1. Which of the following software development life cycle model can be viewed as a meta model?

a. Evolutionary
b. Spiral
c. Prototype
d. Iterative water fall
e. None of the above

2. The spiral model uses this as a risk reduction mechanism in software development process?

a. Iteration
b. Prototyping
c. Incremental
d. Exploratory style
e. None of the above

3. Which of the following software development life cycle model is most suitable for project whose user requirements or underlying technical aspects are not well understood?

a. Evolutionary Model
b. Spiral Model
c. Prototype Model
d. Waterfall Model
e. None of the above

4. Which of the following is true of COCOMO (COnstructive COst estimation MOdel)?

a. An empirical estimation technique
b. An analytical estimation technique
c. Based on Halstead's software science
d. A Heuristic estimation technique
e. A Delphi cost estimation technique

5. Which of the following project estimation metric is suitable for real-time, process control and embedded software applications which tend to have high algorithmic complexity?

a. LOC
b. COCOMO
c. Feature Point
d. Function Point
e. None of the above

6. By Halstead's software science analytical estimation technique, what is program vocabulary?

a. Total Number of keywords used in a program
b. Total Number of operands used in a program
c. Number of unique operators and operands used in the program
d. Length of a program
e. None of the above

7. What do you mean by the term ‘Program Volume’ in Halstead’s software science analytical estimation technique?

a. Minimum number of bits needed to encode the program
b. Total Number of operators and operands used in the program
c. Number of inputs and outputs used by the program
d. Total number of code lines
e. None of the above

8. Suppose the program vocabulary which is the number of unique operators and operands used in the program is n and length of program which is the total number of operators and operands in the program is N. Then by Halstead’s software science, which of the following expression gives out the program volume?

a. $N * n$
b. $N \log_2 n$
c. $\log_2(N + n)$
d. n^N
e. None of the above

9. What is the final output of requirement analysis and specification phase in the software development life cycle?

a. An SRS document
b. Software Architecture
c. Configuration Management Plan
d. Application Portfolio
e. None of the above

10. In formal system development techniques, a formal requirement specification language uses this set to describe requirement specification of the proposed system.

a. Semantic Domains
b. Syntactic Domain
c. Black box specification
d. Satisfaction Domain
e. None of the above

11. Which of the following best describes the characteristics of a clean decomposition?

a. Neat Arrangement
b. High cohesion & Low coupling
c. Low cohesion and High coupling
d. Low fan-out
e. None of the above

12. This is a measure of functional strength of a module.

a. Fan-out

b. Coupling
c. Cohesion
d. Abstraction
e. None of the above

13. This is a measure of functional independence or interaction between two modules.

a. Fan-out
b. Abstraction
c. Cohesion
d. Coupling
e. None of the above

14. The activities in the design phase of software development can be broadly classified into High-level design and Detailed Design. Which of the following can be considered as the outcome of high-level design?

a. Software Architecture
b. SRS
c. SDS
d. Module specification
e. None of the above

15. Which of the following cohesion type exists in a module which contains tasks that must be executed in the same time-span?

a. Coincidental cohesion
b. Logical cohesion
c. Sequential cohesion
d. Temporal cohesion
e. None of the above

16. This type of coupling exists between two modules which share a global data area.

a. Data coupling
b. Content coupling
c. Common coupling
d. Control coupling
e. None of the above

17. This gives a measure of the number of modules that are directly controlled by a given module.

a. Span
b. Fan-in
c. Cohesion
d. Fan-out
e. Abstraction

18. Which of the following is true of the term Fan-in in context of Structure Chart?

a. Gives the number of modules that are controlled by a given module
b. Gives number of modules which directly invoke a given module
c. A low fan-in represents a good design
d. Provide an indication of number of levels in program hierarchy
e. All of the above

19. What do you understand by the term 'Context Diagram' in the context of Data Flow Diagrams (DFDs)?

a. A primitive symbol used to represent a process
b. Level 0 DFD
c. A diagram that list all the data items in a DFD
d. A symbol used to represent control information
e. None of the above

20. Which of the following is (are) not true of Data Flow Diagrams?

a. A modeling technique used to represent the results of structured analysis
b. Represents a system in terms of the input data, processing activities and output data
c. Uses a hierarchy of levels to represent the transformation of input data to final result
d. Can represent control information such as when or in what order different processes are invoked
e. None of the above