

SECTION-B

UNIT-I

2. Define the terms 'Software' and 'Software Engineering'. Lucidly explain the evolving role of software in the modern world.
3. What is Waterfall model of software development? What are the various phases in Waterfall model? Compare Waterfall model with Prototyping.
4. What are Software Metrics? Illustrate the role of metrics and measurement in software project management.
5. Risk management is the area that tries to ensure that the impact of risk on cost, quality and schedule be minimal. Justify the statement.

UNIT-II

6. What do you mean by software quality? Write about the software quality factors and attributes. What is software quality assurance?
7. What are the various software quality standards? Elaborate in detail the CMM model.

UNIT-IV

8. What is Component-based Software Engineering? What are the major benefits of CBSE? What are components and component models? Discuss the elements of a component model and CBSE processes.
9. What is Software Process Improvement (SPI)? What are the elements of SPI framework? Discuss the SPI lifecycle in detail.

SECTION-C

10. Read the case study below and answer the question that follows :

During the last five years, Prime Federal Bank (PFB) has made some big strides towards growth in South Asia. The holding company of the bank has been actively involved in purchasing small banks. This expansion and the resulting increase of operations had been attended by considerable growth in numbers of employees and in the complexity of the organisational structure. In five years, the staff of the bank has increased by 35 percent, and total assets have grown by 70 percent. PFB management decided to improve their

systems to accommodate the new growth of the bank. The key element in ensuring user involvement in the new system is the conducting of quality reviews. In the normal system cycles at PFB, there are ten quality reviews, seven of which are participated in jointly by users and data processing personnel, and three of which are technical reviews by data processing personnel only. An important side benefit of this review process is that users of a new system are forced to become involved in and are permitted to make a contribution to the systems design. Each of the quality review points coincides with the end of a sub-phase in the project life cycle. The review must be held at the completion of one sub-phase to obtain authorisation to begin work on the tasks of the next sub-phase of the project. All tasks and subtasks assigned to members of the project team should end in some 'deliverable' for the project documentation. The first step in conducting a quality review is to assemble the documentation produced during the sub-phase for distribution to the Quality Review Board. The Quality Review Board consists of between two and eight people who are appointed by the project manager with the approval of the project sponsor and the general manager of systems and programming. The minutes of the quality review meeting are written either to express 'concurrence' with the subsystem quality or to recommend changes to the system that must be completed before the next sub-phase can be started. By this process the system is fine-tuned to the requirements of the members of the review group at the end of each sub-phase in the system.

To summarize, the quality review evaluates the quality of project sub-phase results, including design adequacy and proof of accomplishment in meeting project objectives. The review board authorises work to progress based on their detailed knowledge that all required tasks and subtasks of each sub-phase have been successfully completed and documented.

Question :

The Prime Federal Bank (PFB) is doing everything it can to ensure quality in their projects. This means quality is an important element of Project Management. Discuss the concept of Project quality in Project Management and why Prime Federal Bank (PFB) would consider it as an important aspect of their projects.

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