CBCS SCHEME

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Third Semester B.E. Degree Examination, Feb./Mar. 2022
Mechanical Measurement and Metrology

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. Define : i) Accuracy ii) Precision iii)Sensitivity
iv) Hysteresis v) Repeatability. **(10 Marks)**
b. Classify errors, explain any two errors with neat diagram (if required). **(10 Marks)**

OR

2 a. Explain : i) Linearity ii) Time delay iii) Threshold
iv) Loading effect v) Calibration. **(10 Marks)**
b. Write the comparison between Line standard and End standard. **(10 Marks)**

Module-2

3 a. With a neat diagram explain Solex comparator. **(10 Marks)**
b. With a neat diagram explain Sigma comparator. **(10 Marks)**

OR

4 a. With a neat diagram explain the principle, construction and working of sine bar. **(10 Marks)**
b. With a neat diagram explain Clinometer. **(10 Marks)**

Module-3

5 a. Name different mechanical transducer and with a neat diagram explain any one. **(10 Marks)**
b. With a neat diagram explain Piezo-Electric transducer. **(10 Marks)**

OR

6 a. With a neat diagram explain Cathode–Ray oscilloscope. **(10 Marks)**
b. With a neat diagram explain xy plotter. **(10 Marks)**

Module-4

7 a. With a neat sketch explain analytical balance. **(10 Marks)**
b. With a neat sketch explain Prony brake dynamometer. **(10 Marks)**

OR

8 a. With a neat diagram explain eddy current dynamometer. **(10 Marks)**
b. Explain preparation and mounting of stain gauge. **(10 Marks)**

Module-5

9 a. Name the types of fits and explain them. **(10 Marks)**
b. Name the different ways in which the mating parts can be assembled together and explain any two types. **(10 Marks)**

OR

10 a. With a neat diagram explain McLeod gauge. **(10 Marks)**
b. With a neat diagram explain optical pyrometer. **(10 Marks)**

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