



8th sem (Regular & Back)  
SPM IT-813  
(CSE, IT)

## SPRING END SEMESTER EXAMINATION-2014

8<sup>th</sup> Semester B.Tech

### SOFTWARE PROJECT MANAGEMENT IT-813

(Regular-2010 & Back of Previous 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. Attempt all parts: [2 × 10]
  - a) Explain the work breakdown structure(WBS) in project planning.
  - b) Calculate the risk exposure value of case given below and how to solve that?  
Let a project depends on a data centre vulnerable to fire have a probability of catching fire is 1 in 1500. The new computer configuration cost could be estimated is Rs.500,000.
  - c) What are the different categories of resources?
  - d) Draw the project control cycle.
  - e) What are the different types of contract for acquiring software from external supplier?
  - f) Explain Herzberg's theory.
  - g) What are the basic stages for development of a team?
  - h) What is the minimum detail should be drafted to specify the quality of a software product?

(1)

i) What is SEI-CMM?

j) Write down the stages in contract placement.

2. a) Draw a precedence network based on the following table below. Calculate the completion time of the project. [4]

Job	Activity	Duration (weeks)	Precedents
A	Hardware selection	6	
B	System configuration	4	
C	Install hardware	3	A
D	Data migration	4	B
E	Draft office procedure	3	B
F	Recruit staff	10	
G	User training	3	E, F
H	Install and test system	2	C, D

b) What is a float and how is it useful in a CPM network? [4]

3. a) PERT network was developed to take account of uncertainties surrounding estimates of task duration. Explain how the time estimate is determined. [4]

b) Why resource crashing is necessary in executing a project? [4]

4. a) Draw a Gantt chart of the following activities. [4]

Activity	Description	Precedence	Duration (Week)
A	Hardware selection	-	6
B	Software configuration	-	4
C	Install hardware	A	3
D	Data migration	B	4
E	Draft office procedures	B	3
F	Recruit staff	-	10
G	User training	E, F	3
H	Install and test	C, D	2

- b) Describe the fixed price per unit delivered contracts while a management negotiation is carried out. What are its advantages and disadvantages? [4]

5. a) A system to be designed and implemented is counted as comprising 3,200 FPs. What would be the total charge according to the schedule given in table below? [4]

Function point (FP) Count	Function design cost /FP	Implementation cost/FP	Total cost/FP
Up to 2,000	\$242	\$725	\$967
2,001 – 2,500	\$255	\$764	\$1,019
2,501 – 3,000	\$265	\$793	\$1,058
3,001 – 3,500	\$274	\$820	\$1,094
3,501 – 4,000	\$284	\$850	\$1,134

- b) Describe Maslow's hierarchical, needs for motivation used in an organisation. How it is different from Taylors financial motivation? [4]

6. a) Describe in detail about the department structure of software development based on functional format and project format and also find few differences between them. [4]

- b) Explain the co-ordination dependencies in detail. [4]

7. a) Is it at all possible to develop highly reliable software using validation technique alone? If so, can we say that whenever thorough validation is carried out, verification is redundant? [4]

- b) What are the different types of stages present in contract placement? Describe each one in detail. [4]

8. Write short notes of any two:

[4 × 2]

- a) Principles of ISO 9001:2000
- b) What is inspection, quality control and quality assurance used in a process? Discuss in details.
- c) Describe a water fall model and explain the advantages and disadvantages of water fall model.

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