BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI MBA/4502[illegible]/22
(END SEMESTER EXAMINATION)

CLASS: MBA
BRANCH: MANAGEMENT

SEMESTER: II
SESSION: SP/2023

SUBJECT: MT407R1 MANAGEMENT OF MANUFACTURING SYSTEMS

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.

				CO	BL
Q.1(a)	Analyze the various decision levels regarding plant location for a new biscuit production facility.	[5]	2	4
Q.1(b)	What are the different types of manufacturing/production systems? Evaluate their suitability to various manufacturing scenarios.	[5]	1	4
Q.2(a)	List down and analyze the controllable and un-controllable factors in capacity planning.	[5]	2	3
Q.2(b)	From the following time series data predict the crop output (thousand Kg) for next year using (i)direct method, (ii) regression method and (iii)moving average of length three.	[5]	3	5

Year	1997	1998	1999	2000	2001	2002	2003
Crop quantity	40	46	38	42	51	48	57

Q.3(a)	Compare and evaluate ABC analysis, VED method and Kanban.	[5]	3	3
Q.3(b)	What is EOQ in inventory management. Derive the expression of EOQ for a basic inventory management model and list down its assumptions.	[5]	3	5
Q.4(a)	Describe the 7QC tools and justify their importance in managing manufacturing operations.	[5]	1	5
Q.4(b)	List down and analyze the different types of purchasing policies.	[5]	2	4
Q.5(a)	Discuss and analyze the manufacturing tasks suggested by Gordon and Carson.	[5]	1	4
Q.5(b)	Apply Jhonson's algorithm to find out the optimum sequence of loading the jobs so that the total elapsed time for completing the jobs is minimum. Also, find out the machine idle times.	[5]	4	5

Jobs	1	2	3	4	5	6
Machine A	6	8	9	3	5	4
Machine B	3	5	2	7	4	6

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