

Institute of Engineering and Technology (IET-DAVV) Indore

II BE (Regular & PTDC) (Mechanical Engineering)

Manufacturing Processes Assignment Apr-May 2019

Last Date of Submission: 20th May 2019

Total Number of questions: 10

Note: **Attempt all questions.** Answers should be brief and neatly written in your own handwriting & supplemented by diagrams/sketches/figures wherever required.

1. Define a machine tool. Write the basic functions of a machine tool. Classify the various types of machine tools and also write their applicability.
 2. Write the specifications of the following machine tools: (i) Centre lathe (ii) Shaper (iii) Radial Drilling machine (iv) Universal Milling machine (v) Turret lathe.
 3. Explain the characteristics and applications of the following tool materials: (i) High Speed Steel (ii) Sintered Tungsten Carbide (iii) Stellite (iv) Ceramic Tools (v) Cubic Boron Nitride
 4. Describe with the help of a suitable diagram the kinematic system of a turret lathe and explain how different cutting speeds and feed and indexing motions are obtained.
 5. Explain how the length and position of stroke is adjusted in a standard shaper. Explain the work holding devices used in a shaper.
 6. Explain the constructional features of a universal milling machine. Also explain the various cutter holding devices used in a milling machine. What is a universal milling attachment?
 7. Explain the construction and working of an upright drilling machine. Explain the spindle drive mechanism of a drilling machine.
 8. Explain the following processes: (i) Thread grinding (ii) Roll Grinding (iii) Cam and Camshaft grinding (iv) Honing
 9. Explain with the help of suitable diagrams two gear forming and two gear generation processes.
 10. Explain different types of broaches and their applications. Discuss about the material and construction of a Broach.
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