

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End semester examination, May 2020

Course: B tech Mechatronics Engg

Program: Theory of Automation

Course Code: MEEL415

Semester: VIII

Time 03 hrs.

Max. Marks: 100

Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Discuss different layout configurations of Flexible manufacturing system.	5	CO 1
Q 2	Enlist the significance of computer supervisory control system?	5	CO 3
Q 3	State the objectives of a good plant layout.	5	CO 3
Q 4	Define Group Technology. List out the stages in Group Technology.	5	CO 5
Q 5	What are the goals of automation in manufacturing industry?	5	CO 1
Q 6	Enlight the purpose of industrial trucks during material handling.	5	CO 2

SECTION B

Q 7	Discuss the principles of material handling system, which are considered as the Key to Greater Productivity, Customer Service and Profitability.	10	CO 2
Q 8	Discuss on the various guidance and navigation techniques during AGV assisted system.	10	CO 4
Q 9	Explain the use of various technology in materials handling industry to track the flow and movement of materials and products. OR Explain how different control systems and safety measures implemented in materials handling facility.	10	CO 4

SECTION-C

Q 10	Explain the basic structure of OPTIZ system .Discuss about coding and classification of part families. Enlist the benefits of group technology.	20	CO 5
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Q 11	<p>Contrast on the importance of group technology and cellular manufacturing in developing an industrial automation system. Discuss on the part classification and codification in modern industries with an example.</p> <p style="text-align: center;">OR</p> <p>Discuss the characteristic features of flexible manufacturing systems. Explain some operational issues encountered during planning and implementation of FMS.</p>	20	CO 5
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