

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

**Summer Examination 2020 (Backlog)
HVPM's College of Engineering and Technology, Amravati
Department of Mechanical Engineering
Bachelor of Engineering Semester – IV**

Subject : Manufacturing Processes-II

Code : 4ME04

Instructions :

1. Solve any two questions

2. All questions carry equal marks

Total Marks :20

Q1.

- a) Define Tool life. State the variables affecting tool life (02)
- b) State Difference between Orthogonal cutting & Oblique cutting (02)
- c) Explain Working Principle of Radial drilling machine (02)
- d) State Various types of Milling Cutters (02)
- e) State the various types of Grinders (01)
- f) Define Abrasive Jet Machining (01)

Q2.

- a) Explain the types of Chip formation (01)
- b) Explain the Function of Headstock (01)
- c) Explain 1)drilling 2) boring 3) Reaming (02)
- d) Explain Differential Indexing (02)
- e) Define Centerless grinder (02)
- f) Define : Laser Beam machining (02)

Q3.

- a) Define Tool Wear (02)
- b) State any two Difference between Capstan & Turret Lathe (02)
- c) Explain Various angles in Twist drill geometry (01)
- d) what are the various Gear generating Process (01)
- e) State the working principle of Shaper Machine (02)
- f) Define Ultrasonic Machining (02)

Q4.

- a) In Orthogonal Turning operation on lathe the following Data were obtained: Cutting force=120 kg , Feed force=30 kg, back rake angle=15° , Feed rate =0.2 mm/rev. ,Chip thickness= 0.3 mm ,Cutting speed=100 m/min, workpiece diameter =120 mm , Depth of Cut =0.4 mm. Calculate Chip thickness ratio (02)
- b) Explain i) Three Jaw Chuck ii) Four Jaw Chuck (02)
- c) What do you mean by Broaching (02)
- d) What do you mean by dividing head (02)
- e) State any 2 differences between Shaper & Planer Machine (01)
- f) Define Electro Chemical Machining (01)