PRN:		Course Code :	MET 2705.2

Final Year **B. Tech** End Semester Examination Summer 2024

Industrial Engineering and Management

Day and Date: 31 MAY 2024, Friday Max Marks: **100**

Time : 10:30AM To 01:30PM Duration: **03** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1		**Attempt the following**			
	a)	"Planning is a primary function of the management "Why?. Give various steps involved in planning.	08	2	1
	b)	Write short note on " human resource management"	08	3	1
		OR			
	b)	State the functions of the management in an organization.	08	3	1
Q.2		**Attempt the following**			
	a)	Discuss the scope and objectives of Industrial Engineering	08	2	2
	b)	A company is manufacturing 24000 components per month (30 days) by employing 100 workers in daily 8 hour shift. The company gets additional order to produce additional 6000 components. The management decides to employ additional workers. What will be production and productivity level when the number of additional employed workers are (i) 30 workers (ii) 25 workers and (iii) 20 workers	08	3	2
		OR			
	b)	Compute various productivity index for following information and also find Total Productivity. Output: Rs. 100000 Labour Input:Rs 10000 Material Input: Rs 20000 Capital Input:Rs 25000 Energy Input:Rs 5000 Other Expenses:Rs 2000	08	3	2
Q.3		**Attempt any two from the following**			
	a)	Explain the effects of increase or decrease in production on productivity.	08	2	3
	b)	Differentiate between method Study and work measurement.	08	3	3
	c)	Draw the Outline Process chart for the Changing Refill of a Ball Point Pen	08	3	3
Q.4		**Attempt any two from the following**			
	a)	List the different types of the Flow process chart and explain anyone with an example	08	3	4
	b)	List various allowances and discuss need to provide various allowances in determining of standard time.	08	3	4
	c)	Define Time Study and explain basic elements of standard time	08	3	4

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Q.5 **Attempt any Two of the following**

a) In 8 Hour shift 1 Hour is allowed for personal needs. If actual Observed time to complete job is 3 min with performance rating 110 % — 09 — 3 — 5

(i) Find Standard Time
(ii) Output per shift
(iii) If worker produces 120 jobs in a shift Calculate his efficiency.

b) From following continuous Stop watch measurement data find out Standard Time and Production Output for 8 Hour shift. — 09 — 3 — 5

	Cycles (in Minute)		
Elements	1	2	3
1	0.45	1.82	3.37
2	0.80	2.18	3.75
3	1.32	2.75	4.30
4	1.52	2.97	4.54

Take performance rating 105 and allowance 10%

c) Define the Time Study and explain its objectives. — 09 — 3 — 5

Q.6 **Attempt any Two of the following**

a) Classify Value. Explain each type of value. — 09 — 4 — 5

b) List the different types of waste and explain any two. — 09 — 4 — 5

c) Describe the Monte- Carlo simulation in details — 09 — 4 — 5

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