Name:												
Enrolment No:		UNIVERSITY WITH A PURPOSE										
		Time 03 hrs										
SECTION A												
	Question will carry 5 Marks											
2. Instru S. No.	action: Complete the statement / Select th	he correct answer(s)	Maalaa	<u> </u>								
	Fill in the blanks:		Marks	CO CO1								
Q 1	<ul> <li>a. Slowest operating component in the Not very robust if there is a disrup Layout.</li> <li>c. In a Layout, the equipm necessary.</li> <li>d. Complex flow can be difficult to c Layout.</li> <li>e. Drafting, 2-D Templates, 3-D Templates, 3-D Templayout</li> </ul>	otion is a typical dis-advantage of ent, machinery, plant and people move as control is a typical dis-advantage of nplates are typical examples of	5	COI								
Q 2	Compare the following (w.r.t direction of a. Hoist	movement):	5	CO3								
Q 3	<ul><li>b. Overhead Crane</li><li>Explain the following:</li><li>a. Flow Process Chart</li><li>b. String Diagram</li></ul>		5	CO2								
Q 4	State the full-form of the following abbre a. SLP b. CORELAP c. CRAFT d. ALDEP e. AGV	viations:	5	CO3								
Q 5		he process of procurement of raw material he consumer, which does not add any value	5	CO2								
Q 6	List the five most important environmenta into consideration during the design & de	velopment of the plant layout.	5	CO1								
SECTION B												
1. Each question will carry 10 marks												
Q 7	action: Write short / brief notes Explain the term 'Assembly Line Balance	cing' & how does it affect a plant layout.	10	CO2								

Q 9       Explain the five most important 'Geographical parameters' that are required to be considered while planning & designing a Plan Layout.       10       CO2         Q 10       Justify the usage of 'Gravity' for designing a 'Matrial Handling system' & how it is beneficial in the overall productivity enhancement of the manufacturing system & its layout.       10       CO3         Q 11       Differentiate between 'Improvement Algorithm' & 'Construction Algorithm' along with their respective examples used for the development of a Plant Layout.       10       CO3         SECTION-C         Leach Question carries 20 Marks.         2         Instruction: Write long answer.         Q 12       An automobile manufacturing plant produces an automobile component having a sales for a 30,000 units/year. Three operation are required to be performed to give final shape to the product as given below:       1       Operation-A by Machine-X = 8 min/ piece       2       Operation-A by Machine-X = 8 min/ piece       3       Operation-C by Machine-X = 15 min/ piece       3       Operation hours = 2400 hours/ year       20       CO4         Select the appropriate Machine configuration (no. of machines).       Consider:       a. Operation hours = 2400 hours/ year       b. Production Efficiency = 95%       OR       20       CO4         Select the appropriate Machine configuration (no. of machines).       Con alter:       a. Weekly Demand <t< th=""><th>Q 8</th><th colspan="7">Compare &amp; contrast between 'Load Distance Method' and 'Break Even Analysis method' used for the design &amp; development of a Plant Layout.</th><th>CO3</th></t<>	Q 8	Compare & contrast between 'Load Distance Method' and 'Break Even Analysis method' used for the design & development of a Plant Layout.							CO3				
Q 10       Justify the usage of 'Gravity' for designing a 'Material Handling system' & how it is beneficial in the overall productivity enhancement of the manufacturing system & 10       CO3         Q 11       Differentiate between 'Improvement Algorithm' & 'Construction Algorithm' along with their respective examples used for the development of a Plant Layout.       10       CO3         Q 11       Differentiate between 'Improvement Algorithm' & 'Construction Algorithm' along with their respective examples used for the development of a Plant Layout.       10       CO3         SECTION-C         Leach Question carries 20 Marks.         Instruction: Write long answer.         Q 12       An automobile manufacturing plant produces an automobile component having a sales forecast of 30,000 units/year. Three operation are required to be performed to give final shape to the product as given below: <ol> <li>Operation-A by Machine-X = 8 min/ piece</li> <li>Operation By Machine-Z = 15 min/ piece</li> <li>Operation hours = 2400 hours/ year</li> <li>Production Efficiency = 95%</li> <li>OR</li> </ol> 20         Stelect the appropriate Machine in an automobile plant produces 3 types of gears (Gear-A, Gear-B & Gear-C 1 Set-up time (min)         2       Standard time/Unit (min)       2       1       2.5         3       Weekly Demand       1000       5000       30000       4       No. of set-ups/ week       3       5       7	Q 9	Explain the five most important 'Geographical parameters' that are required to be						10	CO2				
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3. Operation-C by Machine-Z = 15 min/ piece         Select the appropriate Machine configuration (no. of machines).         Consider:         a. Operation hours = 2400 hours/ year         b. Production Efficiency = 95%         OR         The milling machine in an automobile plant produces 3 types of gears (Gear-A, Gear-B & Gear-C) as per the following: $\overline{S. No \ \overline{Details} \ \overline{Details} \ \overline{Gear-A \ \overline{Gear-B} \ \overline{Gear-C} \ 1 \ Set-up time (min) \ 40 \ 50 \ 70 \ 2 \ Standard time/ Unit (min) \ 2 \ 1 \ 2.5 \ 3 \ Weekly Demand \ 1000 \ 5000 \ 3000 \ 4 \ No. of set-ups/ week \ 3 \ 5 \ 7 \ Select the appropriate Machine configuration (no. of machines).       Cost         Select the appropriate Machine configuration (no. of machines).         Consider:         a. Operating Hours/ Week = 48 Hours   $		1. Operation-A by Machine- $X = 8 \min/\text{piece}$											
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