

2101195

BACHELOR OF VOCATION
Tool and Die Manufacturing
Subject: Measurement and Metrology
Subject Code: BBME-106
Semester: Third
January 2021
Theory (External): 35 Marks
Time: 03 Hours

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

Roll Number											

SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)
(10x1=10 Marks)

- A. Define units of measurement.
- B. Define sources of error with examples.
- C. Define the concept of angle gauges related to manufacturing industries.
- D. Discuss the applications of dial indicator in manufacturing industries.
- E. Discuss the function of spirit levels along with applications.
- F. Differentiate between cylindricity and parallelism with suitable industrial applications.
- G. Differentiate between Force, weight and Pressure with examples.
- H. Define the concept of Comparators with neat diagram.
- I. Define the concept of Interchangeability with example.
- J. Differentiate between straightness and flatness with neat diagram.

SECTION –B (ESSAY TYPE QUESTIONS)
(5x5=25 Marks)

1. Explain the methods of Measurement with suitable examples and Industrial applications.
2. Define Metrology and describe the statistical concepts in metrology with suitable examples.
3. Explain the construction, working and principle of Bevel protractor with neat and clean diagram along with industrial applications.
4. Define Calibration and explain the method to calibrate slip gauges with suitable example.
5. Describe screw thread terminology with neat diagram.
6. Define the function of Gear and describe the types of gears with neat diagram along with Industrial applications.
7. Define tolerances and explain the different types of tolerances with neat diagram and Industrial applications.
8. Discuss the function of limit gauges and explain the steps required for design of limit gauges with examples.

==END OF PAPER==