

2021

BIOCHEMISTRY — GENERAL

Paper : DSE-B-2

(Molecular Basis of Non Infectious Human Diseases)

Full Marks : 50

The figures in the margin indicate full marks.

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

Group-A

1. Answer *any five* questions: 2×5
- (a) What is “refeeding syndrome”?
 - (b) What is cystic fibrosis?
 - (c) What deficiency causes night blindness?
 - (d) What is ALS?
 - (e) What are the symptoms of Vitamin K deficiency?
 - (f) Define tumor suppressor gene.
 - (g) What are the symptoms of Parkinson’s disease?
 - (h) What are tumor viruses?
 - (i) Describe metastasis in cancer.
 - (j) Mention the criteria of long QT syndrome.

Group-B

2. Answer *any two* questions:
- (a) What is Sickle Cell Anemia? What kind of mutation gives rise to this disease? How is the hemoglobin structure affected by this mutation? 2+1+2
 - (b) Mention briefly the characteristics of polycystic ovarian syndrome. What are the hormones that are dysregulated during polycystic ovarian syndrome? 2½+2½
 - (c) What are the symptoms of Alzheimer’s disease? How does the Alzheimer’s disease develop? How can it be treated? 2+2+1
 - (d) What is the molecular basis of neoplastic growth? What is metastasis? What is p53? 2+2+1

Please Turn Over

3. (a) What is Irritable Bowel Syndrome?
(b) Which foods trigger IBS?
(c) What is meant by the term “probiotics”?
(d) What is hypothyroidism? 2+2+3+3

or,

4. (a) What do you mean by multifactorial disease?
(b) Mention the characteristics of a cancer transformed cells.
(c) What is sarcoma?
(d) How is chemotherapy done? 2+3+2+3

5. (a) What are the general symptoms of Thalassemia?
(b) How can Thalassemia be treated?
(c) How can Thalassemia be diagnosed?
(d) What is PKU? 3+3+2+2

or,

6. (a) What is diabetes mellitus?
(b) What are the factors which controls this metabolic disorder?
(c) What are chaperones?
(d) What is ubiquitin? How does it affect protein degradation? 2+3+2+(1+2)

7. (a) What are the symptoms of Maple Syrup Urine Disease?
(b) What is acute anxiety?
(c) What is Schizophrenia?
(d) What is Achondroplasia? 3+3+2+2

or,

8. (a) How does the Vitamin K deficiency affect the newborns?
(b) What are the early symptoms of Vitamin C deficiency?
(c) How can Scurvy be treated?
(d) What is balanced diet? 3+3+2+2
-