

CBCS SCHEME

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BESCK204D

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

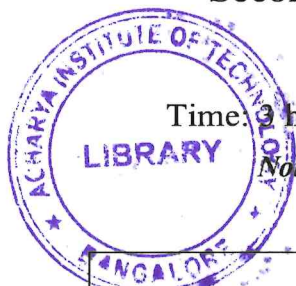
Introduction to Mechanical Engineering

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 the role of mechanical engineer in industry and society.	10	L2	CO1
	b.	Explain the emerging trends of mechanical engineering in i) Manufacturing ii) Automotives iii) Aeronautics iv) Energy sectors.	10	L2	CO1
OR					
Q.2	a.	With a neat sketch, explain the working of nuclear power plant. What are its merits and demerits?	10	L2	CO1
	b.	Write a note on Global warming and ozone layer depletion.	10	L2	CO1
Module – 2					
Q.3	a.	With a neat sketch, explain: i) Turning ii) Facing iii) Knurling iv) Boring v) Reaming.	10	L2	CO1
	b.	Explain the working principle of drilling and milling machine.	10	L2	CO1
OR					
Q.4	a.	With a neat sketch, explain the components of CNC machine.	10	L2	CO2
	b.	Explain the steps involved in 3D printing.	10	L2	CO2
Module – 3					
Q.5	a.	State the function of following IC engine parts : i) Piston ii) Connecting rod iii) Crank shaft iv) Piston rings v) Cam shaft vi) Fly wheel vii) Governor viii) Spark plug ix) Fuel injector x) Fins.	10	L1	CO3
	b.	With a neat sketch, explain the working of four stroke diesel engine. Show the process on P-V diagram.	10	L2	CO3

OR					
Q.6	a.	Write the advantages and disadvantages of Electric Vehicle.	10	L1	CO3
	b.	With a neat sketch, explain the components of Hybrid Vehicle.	10	L2	CO3
Module – 4					
Q.7	a.	List out the applications of grey cast iron and white cast iron.	10	L1	CO4
	b.	List out the applications of Aluminium and its alloys	10	L1	CO4
OR					
Q.8	a.	With a neat sketch, explain the working of Gas Welding. Also list out its merits and demerits.	10	L1,2	CO4
	b.	Write a note on : i) Smart materials ii) Ceramics.	10	L2	CO4
Module – 5					
Q.9	a.	With a neat sketch, explain the configurations of robots.	10	L2	CO5
	b.	Explain different types of automation.	10	L2	CO5
OR					
Q.10	a.	With a block diagram, briefly explain the elements of automation.	10	L2	CO5
	b.	Explain the components of physical design of IoT.	10	L2	CO5
