

2013

M.Sc.

1st Semester Examination

HUMAN PHYSIOLOGY

PAPER—PHY-101

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Unit—01

1. Discuss Boyer's binding change model for ATP Synthesis.

5

Or

(a) What is the importance of mitochondrial electron transport chain in eukaryotic cell?

(Turn Over)

(b) Discuss in brief the mechanism of action of cytochrome C Oxidase in electron transport.

1+4

2. State any two linear equations of enzyme Kinetics with proper plot.

 $2\frac{1}{2}+2\frac{1}{2}$

Or

Discuss critically how the binding of CTP influence reactions of the catalytic subunits of ATCase.

5

3. (a) What is the significance of primary structure of protein?

(b) Describe in brief how β -pleated sheet structure gets stabilized.

1+4

Or

Elaborate the formation and functions of phosphoryl marker in the process of lysosomal protein targeting. What is I-cell disease?

(2+1)+2

4. "Prostaglandin biosynthesis has two control points" — explain it. 5

Or

Discuss in brief the role of growth hormone in metabolism. 5

Unit—02

1. How did the transformation experiments of Griffith differ from those of Avery and his associates? 5

Or

How is DNA organized in chromosomes? 5

2. Describe in brief the events that occur during the prokaryotic DNA replication. 5

Or

How does prokaryotic DNA replication differ from eukaryotic DNA replication? 5

3. What modification are effected in primary mRNA transcript? 5

Or

Describe the mechanism of eukaryotic transcription of mRNA. 5

4. (a) What do you mean by Wobble hypothesis ?
- (b) Name the different antibiotics in the protein biosynthesis.

$$2\frac{1}{2} + 2\frac{1}{2}$$

Or

Write the elongation and termination process of the polypeptide chain.

5
