UG/3rd Sem/MICRO(H)/T/19

2019

B.Sc.

3rd Semester Examination

MICROBIOLOGY (Honours)

Paper - C 6-T

(GENETICS)

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.

1. Answer any *five* questions : 2×5=10

   (a) Distinguish between gene and genome. 2

   (b) Define cell signalling mechanism. 2

   (c) What is programmed cell death ? 2

   (d) State the function of smooth ER. 2

   (e) State the role of Golgi complex in glycosylation of protein. 2

[Turn Over]

(f) What are euchromatin and heterochromatin ? 2

(g) Define the term metastasis. 2

2. Answer any *four* questions : 5×4=20

(a) Discuss the structure of plasma membrane given emphasis on type and nature of lipids. 2+3=5

(b) Write a short note on one gene one polypeptide hypothesis. 5

(c) Describe the structure of Nucleosome. 5

(d) Distinguish between Mitosis and Meiosis cell cycle. 2½+2½=5

(e) State the role of G-proteins in cell cycle. 5

(f) Discuss different control points in cell-cycle progression in yeast. 5

3. Answer any *one* question : 10×1=10

(a) (i) Write the components of electron transport chain in mitochondria.

(ii) What are the difference between the mode of electron transport in mitochondria and chloroplast. 6+4=10

(b) Write a brief notes on —

(i) Protein folding

(ii) MAP kinase pathway $5 \times 2 = 10$
