SPRING END SEMESTER EXAMINATION-2024
6th Semester B.Tech

SOFTWARE PROJECT MANAGEMENT
IT 3032
(For 2021 & Previous Admitted Batches)

Time: 2 Hours 30 Minutes   Full Marks: 50

Answer any FIVE questions.
Question paper consists of two SECTIONS i.e. A and B.
Section A is compulsory.
Attempt any Four question from Sections B.
The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable
and <u>all parts of a question should be answered at one place only</u>.

SECTION-A

1.   Answer the following questions: [1 × 10]

(a)   How project objectives differ from business objectives and show an example for each.

(b)   Recall whether an Operating system on a computer be an Information system or an Embedded system? Justify your answer.

(c)   State the difference between product and process metrics with example for each.

(d)   Which SDLC model are preferred in the following scenarios:

❖   A project where the client's requirements are not clear.

❖   A project where risk assessment is significant and the budgets are tight.

(e) The size of an organic type software product is estimated to be 32,000 lines of source code. If the mean salary of a software developer is Rs.50,000 per month then find the staff cost to develop the product.

(f) Define with an example the relevance of the tolerance line in probability impact matrix.

(g) List out any four reasons for a project facing termination.

(h) "An activity network should not contain dangles." Justify the statement with an example.

(i) How free float differs from interfering float.

(j) When is the entry conditions for one activity be different from the exit conditions for another activity that immediately precedes it?

SECTION-B

2. (a) Discuss various activities of project management with an example for each. [5]

   (b) An ICT project is to replace locally held paper-based records with a centrally organized database. Staff in a large number of offices that are geographically dispersed need training and will then have to use the new ICT system to set up the backlog of manual records on the new database. The system cannot be properly operational until the last record has been transferred. The new system will only be successful if new transactions can be processed within certain time cycles. [5]

   Identify the data that you would collect to ensure that during execution of the project things were going to plan.

3. (a) Outline the main obstacles to group decision making. **[5]**
Also discuss the measures taken to minimize the limitations of group decision making.

(b) Compare and Contrast the functional format and project format of team building strategy. List out advantages and disadvantages for both. **[5]**

4. (a) The initial investment and year-wise cash flow for four years on a project is given below. **[5]**

Year	Project cash flow
0	-100,000
1	20,000
2	30,000
3	30,000
4	55,000

Determine the following:

i).Return on Investment

ii).Net Present Value with a discount rate of 10%.

(b) Discuss the relevance and application of SEI CMM model in software development. How it differs from ISO 9000. **[5]**

5. (a) What do you mean by risk? Explain the Boehm's top 10 development risks. **[5]**

(b) Contract Management has been one of the most important activity in Software Project Management. Demonstrate different situations where each of the contract type is found to be suitable. Justify the same. **[5]**

6. (a) A popular way to overcome the objections in partial completion reporting is by avoiding asking for estimated completion dates, but to ask for the team members' estimates of the likelihood of meeting the planned target date. RAG method is an approach to do it. [5]

Discuss the steps of this method with an example.

(b) Determine Estimate At Completion (EAC) and Variance At Completion (VAC) if both SPI and CPI influence the project work when given variables are: [5]

Budget At Completion (BAC) = $22,000

Earned Value (EV) = $13,000

Planned Value (PV) = $14,000

Actual Cost (AC) = $15,000

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