SPRING END SEMESTER EXAMINATION-2015

8th Semester B.Tech

SOFTWARE PROJECT MAANGEMENT (IT-813)

(Regular-2011 & Back of Previous Admitted Batches)

Full Marks: 60 **Time: 3 Hours**

Answer any SIX questions including Question No.1 which is compulsory.

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable and all parts of a question should be answered at one place only.

1. Answer all the questions. [2 × 10

(a) What are the essential items that must be planned before carrying out a method or methodology?

(b) What are the factors to be considered in handling business risk?

(c) List the products created by the step wise project planning process.

(d) Under which conditions, an appropriate process model is selected?

(e) What is estimation by analogy? Project B has 7 inputs and 15 outputs. What would be the Euclidean distance between this project and the target new project A is being considered having 8 inputs and 17 outputs? Is project B a better analogy with target than project A?

(f) What is Network planning models?

(g) What are the categories of risks and the framework to deal with risks?

(h) From the manager's prospective, how is the work review a important mechanism for project monitoring.

(i) A team is formed simply throwing people together. What will be the outcome of the team? What should be considerations for a proper team development?

(j) Suppose as the president of a company, you have the choice to either go for ISO 9000 based quality model or SEI CMM based model, which one would you prefer? Give the reasons for your choice.

2. (a) Discuss about PRINCE2. What is its importance in project management? [4

(b) Describe the use of decision tree with a suitable example. [4

3. (a) Explain a Gantt chart to the students on a problem of carrying the tasks by different staff. [4

(b) Suppose you are the project manager of a software project. Explain why it would not be proper to calculate the number of developers required for the project as a simple division of the effort estimate (in person-months) by the nominal duration estimate (in months). [4

4. Using the information in Table 1, assuming that the project team will work a standard working week (5 working days in 1 week) and that all tasks will start as soon as possible: [4+2+2

Task	Description	Duration (Working days)	Predecessor/s
A	Requirement Analysis	5	
B	System design	15	A
C	Programming	25	B
D	Telecoms	15	B
E	Hardware Installation	30	B
F	Integration	10	C,D
G	System Testing	10	E,F
H	Training/support	5	G
I	Handover and Go-Live	5	H

(a) Determine the critical path of the project.

(b) Calculate the planned duration of the project in weeks.

(c) Identify any non-critical tasks and the float (free slack) on each.

5. (a) Explain the advantages of a functional organization over a project organization. Also explain why software development houses prefer to use project organization over functional organization. [4

(b) The following is an excerpt from a report generated from a help-desk logging system. [4

Module	Date fault reported	Fault corrected	Effort (hours)
AA247	1.4.2014	2.4.2014	5
AA247	10.4.2014	5.5.2014	4
AA247	12.4.2014	5.5.2014	3
AA247	6.5.2014	7.5.2014	2

Assess the maintainability of module AA247 from the point of view of:

(i) The user management.

(ii) The developer management.

6. (a) Discuss in detail the Taylor's model, Maslow's hierarchical needs and Herzberg's two-factor theory responsible for employee motivation. [4

(b) Discuss on types of contracts with their advantages and disadvantages of each one. [4

7. (a) Three different mental obstacles to good decision making were identified in the text: faulty heuristics, escalation of commitment and information overload. What steps do you think can be taken to reduce the danger of each of these? [4

(b) What is the difference between process and product metrices? Give two examples of each. How does computation of process and product metrices help in developing quality products? [4

8. (a) When we start to produce an activity plan, what are the relevant assumptions one has to consider? [4

(b) Consider a software development project with 7 tasks T1-T7. The estimated duration of these 7 tasks in weeks are 3,2,3,5,2,4 and 5 respectively. T2 and T4 can start when T1 is complete. T3 can start when T2 is complete. T5, T6 and T7 can start when both T3 and T4 are complete. If developer A is available from the start of the project developer B and C become available after three weeks of the start of the project. Schedule the project and show your results in the form of a bar chart and resource histogram. [4

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