

Exam.Code:0907

Sub. Code: 6692

2021

B.E. (Bio-Technology) Third Semester

BIO-312 : Microbiology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Answer the following briefly:-

- a) Name any stock culture collection centre.
- b) How can you preserve fungal cultures?
- c) Define mol % G + C.
- d) Differentiate between lichens and mycorrhizae.
- e) Differentiate between flagella and pili.
- f) Give mode of action of any one chemical agent of sterilization.
- g) Name the goals of classification.
- h) What are frameshift mutations?
- i) What are cysts?
- j) How many ATP molecules are formed at the end of respiration? (10x1)

UNIT – I

- II. a) Explain abiogenesis. Write the contributions of various scientists who put an end to abiogenesis.
b) Give the structure of bacterial flagella. (5,5)
- III. a) Draw the bacterial growth curve and explain its various stages.
b) With the help of a labeled diagram explain structural components of a bacteriophage. (5,5)
- IV. Write about the significance and methods of controlling microbial growth. (10)

UNIT – II

- V. a) Define glycolysis in bacteria. Name all the pathways involved and detail one of them.
b) Explain transduction for transfer of genes among bacteria. (5,5)
- P.T.O.

(2)

- VI. a) Explain characterization of bacteria. Discuss the genetic basis of microbial classification.
- b) Draw the sulphur cycle giving role of microorganisms at various steps. (5,5)
- VII. Explain different types of mutations in detail. (10)

x-x-x