

Con. 2610-08.

(REVISED COURSE)

(3 Hours)

CO-2539

[Total Marks : 100

- N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) **Figures** to the **right** indicate **full** marks.
(4) Assume **suitable** data whenever **necessary**.
(5) Draw sketches/diagram whenever **necessary**.
(6) Use **legible** hand writing use **blue/black ink**.

1. (a) What you mean by pH ? Explain measurement of pH with electrode. How this system calibrated ? 10
(b) Explain principle of pulse oxymetry technique and explain instrument with neat diagram. 10
2. (a) What is cardiac output ? What are the methods used to measure cardiac output, explain one of method. 10
(b) Explain block diagram of spectrophotometer and mention its application. 10
3. (a) Describe ultrasonic blood flow (doppler) method for blood flow measurement through artery along with governing Doppler equation. 10
(b) Explain with a neat block diagram of anaesthesia machine. 10
4. (a) What is blood cell counter ? Explain with neat diagram. 10
(b) Describe how would you measure PCO_2 and PO_2 in the laboratory. 10
5. (a) State four major measurement of pulmonary function, what are the factors which controls the rate and depth of respiration. 10
(b) What is audiometer ? Describe it with the help of block diagram. 10
6. (a) Explain Auto analyser system with the help of neat diagram and explain function of each block. 10
(b) What is flame photometry ? Give its applications. 10
7. Write short notes on (any four) :- 20
(a) Electrophoresis and its use
(b) ELISA reader
(c) Electrolyte Analyser and its use
(d) Chromatography
(e) Florescence microscope.
