

Register No.:

664

April 2024

Time - Three hours
(Maximum Marks: 100)

- [N.B.** 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART - A

1. What is comparator?
2. List the advantages of electrical comparator.
3. What is doppler effect?
4. Write notes on accelerometer.
5. Define force. Mention its unit.
6. Define torque. Mention its unit.
7. Mention the ranges of pH scale.
8. What is gas analyser?
9. Define chromatography.
10. What is Beer's Law?

[Turn over.....

PART - B

11. (a) Explain the construction and working of dial gauge with a neat sketch. Also list its advantages.
(Or)
- (b) Explain the construction and working of pneumatic comparator with a neat sketch. Also mention its advantages.
12. (a) Describe the principle, construction and working of eddy current tachometer with neat diagram.
(Or)
- (b) Explain the construction and working of piezo-electric accelerometer with a neat diagram. Also mention its advantages.
13. (a) (i) Describe the principle, construction and working of strain gauge load cell with necessary diagrams. (10)
(ii) Describe force measurement. (4)
(Or)
- (b) Describe the principle, construction and working of eddy current dynamometer with a neat diagram.
14. (a) Describe the construction and operation of hydrogen electrode with a neat diagram. Also list its limitations.
(Or)
- (b) Explain the construction and operation of paramagnetic oxygen analyser with necessary diagrams.
15. (a) Explain the construction and operation of liquid chromatography with necessary diagrams.
(Or)
- (b) Explain the construction and working of TCD and ECD with necessary diagrams.
