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S. No. of Question Paper : 7118

Unique Paper Code : 32533933 HC

Name of the Paper : Microbial Diagnosis in Health Clinics

Name of the Course : B.Sc. (Hons.) Microbiology : SEC

Semester : III

Duration : 2 Hours

Maximum Marks : 50

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt *five* questions in all.

All questions carry equal marks.

I. Briefly explain the following with suitable examples (any *five*) :

5×2=10

(i) Clinical symptoms of a disease

(ii) Sensitivity of a diagnostic test

P.T.O.

(iii) Agglutination

(iv) Minimal Inhibitory Concentration (MIC)

(v) Meningitis

(vi) Wet mount.

(vii) Pyogenic infection.

2. (a) Discuss the principle of Widal test. 4

(b) Write principles of collection of clinical specimen from a patient. 4

(c) What is a paired sera sample, and what is its significance in diagnosis of an infectious disease? 2

3. Name any two important pathogens infecting the following sites in human body and mention suitable clinical specimens for diagnosis of each pathogen (any four): 4×2.5=10

Nervous system, Urinary tract, Upper respiratory tract, Skin and mucous membranes, Blood.

4. Comment on any two of the following.: 2×5=10

(a) Steps for conducting indirect ELISA.

(b) Nucleic acid based methods for diagnosis of infectious diseases.

(c) Any three staining procedures used in clinical microbiology labs and the target pathogen for each.

5. (a) Explain the procedure for collection of clinical specimen from the following sites (any three): 3×2=6

Lower respiratory tract, Blood, Female genital tract, Skin.

(b) Name a suitable medium for culturing, if following infections are suspected: 1×4=4

(i) Aspergillosis.

(ii) Bacterial dysentery,

(iii) Tuberculosis,

(iv) Streptococcal infection.

6. (a) What is the significance of testing antibiotic sensitivity in pathogenic bacteria ? 2
- (b) Why is *Haemophilus* named so and why is chocolate agar preferred over blood agar for its culturing ? 3
- (c) What is Thayer's Martin Medium and it is used to culture which organism ? 3
- (d) Why is a selective medium preferred over enriched medium for culturing stool sample ? 2