

Sardar Patel University

M.Sc. Integrated Biotechnology, Eighth Semester Examination

Tuesday, 19th March, 2019

02:00 p.m. to 05:00 p.m.

PS08CIGMB1: Medical Microbiology

Note:

1. Figures to the right indicate marks.
2. Draw neat and labeled diagram, wherever necessary.

Q.1

Attempt the followings

- i. *Entamoeba histolytica* was first described by _____ in 1859 and its pathogenic nature was established by Losch in 1875. [8]
 - a. Lambl
 - b. Loss
 - c. Mader
 - d. Virchow
- ii. Trophozoites of *E. histolytica* divide every ____ hours by binary fission.
 - a. 8
 - b. 10
 - c. 12
 - d. 14
- iii. What is the internal osmotic pressure against cytoplasmic membrane of Gram positive bacteria?
 - a. 10 atm
 - b. 15 atm
 - c. 20
 - d. 25
- iv. Killing of most resistant spores by dry heat requires a temperature of _____ for 2 hours.
 - a. 150°C
 - b. 160°C
 - c. 170°C
 - d. 180°C
- v. Which of the following antigen marker appears at the early stage of infection and is used for diagnosis of HIV?
 - a. p24
 - b. gp120
 - c. gp41
 - d. None
- vi. Infections in which viruses are able to infect cells but are not produced from them are known as _____.
 - a. resistant
 - b. abortive
 - c. permissive
 - d. none
- vii. *S. schenckii* is a dimorphic fungus which grows in nature at _____.
 - a. 10°C
 - b. 20°C
 - c. 30°C
 - d. 40°C
- viii. In coccidioidomycosis infection is caused due to
 - a. Thorn prick
 - b. trauma
 - c. skin penetration
 - d. inhalation of arthrospores.

Q.2

Give short answers of the following questions. (Attempt any seven): [14]

- i. Give scientific name of Sheep liver fluke.
- ii. What are the infective forms and mode of transmission of *Fasciola hepatica*?
- iii. Define Sterilization and Disinfection.
- iv. What is D value?
- v. Name the scientists credited with creation of polio vaccine in 1956.

- vi. Name the scientists who first described Epstein-Barr Virus in 1964.
- vii. What is full form of ICTV?
- viii. What disease is caused by *Malassezia furfur*?
- ix. What are dimorphic fungi? Give at least two examples.
- Q.3 A Discuss the distinguishing features of *Taenia saginata*. [6]
B Give morphological characteristics of *Entamoeba histolytica*. [6]
OR
B Explain the life cycle of *Ascaris lumbricoides* with the help of a suitable diagram. [6]
- Q.4 A Explain clinical features and method of diagnosis of diphtheria. [6]
B Write a note on MRSA. [6]
OR
B Discuss various virulence factors employed by *S. pyogenes*. [6]
- Q.5 A Explain classification of viruses given by Baltimore in 1970. [6]
B Explain the natural course of HCV infection with help of schematic diagram. [6]
OR
B Write a note on Varicella-Zoster Virus with special emphasis on laboratory diagnosis. [6]
- Q.6 A What is Dermatophytosis? How is it diagnosed in the laboratory? [6]
B Discuss pathogenesis, laboratory diagnosis and treatment of Sporotrichosis [6]
OR
B Write a note on Pityriasis versicolor. [6]

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