**MBA Program**

**Strategy and Tactics in Project Management**

**Silver Zuma Project – Part II**

The ARC Company specializes in developing and selling a wide range of high-quality scooters. Sales representatives report that there is a growing demand for racing scooters. ARC’s president, Robin Lane, is excited about the possibilities and predicts that one day these kinds of razor scooters will be featured in X-Game events. ARC is a small company and uses a strong matrix to optimally utilize limited manpower.

You are a member of a project team assigned to develop the new razor scooter code named “Silver Zuma.” Table 1 contains the information necessary to create a project schedule. For the purpose of this case assume the following:

**Part A.**

1. The project begins January 6, 2014.
2. The following holidays are observed: January 1, Memorial Day (last Monday in May), July 4th, Labor Day (first Monday in September), Thanksgiving Day (4th Thursday in November), December 25 and 26.
3. If a holiday falls on a Saturday then Friday will be given as an extra day off, and if it falls on a Sunday, then Monday will be given as a day off.
4. The project team works eight-hour days, Monday through Friday.

**Table 1 - Silver Zuma Project**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Task Name** | **Duration** | **Predecessors** | **Resources** |
| 1 | Product development project |  |  |  |
| 2 | Market analysis | 25 days |  | Marketing (4) Design (1) |
| 3 | Product design | 40 days | 2 | Marketing (1) Design (4)  Development (1) Industrial (1) |
| 4 | Manufacturing study | 20 days | 2 | Industrial (4) Development (2) |
| 5 | Product design selection | 10 days | 3,4 | Marketing (2) Design (3)  Development (2) Industrial (2)  Purchasing (.25) |
| 6 | Detailed marketing plans | 15 days | 5 | Marketing (4) |
| 7 | Manufacturing process | 30 days | 5 | Design (1) Development (2)  Industrial (4) |
| 8 | Detailed product design | 50 days | 5 | Marketing (1) Design (4)  Development (2) Industrial (1) |
| 9 | Test prototype | 10 days | 8 | Design (3) Development(2) |
| 10 | Finalized product design | 25 days | 7,9 | Marketing (1) Design (3)  Development (3) Industrial (2) |
| 11 | Order components | 7 days | 10 | Purchasing (1) |
| 12 | Order production equipment | 14 days | 10 | Purchasing (1) |
| 13 | Install production equipment | 25 days | 11FS + 20days  12FS + 40 days | Development (3) Industrial (4) |
| 14 | Celebrate | 1 day | 13 | Development (4) Industrial (4) Design (4) Marketing (4) Purchasing (1) |

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**Part B.**

Set up this project in MS Project 2010 and answer the following questions:

The following personnel (resources) have been assigned to the Silver Zuma project team:

* + Marketing specialists
  + Design engineers
  + Development engineers
  + Industrial engineers
  + Purchasing agent

**Table 2 – Silver Zuma Project Resources**

|  |  |  |
| --- | --- | --- |
| **Resource** | **$/hour** | **Number Available** |
| Marketing specialist | $60 | 4 |
| Design engineer | $90 | 4 |
| Development engineer | $80 | 4 |
| Industrial engineer | $70 | 4 |
| Purchasing agent | $50 | 1 |

Use the file from part I and the information contained in Tables 1 and 2 to assign resources to the project tasks. Answer the following questions:

1. What is the total cost of the Silver Zuma Project?
2. How much is needed in the first three months (January, February, and March)? (cash flow report)
3. Which if any of the **resources** are overallocated?
4. Assume that the project is time constrained (must be finished on time) and try to resolve any overallocation problems by leveling within slack. Will this resolve overallocation?
5. Assume that the project is resource constrained and no additional personnel are available. How long will the project take given the resources assigned? (Hint: Undo leveling performed in question 4 before answering this question.) Note: No splitting of activities is allowed.

**Grading Rubrics:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Question** | **1** | **2** | **3** | **4** | **5** | **Total** |
| **Grade** | **10** | **5** | **5** | **5** | **5** | **30** |

**After completing the assignment fill out the attached answer sheet and submit it with the Project 2010 file in the designated area in Moodle.**