



JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA

PGDM / PGDM (M) / PGDM (SM)

FIFTH TRIMESTER (Batch 2020-22)

END TERM EXAMINATIONS, January 2022

SET-1: MAIN QP

Course Name	Project Management	Course Code	OM 501
Max. Time	2 hours	Max. Marks	40 MM

INSTRUCTIONS:

- A. Attempt all questions.
- B. This is a **Closed Book examination**
- C. Mode of submission:
 - Answer sheet to be submitted/ uploaded on Moodle as a **single word file** (MS Word)
 - **Answer to Q 1 and Q2 to be done with pen and paper. Name and Roll Nos. of the student MUST be written on the paper. The photo or scanned copy of the answers to these questions to be pasted in main the MS word file.**
 - Answers to other question Q3 **MUST be typed in the word file.**
 - **Only Single word file to be uploaded on Moodle.**
- D. **Permitted Plagiarism % and Penalty Clause for any Defiance as: Overall Permitted Plag. is 10%, Penalty Clause: 11-20 % - Minus 5 Marks, Above 20% - No Evaluation/Reappear Exam.**
- E. Answers should be rich in content, pointwise and precise. Avoid unnecessary long answers.

Q1)

You work for Nokia in its global cell phone group. You have been made project manager for the design of a new cell phone. Your supervisors have already scoped the project, so you have a list showing the work breakdown structure, and this includes major project activities. You must plan the project schedule and calculate project duration. Your boss wants the schedule on his desk by tomorrow!

You have been given information in Table below. It includes all the activities required in the project and the duration of each activity. Also, dependencies between the activities have been identified.

Your project is divided into five major subprojects. **Subproject “P”** involves developing specifications for the new cell phone. Here, decisions related to such things as battery life, size of the phone, and features need to be made. These details are based on how the customer uses the cell phone.

These user specifications are redefined in terms that have meaning to the subcontractors that will actually make the cell phone in **Subproject “S”** i.e. Supplier Specifications. These also involve engineering details for how the product will perform.

The individual components that make up the product are the focus of **Subproject “D** i.e. Product Design”. **Subproject “I”** i.e. Product Integration brings all the components together, and a working prototype is built and tested. Finally, in **Subproject “V”**, suppliers are selected and contracts are negotiated.

Table below depicts the Work Breakdown Structure and Activities for the Cell Phone Design Project :

Major Subprojects/ Activities	Activity Identification	Dependency	Duration (weeks)
Product specifications (P)			
Market research	P1	----	2
Overall product specifications	P2	P1	4
Hardware	P3	P2	5
Software	P4	P3	5
Supplier specifications (S)			
Hardware	S1	P4	5
Software	S2	P4	6
Product Design (D)			
Battery	D1	S1	1
Display	D2	S1	2
Camera	D3	S1	1
Outer cover	D4	D1,D2,D3	4
Product Integration (I)			
Hardware	I1	D4	3
User Interface	I2	D2	4
Software Coding	I3	I2	4
Prototype testing	I3	I1,I3	4
Subcontracting (V)			
Suppliers Selection	V1	S1, S2	10
Contract Negotiation	V2	I4,V1	2

Answer the following:

- Construct a project schedule network diagram that includes all the activities and their logical relationships and determine the minimum number of weeks for completing the project.
- Determine and examine the start and finish time for each activity and identify the activities that are on the critical path. Also determine total float of each non-critical activity.
- Your boss would like to study the impact of making two changes to how the project is organized. The first change involves using dedicated teams that would work strictly in the parallel on the activities in each subproject. For example, in subproject P (product specifications) the team would work on P1, P2, P3 and P4 all in parallel. In other words, there would be no precedence relationships within a subproject- all tasks within a subproject would be worked on at the same time and each would take the same amount of time as originally specified.

Second, with this new design, all the subprojects would be done sequentially with P done first, then S, D, I and finally V. Analyse the expected impact on how long it would take to complete the project if this change were made?

(Marks 6+6+6 =18)

Q2)

You are Project manager of a global project to raise funds and obtain charitable donations from multiple stakeholders for your Non-Governmental Organization (NGO) working for orphaned children across the globe. Your project is *now* at 30th day into a planned 40-day project. The project is divided into 3 major activities.

The first activity is designed to solicit individual donations. It is scheduled to run the *first* 25 days of the project and estimated cost of this activity is \$7500. Even though you are 30 days into the project, we still see that we have only 90 percent of this activity complete. Further, your team has already spent \$7000 on the activity as on date.

The second activity relates to company donations and is scheduled to run for 30 days starting on the day 5 and extending till day 35 (i.e. 5+30). We estimate that, even though we *should have* 83 percent (i.e. 25 days/30 days) of this activity complete as per project schedule, it is actually only 50 percent complete. The cost of this activity of the project is estimated to be \$9000. Expenditure till date on it is \$4300

The final activity relates to obtaining funds from sports associations. This activity is scheduled to run during the last 10 days of the project and has not yet started. It is estimated to cost an additional \$4000.

- a) Examine PV, EV, AC, CV, SV of the project as on day 30 of the project. Evaluate the health of the project?
- b) Your NGO plans to organize a big **Fund Raising Event** to attract sponsors and raise funds from potential individual donors, corporate donors and others. You are the designated “Project Manager” for this project. Your project scope includes all work including concept development, obtaining required approvals, venue selection, sending invitation, logistics, making arrangements at the event venue, media coverage etc. Make suitable assumptions about the project scope as necessary. Develop a WBS for the same.

(Marks 5+5=10)

Q3)

Case: Codeword

Codeword is a medium size firm that designs and manufactures electronic systems for mass transit industry. It competes with other firms to win contracts to provide such systems. When Codeword receives a contract, it creates a project to complete the work and create all deliverables including final system installation as required by the client. Codeword has handful of Project Managers who report to General Manager; other report to their respective Functional Managers.

Jack Kowalski has been with the company for about 12 years, since graduating from college with a BS electronic engineering. He has worked his way up to senior electronics engineer and reports to the manager of electrical engineering. He has worked on many projects and is well respected within the company. Jack has been asking for an opportunity to be a project manager. When Codeword is awarded a \$15 million contract to design and manufacture an advanced electronic system for a new aircraft, the general manager promotes Jack to project management and asks him to manage & lead this project.

Jack works with the functional managers to get the best people available assigned to the project. Most of the people are buddies who have worked with Jack on previous projects. However, with Jack’s position as senior electronics engineer vacant, the manager of electrical engineering has no one with the appropriate level of expertise to assign Jack’s project. So the manager hires a new person, Alfreda Bryson. Lured away from a competitor, Alfreda has a Ph.D. in electronic engineering and eight years’ experience. She was able to command a high salary---more than Jack is making. She is assigned to Jack’s project full time as the senior electronics engineer.

Jack takes a special interest in Alfreda's work and asks to meet with her to discuss her design approaches. Most of these meetings turn into monologues, with Jack suggesting how Alfreda should do the design and paying little attention to what she says.

Finally, Alfreda asks Jack why he is spending so much more time reviewing her work than that of the other engineers on the project. He responds, "I don't have to check theirs. I know how they work. I've worked with them on other projects. You're the new kid on the block, and I want to be sure you understand the way we do things here, which may be different than your previous employer."

On the other occasion Alfreda shows Jack what she thinks is a creative design approach that will result in a lower-cost system. Jack tells her, "I don't even have a Ph.D. and I can see that won't work. Don't be so esoteric; just stick to basic sound engineering".

During a business trip with Dennis Freeman, another engineer assigned to the project who has known Jack for six years, Alfreda says that she is frustrated with the way Jack treats her. "Jack is acting more like the electronics engineer for the project than the project manager," she tells Dennis. "Besides, I have forgotten more about designing electronics than Jack ever knew! He isn't really up to date on electronic design methodologies." She also tells Dennis that she's planning to discuss the matter with the manager of electrical engineering and that she would never have taken the job with Codeword if she had known it was going to be like this.

Answer the following:

- a) Evaluate performance of Jack as a Project Manager. Examine whether Jack is ready to serve as a Project Manager. Why or Why not?
- b) Formulate and recommend an approach to Alfreda to deal with the present situation.
- c) Recommend how Manager of Electrical Engineering should respond to this situation when Alfreda raises the issues with the Manager.

(Marks 4+4+4=12)