

### SECTION-B

**Note:** Short answer type questions. Attempt any Six questions out of eight questions. (6x5=30)

- Q.11 Explain the meaning and scope of metrology in field of engineering.
- Q.12 Explain the principles of mechanical measuring instrument and optical instruments.
- Q.13 What is the importance of balancing and graduation of measuring instruments? Explain
- Q.14 Explain the geometrical characteristics of surface roughness.
- Q.15 What are the various factors affecting surface finish?
- Q.16 Explain the working of techno meters.
- Q.17 Describe the working of tolerod.
- Q.18 Write a short note on maintenance of measuring instruments.

### SECTION-C

**Note:** Long answer questions. Attempt any one question out of two questions. (1x10=10)

- Q.19 Explain in detail the different sources of errors in the measuring instruments.
- Q.20 Describe viscometer. Explain the construction and working of a viscometer.

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**Dvoc - Level -5**

**1st Sem / Production Tech.**

**Subject : Metrology and Measuring Instruments**

Time : 2 Hrs.

M.M. : 50

### SECTION-A

**Note:** Very short questions. Attempt all ten questions. (10x1=10)

- Q.1 Define limits.
- Q.2 Define accuracy.
- Q.3 Write use of Autocollimator.
- Q.4 Describe dial indicator.
- Q.5 Write full form of CLS
- Q.6 Write a method of measuring surface roughness
- Q.7 Write use of rheo viscometer.
- Q.8 Define thermocouple
- Q.9 Define flatness
- Q.10 Write the use of tolerod

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