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

2019

B.Sc.

3rd Semester Examination

BIOTECHNOLOGY

(Honours)

Paper - C 5-T

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* from the following questions : 2×5=10

   (a) What is mixotroph? Give example. 2

   (b) Write down the importances of microbial taxonomy? 2

   (c) What is signature sequence for taxonomy? 2

   (d) What is numeral approaches to design the taxonomy? 2

[Turn Over]

(e) Define prototroph, Give example. 1+1

(f) Write the unique properties of virus. 2

(g) Differentiate between algae and fungi. 2

(h) Write down the properties of bacteria. 2

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

(a) What is pure culture? Classify the pure culture and define each type. Describe the pure culture technique by tube dilution method. 1+2+2

(b) Briefly describe the different methods of pure culture preservation. 5

(c) Write the direct cell number counting method to measure the bacterial growth. 5

(d) "TCA-cycle is named as amphibolic pathway"—explain. 5

(e) What is bacterial sporulation? Why do the endospores show high registance power than vegetative cell? 2+3

(f) Relate between growth rate and generation time. Differentiate between Hfr and F+cells. 3+2

3. Answer any *one* from the following : 10×1=10

(a) Briefly describe the mechanism of bacterial transformation. Mention the advantages of fermented food. Write the application of molds in food industry. 4+3+3

(b) What is MPN test? Write its significance. Write down the composition of sewage. Give some biochemical test to distinguish between typical and atypical coliform. (2+3)+(3+3)
