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**B.E/ B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC 2011**

**COMPUTER SCIENCE & ENGINEERING BRANCH**

**SEVENTH SEMESTER**

**CS 9042 - SOFTWARE PROJECT MANAGEMENT**

**(Regulation 2008)**

**Time: 3 hrs**

**Max. Marks: 100**

**Answer ALL Questions**

**Part - A (10 x 2 = 20 marks)**

1. How does an Information Technology project differ from other projects?
2. What do you understand by project triangle?
3. Mention the steps involved in cost benefit analysis?
4. What are the aspects to be considered in technical assessment of the project?
5. Consider the details in the following table. Evaluate the risk exposure and prioritize the risk according to Risk Exposure. Justify your answer.

Risk	Probability	Loss in Rs
Overall response time too slow	0.20	4000
Web Server fails	0.25	5000
User ID's can be viewed	0.10	50,000

6. Define F-F and S-F dependency with an example.
7. What are the various ways in collecting the project data?
8. What are the advantages and disadvantages of 'Time and material contract'?
9. List some of the tests conducted on eligible candidates to find out their suitability for the job?
10. What are the five factors of personality? Give examples.

**Part - B (5 x 16 = 80 marks)**

11. a. XYZ Ltd. Planning a project to introduce a new product, has listed the following necessary activities:

Activity	Preceding Activity	Expected Time (Week)
A	-	6
B	-	3
C	A	5
D	A	4
E	A	3
F	C	3
G	D	5

H	B,D,E	5
I	H	2
J	I,G,F	3

- (i) Draw the network for the project and determine the independent paths, critical path and its duration. (4+2+2)
- (ii) If the start of activity B is delayed by 3 weeks, activity E by 2 weeks and activity G by 2 weeks, how is the total time for the project affected? (4)
- b. Schedule slippage is a very common form of risk that almost every project manager has to deal with. Suppose you are a project manager of a medium sized project. Explain how you would manage the risk of schedule slippage. (4)
12. a. i. Explain in detail the activities covered by the software project management. (8)
- ii. Develop a "web based appointment management system for hospitals" deliverable in April 2012 as per ISO 9001 standards within the budget of Rs 45 lakhs, for the above examples develop the objectives in terms of SMART. (8)
- (or)
- b) i. What are the procedures and standards to be frozen at the initial stage of the project? (4)
- ii. Draw the organization chart for a typical software project. (4)
- iii. Explain in detail the steps involved in MICRO level planning. (8)
13. a. i. Consider the cash flow statement of the two proposals for a period of five years. Find which project gives more profit? Calculate the Return on Investment for the below cash flow statement. (8)

Year	Project1(Rs)	Project2 (Rs)
Initial investment	100,000	100,000
1	30,000	20,000
2	30,000	20,000
3	30,000	20,000
4	30,000	20,000
5	30,000	75,000

- ii. Define the terms Payback period, Net present value and Internal Rate of Return (IRR). Explain the advantages and disadvantages of IRR technique. (4+4)
- (or)
- b. Consider a product sale depends on market situation as given below (16)
- The market looking really bright with probability of 0.2
  - The market situation remains average with the probability of 0.5
  - The market becoming dull has the probability of 0.3
- The customer's willing to buy our product during each of the above decision scenario also have some probability factor, which is described below.
- If market is bright the probability of a revenue generation of Rs 30 lakhs is 0.3 and Rs 50 lakhs is 0.7.

- If market is average the probability of a revenue generation of Rs 5 lakhs is 0.8 and Rs 10 lakhs is 0.2.
- If market is dull the probability of a revenue generation of Rs 15 lakhs is 0.9 and Rs 20 lakhs is 0.1.

For the given scenario above develop the decision tree and calculate the Risk Adjusted Revenue.

14. a. i. Explain the various techniques to present the collected data in project progress report in an effective way. (8)
- ii. Consider a project which has an earned value of Rs 5000, planned value of Rs 4000 and Actual-cost of Rs 3000. Calculate Cost Variance (CV), Schedule Variance (SV), Cost Performance Index (CPI) and Schedule Performance Index (SPI). (8)

(or)

- b. Consider the project which consists of design, coding and implementation phase and our preferred supplier has quoted the following prices as shown in table below

FP count	Design cost/FP (Rs)	Coding cost/FP (Rs)	Implementation Cost /FP (Rs)	Support Cost /FP /year (Rs)
Up to 1500	10,000	7000	18,000	5000
1500-2000	12,000	8000	20,000	7000
2000-3000	15,000	10,000	22,000	10,000
3000-4000	18,000	12,000	25,000	13,000
4000-5000	20,000	15,000	30,000	15,000

Calculate the cost of design, cost of coding, cost of implementation at site, cost of support for one year and the total budgeted cost if the initial estimate of Function Point's is 3800. (16)

15. a. i. Explain in detail the different motivation models with necessary examples. (10)
- ii. List some competencies of an IT project manager to make the project success. (6)

(or)

- b. i. Explain in detail the different leadership styles. (10)
- ii. What steps can be taken by an IT organization to ensure good health for its IT employees? (6)