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B.E/B.Tech. DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2012

COMPUTER SCIENCE AND ENGINEERING

SEVENTH SEMESTER

CS9042 - SOFTWARE PROJECT MANAGEMENT

(REGULATION 2009)

①

Time: 3 Hours

Max Marks: 100

Answer ALL Questions

Part – A (10 X 2 = 20 Marks)

1. Distinguish between software product development and outsourced projects?
2. Identify the key aspects in which the modern software project management differs from those of traditional software project management.
3. List the product created by the Step Wise planning process.
4. What products must exist before the activity test program can take place?
5. If you were asked as an expert to provide an estimate of the effort needed to make certain changes to an existing piece of software, what information would you like to have to hand to assist you in making that estimate?
6. List few categories of risk and give one example each.
7. Classify the types of contracts.
8. Mention the advantages of a functional organization over a project organization.
9. As a project manager, identify the characteristics that you would look for in software developer while trying to select personnel for your team.
10. How Stress is created in software development environment?

Part-B (5x16=80 Marks)

11. (a). A software house has developed a customized order processing system for a client. Assume you are an employee of the software house that has been asked to organize a training course for the end-users of the system. At present, a user handbook has been produced, but no specific training material. A plan is now needed for the project which

will set up the delivery of the training courses. The project can be assumed to have been completed when the first training course starts. Among the things that will need to be considered are the following:

- Training materials will need to be designed and created;
- A Time table will need to be drafted and agreed;
- Date(s) for the course will need be arranged;
- The people attending the course will need to be identified and notified;
- Rooms and computer facilities for the course will need to be provided.

Questions:

- i. Identify the main stakeholders of this project. (3)
- ii. Draw up the objectives for this project. (3)
- iii. For the objectives, identify the measures of effectiveness. (5)
- iv. For the objectives, write the sub-objectives or goals and the stakeholders who will be responsible for this achievement. (5)

12. (a) i. Explain why discounted cash flow techniques provide better criteria for project selection than net profit or return on investment. (10)
- ii. Identify the pros and cons of using pair programming over programmers working alone. Based on analysis, point out if there are any situations where the pair programming technique may not be suitable. (6)

(Or)

12. (b) A software package is to be designed and built to assist in software cost estimation. It will input certain parameters and produce initial cost estimates to be used at bidding time.
- i. It has been suggested that a software prototype would be of value in these circumstances. Explain why this might be. (6)
 - ii. Discuss how such prototyping could be controlled to ensure that it is conducted in an orderly and effective way and within a specified time span. (10)
13. (a) Using Activity-on-node network diagram find critical path and the total time required to complete the project when no delay occurs for the below activity list. (16)

Task	Predecessor Tasks	Time (weeks)
A	-	5
B	A	7
C	B	6
D	A	5
E	D	10
F	B	15
G	B	8
H	G	8
I	C	4
J	G	4
K	E,F	5
L	I,H	3

(Or)

13. (b) Suppose you are the 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 normal duration estimate (in months).
14. (a) Suppose you are the project manager of a large software development project. List three common types of risks that your project might suffer. Point out the main steps that you would follow to effectively manage risks in your project.

(Or)

14. (b) If you have access to project planning software, investigate the extent to which it offers support for earned value analysis. If it does not do so directly, investigate ways in which it would help you to generate a baseline budget and track the earned value.
15. (a) Mention the baseline in the context of software configuration management? How do baselines get updated to form new baselines? (5+12)

(Or)

15. (b) Do you agree with the following statement: "Few, if any, organization in the real world is purely functional, project or mixture in nature". Justify your answer.