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BTCSE 301 (Software Engineering)

Time: 2.5 hr

M.M 60

Section (A)

4x5=20

Attempt any FOUR questions.

S.No.	Question	Marks	CO	BL
1	Explain the importance of Software Engineering in designing Software.	5	CO2	L1
2	Define Quality. Discuss the Quality factors of Software in detail.	5	CO1	L1
3	Write short notes on the following a) Cohesion b) Coupling	5	CO2	L2
4	Differentiate the following: a) Software and Programme b) Bottom up and Top down Software design	5	CO2	L3
5	Discuss the Software and Hardware reliability in detail?	5	CO1	L1
6	Discuss the following maintenance strategies: a) Corrective Maintenance b) Perfective Maintenance	5	CO3	L5

Section B

4x10=40

Attempt any FOUR questions.

S.No.	Question	Marks	CO	BL
1	Discuss the following models for Software Engineering. a) Spiral Model b) Waterfall Model	10	CO1	L4
2	Discuss the significance and use of Requirements engineering? Consider the Problem of Railway Reservation system and design the following: a) Problem Statement b) DFD	10	CO1	L1

3	Discuss the term Modularity with a suitable example in terms of Software Engineering? Write short note on any one of the following a) CMM or b) Iterative Enhancement Model	10	CO2	L3
4	Discuss the Journey of Software models. What type of Challenges and issues were faced? How they have been overcome?	10	CO1	L2
5	Discuss the following terms with respect to Software Testing a) Acceptance Testing c) Black box testing b) Test Cases d) White box testing	10	CO4	L3
6	Compute the Function Point of the project by considering the project with the following parameters:	10	CO3	L6

- 1) External inputs: 10 with low complexity, 10 with high complexity
- 2) External Outputs: 10 with average complexity, 10 with low complexity
- 3) External Inquiries: 22 with high complexity
- 4) Internal logical files: 20 with low complexity, 10 with high complexity
- 5) External Interface files: 15 with low complexity, 10 with high complexity

In addition to this the system requires

- a) Master files to be updated always
- b) Incidental distributed Processing functions
- c) High Security
- d) Moderate Maintenance

Other CAF are treated as average.

Functional units	Low	Avg	High
EI	3	4	6
EO	4	5	7
EQ	3	4	6
ILF	7	10	15
EIF	5	7	10

Functional Units with Weighing factors

BLOOMS TAXANOMY LEVELS (BL)

1-REMEMBERING, 2-UNDERSTANDING, 3-APPLYING, 4-ANALYSING,

5-EVALUATING, 6-CREATING