V.P. & R.P.T.P. SCIENCE COLLEGE
B.Sc. EXAMINATION
MICROBIOLOGY: US05CMIC05
SATURDAY; 06.10.18
10.00 a.m. - 12.00 noon
Total Marks: 50

Q.1. Attempt the following multiple choice questions. (08)

1. In which example of fungi out of the following are pseudosclerotia formed?
   a) *Mucor mucedo*
   b) *Rhizopus stolonifer*
   c) *Polyporus basilapiloides*
   d) None of the above
2. Which of the following is used in baking and brewing industry?
   a) *Aspergillus flavus*
   b) *Pythium debaryanum*
   c) *Saccharomyces cerevisiae*
   d) *Aspergillus oryzae*
3. The causative agent of smallpox is
   a) Vaccinia virus
   b) Rhabdovirus
   c) Adenovirus
   d) none of the above
4. HIV infects lymphocytes bearing---------- receptors.
   a) C_4D_4
   b) D_4C_4
   c) CD_4
   d) CD_2
5. Thermoplasma resembles mycoplasmas by
   a) lacking a cell wall
   b) forming tiny fried egg colonies
   c) both (a) and (b)
   d) neither (a) nor (b)
6. Rickettsia can be cultured in the laboratory by using
   a) host animals
   b) embryonated chicken eggs
   c) tissue cell culture
   d) all of the above
7. Presence of ---------- in the atmosphere is inhibitory to lichens.
   a) Carbon monoxide
   b) sulphur di oxide
   c) carbon di oxide
   d) none of the above

PTO

8. A non obligatory association between two different species that is beneficial to to both population of organisms is
   a) Parasitic
   b) Predatory
   c) Protocooperative
   d) Symbiotic

Q.2. Attempt any five out of the following: (10)

1. List methods of asexual reproduction in fungi.
2. Name four fungi having importance in medical field.
3. Draw a labelled diagram of HIV.
4. Why is antiserum added during one step growth experiment?
5. In what environment would the following bacteria be expected to thrive?
   (i) Halobacterium (ii) Sulfolobus
6. How do Rickettsia differ from Chlamydia?
7. Define: (i) community (ii) autochthonous population
8. What does Photobacterium need to exhibit bioluminescence?

Q.3.Describe the role of fungi in the fields of industry and agriculture. (08)

OR

Q.3. Describe mycelial modifications in fungi. (08)

Q.4. Write notes on:

a) Doermanns premature lysis experiment (05)

b) Single burst experiment. (03)

OR

Q.4.(a)Write a note on viroids. (05)

(b) Draw a neat and labelled diagram of poxvirus and describe its morphology. (03)

Q.5.Write in detail about sulphur compound metabolizing bacteria. (08)

OR

Q.5. Write notes on Actinomycetes in detail. (08)

Q.6. Describe mutualism citing two examples. (08)

OR

Q.6. Write notes on commensalism. (08)