2018

2nd Semester

PHYSIOLOGY

PAPER—C4T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

1. Answer any *five* Questions : 5×2

(a) Mention the functions of modified sugar.

(b) What is mutarotation ?

(c) What is iodine number ?

(d) Mention the physiological importance of cholesterol.

(e) What do you mean by cis and trans fatty acids?

(f) Write the name and importance of two cyclic fatty acids.

(g) Write the Chargaff's rules of DNA.

(h) State briefly the functions of RNA polymerase.

2. Answer any *four* questions : 4×5

(a) What are the lipo proteins? Mention their composition and functions. 1+2+2

(b) What is the mechanism of base pairing of nucleotides in DNA structure, under physiological condition. What is Z-DNA? 4+1

(c) What are the Phospholipids? Mention their physiological importance. 2+3

(d) Describe the different forces the stabilize the different levels of protein structure. What do you mean by Ramchandran Plot in determining protein structure. 3+2

(e) Explain the following properties of fatty acids

(i) saponification,

(ii) rancidity. $2\frac{1}{2}+2\frac{1}{2}$

(f) Why amino acids are called ampholytes ? State the features of peptide bond. 2+3

3. Answer any *one* question : 1×10

(a) Describe the Watson-Crick DNA double helix model with a suitable diagram. State the Cloverleaf structure of tRNA. 6+4

(b) Why lactose or maltose is known as reducing sugar but sucrose is non reducing sugar ? Explain epimerism and anomerism of monosaccharides. Give a brief note on muco-polysaccharides. 3+(2+2)+3

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