

U.G. 2nd Semester Examination - 2020**PHYSIOLOGY****[HONOURS]****Course Code : PHYSIOL(H)CC-T-03**

Full Marks : 40

Time : $2\frac{1}{2}$ Hours*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **five** questions: 2×5=10
 - a) Define genome.
 - b) What are collagens?
 - c) What are biogenic amines?
 - d) What is r RNA?
 - e) What are triglycerides?
 - f) Define saponification number.
 - g) What is chromatography?
 - h) What are essential fatty acids?
2. Answer any **two** questions: 5×2=10
 - a) Describe the structure of alpha helix of proteins. 5

[Turn over]

- b) Give a brief account on Z DNA. How it differs with B DNA. 3+2=5
 - c) Why glucose is called a reducing sugar? State the principle of Benedict test.
 - d) Define linker histone. Discuss the role of histone proteins in organizing chromosomal structure. 1+4=5
3. Answer any **two** questions : 10×2=20
 - a)
 - i) Discuss how proteins are being folded and held together within cell.
 - ii) What do you understand by isoelectric precipitation ? 7+3=10
 - b) Mention the salient features of double helical structure of DNA .What is gel electrophoresis? 8+2=10
 - c) Explain cis-trans isomerism in the context of fatty acids. What are the major lipoproteins ? State their functions. 2+5+3=10
 - d) “Glucose and fructose form the same osazone ” —Explain. Delineate the chemical structure of starch. State the function of invertase. 4+4+2=10
