765

Register No.:

January 2022

Time: Three hours

(Maximum Marks: 100)

[N.B: (1) Answer all question in PART-A
(2) Answer division (A) or (B) of each question in PART-B
(3) Each question carries 3 marks in PART-A and 14 marks in PART-B]

PART-A

1. What is precision and accuracy?
2. What is error and classifications of error?
3. What are the linear and angular measuring instruments?
4. What are the merits and demerits of Electrical comparator?
5. Define: Backlash in gears.
6. Explain the terms (i) Module (ii) Pitch Circle (iii) Working depth.
7. What is interferometer and types of interferometer?
8. What are the factors affecting CMM?
9. What is direct and indirect measurement? State it types.
10. State the advantages and disadvantages of Rotometer.

PART-B

11. (a) (i) Explain briefly about the objectives of engineering metrology.

(ii) What are classifications of standards? Compare the line and end standards.

(Or)

(b) (i) Explain the classification of measurements.

(ii) Explain the purpose of inspection.

12. (a) (i) Explain the micrometer with neat Sketch

(ii) What are the types of Sine bar? Explain its uses and limitations.

(Or)

(b) (i) With the help of a neat sketch explain Angle dekkor.

(ii) Compare electrical comparator with mechanical comparator.

13. (a) (i) Sketch and explain how the effective diameter of external thread is measured by the following methods (i) One wire (ii) Three wire.

(ii) Explain Tool Maker's microscope with a neat sketch.

(Or)

(b) (i) Describe the Parkinson's gear tester with a neat sketch.

(ii) Sketch and explain how Taly Surfmetre is used to measure roughness.

14. (a) (i) Explain with a neat Sketch about Laser telemetric System.

(ii) Explain briefly the Twyman-Green Interferometer with a neat Sketch.

(Or)

(b) (i) What is CMM? Explain the types of CMM.

(ii) With a neat Sketch explain the Trigger type probe system.

15. (a) (i) Explain the working of hydraulic load cell with a neat Sketch.

(ii) Explain Stroboscope tachometer with a neat sketch.

(Or)

(b) (i) Explain the rope brake dynamometer.

(ii) Sketch and explain the Electromagnetic Flow meter.
