



17544

16117

2 Hours / 50 Marks

Seat No.

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- Instructions :**
- (1) All questions are **compulsory**.
 - (2) Illustrate your answers with neat sketches **wherever** necessary.
 - (3) Mobile Phone, Pager and any other Electronic Communication devices are **not** permissible in Examination Hall.

Marks

1. A) Attempt **any three** : **12**
- 1) State Beer and Lambert Law. List any four analytical instruments based on Beer and Lambert Law.
 - 2) With neat labelled diagram explain the working of autoclave.
 - 3) Draw neat diagram for computing TCO₂ using blood analyzer.
 - 4) State the types of electronic microscope also list its different parts.
- B) Attempt **any one** : **6**
- 1) With neat labelled diagram explain construction and working of transmission Electron Microscope.
 - 2) What is sterilization ? Name the analytical equipments that are used for following applications and give reason.
 - i) For disposal of Biomedical Waste.
 - ii) For separation of Blood Content like Plasma, WBC, RBC etc.
 - iii) For removing microduct, clots and blood stain on the instrument.
2. Attempt **any four** : **16**
- 1) With neat labelled diagram, explain working of capillary electrophoresis.
 - 2) With neat labelled diagram explain working principle of dark field blood cell counter.
 - 3) Describe the working of single beam spectrophotometer with neat diagram.
 - 4) Write technical specification of blood gas analyzer and blood cell counter.
 - 5) Draw block diagram of gas chromatography and explain its working.
3. Attempt **any four** : **16**
- 1) Describe the working of flame photometry with neat diagram.
 - 2) Explain the working of hot air oven with neat diagram.
 - 3) Explain liquid chromatography with neat diagram.
 - 4) Draw and explain block diagram of analytical instrument.
 - 5) With neat diagram explain construction of auto analyzer.