**2023/TDC(CBCS)/EVEN/SEM/
BVOCGE—403T/384**

TDC (CBCS) Even Semester Exam., 2023

B.VOC (Information Technology)

(4th Semester)

Course No. : BVOCGE—403T

(Software Engineering)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer *any* **five** questions

1. *(a)* Define software engineering. Briefly explain the software development life cycle model. 8

    (b) Write down the comparison of different models of software engineering. 6

2. *(a)* Briefly explain the four stages of software project management process. 8

    (b) Write a short note on time boxing model. 6

(Turn Over)

(2)

3. *(a)* Briefly explain the decision table. Write down the importance of decision table. 8

(b) Define the following : 6

    (i) Transform flow

    (ii) Transaction flow

4. *(a)* Explain decision tree with example. 8

(b) Write short notes on the following : 6

    (i) DFD

    (ii) ERD

5. Define object-oriented design. What are the three key attributes that govern the quality of an object-oriented design? Explain. 14

6. *(a)* Explain the following with example : 8

    (i) Class diagram in UML

    (ii) Sequence diagram in UML

(b) Briefly explain the basic construct of PDL. 6

7. Explain the following techniques that are used to select the test cases : 4+4+4+2=14

(a) Equivalence-class partitioning

(b) Boundary value analysis

(c) Cause-effect graphing

(d) Pairwise testing

(3)

8. *(a)* Distinguish among error, fault and failure. 6

(b) Write a short note on test oracle. 3

(c) Explain the levels of testing w.r.t. software engineering. 5

9. *(a)* Distinguish between the following : 6×2=12

    (i) Quality control and Quality assurance

    (ii) ISO 9000 quality standards and ISO 9001 standards

(b) Briefly explain software safety. 2

10. Define Software Configuration Management (SCM). What are the five tasks associated with the SCM? Explain. 14

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