

DURATION: 2 HOURS

MARKS: 60

(11)

Instructions:

1. Question No 1 is Compulsory.
2. Attempt any 3 out of remaining 5 Questions.
3. Each Question carry 15 Marks

Q.NO Attempt any five

Q.NO	Attempt any five	Mark	BL	CO
1	a) State the role of Mechanical Engineer in the field of Automobile sector.	3	R	1
	b) State the different sources of Energy.	3	R	2
	c) Show with a diagram the arrangement of driver and driven pulleys, Tension side, Slack side in a simple belt drive.	3	R	3
	d) State the names of various components of Refrigeration system.	3	U	4
	e) Draw a neat sketch of hybrid Electric Vehicle showing names of different components	3	R	5
	f) Write a note on Automation.	3	U	6
2	a) Define Force, Pressure, Work, Power with unit of each.	4	U	1
	b) Differentiate between Microscopic and Macroscopic approach of thermodynamics.	4	U	2
	c) Explain working of four stroke Reciprocating I C engine with a neat sketch.	7	U	2
3	a) Draw T S diagram of Otto, Diesel and Dual Cycle.	4	U	2
	a) State the function of Gear drive and belt drive.	4	R	3
	b) Explain working of power transmission system	7	U	3
4	a) State the function of Differential, Propeller shaft, Clutch and axle.	4	R	5
	b) Write a note on wheel and tyre.	4	U	5
	a) Discuss on any one Indian Electric Vehicle.	7	U	5
5	a) Discuss role of robotics in Mechanical Engineering.	4	R	6
	b) Write a note on Autonomous vehicle.	4	R	6
	c) Explain working of household refrigeration system.	7	U	4
6	a) Define air conditioning process and State the properties of moist air.	4	R	4
	b) Differentiate between Petrol engine and diesel engine	4	U	2
	c) Discuss PHEV and EREV	7	U	3

BL - BLOOMS LEVEL - R - REMEMBER, U - UNDERSTAND
CO - COURSE OUTCOM

Duration 3hrs.

Marks 60

- NB
- 1) Question No. 1 is compulsory
 - 2) Attempt any three questions out of the remaining five questions.
 - 3) Figures to the right indicate full marks.
 - 4) Assume suitable data wherever required, but justify the same.

Q1. Attempt any ONE

(15)

- A. Figure 1 shows an isometric view of a block. Draw the following:
- a) Sectional front view (F.V.) looking along arrow Y (Section B-B)
 - b) Right-hand side view (R.H.S.V)
 - c) Top View (T.V)

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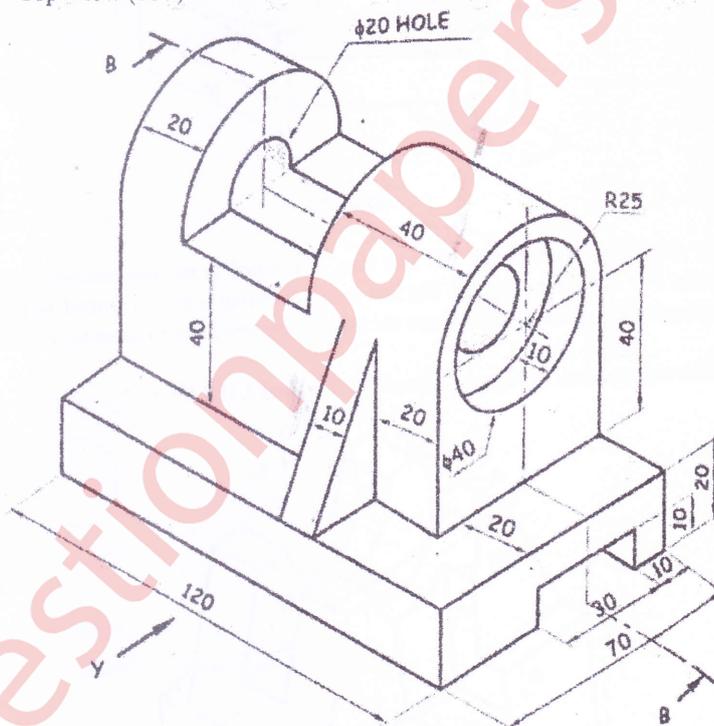


Figure 1

OR

- B. Figure 2 shows an isometric view of a block. Draw the following:
- a) Sectional front view (F.V.) looking along Section A-A
 - b) Left-hand side view (L.H.S.V)
 - c) Top View (T.V)

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