SAIVA BHANU KSHATRIYA COLLEGE

(Aruppukottai Nadargal Uravinmurai Pothu Abi Viruthi Trustuku Pathiyapattathu)

ARUPPUKOTTAI
DEPARTMENT OF BCA
QUESTION BANK

Name of the Department :	BCA	UG / PG :	UG
Semester (UG - III & V; PG - III) :	V	Subject Code :	SCAJC52
Name of the Subject :	Software Engineering		

Section A (Multiple Choice Questions)

Unit I： (Introduction to Software Engineering and Planning a Software Project)

1. A -------- Project requires 5 to 20 programmers for a period of 2 to 3 years and results in a system of 50,000 to 1, 00,000 source statements, packaged in several subsystems.
   (a) Small   (b) Trivial   (c) Medium-sized   (d) Large
2. Brooks has observed that the number of communication paths among n Programmers grows as
   (a) n (n-1)/2   (b) n(n+1)/2   (c) n(n+2)/2   (d)n(n*n)
3. Analysis consists of two subphases ------------- and requirements definition.
   (a) Planning   (b) Testing   (c) Debugging   (d)Adapt
4. ------- means the extent to which software can continue to operate correctly despite the introduction of invalid inputs.
   (a) Portability   (b) Reliability   (c) Robustness   (d)Correctness
5. ---------- is a software development activity that is not a part of software processes.
   (a) Validation   (b) Specification   (c) Development   (d)Dependence

Unit II： (Software Cost Estimation)

6. -------- relies on the experience, background and business sense of one or more key people in the organization.
   (a) Expert Judgment   (b) Delphi cost estimation (c) Work breakdown structure (d) Algorithmic cost model
7. A -------- is a hierarchical chart that accounts for the individual parts of a system
   (a) Delphi cost estimation   (b) Expert Judgment   (c) Work breakdown structure (d)COCOMO
8. The most widely used cost estimation technique is --------- which is an inherently top-down estimation technique
   (a) Delphi cost estimation   (b) Expert Judgment   (c) Work breakdown structure (d)COCOMO
9. A COCOMO model is -----------.
   (a) Common Cost Estimation Model   (b) Constructive Cost Estimation Model
   (c) Complete Cost Estimation Model   (d)Comprehensive Cost Estimation Model
10. There are --------- generally acknowledged categories of software products.
    (a) Three   (b) Two   (c) Four   (d)Five

Unit III： (Software Requirements Definition)

11. ----------- are concise notations for defining both finite and infinite set of symbol strings.
    (a) Implicit equations   (b) Axioms   (c) Regular expression   (d)Decision Table
12. -------- incorporates a graphical language and a set of methods and management guidelines for using the language.
    (a) PSL   (b) RSL   (c) SADT   (d)SSA
13. A ----------- is represented as a bipartite directed graph.
    (a) Emplicit equations   (b) Axioms   (c) Regular expression   (d)Petrinet
14. ---------- table provides a mechanism for recording complex decision logic.
    (a) Decision   (b) Transition   (c) Regular expression   (d)Petrinet
15. The ----------- was developed by Professor DanielTeichrow.
    (a) PSL   (b) RSL   (c) REVS   (d)SADT

Unit IV：(Software Design)

16. ------- is the intellectual tool that allows us to deal with concepts apart from particular instances of those concepts.
    (a) Abstraction　　　(b) Information hiding　(c) Structure　　　(d)Concurrency

17. The relative independence among modules in known as-----------
    (a) Coupling　　　(b) Cohesion　　　(c) relationships　　　(d)sequence

18. The desired level of Coupling is -----------.
    (a) No Coupling　　　(b) Control Coupling　(c) Common Coupling　(d)Data Coupling

19. A ---------- is a named collection of data that describes a data object.
    (a) Data collection　　(b) Data abstraction　(c) Data Manipulation　(d)Data Objects.

20. ----------- cohesion occurs when the elements within a module have no apparent relationship to one another.
    (a) Logical　　　(b) Coincidental cohesion　　(c) Temporal　(d)Functional

Unit V：(Verification and Validation Techniques and Software Maintenance)

21. Software testing concerned with exercising and observing product behavior is called-------.
    (a) Validation　　　(b) Maintenance　　(c) Dynamic verification (d) Quality Assurance

22. Changes made to the system to reduce the future system failure chances is called
    (a) Preventive Maintenance (b) Adaptive Maintenance　(c) Corrective Maintenance (d) Perfective Maintenance

23. Verification is defined as ----------------.
    (a) Are we building the right product?　　(b) Are we building the right project?
    (c) Are we building the product right?　　(d) Are we building the project right?

24. Modifying the software to match changes in the ever changing environment is called-----------.
    (a) Adaptive Maintenance　　　　　(b) Corrective Maintenance
    (c)Perfective Maintenance　　　　　(d) Preventive Maintenance

25. --------- test cases involve exercising the code with nominal input values.
    (a) Functional　　　(b) Performance　　　(c) Stress　　　(d) Structure

Section B (7 mark Questions)

Unit I：(Introduction to Software Engineering and Planning a Software Project)

26. What are the Project Size categories for Software products? Describe.
27. What are the factors to consider in project planning and in setting project goals? explain
28. What are the phases of the Phased model of software Life Cycle Explain?
29. Explain the Programming Team Structure
30. Explain the Prototype Life Cycle Model

Unit II：(Software Cost Estimation)

31. Explain Programmer Ability and Product Complexity
32. Explain Expert Judgment
33. Explain Work Breakdown Structure
34. Write a brief note on Delphi cost estimation.
35. Explain Staffing Level Estimation

Unit III：(Software Requirements Definition)

36. Explain about the Relational Notations
37. Explain about the State Oriented Notations
38. Explain about the PSL/PSA

39. Explain about the RSL/REVS and SSA
40. Explain about the Structured Analysis and Design Technique

Unit IV：(Software Design)

41. Describe the rating scale of Coupling and Cohesion
42. What is Stepwise Refinement? Explain
43. Explain Integrated Top-Down Development
44. Write a brief note on Jackson Structured Programming
45. Write a short note on Milestones, walkthroughs and Inspections

Unit V：(Verification and Validation Techniques and Software Maintenance)

46. What is Quality Assurance? Explain about the software quality assurance plan?
47. Describe the various Debugging methods.
48. Explain Integration Testing
49. Explain Input-Output Assertions and Structural Induction
50. Explain the managerial aspects of software maintenance.

Section C (10 mark Questions)

Unit I：(Introduction to Software Engineering and Planning a Software Project)

51. Explain Quality and Productivity Factors.
52. Discuss Planning the Development Process

Unit II：(Software Cost Estimation)

53. Explain Software Cost Factors
54. Explain Software Cost Estimation Techniques.

Unit III：(Software Requirements Definition)

55. Explain any two Formal Specification Techniques
56. Explain Languages and Processors for Requirements Specification

Unit IV：(Software Design)

57. Explain briefly any four Fundamental Concepts of software design.
58. Explain Design Notations.

Unit V：(Verification and Validation Techniques and Software Maintenance)

59. What are the two kinds of activities of System Testing?Explain.
60. Explain Formal Verification Techniques