

Dronacharya College of Engineering, Gurgaon

Department of Electronics and Computers Engineering

Subject: Software Project Management (CSE-403-F)

Semester: / Branch: ECS

Short Answer questions

Section A

1) Software engineering aims at developing ?

- a. Reliable Software
- b. Cost Effective Software
- c. Reliable and cost effective Software
- d. None Of Above

Answer = C

Explanation:Software engineering is the process that aims at developing the software's that are Reliable and cost effective as well.

2) A good specification should be ?

- a. Unambiguous
- b. Distinctly Specific
- c. Functional
- d. All of Above

Answer = D

Explanation:A good specification should have all the qualities such as unambiguos, distinctly specific and functional.

3) Which of the following is a tool in design phase ?

- a. Abstraction

- b. Refinement
- c. Information Hiding
- d. All of Above

Answer = D

4) Information hiding is to hide from user, details ?

- a. that are relevant to him
- b. that are not relevant to him
- c. that may be maliciously handled by him
- d. that are confidential

Answer = C

Explanation:Information hiding is just the process of making inaccessible certain details that have no effect on the other parts of the program.

5) Which of the following comments about object oriented design of software, is not true ?

- a. Objects inherit the properties of class
- b. Classes are defined based on the attributes of objects
- c. an object can belong to two classes
- d. classes are always different

Answer = C

Explanation:An object can not belong to two classes.

6) Design phase includes?

- a. data, architectural and procedural design only
- b. architectural, procedural and interface design only
- c. data, architectural and interface design only
- d. data, architectural, interface and procedural design

Answer = D

Explanation:Design phase included the design of whole software including data, architectural, interface and procedural design.

7) To completely write the program in FORTRAN and rewrite the 1% code in assembly language, if the project needs 13 days, the team consists of ?

- a. 13 programmers
- b. 10 programmers
- c. 8 programmers
- d. 100/13 programmers

Answer = C

Explanation: Writing the whole program in FORTRAN takes 100 man-day, remaining 1% code requires 4 man-day. If it is completed in 13 days then $104/13 = 8$ programmers it required.

8) If 99% of the program is written in FORTRAN and the remaining 1% in assembly language, the percentage increase in the programming time compared to writing the entire program in FORTRAN and rewriting the 1% in assembly language is ?

- a. 10
- b. 5
- c. 13
- d. 8

Answer = B

Explanation:The first case takes $99+10=109$ man-day. The second case require $100+4=104$ man-day. Percentage = $(109-104)*100/100 = 5$

9) If the entire program is written in FORTRAN, the percentage increase in the execution time, compared to writing the entire program in FORTRAN and rewriting the 1% in assembly language is ?

- a. 0.9
- b. 0.8
- c. 8
- d. 9

Answer = B

Explanation:Let the first case takes 100 units of time to execute. Second case will take $99 + (1/5)$ units of time. As the 1% coding in assembly language will take $1/5$ units of time. Hence the required percentage = $0.8*100/100 = 0.8$.

10) If 99% of the program is written in FORTRAN and the remaining 1% in assembly language the percentage increase in the execution time, compared to writing the 1% in assembly language is ?

- a. 0.9
- b. 0.1
- c. 1
- d. 0

Answer = D

Explanation:In both cases the final program will have the same 99% of code in FORTRAN and the remaining 1% in assembly language. Hence the execution time will remain same.

Section B

1) White box testing, a software testing technique is sometimes called ?

- a. Basic path
- b. Graph Testing
- c. Dataflow
- d. Glass box testing

Answer = D

Explanation: White box testing also named as clear box testing, transparent testing, glass box testing and structural testing. It is a method in which the internal structure of application is tested.

2) Black box testing sometimes called ?

- a. Data Flow testing
- b. Loop Testing
- c. Behavioral Testing
- d. Graph Based Testing

Answer = C

Explanation: Black box testing is a method that tests for the functionality of an application.

3) Which of the following is a type of testing ?

- a. Recovery Testing
- b. Security Testing
- c. Stress Testing

- d. All of above

Answer = D

Explanation: Recovery testing is a method for testing how well a software can recover from crashes. Security testing ensures that the software protects the data and performs its all functions. Stress testing determines the robustness of software.

4) The objective of testing is ?

- a. Debugging
- b. To uncover errors
- c. To gain modularity
- d. To analyze system

Answer = B

Explanation: The main objecting of testing is to make the software error free.

5) is a black box testing method ?

- a. Boundary value analysis
- b. Basic path testing
- c. Code path analysis
- d. None of above

Answer = A

Explanation:In boundary value analysis, we choose an input from test cases from an equivalence class such that the input lies on the edge of equivalence class.

6) Structured programming codes includes ?

- a. sequencing
- b. alteration
- c. iteration
- d. multiple exit from loops
- e. only A, B and C

Answer = E

Explanation:These three constructs are sufficient to program any

algorithm. Moreover, as far as possible single entry single exit control constructs are used.

7) An important aspect of coding is ?

- a. Readability
- b. Productivity
- c. To use as small memory space as possible
- d. brevity

Answer = A

Explanation: Readability and understandability as a clear objective of coding activity can itself help in producing software that is more maintainable.

8) Data structure suitable for the application is discussed in ?

- a. data design
- b. architectural design
- c. procedural design
- d. interface design

Answer = A

Explanation: Data design is the first and most important design activity, where the main issue is to select the appropriate data structure.

9) In object oriented design of software , objects have ?

- a. attributes and names only
- b. operations and names only
- c. attributes, name and operations
- d. None of above

Answer = C

Explanation: The objects contains attributes, names and operations as well.

10) Function oriented metrics were first proposed by ?

- a. John
- b. Gaffney
- c. Albrecht

d. Basili

Answer = C

Explanation:Albrecht suggests a measure called **Function point**, which are derives using a empirical relationship based on the countable measures of software information domain.

Section C

1) Given a source code with 10 operators includes 6 unique operators, and 6 operand including 2 unique operands. The program volume is ?

- a. 48
- b. 120
- c. 720
- d. insufficient data

Answer = A

Explanation: No Explanation

2) In the system concepts, term organization ?

- a. implies structure and order
- b. refers to the manner in which each component fuctions with other components of the system
- c. refers to the holism of system
- d. means that part of the computer system depend on one another

Answer = A

Explanation: No Explanation

3) In the system concepts, the term integration ?

- a. implies structure and order
- b. refers to the manner in which each component functions with other components of the system
- c. means that parts of computer system depends on one another
- d. refers to the holism of systems

Answer = D

Explanation: No Explanation

4) Project indicator enables a software project manager to ?

- a. assess the status of an ongoing project
- b. track potential risks
- c. uncover problem areas before they " go critical "
- d. All of above

Answer = D

Explanation: No Explanation

5) Once object oriented programming has been accomplished, unit testing is applied for each class. Class tests includes ?

- a. Fault based testing
- b. Random testing
- c. Partition testing
- d. All of above

Answer = D

Explanation: No Explanation

6) Developed a set of software quality factors that has been given the acronym FURPS - Functionality, Usability, Reliability, performance, Supportability ?

- a. Hewlett - Packard
- b. Rumbaugh
- c. Booch
- d. Jacobson

Answer = A

Explanation: No Explanation

7) In system design, we do following ?

- a. Hardware design after software
- b. Software design after hardware
- c. Parallel hardware and software design
- d. No hardware design needed

Answer = C

Explanation: No Explanation

8) The document listing all procedures and regulations that generally govern an organization is the ?

- a. Personal poling bank
- b. Organizing manual
- c. Administration policy manual
- d. Procedure log

Answer = B Explanation: No Explanation

9) A turnkey package includes ?

- a. Software
- b. Hardware
- c. Training
- d. All of above

Answer = D

Explanation: No Explanation

10) Detailed design is expressed by ?

- a. CSPEC
- b. PSPEC
- c. MINI SPEC
- d. Code SPEC

Answer = C

Explanation: No Explanation

Section D

1) In functional decomposition, the data flow diagram ?

- a. is ignored
- b. is partitioned according to the closeness of the datagram and storage items
- c. is partitioned according to the logical closeness of the actigram
- d. Both A and C
- e. None of above

Answer = C

Explanation: N/A

2) Which of the following is done in order a data in phase 1 of the system development life cycle ?

- a. Reviewing policies and procedures
- b. Using questionnaires to contact surveys
- c. Conducting Interviews
- d. All of above
- e. None of above

Answer = D

Explanation: N/A

3) A graphic representation of an information system is called ?

- a. Flow chart
- b. Pictogram
- c. Data flow diagram
- d. Histogram
- e. None of above

Answer = C

Explanation: N/A

4) To avoid errors in transcription and transposition, during data entry the system analyst should ?

- a. Provide for a check digit
- b. Provide for a hash totals
- c. Provide batch totals
- d. All of above

Answer = D

Explanation: N/A

5) In the system concepts, the term integration ?

- a. implies structure and order

- b. refers to the manner in which each component functions with other component of the system
- c. means that part of the computer system depend on one another
- d. refers to the holism of system
- e. None of above

Answer = D

Explanation: system integration is the bringing together of the component subsystems into one system and ensuring that the subsystems function together as a system. In information technology, systems integration is the process of linking together different computing systems and software applications physically or functionally, to act as a coordinated whole

6) RAD is a linear sequential software development process model. RAD is an acronym for ?

- a. Rapid Application Development
- b. Rapid Action Development
- c. Rough Application Development
- d. Rough Action Development

Answer = A

Explanation: Rapid application development (RAD) is a software development methodology that uses minimal planning in favor of rapid prototyping. The "planning" of software developed using RAD is interleaved with writing the software itself

7) In risk analysis of spiral model, which of the following risk includes ?

- a. Technical
- b. Management
- c. Both A and B
- d. None of these

Answer = C

Explanation: N/A

8) The model remains operative until the software is retired ?

- a. Waterfall
- b. Incremental

- c. Spiral
- d. None of these

Answer = C

Explanation: The spiral model is based on continuous refinement of key products for requirements definition and analysis, system and software design, and implementation (the code). At each iteration around the cycle, the products are extensions of an earlier product. This model uses many of the same phases as the waterfall model, in essentially the same order, separated by planning, risk assessment, and the building of prototypes and simulations

9) A quantitative measure of the degree to which a system, component, or process possesses a given attribute ?

- a. Measure
- b. Measurement
- c. Metric
- d. None of these

Answer = C

Explanation: N/A

10) RAD is not appropriate when ?

- a. Fast finding already done
- b. Technical risks are high
- c. Testing is not needed
- d. None of above

Answer = B

Explanation: RAD model may not be useful for large, unique or highly complex projects. This method cannot be a success if the team is not sufficiently motivated and nor is unable to work cohesively together.