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M.Phil/2nd Sem/LSC/19

2019

M. Phil 2nd Semester Examination

LIFE SCIENCE

Paper : LSC-123

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.
Write the answers wherever necessary.*

(1 Elucidation of Biomolecules)

Group - A

(Marks : 8)

1. Answer any *four* questions from the following : 4×2
- a) What are deoxy sugars? Give examples. 1+1
 - b) What is rancidity? 2
 - c) What is molten globule? 2
 - d) Mention two endocrinopathic disease of GH. 2
 - e) What is the chemical nature of carotenoids? 2
 - f) Mention two deficiency symptoms of vitamin E. 2

[Turn Over]

(2)

Group - B

(Marks : 16)

2. Answer any *four* questions from the following : 4×4
- Write down the signaling mechanism of glucagon epinephrine by GPCR. 4
 - Describe the biological importance and application of flavones. $2 + 2$
 - Differentiate the configuration of parallel and anti-parallel β -plated sheet. 4
 - What are quinones? Name some important quinones with the uses. 3
 - Mention the occurrence and physiological importance of morphine. $1 + 3$
 - Discuss the formation of micelles and their uses. $2 + 2$

Group - C

(Marks : 16)

3. Answer any *two* questions from the following : 2×8
- Elucidate the different isoforms of inositol mentioning the function of inositol. Describe the laminated and randomly branched structure of amylopectin. Mention the application of heparin. $(2 + 2) + (1 + 1) + 2$
 - Describe diagrammatically the metabolism of chylomicron with special reference to lipoprotein lipase.
Write down a note on 'good cholesterol carrier'. $(3+2)+3$
 - Write down the significance of protein folding. Discuss the role of molecular chaperones in protein folding with special reference to Hsp 60. $3 + 5$