

**2024/TDC (CBCS)/EVEN/SEM/
BVOCGEC-403T/402**

TDC (CBCS) Even Semester Exam., 2024

**Bachelor of Vocational Course
(Information Technology)**

(4th Semester)

Course No. : BVOCGEC-403T

(Software Engineering)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

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

**Answer five questions, taking one
from each Unit**

UNIT—I

1. (a) What do you mean by Software Requirement Specification (SRS)? What are the main components of SRS document? Explain. 4+6=10
- (b) Write a short note on phototyping model. 4

(2)

2. (a) What do you mean by software engineering? Briefly explain the three phases of software engineering. 8
- (b) Briefly explain the waterfall model. Write down the advantages and disadvantages of waterfall model. 6

UNIT—II

3. (a) Explain top-down and bottom-up strategies with respect to software design. 6
- (b) What do you mean by function-oriented design? What are the principles associated with design of the software? 8
4. (a) Write short notes on the following : 8
- (i) Abstraction
 - (ii) Modularity
 - (iii) Cohesion
 - (iv) Coupling
- (b) Briefly explain structure chart with example. 6

24J/1005

(Continued)

(3)

UNIT—III

5. (a) Define object-oriented design concepts. 2
- (b) Briefly explain the verification techniques of the following : 12
- (i) Design walkthrough
 - (ii) Critical design review
 - (iii) Consistency checkers
6. (a) Explain the following : 10
- (i) UML
 - (ii) PDL
- (b) Distinguish between algorithmic decomposition and object-oriented decomposition. 4

UNIT—IV

7. (a) Explain different levels of testing that are used in the testing process. 8
- (b) Briefly explain the terms 'black-box testing' and 'white-box testing'. 6
8. (a) Describe the concepts of the following structural testing : 12
- (i) Control flow-based testing

24J/1005

(Turn Over)

- (ii) Data flow-based testing
- (iii) Mutation testing
- (b) Define test case specification. 2

UNIT—V

- 9. (a) Define the following : 12
 - (i) Version control
 - (ii) Change control
 - (iii) The SQA plan
- (b) What is the ISO 9001 standard? 2
- 10. (a) What do you mean by quality assurance? What are the activities of SQA? 8
- (b) Briefly explain software reliability. 6
