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| Image result for adamas university logo | **ADAMAS UNIVERSITY**  **END SEMESTER EXAMINATION**  (Academic Session: 2020 – 21) | | |
| **Name of the Program:** | M.Tech (CEM) | **Semester:** | I |
| **Paper Title:** | Construction Planning, Scheduling and Control | **Paper Code:** | ECE61125 |
| **Maximum Marks:** | 50 | **Time Duration:** | 3 Hrs |
| **Total No. of Questions:** | 17 | **Total No of Pages:** | 02 |
| *(Any other information for the student may be mentioned here)* | 1. At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. 2. All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. 3. Assumptions made if any, should be stated clearly at the beginning of your answer. | | |

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| **Group A**  **Answer All the Questions (5 x 1 = 5)** | | | |
| 1 | Define Work tasks in construction projects. | **R** | **CO1** |
| 2 | What is the purpose of numbering the events? | **U** | **CO2** |
| 3 | What are the difference compounds of a balance sheet? | **U** | **CO3** |
| 4 | Enumerate the types of project information. | **U** | **CO4** |
| 5 | Write a note on relational model | **U** | **CO5** |
| **Group B**  **Answer All the Questions (5 x 2 = 10)** | | | |
| 6 a) | Explain the basic concept involved in project planning | **U** | **CO1** |
| **(OR)** | | | |
| 6 b) | How do you overcome the improper material management? | **Ap** | **CO1** |
| 7 a) | What is the purpose of scheduling and what are the steps involved in schedule chart? | **U** | **CO2** |
| **(OR)** | | | |
| 7 b) | The following table gives the activity in construction projects   |  |  | | --- | --- | | **Activity** | **Duration (Days)** | | 1-2 | 20 | | 1-3 | 25 | | 2-3 | 10 | | 2-4 | 12 | | 3-4 | 6 | | 4-5 | 10 |  1. Draw the network for project 2. Find the critical path and expected time duration | **U** | **CO2** |
| 8 a) | Identify different cost control activities for a residential apartment. | **Ap** | **CO3** |
| **(OR)** | | | |
| 8 b) | What is job cost accounts? Write in details. | **U** | **CO3** |
| 9 a) | Classify the types of project information. | **U** | **CO4** |
| **(OR)** | | | |
| 9 b) | Illustrate the use of project information in construction process. | **U** | **CO4** |
| 10 a) | Summarize the advantages and disadvantages of integrated application systems. | **U** | **CO5** |
| **(OR)** | | | |
| 10 b) | Compare the suitability of hierarchical model and network model with respect to the manufacturing industry. | **An** | **CO5** |
| **Group C**  **Answer All the Questions (7 x 5 = 35)** | | | |
| 11 a) | Build a precedence relationship of construction activities for a thermal power plant. | **Ap** | **CO1** |
| **(OR)** | | | |
| 11 b) | i) Explain the estimation of the activity durations in detail. (2)  ii) Explain briefly choice of construction technology and construction methods. (3) | **U**  **Ap** | **CO1** |
| 12 a) | The following table lists the jobs of a project with their time estimates:   |  |  |  |  | | --- | --- | --- | --- | | Activity | to | tm | tp (in Days) | | 1,2 | 3 | 6 | 15 | | 1,6 | 6 | 5 | 14 | | 2,3 | 6 | 12 | 30 | | 2,4 | 2 | 5 | 8 | | 3,5 | 5 | 11 | 17 | | 4,5 | 3 | 6 | 15 | | 6,7 | 3 | 9 | 27 | | 5,8 | 1 | 4 | 7 | | 7,8 | 4 | 19 | 28 |  1. Find out expected time duration of the project. 2. Identify and draw the critical path. 3. Find out floats of all the activities based on expected time duration. | **Ap** | **CO2** |
| **(OR)** | | | |
| 12 b) | Describe various methods of presenting project schedules and select suitable method for projects repetitive in nature. | **U & Ap** | **CO2** |
| 13 a) | Explain different stages of cost control for a residential project. | **U** | **CO3** |
| **(OR)** | | | |
| 13 b) | Examine the best strategies for cash flow management in construction | **An** | **CO3** |
| 14 a) | Explain the use of project information to carry out construction project. | **U** | **CO4** |
| **(OR)** | | | |
| 14 b) | Explain the problems in information system management in detail. | **U** | **CO4** |
| 15 a) | Infer the important information to be gathered for organizational process. | **U** | **CO4** |
| **(OR)** | | | |
| 15 b) | Elucidate primary and secondary source of information. | **U** | **CO4** |
| 16 a) | Illustrate a frame based data storage hierarchy system adopted in construction industry. | **Ap** | **CO5** |
| **(OR)** | | | |
| 16 b) | Compare conceptual and logical data model with ER diagram | **U** | **CO5** |
| 17 a) | Discuss in detail about Information transfer and flow. | **U** | **CO5** |
| **(OR)** | | | |
| 17 b) | Develop a database management system to manage and control inventory of construction project | **Ap** | **CO5** |