
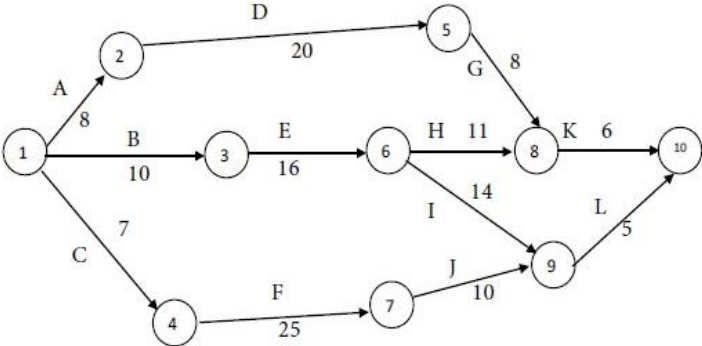


Name: Enrolment No:			
UPES Dehradun End Semester Examination, May 2024			
Course: Manufacturing Technology Program: B.Tech (Mechanical Engineering) Course Code: MEPD3010		Semester: VI Time : 03 hrs. Max. Marks: 100	
SECTION A (5Qx4M=20Marks)			
S. No.	Statement of question	Marks	CO
Q 1	Explain Casting process with advantages and disadvantages. Also define the basic steps of the casting process.	4	CO1
Q 2	Define minimum metal condition and maximum metal condition.	4	CO1
Q 3	Compare plain plug gauges and snap gauges	4	CO4
Q 4	Summarize computer integrated manufacturing (CIM).	4	CO1
Q 5	Analyze the geometry of single point cutting tool with neat diagram.	4	CO4
SECTION B (4Qx10M= 40 Marks)			
Q 6	Explain the principle of vernier instruments. Discuss the working of vernier height gauge.	10	CO2
Q 7	Classify various types of gear tooth errors. Also discuss the process of measuring tooth errors.	10	CO4
Q8	Summarize the critical path method. What are the different steps in CPM.	10	CO3
Q9	Solve the problem where the main scale in a vernier instrument is graduated in millimetres, with the smallest division being 1mm. Ten divisions on the vernier scale correspond to nine divisions on the main scale. Answer the following questions: (a) Is the vernier scale a forward vernier or a backward vernier? (b) What is the least count of the instrument? (c) If the main scale reads 13mm and the fifth division on the vernier scale coincides with a division on the main scale, what is the value of the dimension being measured?	10	CO4
SECTION-C (2Qx20M=40 Marks)			

<p>Q10</p>	<p>Interpret the completion time and the critical activities for the following project:</p> 	<p>20</p>	<p>CO2</p>
<p>Q11</p>	<p>Categorize various types of allowances used in the casting process with neat diagrams.</p> <p style="text-align: center;">OR</p> <p>Identify the working principle of abrasive jet machining with neat diagram. How it is different than water jet machining.</p>	<p>20</p>	<p>CO3</p>