



# CAMBRIDGE INSTITUTE OF TECHNOLOGY

K.R. PURAM, BENGALURU-560036

## Department of Mechanical Engineering

Program: B.E. ■

M.Tech. □

Specialization:

### Second Internal Assessment - Even Semester 2018-19

Sub. Name: Elements of Mechanical Engineering

Sub. Code: 18ME25

Semester: II

Date: 10-05-2019

Time: 2:30 PM

Duration: 90 Minutes

Max. Marks: 30

[Instructions: Answer any two full questions as indicated below]

Sl. No.	QUESTIONS	COs	RBT Levels	Marks
1.	a) Explain, with a neat diagram, the working principle of centrifugal pump.	CO2	L2	07M
	b) List the various methods of producing taper turning? Discuss taper turning by swiveling the compound rest method.	CO5	L3	08M
OR				
2.	a) Explain, with a neat diagram, the working principle of reciprocating pump.	CO2	L2	07M
	b) With a neat diagram, discuss the working principle of vertical milling machine.	CO5	L3	08M
3.	a) Explain the various robot configurations with neat diagram.	CO6	L2	07M
	b) Illustrate the formation of steam with a T- h diagram.	CO1	L3	08M
OR				
4.	a) Discuss open loop and closed loop control systems in CNC operations.	CO6	L2	07M
	b) A 5 kg of wet steam of quality 80% passes from a boiler to a superheater at a constant pressure of 1 MPa. In the superheater its temperature increases to 350 °C. Determine the amount of heat supplied in the superheater. Take specific heat of superheated steam as 2.25 kJ/kgK.	CO1	L3	08M

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