**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM**

**SIXTH TRIMESTER (Batch 2020-22)**

**END TERM EXAMINATION, MAY-2022**

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| --- | --- | --- | --- |
| Course Name | **Project Management** | Course Code | **40526** |
| Max. Time | **2 hours** | Max. Marks | **40** |

**INSTRUCTIONS:**

The examination will be conducted in the IT Lab. Students can use the Lab computers for the access of MS Excel only. Access to any other tabs/files/browsers will be not be allowed. Excel files will be submitted after the exam.

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**Questions.1 (10 Marks)**

An automobile manufacturer is seeking for redesigning of his assembly line where new machines will be installed. It will require redesign of the space layout and will require some investment. The manufacturer wants to keep the costs low but wants the work to be done as soon as possible. The operations should be reliable and the services should also be reasonable. There are four project alternatives available and their respective criteria are given in the following table. Use an appropriate MCDM method (preferably AHP or TOPSIS or AHP+TOPSIS) to select the best project alternative.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Alternatives** | **Cost**  **(INR)** | **Time (days)** | **reliability** | **service** |
| Alpha | 3500000 | 255 | Very high | Low |
| Beta | 5500000 | 200 | High | Very high |
| Gamma | 3000000 | 350 | Moderate | Moderate |
| Delta | 2000000 | 400 | Low | Very Low |

**Questions.2 (10 Marks)**

You have signed a contract to build a garage for the Simpsons. You will receive a $500 bonus for completing the project within 17 working days. The contract also contains a penalty clause in which you will lose $100 for each day the project takes longer than 17 working days. Draw a project network, given the following information. Complete the forward and backward pass, compute activity slack, and identify the critical path. Do you expect to receive a bonus or a penalty on this project?

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Description** | **Predecessor** | **Time (days)** |
| A | Prepare site | None | 2 |
| B | Pour foundation | A | 3 |
| C | Erect frame | B | 4 |
| D | Roof | C | 4 |
| E | Windows | C | 1 |
| F | Doors | C | 1 |
| G | Electrical | C | 3 |
| H | Rough-in-frame | D, E, F, G | 2 |
| I | Door opener | F, G | 1 |
| J | Paint | H, I | 2 |
| K | Cleanup | J | 1 |

**Questions.3 (5+2.5+2.5 Marks)**

Consider the example of TATA Nano and discuss the requirements for successful project closure which TATA Motors could have implemented. Suggest the project duration reduction strategies and project cost reduction strategies for TATA Motors which if implemented, could have avoided the failure of TATA Nano.

**Questions.4 (2.5+2.5+2.5+2.5 Marks)**

Compare and contrast the monitoring and control issues involved in the management of following projects:

• Construction of pharma bottling plant

• Blockchain implementation in a textile company’s supply chain

• Successful completion of a University election

• New product introduction for a smartphone manufacturer