

BACHELOR OF VOCATION
Tool and Die Manufacturing
Subject: Dies and Moulds
Subject Code: CBME-301
Semester: Fifth
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 Which of the following material is not made by injection molding?
- a) Nuts
 - b) Tubes
 - c) Car handles
 - d) Electrical fittings
- B Compression moulding is the ideal method of processing.....
- a) Plastics
 - b) Thermo-setting plastics
 - c) Thermoplastics
 - d) Non-ferrous materials
- C Compound dies performs
- a) two or more operations at one station in one stroke
 - b) two or more operations at different stations in one stroke
 - c) only one operation and that too at one work station
 - d) two operations at two different work stations in the same stroke
- D If the degree of drawing is 0.5 and the initial area is 100mm^2 then the final area in mm^2 is equal to?
- a) 50
 - b) 60
 - c) 40
 - d) 30
- E Which of the following methods of manufacturing is used for the production of appliances like the fridge and vacuum cleaner?
- a) Forging
 - b) Deep drawing
 - c) Sheet metal forming and cutting
 - d) Rolling
- F Transfer dies are same as progressive dies in which piercing and blanking operations are performed. Give answer with explanation.
- a) True
 - b) False

- G Which of the following types of force is predominant in the sheet metal forming processes?
- a) Shearing force
 - b) Compressive force
 - c) Tensile force
 - d) Indirect compressive force
- H In blanking operation, the clearance is provided on.....
- a) Die
 - b) Punch
 - c) Half on die and half on punch
 - d) May be provided on any member
- I Which among the following causes first order surface irregularity?
- a) Lack of straightness
 - b) Lack of rigidity
 - c) Feed and speed
 - d) Vibrations
- J Which of the following parts is used for holding the metal sheet during blanking operation?
- a) Spherical steel ball
 - b) Roller
 - c) Pressure pad
 - d) Magnet

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

- Q1 Differentiate between coining and embossing. Also write the applications (at least two) of each process.
- Q2 How annealing is related to cold working. What is effect of hot working on mechanical properties of metals?
- Q3 Define extrusion ratio and give its common values for various metal. List the advantages and disadvantages of extrusion process.
- Q4 Sketch the various method of holding punches.
- Q5 Differentiate between compound die and combination die with neat sketch.
- Q6 What is the function of providing straight and angular clearance in the die block?
- Q7 What is the difference between a Profilometer and a Profilograph? Explain the importance of surface finish.
- Q8 How the feeding system can be classified? List out the advantages of feeding systems.

*******END OF THE PAPER*******

