Question Paper Code: 40831

B.E./B.Tech DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Fifth Semester

Mechanical Engineering

ME 8501 – METROLOGY AND MEASUREMENTS

(Regulations 2017)

Time: Three hours

Maximum: 100 marks

Answer ALL questions.

PART A —
$$(10 \times 2 = 20 \text{ marks})$$

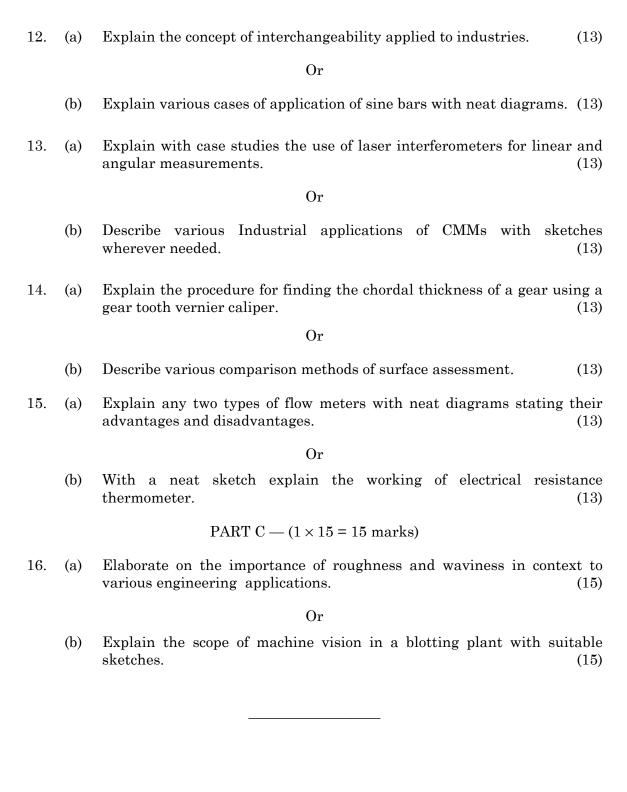
- 1. How does 'person' as a factor influence the results of a measurement?
- 2. Discuss the basis of selecting a standard for a particular type of measurement?
- 3. Write short notes on 'Ring guages'.
- 4. What is selective assembly?
- 5. What is the advantage of using polarized beam splitter over ordinary glass based beam splitter?
- 6. Mention about the uses of various types of probes used in CMMs.
- 7. List out the difficulties witnessed in the measurement of flatness of a surface.
- 8. Brief on the effect of stylus and skid in measurement of surface roughness.
- 9. What are the uses of a force transducer?
- 10. Define 'Reliability'.

PART B —
$$(5 \times 13 = 65 \text{ marks})$$

11. (a) Briefly explain the elements of a measurement system. (13)

Or

(b) Explain various types of errors that occur in engineering measurements. (13)



40831