

S.B. Roll. No.....

METROLOGY AND INSTRUMENTATION
3rd Exam/Mech./4653/Jun'2022
(For 2018 Batch Onwards)

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. Give answer in one line.

15x1=15

- a. What is metrology?
- b. Define Roundness.
- c. What is the full form of C.L.A. method?
- d. Name any two methods used to measure External Diameter of thread.
- e. Define line standard.
- f. Give the names of various instruments used for angular measurement.
- g. Give the name of any two types of callipers.
- h. Define error.
- i. Expand B.I.S.
- j. Define primary texture (Roughness).
- k. Define interchangeability.
- l. What is the full form of R.M.S. method?
- m. Give two uses of feller gauge.
- n. What is load cell?
- o. Expand L.V.D.T.

SECTION-B

Q2. Attempt any six questions.

6x5=30

- i. What is the difference between Precision and Accuracy?
- ii. Give the advantages and disadvantages of pneumatic comparators.
- iii. What are the main Characteristics of Comparator?
- iv. Explain briefly the use of stroboscope.
- v. What are the limitations of sine bar in angular measurement?
- vi. What are the uses of strain gauge?
- vii. Discuss factors affecting surface finish.
- viii. Describe the uses of slip gauges.

SECTION-C

Q3. Attempt any three questions.

3x10=30

- a. Explain the construction and working principle of Micrometer with Diagram.
- b. Explain briefly profile projector.
- c. Give the working principle of autocollimator with sketch.
- d. Explain briefly controllable errors.
- e. Give the Terminology of surfaces roughness.