

P P SAVANI UNIVERSITY

Fourth Semester of B. Tech. Examination

May 2022

SEME2050 Forming and Machining Process

20.05.2022, Friday

Time: 09:00 a.m. To 11:30 a.m.

Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in same answer sheet.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION - I

- Q - 1** Define: [05]
- (i) Hot working
 - (ii) Cold working
 - (iii) Forging
 - (iv) Drawing
 - (v) Alligator crack
 - (vi) Extrusion
 - (vii) Punching
- Q - 2 (a)** What are the difference between hot rolling operation and cold rolling operation? [05]
- Q - 2 (b)** What are the defects in rolling operation? How rolling defects are reduced? [05]
- Q - 2 (a)** Write down the classification of forging process. Explain the forging process for any method? [05]
- Q - 2 (b)** What are the defects of forging? How forging defects can be reduced? [05]
- Q - 4** Explain the metal deforming process in rolling and forging operation. How rolling process is different from forging process? [05]

SECTION - II

- Q - 1** Answer the Following: (MCQ/Short Question/Fill in the Blanks) [05]
- (i) List the various metal removal processes
 - (ii) Cutting speed
 - (iii) Depth of cut
 - (iv) tool wear
 - (v) Feed
 - (vi) Apron in Lathe machine
 - (vii) Types of mandrel
- Q - 2 (a)** Draw an Schematic diagram of Lathe Machine also mention its parts name [05]
- Q - 2 (b)** Write down the principle of Broaching Machine with the help of neat sketch. [05]

OR

- Q - 2 (a) Write down the difference between Conventional lathe machine and Capstan & Turret Lathe machine. [05]
- Q - 2 (b) Explain JIG/Precision Boring Machine with the help of neat sketch. Also write the important part and application of JIG/Precision boring Machine. [05]
- Q - 3 (a) Draw neat sketch of hydraulic shaper mechanism and explain its working. [05]
- Q - 3 (b) Explain Radial Drilling Machine with help of neat sketch. [05]

OR

- Q - 3 (a) Explain Feed Mechanism used in shaper machine with the help of diagram. [05]
- Q - 3 (b) Explain principal parts of standard planner with neat sketch. [05]
- Q - 4 Attempt any one [05]
- (i) Explain column and knee type milling machine with the help of neat sketch. Also write down its various principal parts.
- (ii) Explain direct indexing system and Plain indexing of milling machine.
