

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2020

Course: Project Management
Program: B. Tech –Mechanical

Course Code: IPEG425

Instructions: All questions are compulsory.

Semester: VIII
Time 03 hrs.
Max. Marks: 100

SECTION A

S. No.		Marks	CO																
Q 1.1	The project requires an initial investment of Rs 20,000 and the annual cash inflows for 5 years is Rs 6000, Rs 8000, Rs 5000, Rs 4000 and Rs 4000 respectively. The payback period of the project will be _____.	5	CO2																
Q 1.2	Consider a project which has the following cash stream. <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Year</td> <td align="center">0</td> <td align="center">1</td> <td align="center">2</td> </tr> <tr> <td>Cash stream</td> <td align="center">-160000</td> <td align="center">1000000</td> <td align="center">-1000000</td> </tr> </table> The IRR of the project will be: (a) 15% (b) 25% (c) 400% (d) Both (b) & (c)	Year	0	1	2	Cash stream	-160000	1000000	-1000000	5	CO2								
Year	0	1	2																
Cash stream	-160000	1000000	-1000000																
Q 1.3	XYZ limited is evaluating a project that has the following cash flow stream associated with it. Calculate MIRR: <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Year</td> <td align="center">0</td> <td align="center">1</td> <td align="center">2</td> <td align="center">3</td> <td align="center">4</td> <td align="center">5</td> <td align="center">6</td> </tr> <tr> <td>Cash Flow</td> <td align="center">-120</td> <td align="center">-80</td> <td align="center">20</td> <td align="center">60</td> <td align="center">80</td> <td align="center">100</td> <td align="center">120</td> </tr> </table> (a) 0.12 (b) 0.19 (c) 0.16 (d) None of the above	Year	0	1	2	3	4	5	6	Cash Flow	-120	-80	20	60	80	100	120	5	CO2
Year	0	1	2	3	4	5	6												
Cash Flow	-120	-80	20	60	80	100	120												
Q 1.4	The time estimate to do the 15 th iteration of an activity is 1 hour. Find out the time necessary to complete the first activity. Given $a = 0.737$ (a) 5.2 hours (b) 7.3 hours (c) 8.0 hours (d) None of them	5	CO3																
Q 1.5	Reduction in project duration is directly proportional to _____ & indirectly proportional to _____	5	CO3																
Q 1.6	Find out: (a) the duration of the critical path in the following network diagram & (b) the duration of slack in the network diagram. <p align="center">(a)----- (b)-----</p>	5	CO3																

SECTION B			
Q 2.1	Define the term Project Appraisal. Name the various types of Appraisal and discuss them in detail.	10	CO2
Q 2.2	Make a comparative report describing the merits and demerits of different project scheduling methods like PERT & CPM.	10	CO3
Q 2.3	Define the term procurement Management and procurement cycle. Also define the project procurement management process.	10	CO4
Q 2.4	Write short notes on the following: (a) Construction Management (b) Total Productivity Vs Partial Productivity	10	CO4
Q 2.5	Explain why cost estimation is such an important component of project planning. Discuss how it links together with the work breakdown structure and the Project schedule. OR Write short notes on the following: (a) Subcontract administration (b) Notice Inviting tender	10	CO3 CO4
SECTION-C			
Q 3	<p>Attempt any one for the following two Case Studies</p> <p style="text-align: center;">Case Study I</p> <p>Project Management in Indian and Japanese Organizations – A comparative case study</p> <p>There is a significant difference in project management in Japanese organizations and Indian organizations. Japanese organizations strictly follow the project schedule and strive to finish the project within the allotted budget and the cost. On the contrary, Indian organizations lack in a holistic planning for a project. Indian organizations prepare a project plan only for the documentation in the tendering process, rather than for the proper execution of the project. Moreover, Indian organizations focus more on minimizing the cost rather than improving the quality of work and the time required for the project. In contrary to Japanese organizations, Indian organizations do not mobilize skilled workers and rely on the local unskilled or semiskilled workers.</p> <p>There are numerous projects that show the relative incompetency of Indian organizations in executing projects, compared to the foreign counterparts. For example, the Delhi Government planned to construct two bridges, namely the ITO Bridge and the Nizamuddin Bridge, across the river Yamuna in Delhi. The Public Work Department (PWD) awarded the contract for ITO bridge to two Indian organizations for Rs. 11 crores each. The project supposed to be completed within 36 months of commencement of work. However, the project took 60 months to be completed. The approach road was not completed by the time the project was opened for the traffic. The project incurred Rs. 30 crores (8 crores more than the allotted budget).</p>	20	CO1

On the other hand, the Nizamuddin Bridge was funded by the Japanese government. The responsibility of executing the project was assigned to the Japanese engineers. The project was supposed to be completed within 28 months. However, the project was completed two months ahead of the schedule and within the allotted budget. The involvement of the Japanese engineers was the main reason for the successful completion of the project within the allotted cost and time.

Generally, the main reason behind the cost overrun of any project is improper planning, wrong estimation of time, and delay in execution. Therefore, an organization should accurately estimate the project duration and estimate the project cost on the basis of the project duration. Traditionally, the government agencies and the state-owned organizations in India awarded the contract of any project to the lowest bidder, regardless of the competency and experience of the organization in handling any project. In many cases, the proposals of many renowned international organizations get rejected. Therefore, it is very common in India that the organizations that have been awarded the project are not able to finish the project in the within the allotted cost and time. Sometimes the cost overrun becomes so large that the project cost becomes more than what an international organization would have demanded for the project. Most of the national highway projects in India exceed the allotted budget for the project.

Most of the times, the Indian contractors are not satisfied by the price the government agrees to pay for a project. On the other hand, the Indian government and the state owned organizations are not satisfied with the calculation of the bidding price by the organizations. Therefore, it becomes very difficult for the government to estimate a fair price for a project.

These different factors undermine the growth and the effectiveness of the Indian organizations in managing and executing projects. However, Indian organizations need to learn and adopt best global project management practices.

Answer the following questions based on case

- (a) Discuss the basic reasons behind cost overruns in projects in Indian organizations in context of case study.
- (b) Discuss the basic differences between project management in Japanese organizations and Indian organizations in context of case study.

OR

Case Study II

Dhanalaxmi Constructions

Dhanalaxmi Constructions is an East India-based real estate organization, owned by the Ambition Group. Since its foundation in 2002, the organization is engaged in the construction of residential properties and commercial complexes. It has experienced almost 70-75% sales growth every year from 2002 to 2007. The customer base also has grown at the rate of 35-45% every year in the same period. The high growth rate can be attributed to the aggressive marketing strategy of the organization.

In 2008, the organization wanted to construct a 600-acre township by the name of New Palli in the outskirts of Kolkata. Mr. Kunal was appointed as a project manager. Dhanalaxmi

Constructions also procured approval from the concerned authorities in August 2008 for the project. The construction process started in October 2008. The organization aggressively advertised the new township in different media, such as newspaper, television, and hoardings. It received a tremendous response from the customer as 50% of the plots were booked within first two months of the project.

Huge number of booking of flats in advance resulted in high cash inflow in the organization. Dhanalaxmi started exploring different other projects for investing the idle cash in hand. It started studying different sectors, such as power generation, Information Technology (IT), and medical devices for any profitable venture. After consulting with different industry experts, the organization decided to undertake an IT project. IT seemed to be very profitable venture because the boom in the software industry, even though the organization did not have any expertise in the industry. In February 2009, Dhanalaxmi Constructions started its new IT venture by the name of Paradise InfoTech Pvt. Ltd.

This new software organization decided to develop a website that would provide information about different local organizations. As a result, the organization developed a website called www.localinfo.com. The organization hired 35 management graduates for collecting information about all organizations in Kolkata. The website also started providing different e-commerce services, including online payment. Most of the revenue was expected to come from online advertisement. Therefore, the organization hired salesforce for selling advertisement space in the website. It also started charging for online transactions made through the website.

However, Paradise InfoTech was not able to collect enough advertising revenue from the website for reaching the breakeven point of the venture. It became a loss making business for the organization. In September 2009, Dhanalaxmi Constructions sold its IT venture to XYZ InfoCom. The failure of the IT business had a very serious effect on the financial health of the organization. Most of the revenue earned from the advanced booking of New Palli township was spent in developing and promoting the website. The organization did not have enough capital to continue the township project. As a result, it had to stop the construction process of the New Palli project in February 2010.

Answer the following questions based on case

- (a) In your opinion, mention what went wrong with Dhanalaxmi Construction.
- (b) Explain the various factors organization should have considered before starting a new project.
- (c) Explain how could Dhanalaxmi Constructions generate new project ideas.