

210107

BACHELOR OF VOCATION
Automotive Manufacturing
Automotive Mechatronics
Subject: Manufacturing Technology
Subject Code: BBME-101
Semester: First
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

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

- A The indexing of the turret in a single spindle automatic lathe is done using..... mechanism
- (a) Geneva
 - (b) Ratchet and Pawl mechanism
 - (c) Rack and Pinion
 - (d) Whitworth mechanism
- B Crater wear is predominant in
- (a) Carbon steels tools
 - (b) High speed steel tools
 - (c) Tungsten carbide tools
 - (d) ceramic tools
- C A pattern carries which allowance for internal and external surfaces?
- (a) Shrinkage allowance
 - (b) Machining allowance
 - (c) Distortion allowance
 - (d) Draft allowance
- D Hardness of green sand mould increases with
- (a) Increases in moisture content beyond 6%
 - (b) Increase in both moisture content and permeability
 - (c) decrease in permeability
 - (d) Increase in permeability
- E Dry and compressed air is used as cutting fluid for machining:
- (a) steel
 - (b) aluminium
 - (c) Cast iron
 - (d) brass
- F Size of a shaper is given by
- (a) Stroke length
 - (b) table size
 - (c) Weight of the machine
 - (d) all of these



- G** In a plain milling machine, the table can be moved:
- (a) Longitudinally
 - (b) Crosswise
 - (c) vertically
 - (d) All of the above
- H** In one setting of rolls in a 3-high rolling mill, one gets
- (a) One reduction in thickness
 - (b) One reduction in thickness
 - (c) One reduction in thickness
 - (d) Two or three reduction in thickness depending upon setting
- I** In brazing process the liquid metal fills the gap by which one of the following means
- (a) Capillary infiltration
 - (b) gravity infiltration
 - (c) Pressure infiltration
 - (d) vacuum infiltration
- J** In 3-2-1 principle of fixture design, 3 refers to number of:
- (a) Setups possible
 - (b) clamps required
 - (c) Positions on primary face
 - (d.) locating positions

SECTION -B (ESSAY TYPE QUESTIONS)

(5x5=25 Marks)

- Q1 Define and represent the various angles in different views of single point cutting tool.
- Q2 Define the term tool life and also explain various types of tool wear with a neat sketch.
- Q3 Distinguish between welding, soldering and brazing processes.
- Q4 Define the term extrusion. Explain its types with a neat sketch and also write down its advantages and drawbacks.
- Q5 Explain the working principle of milling machine with a neat diagram. Also differentiate between shaper and planer machine?
- Q6 Write the requirements of a good pattern. Also discuss various types of pattern with a neat sketch.
- Q7 List the various tool materials used in industry. State the advantages and disadvantages of each material.
- Q8 Write short notes on:
(a) Welding defects, its causes and remedies
(b) Super finishing operations

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