B.Sc. BIOTECHNOLOGY
SPECIAL EXAMINATION
Second Semester
MICROBIOLOGY-II
(BBT - 202)

Duration: 3Hrs. **Full Marks: 70**

Part-A (Objective) =20
Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins. **Marks: 50**

Answer any *four* from *Question no.* 2 to 8
***Question no.* 1 is compulsory.**

1. Explain with a neat diagram on the process of Hypersensitivity Type 1. (10)
2. Describe the process of specialized transduction with diagram. (10)
3. Explain Pentose phosphate pathway. (10)
4. Describe any one method of purification of virus. (10)
5. Describe the reproduction in rickettsiae with a neat diagram. (10)
6. Define mutation. Explain spontaneous mutation with a neat diagram. (10)
7. Define plasmid. Describe F'mode of reproduction in bacteria. (10)
8. Describe the production of citric acid. (10)

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REV-00
BBT/02/05 2016/11

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Duration: 20 minutes **Marks – 20**

(PART A - Objective Type)

I. Choose the correct answer: **1×10=10**

1. The U tube experiment was conducted by
   a) Lederberg &Tatum b) Barbara Mcclintok
   c) Bernard Davis d) Fred Griffith

2. The capsid of adenovirus is
   a) Helical b) Complex
   c) Icosahedral d) Enveloped

3. Production of SCP associated with renewable c-sources
   a) Methanol b) Cellulose waste
   c) Ethanol d) Whey

4. The primary microorganism contributing to the production of sauerkraut is
   a) Enterococcus faecalis b) Lactobacillus brevis
   c) Leuconostocmesenteroides d) Aspergillusniger

5. Systemic lupus erythematous is associated with
   a) Hypersensitivity type 1 b) Hypersensitivity type 11
   c) Hypersensitivity type 111 d) Hypersensitivity type 1V

6. Reticulate body is found in
   a) Rickettsia b) Mycoplasma
   c) Chlamydia d) Pasteurellaceae

7. The primary microorganism contributing to the production of sauerkraut is

   a) Enterococcus faecalis b) Lactobacillus brevis

   c) Leuconostocmesenteroides d) Aspergillusniger

8. The enzyme 2- keto 3 deoxy 6 Phosphogluconate is associated in which pathway

   a) Pentose Phosphate Pathway b) EntnerDoudorhoff pathway

   c) Kreb cycle d) Glyoxylate pathway

9. Mad cow disease is associated with

   a) Bacterial infection b) Abnormal conformation of protein folding

   c) Immunological disorder d) Viral infection

10. Thermophilic bacteria associated with bioleaching

   a) E.coli b) Pseudomonas

   c) Thiobacillusferroxidans d) Aspergilusniger

Fill in the blanks: **1×10=10**

1. A plasmid that can exist either independently of the host cell chromosome or be integrated into it is known as_____

2. ABO blood transfusion is associated with hypersensitivity type _____system.

3. The name of the transposable elements in bacteria is known as_____.

4. Production of acetone & butanol is an_____ process.

5. Accumulation of Cro gene give rise to _____cycle.

6. Tempeh production is associated with the fermented_____.

7. Linkage of pentose phosphate pathway to glycolysis is via enzyme _____.

8. The name of the transposable elements in bacteria is known as_____

9. The bacterial polysaccharide associated with the remediation of oil spillage is

_____.

10. The abnormality in _____ gene is associated with prions.

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