

B.Tech. (CSE)**Software Engineering – BTCS 603****Time: 3 Hours****M. Marks: 60**

NOTE: Section A is compulsory. Attempt any four questions from Section B. Attempt any two questions from Section C.

Section A

1. Answer the following in brief: 2 × 10 = 20
- a) Throw-away Prototyping
 - b) Evolution of software engineering
 - c) Modularity
 - d) Code Review
 - e) Verification and Validation
 - f) Static and Dynamic Analysis
 - g) GANTT Charts
 - h) Cost-time Relations
 - i) Non-functional Requirements
 - j) Issues in Software Design

Section B

- 2. Why do we need to carry out feasibility study for any project? What type(s) of feasibility is more important? (05)
- 3. Why do requirements gathering difficult? What types of tools are available for requirements gathering? (05)
- 4. What features must be considered in designing user interface? Why is it so important? (05)
- 5. How will you define design for testability? How good design helps in software testing? (05)
- 6. What is cost estimation in software? What types of cost estimation model are available in software engineering? (05)

Section C

7. Consider the following narrative description; draw the Data Flow Diagrams for this description starting from zero level. If missing, consider suitable data to complete the description.

The purpose of the TEXTBOOK INVENTORY SYSTEM at a campus bookstore is to supply textbooks to students for classes at a local university. The university's academic departments submit initial data about courses, instructors, textbooks and projected enrollments to the bookstore on a TEXTBOOK MASTER LIST. The bookstore generates a FORM 17; PURCHASE ORDER, which is sent to publishing companies supplying textbooks. Book orders arrive at the bookstore accompanied by a PACKING SLIP, which is checked and verified by the receiving department. Students fill out a BOOK REQUEST FORM that includes course information. When they pay for their books the students are given a paper tape CASE REGISTER SALES RECEIPT. (10)

- 8. What is black-box testing? Explain various techniques used in black-box testing with the help of suitable example. (10)
- 9. Explain the difference between Six Sigma, ISO and SEI-CMMI approach for software quality. (10)

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