GBGS SCHEME

TONI	100	1					BESCK104D/BESCKD104
JSN	8	100					DESCRIVAD/DESCRIPTUA
10	a solul	9000					

First Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.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.

	2				
		Module 1	M	L	C
Q.1	a.	Explain the role of mechanical engineering in society.	10	L2	CO1
2	b.	Explain the emerging trends and technologies in the following sectors. i) Manufacturing sector ii) Automotive sector iii) Aerospace sector iv) Marine sector.	10	L2	CO1
		OR			, ,
Q.2	a.	With a neat sketch, explain the working principle of Hydel power plant.	10	L2	CO1
m ^{KC}	b.	Write short notes on: i) Fossil fuels ii) Bio-fuels.	10	L2	CO1
5		Module – 2			
Q.3	a.	What is lathe? With neat sketch explain the working principle of lathe machine.	6	L2	CO2
	b.	With neat sketches, explain the following lathe operations. i) Turning operation ii) Knurling operation.	8	L2	CO2
	c.	Differentiate between up milling and down milling.	6	L2	CO2
		OR			
Q.4	a.	What is CNC? With neat sketches, explain the basic components of CNC.	8	L2	CO2
	b.	List the advantages and disadvantages of CNC.	6	L1	CO2
	c.	List the advantages and disadvantages of 3D printing.	6	L2	CO2
	4	Module – 3			
Q.5	a.	With a neat sketch, explain the components of I.C engine.	10	L2	CO3
	b.	With a neat sketch, explain the working principle of 4-stroke petrol engine along with PV diagram.	10	L2	CO3
1		OR			
Q.6	a.	What is an electric vehicle? Briefly explain the components of an electric vehicle.	10	L2	CO3
	b.	State the advantages and disadvantages of EVs and hybrid vehicles.	10	L2	CO3
		Y*			

BESCK104D/BESCKD104

materials. i) Cast iron ii) High carbon steel iii) Alluminium iv) Copper. b. Write short notes on: i) Polymers ii) Shape memory alloys. OR Q.8 a. What is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. 5 L2 CO c. List the applications of welding. Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******			Ma Jula 4			
materials. i) Cast iron ii) High carbon steel iii) Allumintum iv) Copper. b. Write short notes on:i) Polymers ii) Shape memory alloys. OR Q.8 a. What is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. 5 L2 CO Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control 10 L2 CO systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******		-		Т Т	1	
materials. i) Cast iron ii) High carbon steel iii) Alluminium iv) Copper. b. Write short notes on: i) Polymers ii) Shape memory alloys. OR Q.8 a. What is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control 10 L2 CO systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******	Q.7	a.	Write the composition, properties and applications of the following	10	L2	CO ₄
i) Cast iron ii) High carbon steel iii) Alluminium iv) Copper. b. Write short notes on: i) Polymers ii) Shape memory alloys. OR Q.8 a. What is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. DR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO *******						
b. Write short notes on: i) Polymers ii) Shape memory alloys. OR Q.8 a. What is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control 10 L2 CO systems. b. With neat sketches, explain four basic robot configurations. OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******						
OR Q.8 a. What is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. 5 L2 CO Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******			i) cust non ii) iiigii cui cui sioi			
Q.8 a. What is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. 5 L2 CO Module – 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******		1	White short rotes on : i) Dolymore ii) Chang memory alloys	10	1.2	CO3
A what is Welding? With a neat sketch, explain the working principle of Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. 5 L2 CO Module – 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******		b.	write short notes on . 1) Polymers II) Shape memory alloys.	10		CO3
A with neat sketches, explain four basic robot configurations. A with neat sketches, explain four basic robot configurations. 10 L2 CO						18
b. With neat sketches, explain 3 types of flames used in gas welding process. 5 L2 CO c. List the applications of welding. 5 L2 CO Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. 10 L2 CO With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO b. Briefly explain characteristics of I.O.T. 10 L2 CO						
Electric Arc Welding. b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. 5 L2 CO Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******	0.8	a.	What is Welding? With a neat sketch, explain the working principle of	10	L2	CO4
b. With neat sketches, explain 3 types of flames used in gas welding process. c. List the applications of welding. 5 L2 CO Module - 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO ******						
c. List the applications of welding. Module - 5						
c. List the applications of welding. Module - 5		h	With neat sketches, explain 3 types of flames used in gas welding process.	5	L2	CO ₄
Module – 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. 10 L2 CO OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO *****		υ.	With neat sketches, explains types of hames assume as well-specific			
Module – 5 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO b. Briefly explain characteristics of I.O.T. 10 L2 CO			List the applications of walding	5	12	CO
 Q.9 a. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. DR Q.10 a. What is Automation? Explain 3 types of automation. b. Briefly explain characteristics of I.O.T. 10 L2 CO ***** 		c.	List the applications of welding.	3		00-
A. With the help of block diagram, explain open loop and closed-loop control systems. b. With neat sketches, explain four basic robot configurations. OR Q.10 a. What is Automation? Explain 3 types of automation. D. L2 CO Briefly explain characteristics of I.O.T. 10 L2 CO						
b. With neat sketches, explain four basic robot configurations. OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO b. Briefly explain characteristics of I.O.T. 10 L2 CO						
b. With neat sketches, explain four basic robot configurations. OR Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO b. Briefly explain characteristics of I.O.T. 10 L2 CO	Q.9	a.	With the help of block diagram, explain open loop and closed-loop control	10	L2	CO5
b. With neat sketches, explain four basic robot configurations. OR Q.10 a. What is Automation? Explain 3 types of automation. b. Briefly explain characteristics of I.O.T. 10 L2 CO *****						
OR Q.10 a. What is Automation? Explain 3 types of automation. b. Briefly explain characteristics of I.O.T. 10 L2 CO *****			A A			
OR Q.10 a. What is Automation? Explain 3 types of automation. b. Briefly explain characteristics of I.O.T. 10 L2 CO *****		h	With neat sketches, explain four basic robot configurations	10	1.2	CO
Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO b. Briefly explain characteristics of I.O.T. 10 L2 CO		D.	With heat sketches, explain four basic rooot configurations.	10		
Q.10 a. What is Automation? Explain 3 types of automation. 10 L2 CO b. Briefly explain characteristics of I.O.T. 10 L2 CO						
b. Briefly explain characteristics of I.O.T. 10 L2 CO				40	TA	00
****	Q.10	a.	What is Automation? Explain 3 types of automation.	10	L2	CO
* * * *	- 12					
***		b.	Briefly explain characteristics of I.O.T.	10	L2	CO

		A				
2 of 2			2 of 2			
2 of 2		A	2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			
2 of 2			2 of 2			