Printed Pages : 3 EIT-601

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2526 Roll No. | | | | | | | | | | |

B.Tech.

(SEMESTER-VI) THEORY EXAMINATION, 2012-13

SOFTWARE PROJECT MANAGEMENT

Time : 3 Hours] *[Total Marks : 100*

SECTION – A

1. Attempt **all** parts. **10 × 2 = 20**

(a) How are software project management issues different for in-House project and work on hire project ?

(b) Why is it important to evaluate a project before it is taken up ?

(c) Explain the reasons behind the following assertion : "Adding more manpower to a late project makes it later".

(d) Who are the stakeholders of a software project ? Name them.

(e) Differentiate between verification and validation.

(f) What is the objective of earned value analysis ?

(g) Why quality standards are needed ?

(h) Can a program be correct and still do not exhibit good quality ?

(i) Distinguish between variant and version during configuration management of a software product.

(j) What are integrated CASE tools ?

SECTION – B

2. Attempt any **three** parts. **10 × 3 = 30**

(a) Why is it necessary to plan software projects ? What are the broad activities that encompass software project planning ? List the steps involved in detailed planning.

(b) What is critical path and why it is important to identify critical path in software development cycle ? How a critical path can be identified in a small network ?

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(c) Differentiate between Cost Performance Index (CPI), Schedule Performance Index (SPI). For what purpose these indices are used ? Suppose you have a budgeted cost of a project at ₹ 9,00,000. The project is to be completed in 9 months. After a month, you have completed 10% of the project at a total expense of ₹ 1,00,000. The planned completion should have been 15%. Identify the status of project by computing the CPI index and SPI index.

(d) State McCall's software quality factors. How is process quality management different from product quality management ? What techniques would you employ to enhance software quality ?

(e) What is software baseline and its significance ? Describe various baselines.

SECTION – C

Attempt **all** parts. **10 × 5 = 50**

3. Attempt any **two** parts :

(a) How expert judgements could be made use for the estimation of software efforts ?

(b) Explain the important issues that a project manager needs to document in a Software Project Management Plan (SPMP).

(c) What is sliding window planning ? What kinds of projects are suitable for sliding window planning ?

4. Attempt any **two** parts :

(a) The project has a very tight schedule. Suggest two ways in which productivity could be improved to help bring this project on schedule. Discuss how each of the methods you describe actually improves productivity.

(b) What is work breakdown structure ? What is its use ? Illustrate by a simple example.

(c) Justify the following statement : "Project managers normally use PERT charts for doing resource allocation, whereas GANTT charts are used for monitoring and controlling the progress of the project".

5. Attempt any **two** parts :

(a) What purpose does "walkthrough" serve ? How is this accomplished ?

(b) Using the earned value analysis, show graphically the cost and the schedule variances of a project that is ahead of schedule but is spending correctly.

(c) What is review in the Project Management ? How technical reviews are conducted during software development ?

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6. Attempt any **two** parts :

(a) What are stress and volume testing ? What is the difference between these two types of testing ? How are they performed ? Give some examples of stress and volume testing.

(b) Which types of activities are performed in Software Quality Assurance (SQA) ? List SQA related activities.

(c) What are the five levels of Capability Maturity Model (CMM) ? Is it possible for an organization to achieve a higher level of CMM without achieving a lower one ?

7. Attempt any **two** parts :

(a) What are the different risk assessment activities ? Discuss any one of these.

(b) Schedule slippage is a very common form of risk that almost every project manager has to encounter. If you are project manager of a medium-sized project, how would you manage this risk ?

(c) What do you mean by Software Configuration Management (SCM) ? Why is it necessary ?