

CBCS SCHEME

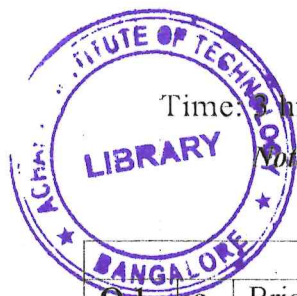
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BESCK104D

First Semester B.E./B.Tech. Degree Examination, June/July 2026

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.	Briefly explain role of Mechanical Engineering in Industry and Society.	10	L2	CO1
	b.	Explain Emerging Trends and Technologies in Energy and Manufacturing sectors.	10	L2	CO1
OR					
Q.2	a.	Explain the different types of fossil fuels and biofuels with applications.	10	L2	CO1
	b.	Write a short note on : i) Global warming ii) Ozone layer depletion	10	L2	CO1
Module – 2					
Q.3	a.	Briefly explain the specifications of Lathe and Drilling machine.	08	L2	CO2
	b.	Explain the following operations with neat sketches. i) Knurling ii) Boring iii) Slot milling	12	L2	CO2
OR					
Q.4	a.	Explain the components of CNC with block diagram.	10	L2	CO2
	b.	What are advantages and disadvantages of CNC?	06	L1	CO2
	c.	Write a short note on 3D printing.	04	L2	CO2
Module – 3					
Q.5	a.	With a neat sketch explain the components of IC Engine.	10	L2	CO3
	b.	Explain the working of 4 – stroke petrol engine with P – V diagram.	10	L2	CO3
OR					
Q.6	a.	Explain the components of Electric and Hybrid vehicle with neat sketch.	10	L2	CO3
	b.	List advantages, disadvantages and applications of Electric and Hybrid vehicles.	10	L2	CO3
Module – 4					
Q.7	a.	Recite the classification of engineering materials.	10	L2	CO4
	b.	List and explain the mechanical properties and applications of Ferrous materials.	10	L2	CO4
OR					
Q.8	a.	Define welding? Explain the construction and working of Arc welding with neat sketch.	10	L2	CO4
	b.	With a neat sketch explain 3 types of flames used in Gas welding.	10	L2	CO4
Module – 5					
Q.9	a.	Explain with the block diagram the open and closed loop control systems.	10	L2	CO5
	b.	Define Automation and explain three types of Automations.	10	L2	CO5
OR					
Q.10	a.	Explain Physical design and Logical design of IoT.	10	L2	CO5
	b.	Explain functional blocks and communication models used in IoT.	10	L2	CO5
