

CSE 208

B.Tech. (IVth SEMESTER) EXAMINATION, 2024-25

BACHELOR OF TECHNOLOGY

(CSE)

Software Engineering

Time : Three Hours]

[Maximum Marks : 75

Note: There are **three** sections (A, B and C) and candidate has to attempt questions from all sections. Marks are indicated against each section.

Section-A

1. Answer all questions : $5 \times 3 = 15$
- (a) What is Software Engineering ? Explain it.
 - (b) Differentiate between cohesion and coupling.
 - (c) Differentiate between Black Box and White Box testing.
 - (d) What is Reverse Engineering ?
 - (e) What is SQA ?

Section-B

Note : Answer all questions of the following : $4 \times 5 = 20$

2. (a) Differentiate between data flow diagram and E-R diagram.

OR

- (b) Define SRS document with an example. Write all the required steps involved in software requirement specification.

3. (a) What is Structural Chart ? What are the symbols used in structural chart ?

OR

(b) What are the design strategies used in software engineering. Explain in details ?

4. (a) What is Testing ? Explain all types of testing used in software engineering.

OR

(b) What is code inspection ? Explain its steps for inspecting a code with its types.

5. (a) What is Maintenance ? Explain the basic features of Preventive, Corrective and Perfective maintenance.

OR

(b) What is software Re-engineering ? What are the steps involved in it ?

Section-C

Note: Answer any two questions of the following : $2 \times 20 = 40$

6. (a) What is FPA ? Consider a software project with following information domain character for the calculation of function point metric EI = 30, EO=60, EIn =23, Number of files = 08, Number of external interfaces = 02, It is given that the complexity weighting factors for EI, EO, EIn, External files, External interfaces are 4,5,4, 10 & 7. It is also given that out of 14 value adjustment factors that

0.01
40
0.01
0.40
0.40
0.64
1.00

influence the development effort. Four factors are not applicable, each of other four factors has value 3, each of remaining factors has value 4. The computed value of the function point metric is.

(b) What is FPA ? What are the metrics involved in it ?

7. (a) What is FTR ? What are the steps involved in this process ?

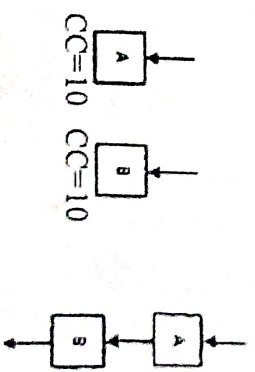
(b) What are dynamic testing and static testing? Explain the types of static testing in detail.

8. (a) What is SDLC by lifecycle ? Explain each and every steps of SDLC in detail with a proper diagram and example.

(b) What is SEI - CMM model ? What are the levels of SEI - CMM, explain it with a block diagram ?

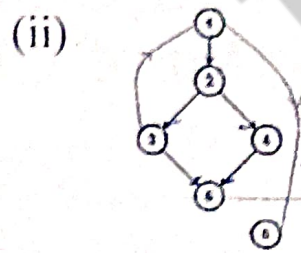
9. (a) What are CASE Tools ? Explain it. 10

(b) The CC of each of the module A & B is 10. What is CC of sequential integration on right hand side ? 5



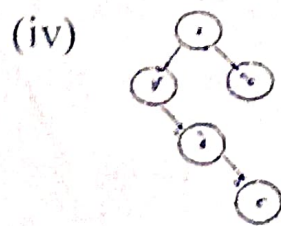
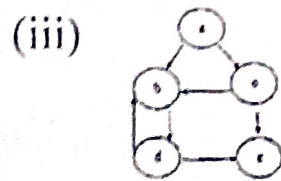
(c) What is the cyclomatic complexity of : 5

```
(i) int module (int x, int y)
{
  while (x != y){
    If (x > y)
    x = x - y;
    else y = y - x;
  }
  return x;
}
```



$$= 7 - 6 + 2$$

$$= 1 + 2$$



what is cc of the model
 $E = 17, n = 13$

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