

SEAT NO. _____

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SARDAR PATEL UNIVERSITY
B.Sc 5TH SEMESTER EXAMINATION 2020
28th DECEMBER, 2020

SUBJECT: MICROBIOLOGY US05CMIC23

2.00p.m. – 4.00p.m. VIROLOGY AND MYCOLOGY Total Marks: 70

Q-1 Attempt Multiple Choice Questions. (10Marks)

1. What is the function of a tail of the head-and-tail phage?
a) Stabilization of phage DNA b) Attachment of phage
c) Release of replicative enzymes d) Helps in motility

2. Circularization of the injected linear phage DNA molecule is facilitated by which of the following?
a) Polyhedral head b) Cos sites
c) Phage tail d) Capsid proteins

3. What is true about Fd phage?
a) It is filamentous phage b) Infects by attaching to the tip of the pilus
c) It is ssDNA phage d) All of above

4. Acetyl choline on neurons is receptors for
a) HIV b) Rabies virus
c) Herpes virus d) Polio virus

5. Which of the following is virus of protist which resembles tail containing bacteriophage?
a) virus of Uronemagigas b) mimivirus
c) virus of Paramecium busaria d) none of these

6. Fungi that grows on living bodies of other organisms is called _____

- a) parasitic
- b) saprophytic
- c) Heterotrophic
- d) None of these

7. Specialized structure haustorium is an example of which kind of hyphae?

- a) intracellular
- b) intercellular
- c) Extracellular
- d) None of these

8. The phenomenon of heterothallism in fungi was first observed in _____

- a) Mucor
- b) Aspergillus
- c) Rhizopus
- d) Penicillium

9. Which of the following is known as Valley fever?

- a) Coccidioidomycosis
- b) Microsporidiosis
- c) Blastomycosis
- d) Candidiasis

10. Fungi that trap and destroy nematodes are called as _____

- a) Parasitic
- b) Predacious
- c) saprophytic
- d) None of these

Q-2 A) Fill in the blanks (04Marks)

1. Bacteriophages MS2 and QB are _____ phages (RNA/ DNA)

2. Some insect viruses may form occlusion bodies comprising virions embedded within a matrix made up of..... (lipid/ protein)

3. The aseptate, multinucleated mycelium is known as _____ (Eucarpic/ coenocytic)

4. Toxin produced by *Aspergillus flavus* is called _____ (Aflatoxin/ Ergot toxin)

Q-2 B) Mention True / false

(04 Marks)

1. $\Phi 6$ of *Pseudomonas syringae* pathovar phaseolicola is an enveloped phage
2. Polyhedrosis viruses can also tolerate high pH values of midgut of insects.
3. Yeast is Unicellular and prokaryotic fungi.
4. A sexual hormone which attracts motile gametes is Sirenin

Q-3 Attempt any ten (10) questions in short. (20 Marks)

1. Viruses that infect bacteria were discovered independently by which two scientists?
2. Define: Burst size and latent period
3. What do you mean by temperate phage? Give example.
4. What is uncoating? How it is carried out?
5. What is CPE? What is syncytium.?
6. What are oncogenic viruses? Give examples.
7. What is dolipore septa? State its role
8. List asexual spores of fungi.
9. Differentiate between holocarpic and eucarpic fungi.
10. What are predacious fungi?
11. Name two mycotoxins and organism producing it.
12. What is trisporic acid? State its role in reproduction of fungi.

Q-4 Attempt any four

(8x4=32 Marks)

1. Explain attachment and penetration of T-even phages in their host.
2. Explain one step growth curve of Delbruck.
3. Write a note on: TMV
4. Write a note on: Cytopathic effects. (CPE)
5. Write a note on: Macro and Micro nutritional requirement of Fungi
6. Explain : sexual reproduction in fungi.
7. List secondary metabolites of fungi having industrial importance and explain any two.
8. List various air born fungal diseases and explain any one in detail.

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