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**J-3596[S-1452]**

**[2037]**

**B.Sc. (BI) (Semester - 6<sup>th</sup>)**

**SOFTWARE ENGINEERING (B.Sc. (BI) - 604)**

**Time : 03 Hours**

**Maximum Marks : 75**

**Instruction to Candidates:**

- 1) Section - A is **compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

**Section - A**

**Q1)**

**(15 × 2 = 30)**

- a) What is software engineering?
- b) Is it possible to estimate software size before coding?
- c) How is function point metric advantageous over LOC metric?
- d) What is risk? .
- e) What problems are likely to arise if a module has low cohesion?
- f) What document should be produced on completion of the design phase?
- g) Explain the usefulness of decision table during testing.
- h) What is the difference between white and black box testing?
- i) Differentiate integration testing and system testing.
- j) Is unit testing possible in all circumstances?
- k) What is the importance of slack time?
- l) What is the advantage of system diagram?
- m) Describe task maintenance model.
- n) Discuss various aspects of ripple effect and how it affects the stability of program.
- o) What is software?

**P.T.O.**

## Section - B

(9 × 5 = 45)

- Q2)** What are the characteristics to be considered for the selection of life cycle model?
- Q3)** List the advantages and disadvantages of involving s/w engineer throughout the s/w development planning process.
- Q4)** Explain the Putnam resource allocation model. What are the limitations of this model?
- Q5)** Discuss the objectives of software design. How do we transfer an informal design to detailed design?
- Q6)** Explain module coupling and its different types.
- Q7)** Discuss the limitations of testing. Why do we say that complete testing is impossible?
- Q8)** Discuss the various steps of data flow testing.
- Q9)** List some of the problems that could result from adding debugging statements to code. Discuss the possible solution of these problems.
- Q10)** What are the linkages between data flow and E-R diagrams?
- Q11)** What is software requirement specification? List out various software requirement specification standards.
- Q12)** Explain the steps of software maintenance with the help of diagram.
- Q13)** List out system documentation and also explain their purpose.

