



- 2 Write short notes on any three of the following : 12
- (a) Biowaste management
  - (b) Microscopic observation of clinical samples.
  - (c) Corynebacteria
  - (d) Collection and processing of sputum sample.

## SECTION - II

- 1 (a) What is the significance of gram negative cocci? 14  
Describe the culturing techniques used for their diagnosis.

OR

- (a) How will you differentiate *Proteus*, *Providencia* and *Morganella* in relation to their clinical significance and characteristics?
- (b) Name the obligate intracellular bacteria. Describe the culturing techniques used for their diagnosis in bacteriological laboratories.

OR

- (b) Describe the Fish and PCR techniques used for the diagnosis.
- 2 Write short notes on any three of the following : 12
- (a) *M. leprae* and MIC complex.
  - (b) Laboratory management of Bio-terrorism
  - (c) *Borrelia*
  - (d) Biolog for identification of Human Pathogen.