

# CBCS SCHEME

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BESCK204D/BESCKD204

Second Semester B.E./B.Tech. Degree Supplementary Examination,  
June/July 2024

## Introduction to Mechanical Engineering

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Discuss the Role of Mechanical Engineer in society.	5	L2	CO1
	b.	Explain the trends in mechanical engineering industry.	7	L2	CO1
	c.	Enumerate the importance of mechanical Engineer in Manufacturing and Automobile industry.	8	L2	CO1
OR					
Q.2	a.	Briefly explain the causes for Global warming.	5	L2	CO1
	b.	Sketch and explain Wind mill working.	7	L2	CO1
	c.	Explain the construction of Hydel power plant with a neat sketch.	8	L2	CO1
Module – 2					
Q.3	a.	Explain the knurling operation.	5	L2	CO2
	b.	Explain the Drilling and Boring operation with suitable sketches.	7	L2	CO2
	c.	Briefly explain the following milling operation : (i) Plane milling (ii) Slot milling	8	L2	CO2
OR					
Q.4	a.	Write the advantages and applications of CNC.	5	L1	CO2
	b.	Explain briefly the CNC configuration with a block diagram.	7	L2	CO2
	c.	Discuss the steps in 3D printing.	8	L2	CO2
Module – 3					
Q.5	a.	Sketch and explain the IC Engine components.	4	L2	CO3
	b.	Briefly explain 4-stroke petrol engine.	8	L2	CO3
	c.	Explain the 4-stroke diesel engine with appropriate sketches.	8	L2	CO3
OR					
Q.6	a.	List the advantages, disadvantages and applications of EV.	6	L1	CO3
	b.	Explain briefly the components of EV with a sketch.	7	L2	CO3
	c.	Discuss the types of EV.	7	L2	CO3
Module – 4					
Q.7	a.	Discuss the characteristics and applications of Aluminium alloy.	6	L1	CO4
	b.	Explain the following Engineering materials: (i) Ceramics (ii) Glass	7	L2	CO4
	c.	Write short note on : (i) Polymers (ii) SNA	7	L2	CO4

OR

Q.8	a.	Explain the types of flames in Gas Welding process.	6	L2	CO4
	b.	Differentiate between soldering, brazing and welding.	7	L2	CO4
	c.	With a neat sketch, explain Arc welding process.	7	L2	CO4

Module – 5

Q.9	a.	Differentiate open loop and closed loop control system.	6	L2	CO5
	b.	Explain the types of automation.	7	L2	CO5
	c.	Explain the types of Robt configurations (any 2) with sketches.	7	L2	CO5

OR

Q.10	a.	Explain the characteristics of IOT.	6	L2	CO5
	b.	Discuss with a block diagram, the physical design of IOT.	7	L2	CO5
	c.	Explain the types of communication models.	7	L2	CO5

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