

17544

21819

2 Hours / 50 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. (A) Attempt any THREE :

12

- (a) State Beer & Lambert's Law. List any four analytical instruments based on Beer & Lambert's Law.
- (b) Define the term sterilization. List any two sterilizing instruments.
- (c) Which instrument is used to measure / identify dissolved gases present in Blood ? Draw its block diagram.
- (d) State the different types of electronic microscope. Also, write their application.

(B) Attempt any ONE :

6

- (a) Draw constructional diagram of SEM and explain it in detail.
- (b) Identify the sterilising equipment for the following & draw their constructional diagram :
 - (i) For sterilizing various powders.
 - (ii) To disposal of Biomedical waste.

2. Attempt any FOUR :**16**

- (a) Define the term chromatography. Also, give its classification.
- (b) List any four technical specifications of Blood gas analyser.
- (c) Define the term centrifuge. Also, state its working principle.
- (d) Draw neat diagram of colorimeter and explain it.
- (e) Draw neat diagram of measurement of pO_2 in blood. With neat diagram explain the measurement of pO_2 in blood.
- (f) Draw neat diagram of gas chromatography and explain it.

3. Attempt any FOUR :**16**

- (a) Describe the working of ultrasonic cleaner.
 - (b) Draw constructional diagram of analytical ultracentrifuge & explain it.
 - (c) Define the term electrophoresis. Draw neat diagram of capillary electrophoresis and explain its working.
 - (d) Draw neat diagram of flame photometer and explain it.
 - (e) List any four technical specifications of spectrophotometer.
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