

B.Sc./4th Sem (H)/COMS/24(CBCS)

2024

4th Semester Examination
COMPUTER SCIENCE (Honours)

Paper : C 9-T

(Software Engineering)

[CBCS]

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

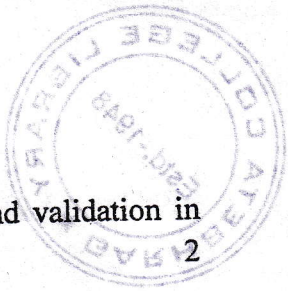
Group - A

Answer any *five* questions : 2×5=10

1. Why Software Engineering is called Layered Technology? 2
2. What is Prototyping Process Model? Under what circumstances is it recommended? 1+1
3. "A high-quality SRS (Software Requirement Specification) is a pre-requisite to a high quality software." — Justify the statement. 2

P.T.O.

(2)

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4. What do you mean by verification and validation in software development? 2
 5. What do you mean by "Phase containment of error"? 2
 6. What are the various metrics for Software Quality? 2
 7. What do you mean by the reactive and the proactive risk strategies? 2
 8. Why we study feasibility before software development? 2

Group - B

Answer any *four* questions : 5×4=20

9. What does the Capability Maturity Model Integration (CMMI) determine? Explain any three capability levels. 2+3
10. State the significance of a Gantt chart for scheduling and monitoring a software project. 5
11. Create a control flow graph and find the cyclomatic complexity of the following code :

```
int factorial (unsigned int N) {
```

```
    int fact = 1, i;
```

```
    for (i = 1; i <= N; i++) {
```

```
        fact *=i;}
```

```
    return fact;}
```

2+3

(3)

12. How does the consequences of a risk in a software project assessed? 5
13. Explain all levels of Coupling in software design. 5
14. Describe the activities of Software Configuration Management. 5

Group - C

Answer any *one* question : 10×1=10

15. With the help of a diagram explain how software can be develop using spiral model? Also mention the advantages and disadvantages of this model. 6+4
 16. Explain how software cost can be estimated using all types of COCOMO in estimating software cost. 10
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