

B. SC . BIOTECHNOLOGY
SECOND SEMESTER
MICROBIOLOGY-II
BBT-202

Duration: 3 Hrs.

Marks: 70

{ Part : A (Objective) = 20 }
{ Part : B (Descriptive) = 50 }

Duration: 2 Hrs. 40 Mins.

Marks: 50

[PART-B : Descriptive]

[Answer question no. One (1) & any four (4) from the rest]

1. Explain with a neat diagram reproduction in bacteria based on specialized transduction 10
2. Define tautomerism? Explain the mode of spontaneous mutation with a neat diagram 2+8=10
3. Write five properties of drugs? Explain the mode of drug action by β lactam antibiotics 5+5=10
4. Describe the method of cultivation of virus in chick embryo with a neat diagram and purification based on density gradient centrifugation 5+5=10
5. Define mycosis? Explain with a neat diagram the reproduction in zygomycota 4+8=10
6. Describe the relationship between EMP pathway and ED pathway based on energy yield 10
7. Describe the mode of reproduction in Chlamydia with a neat diagram 10
8. Write a note on causative agent, symptoms and treatment of dengue 10

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Duration: 20 Mnts.

Marks: 20

[PART-A : Objective]

Choose the correct answer from the following:

1×20=20

1. Chlamydia is a
 a. Motile G+ve coccoid
 b. Motile G-ve coccoid
 c. Non-motile G+ve coccoid
 d. Nonmotile G-ve coccoid
2. Contagious bovine pleuropneumonia in cattle is caused by
 a. Chlamydia
 b. Virus
 c. Rickettsia
 d. Mycoplasma
3. Blactam antibiotics kill the bacteria by
 a. Binding to the B1,4 glycosidic bond
 b. Binding to the α1,4 glcosidic bond
 c. Binding to D alanine of the peptide linkage
 d. Binding to L alanine of the peptide linkage
4. Bacteria which are unable to synthesize their own nutrients are known as
 a. Prototroph
 b. Auxotroph
 c. Autotroph
 d. Heterotroph
5. Microorganism used in the production of citric acid
 a. Saccharomyces cerevisiae
 b. Zymononas mobilis
 c. Aspergillus niger
 d. Kluveromyces fragilis
6. Transfer of genetic material via bacteriophage is known as
 a. Transformation
 b. Conjugation
 c. Transduction
 d. None
7. Mad cow disease is associated with
a. Virusoids
b. Bacteria
c. Protozoa
d. Prions
8. Test used to determine the enterobactericeae family
a. Catalase test
b. IMVic Tese
c. Amylase
d. Caesin
9. Caesin is a
a. Glycoprotein
b. Protozoa
c. Phosphoprotein
d. Carbohydrate
10. Rhizopus stolonifer is an eg of which class of fungi
a. Ascomycota
b. Zygomycota
c. Basidiomycota
d. Deuteromycota
11. Most of the microorganism associated in soil are
a. Virus
b. Bacteria
c. Fungi
d. Actinomycetes
12. Enzymes responsible for the production of citic acid
a. Isocitrate dehydrogenase
b. Citrate synthase
c. Fumarase
d. Pyruvate carboxylase
13. Sulphanilamide is a type of
a. B lactam antibiotics
b. Base analogue
c. Inhibition of protein synthesis
d. Cell wall degradation
14. Most of the soil microbes follows which pathway
a. EMP pathway
b. Glyoxylate pathway
c. Entner Doudorhoph pathway
d. Hexose monophosphate

15. How many ATP is released during the production of TCA cycle

- a. 8 ATP
- b. 10 ATP
- c. 12 ATP
- d. 11 ATP

16. Which is the key enzymes involved in the production of glyoxylate pathway

- a. Citrate synthase
- b. Isocitrate dehydrogenase
- c. Isocitrate lyase
- d. Pyruvate dehydrogenase

17. During the cultivation of virus in chick embryo it produces a local tissue lesions known as

- a. Plaque
- b. Colony
- c. Pock
- d. None

18. Which of the following is a beta lactam antibiotics

- a. Sulfonilamide
- b. Quinolone
- c. Tetracycline
- d. Penicillin

19. Leprosy is caused by

- a. Bacillus subtilis
- b. Mycobacterium leprae
- c. Salmonella typhi
- d. E.coli

20. MPN test is done to detect

- a. Purity of milk
- b. Purity in water
- c. Microorganism in food sample
- d. None

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UNIVERSITY OF SCIENCE & TECHNOLOGY, MEGHALAYA



Question Paper CUM Answer Sheet

PART (A) : OBJECTIVE

Serial no. of the main Answer sheet

Course :

Semester : Roll No :

Enrollment No : Course code :

Course Title :

Session : 2016-17 Date :

Instructions / Guidelines

- > The paper contains twenty (20) / ten (10) questions.
- > The student shall write the answer in the box where it is provided.
- > The student shall not overwrite / erase any answer and no mark shall be given for such act.
- > Hand over the question paper cum answer sheet (Objective) within the allotted time (20 minutes / 10 minutes) to the invigilator.

| Full Marks | Marks Obtained | Remarks |
|------------|----------------|---------|
| 20 | | |

Scrutinizer's Signature

Examiner's Signature

Invigilator's Signature