

Seat No. : _____

LF-109

April-2014

B.Sc. Sem.-VI

CC-309 : Microbiology

(Medical Microbiology)

Time : 3 Hours]

[Max. Marks : 70

- Instructions :** (1) Draw figures wherever necessary.
(2) Mention correct question number against each answer.
(3) Figures to the right indicate marks.

1. Answer the following : (Any **two**) **14**
- (A) Define the term host and parasite. What types of relationship may exist between the host and a parasite ?
- (B) Explain various factors necessary for the development of infection.
- (C) Microbes express their pathogenicity by means of their virulence. – Justify.
- (D) Discuss the role of the following in the defense of the host : skin, mucous membrane and leucocytes.
2. Answer the following : (Any **two**) **14**
- (A) Discuss with examples, the protective effect of the normal bacterial flora for their human host.
- (B) Describe giving examples, different portals of exit for a pathogen commonly associated to human and animal diseases.
- (C) Explain transmission and control of nosocomial infections.
- (D) Describe various techniques used to study epidemiology.
3. Answer the following : (Any **two**) **14**
- (A) Write a note on ‘Transmission and control of food borne infections’.
- (B) What is meant by contagious disease ? Describe symptoms and diagnosis of syphilis.
- (C) Illustrate the life cycle of malaria parasite and discuss the measures to control its transmission.
- (D) Describe the etiological agent, symptoms, transmission and control of anthrax.

4. Answer the following : (Any **two**) **14**
- (A) How do the pathological changes in blood or body fluids help the diagnosis of diseases ?
 - (B) Explain the role of serological reactions in clinical immunology.
 - (C) Describe various methods of collection, storage and transport of blood for the diagnosis of microbial infections.
 - (D) How does the microscopy help in the identification of a pathogen ? Explain giving examples.
5. Give short and specific answers in 1-2 lines only : **14**
- (A) Define 'quiescence latency'.
 - (B) Name the virulence factor which breaks down the cementing polysaccharide that glues the host cells together and helps in invasion.
 - (C) What is that condition known where the animal is reared in environment that has been rendered free of microorganisms ?
 - (D) What are reservoirs ?
 - (E) Name two essential qualities of epidemiological markers.
 - (F) If for a particular disease in a year, 12 individuals die out of 86 infected, among a population of 1000, calculate the mortality rate and the morbidity rate.
 - (G) Name the disease which was known by the name 'Black death'.
 - (H) Give two examples of the organisms responsible for food poisoning.
 - (I) What is transfer host ?
 - (J) Define 'CPE'.
 - (K) What would you call an antibody with the ability to neutralize a specific toxin ?
 - (L) Give one application of biosensor in clinical medicine.
 - (M) What is the importance of inclusion bodies ?
 - (N) Name a disease caused by Retrovirus.
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