

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: MBA
BRANCH: MBA**

**SEMESTER : IV
SESSION : SP/2025**

SUBJECT: MT559 MANUFACTURING PLANNING AND CONTROL

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Suppose that four machines, 1, 2, 3, and 4 have been identified as belonging in a GT machine cell. An analysis of 50 parts processed on these machines has been summarized in the From-To chart presented below. Additional information is that 50 parts enter the machine grouping at machine 3, 20 parts leave after processing at machine 1, and 30 parts leave after machine 4. Determine a logical machine arrangement using Hollier method. [5] CO 1 BL 3

From - To Chart					
To:	1	2	3	4	
From:	1	0	5	0	25
	2	30	0	0	15
	3	10	40	0	0
	4	10	0	0	0

- Q.1(b) Describe Flexible Manufacturing System. Discuss three levels of manufacturing flexibility. [5] CO 1 BL 2
- Q.2(a) Make-to-order is a production strategy that typically allows consumers to purchase products customized to their specifications. Elaborate. Discuss what steps should companies take to implement a Make-to-Order Strategy? [5] CO 2 BL 4
- Q.2(b) Discuss main components and types of a Manufacturing Planning and Control (MPC) System. Also discuss benefits and challenges of a MPC system. [5] CO 2 BL 2
- Q.3(a) Discuss objectives of JIT System. What are the obstacles encountered in implementing JIT? [5] CO 3 BL 3
- Q.3(b) Discuss in brief the concept of Manufacturing Resource Planning (MRP-II). [5] CO 3 BL 2
- Q.4(a) Explain different computerised elements of computerised integrated manufacturing (CIM). [5] CO 3 BL 2
- Q.4(b) Explain the concept of CIM wheel and explain the importance of integrating the enterprise included therein? [5] CO 3 BL 3
- Q.5(a) Discuss various routing techniques and routing procedures. [5] CO 4 BL 2
- Q.5(b) Discuss principles of scheduling. Also Explain three standard scheduling methods. [5] CO 4 BL 3

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