

**2008****M.Sc.****4th Semester Examination****BIO-MEDICAL LAB. SCIENCE & MANAGEMENT****PAPER—XIII (Unit - 26)***Full Marks : 40**Time : 2 Hours**The figures in the right-hand margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.**Illustrate the answers wherever necessary.***(Clinical Microbiology & Diagnostic Bacteriology)***Answer all questions.***Module — I**

1. Answer any *five* questions of the following : 5×1
- (a) What is the difference between the primary and secondary culture ?
  - (b) What do you mean by Endotoxin and Exotoxin ?
  - (c) Write the features of cell covering of Gram-positive bacteria.
  - (d) Write the use of DCA medium.
  - (e) What do you mean by Psychrophilic bacteria ?
  - (f) Write the application of HEPA filter.

*(Turn Over)*

- (g) Mention the names of the different culture techniques.
- (h) Name one each at thick walled cell, thin walled cell and wall less medically important bacteria.
2. (a) What is spore ?
- (b) Write the procedure of Ziehl-Neelsen staining.
- (c) What are the pathogenic and non-pathogenic spore bearing organisms ? 1+5+2

**Or**

- (a) What precautions to be taken during specimen collection and handling for the bacteriological examination ?
- (b) How you will proceed to take a throat swab for bacteriological examination ? (2+2)+4
3. (a) Write the composition and use of Mckonkey and Lownstein Jensen (LJ) medium.
- (b) Describe the procedure of DNAase and bile solubility test for bacterial identification.

(2+2)+(1½+1½)

**Or**

- (a) What should be the several approach for the diagnosis of a bacterial infection ?
- (b) Describe the bacteriologic method of culture of some body materials of the patient for the diagnosis of the infection. 2+5

**Module — II**

4. Answer any *five* questions of the following : 5×1
- (a) Name the pathogenic organisms commonly found in CSF and urine.
  - (b) Name the diagnostic test for pulmonary tuberculosis bacteria.
  - (c) Write the name of specific media for the detection of clostridium tetani.
  - (d) What is the cultural characteristics of vibrio cholerae ?
  - (e) What are the biochemical activity of E.Coli. ?
  - (f) Mention the identifying characters of Staphylococcus aureus.
  - (g) What is the Serological reaction of Treponema pallidum ?
  - (h) Write the application of Robertson's cooked meat media.
5. (a) Write the composition and staining procedure of Albert Stain.
- (b) What are the findings in a case of Diphtheria patient ? 5+3

**Or**

- (a) Write the morphology and cultural characteristics of Neisseria Gonorrhoeae.
- (b) How laboratory diagnosis can be made ?

(2+2)+4

6. (a) Briefly describe the mode of action of antimicrobial agents.
- (b) Describe the dilution and disc diffusion techniques in laboratory for the antimicrobial sensitivity testing.

2+5

Or

- (a) Write the morphology and cultural characteristics of Haemophilus Influenzae.
- (b) Write the staining property and biochemical activity of Haemophilus Influenzae.
- (c) What pathogenesis are produced by Haemophilus Influenzae ?

$$(1\frac{1}{2}+1\frac{1}{2})+(1\frac{1}{2}+1\frac{1}{2})+1$$

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