Semester–I, 2015
Subject : PHYSIOLOGY (PG)
Paper : PHYPG–101
Group : Unit 01 & Unit 02
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.

Unit–01 (Marks : 20)

Answer **Q1.** and any **one** out of **Q2** and **Q3:**

Q1. Answer **any five** question: 2x5=10

i) What are amino sugars? Give two examples.

ii) What is anemerism?

iii) What is storage lipids? Give examples.

iv) What are zwitterious?

v) What are fibrons proteins. Give two examples.

vi) What is meant by Tm of DNA?

vii) What is chargoff's rule?

viii) Write the chemical structures and nature of metheonine and lysine.

Q2. a) What are glycoconjugates?

b) Describe the structure and function of proteoglycans.

c) What is sugar code? 3+5+2=10

Q3. a) State the structural details of secondary structure of proteins with proper diagram.

b) What is Ramachandran Plot? 7+3=10

Unit–02 (Marks : 20)

Answer **Q4.** and any **one** out of **Q5** and **Q6**: 2x5=10

Q4. Answer **any five** questions:

i) What do you mean by Van't Hoff factor?

ii) What do you mean by Viscoelasticity of blood?

iii) Distinguish between streaming Potential and sedimentation potential of colloids.

iv) What do you mean by physiological steady state?

v) Distinguish between Newtonian and Non Newtonian fluid.

vi) State Fick's law of diffusion.

vii) What is Reynold's number?

viii) What do you mean by Bernoulli's principle?

Q5. a) Illustrate the interplay of pressure, flow and resistance in hemodynamics.

b) What is Fahraeus – Lindquist effect?

c) State the differences between Laminar flow and Turbulent flow of liquid. 6+2+2=10

Q6. a) State the factors controlling the pulmonary vascular resistance.

b) Discuss critically the role of surfactant in alveolar dynamics.

c) Write a brief note on "Electrical Double Layer" formed within colloidal solution. 3+4+3=10