

Hall Ticket Number:

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Code No. : 31123 S

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (CSE) III Year I-Semester Supplementary Examinations, May/June-2018

Software Engineering

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. List the merits and demerits of the spiral process model.
2. What do you understand from the term SCRUM?
3. Analyze the different categories of risks?
4. How is effort estimation done?
5. Enumerate the different levels of visibility of a class attribute with examples.
6. Structural modeling can be done through class diagram. Justify.
7. Differentiate between process and thread.
8. Is it mandatory to draw a collaboration diagram during the design of the system?
9. Evaluate as to when and how stress testing is done?
10. Write the expressions for Halstead's measure for source code.

Part-B (5 × 10 = 50 Marks)

11. a) Write the advantages and disadvantages of incremental model. Explain any one incremental model. [5]
b) State the need for refactoring? How can a development model benefit by the use of refactoring? [5]
12. a) What are the criteria for estimating a project? Analyze about the critical path method for web application project. [4]
b) Discuss the relationship between the concept of information hiding as an attribute of effective modularity and the concept of module independence. [6]
13. a) Explain about the terms Interface, Packages. [4]
b) Draw a class diagram for any business system that captures the relationships of dependency, aggregation and composition. [6]
14. a) Draw a deployment and component diagram for "online order processing system". [6]
b) When does use case diagram use the concept of <<extends>>, <<includes>>? [4]
15. a) Describe the three debugging strategies with relevant examples. [5]
b) Find the different independent paths and calculate the cyclomatic complexity using basis path testing for the given fragment of code: [5]
If A=10
THEN IF B>C
THEN A-B
ELSE A-C
ENDIF
ENDIF
PRINT A

- 16. a) How is Agile methodology better than conventional software development models? [5]
- b) What are the design principles to be used in general for any software system? [5]
- 17. Answer any *two* of the following:
 - a) Draw an advanced class diagram for online shopping system with four relationships. [5]
 - b) Explain about an artifact and draw artifact diagram for web application. [5]
 - c) Identify the objects in word processing application. Test the objects using graph-based testing methods. [5]



Part B (2 x 10 = 20 Marks)

- 11. a) Write the advantages and disadvantages of structural model. Explain any one structural model.
- b) State the need for refactoring. How can a development model benefit by the use of refactoring?
- 12. a) What are the criteria for estimating a project? Analyse any one the criteria with suitable for web application project.
- b) Discuss the relationship between the concept of information hiding as an attribute of software modularity and the concept of module independence.
- 13. a) Explain about the term Interface Packages.
- b) Draw a class diagram for any business system that captures the relationships of dependency, aggregation and composition.
- 14. a) Draw a requirement and development diagram for "online order processing system".
- b) When does one use diagram for the concept of "context" in refactoring?
- 15. a) Describe the three debugging strategies with relevant examples.
- b) Find the different independent paths and calculate the cyclomatic complexity using path testing for the given fragment of code.

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