**SET UNIT-1**

1. What is a software ?

A) computer program

B) source code

C) computer programs and associated documents

D) operating system

2. Software can be created by

A) developing new programs

B) Reusing existing software

C) configuring generic software systems

D) All of the options

3. What is software process?

A) set of activities for validating software

B) Set of activities for development or maintenance of software

C) model of development activity

D) none of the mentioned

4. Attributes of good software includes

A) Efficiency

B) Effectiveness

C) Dependability, Maintainability, Usability

D) none of the mentioned

5. A Socio technical system includes

A) hardware and software

B) people

C) technical system

D) technical system, operational processes and people

6. Emergent properties of system is

A) property of a system as a whole

B) Non deterministic

C) Both the options

D) none of the options

7. Development model suited for system engineering is

A) Waterfall model

B) Incremental model

C) component based engineering model

D) All of the options

8. What is a Legacy system?

A) system built for legal profession

B) system built for medical domain

C) system that has been developed in past using obsolete technology

D) none of the mentioned

9. Failures in critical systems can cause

A) Threat to human life

B) Physical damage

C) Great economic loss

D) All of the mentioned

10. For Critical systems Usefulness and Trustworthiness are same

A) TRUE

B) FALSE

11. In waterfall model of software development

A) following phase cannot start until previous phase is completed

B) software can be released in increments

C) components are joined to develop software

D) none of the options

12. The advantage of waterfall model is that no documents are produced

A) TRUE

B) FALSE

13. The objective of throw away prototyping is to

A) undertand the system requirement

B) build test cases for validation

C) complete the feasibility

D) none of the mentioned

14. The drawback of evolutionary development is

A) specification is developed incrementally

B) less useful than waterfall model

C) lack of process visibility

15. Incremental model are best suited for large systems development

A) TRUE

B) FALSE

16. Requirement modification is a phase in Component based software engineering

A) TRUE

B) FALSE

17. The Component based software development model is less risky

A) TRUE

B) FALSE

18. In Spiral model

A) there are small frequent releases of the system

B) Risks are assessed and resolved throughout the process

C) Pair programming is used

D) none of the mentioned

19. Constant refactoring of code is usually done in

A) Waterfall model

B) Spiral model

C) Extreme programming

20. Software design is a description of

A) structure of the software to be developed

B) data which is part of the system

C) Interfaces between system components

D) all of the mentioned

21. CASE tools are software to support software development and evolution processes

A) TRUE

B) FALSE

22. Which are the best practices of software engineering

A) Develop iteratively

B) Manage requirements

C) Model software visually

D) all of the mentioned

23. As requirements change through changing business circumstances,the software that supports the business must also evolve and change

A) TRUE

B) FALSE

24. Testing with customer data to check that the system meets the customer needs is called

A) Alpha testing

B) Beta testing

C) Structural testing

D) All of the mentioned

25. In software engineering a component may mean

A) Function

B) Procedure

C) Class

D) All of the mentioned

26. In software engineering Verification and validation is intended to show that a system conforms to its specification and meets the expectation of the customer

A) TRUE

B) FALSE

27. Objective setting, Risk assessment and reduction, development and validation are phases of

A) Waterfall model

B) Spiral model

C) Component model

D) Rational unified model

28. Requirement Elicitation and Analysis may involve models and prototypes for better understanding

A) TRUE

B) FALSE

29. In component based software engineering the maintenance may be difficult

A) TRUE

B) FALSE

30. During system integration which approach may be better

A) Incremental approach

B) Big bang approach

C) test first approach

D) Component based approach

31. Management of software development is dependent upon?

A) People

B) Product

C) Process

D) All of above

32. Which is not a software life cycle model?

A) Spiral Model

B) Waterfall Model

C) Prototyping Model

D) Capability maturity Model

33. SRS stands for?

A) Software requirement specification

B) Software requirement solution

C) System requirement specification

D) None of Above

34. Waterfall model is not suitable for?

A) Small Projects

B) Complex Projects

C) Accommodating change

D) None of Above

35. RAD stands for?

A) Rapid Application Development

B) Relative Application Development

C) Ready Application Development

D) Repeated Application Development

36. Software engineering aims at developing?

A) Reliable Software

B) Cost Effective Software

C) Reliable and cost effective Software

D) None Of Above

37. A good specification should be?

A) Unambiguous

B) Distinctly Specific

C) Functional

D) All of Above

38. Which of the following is a tool in design phase?

A) Abstraction

B) Refinement

C) Information Hiding

D) All of Above

39. 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

40. The model remains operative until the software is retired ?

A) Waterfall

B) Incremental

C) Spiral

D) None of these

41. A quantitative measure of the degree to which a system, component, or process posses a given attribute?

A) Measure

B) Measurement

C) Metric

D) None of these

42. Which one of the following is not a maintenance model?

A) Waterfall model

B) Reuse-oriented model

C) Iterative enhancement model

D) Quick fix model

43. Which of the following manuals is a user documentation?

A) SRS -Software Requirement Specification

B) SDD -Software Design Document

C) System Overview

D) None of the mentioned

44. What is the major advantage of using Incremental Model?

A) Customer can respond to each increment

B) Easier to test and debug

C) It is used when there is a need to get a product to the market early

D) Easier to test and debug & It is used when there is a need to get a product to the market early

45. Identify the disadvantage of Spiral Model.

A) Does not work well for smaller projects

B) High amount of risk analysis

C) Strong approval and documentation control

D) Additional Functionality can be added at a later date

46. Spiral Model has user involvement in all its phases.

A) True

B) False

47. How is Incremental Model different from Spiral Model?

A) Progress can be measured for Incremental Model

B) Changing requirements can be accommodated in Incremental Model

C) Users can see the system early in Incremental Model

D) All of the mentioned

48. Choose the correct option in terms of Issues related to professional responsibility

A) Confidentiality

B) Intellectual property rights

C) Both Confidentiality & Intellectual property rights

D) Managing Client Relationships

49. Software engineers should not use their technical skills to misuse other people computers. Here the term misuse refers to

A) Unauthorized access to computer material

B) Unauthorized modification of computer material

C) Dissemination of viruses or other malware

D) All of the mentioned

50. Identify an ethical dilemma from the situations mentioned below:

A) Your employer releases a safety-critical system without finishing the testing of the system

B) Refusing to undertake a project

C) Agreement in principle with the policies of senior management

D) All of the mentioned

51. Which of these software engineering activities are not a part of software processes?

A) Software dependence

B) Software development

C) Software validation

D) Software specification

52. Which of these is true?

A) Generic products and customized products are types of software products

B) Generic products are produced by organization and sold to open market

C) Customized products are commissioned by particular customer

D) All of the mentioned

53. Which of these is not true?

A) Web has led to availability of software services and possibility of developing highly distributed service based systems

B) Web based systems have led to degradation of programming languages

C) Web brings concept of software as service

D) Web based system should be developed and delivered incrementally

54. Selection of a model is based on

A) Requirements

B) Development team & Users

C) Project type and associated risk

D) All of the mentioned

55. Which of the following life cycle model can be chosen if the development team has less experience on similar projects?

A) Spiral

B) Waterfall

C) RAD

D) Iterative Enhancement Model

56. If you were a lead developer of a software company and you are asked to submit a project/product within a stipulated time-frame with no cost barriers, which model would you select?

A) Waterfall

B) Spiral

C) RAD

D) Incremental

57. A company is developing an advance version of their current software available in the market, what model approach would they prefer?

A) RAD

B) Iterative Enhancement

C) Both RAD & Iterative Enhancement

D) Spiral

58. One can choose Waterfall Model if the project development schedule is tight.

A) True

B) False

59. Spiral Model has high reliability requirements.

A) True

B) False

60. RAD Model has high reliability requirements.

A) True

B) False

**Extra Questions Of Sunil Manoli**

|  |  |  |
| --- | --- | --- |
|  | **Unit-1** | |
| 1 | The stand-alone systems that are produced by a development organisation and sold on the open market to any customer who is able to buy them is known as………………….. | |
|  | a) Generic Products | b) Customised Products |
|  | c)Software Products | d)None of the above |
|  |  |  |
| 2 | An engineering discipline which is concerned with all aspects of software productionis known as…………………………. | |
|  | a)Computer Science and Engineering | b)System Engineering |
|  | c)Software Engineering | d)Computer-Aided Software Engineering |
| ANSWER:c | | |
| 3. | ……………… is the set of activities and associated results that produce a software product. | |
|  | a)Software process model | b)Software Process |
|  | c)software | d)Workflow model |
| ANSWER:b | | |
| 4. | Systems are required to operate as distributed systems across networks that include different types of computers and with different kinds of support systems is known as | |
|  | a) The delivery challenge | b) The trust challenge |
|  | c) The heterogeneity challenge | d)None of the above |
| ANSWER: c | | |
| 5. | systems that include hardware and software components but not procedures and processes is known as…………….. | |
|  | a) Technical computer-based systems | b) Socio-technical systems |
|  | c)Emergent Systems | d)None of the above |
| ANSWER:a | | |
| 6. | …………………is the activity of specifying, designing, implementing, validating, deploying and maintaining socio-technical systems. | |
|  | a)Software Engineering | b)Electronic Engineering |
|  | c)Structural Engineering | d)Systems Engineering |
| ANSWER:d | | |
| 7. | …………..is concerned with how the system functionality is to be provided by the components of the system. | |
|  | a)System Requirements | b)System Design |
|  | c)System Modelling | d)System Integration |
| ANSWER:b | | |
| 8. | Human and organisational factors from the system’s environment that affect the system design include: | |
|  | a) Process changes | b) Job changes |
|  | c) Organisational changes | d)All of the above |
| ANSWER:d | | |
| 9. | ……………..are business-critical systems which are maintained because of its risk factors to replace them. | |
|  | a)Legacy Systems | b)Socio-Technical Systems |
|  | c) Technical computer-based systems | d)None of the above |
| ANSWER:a | | |
| 10. | A system whose failure may result in injury, loss of life or serious environmental damage is known as……….. | |
|  | a) Mission-critical systems | b) Business-critical systems |
|  | c) Safety-critical systems | d)None of the above |
| ANSWER:c | | |
| 11. | The ability of the system to deliver services as specified is known as………… | |
|  | a)Availability | b)Reliability |
|  | c)Safety | d)Security |
| ANSWER:b | | |
| 12. | An event that occurs at some point in time when the system does not deliver a service as expected by its users is called………… | |
|  | a) System error | b) System fault |
|  | c) Human error or mistake | d) System failure |
| ANSWER:d | | |
| 13. | The use of verification and validation techniques that increase the chances that faults will be detected and removed before the system is used. | |
|  | a) Fault avoidance | b) Fault detection and removal |
|  | c) Fault tolerance | d)None of the above |
| ANSWER:b | | |
| 14. | …………..takes the fundamental process activities of specification, development, validation and evolution and represents them as separate process phases such as requirements specification, software design, implementation, testing and so on. | |
|  | a)Waterfall Model | b) Evolutionary development |
|  | c) Component-based software engineering | d)None of the above |
| ANSWER:a | | |
| 15. | ……………….is based on the idea of developing an initial implementation, exposing this to user comment and refining it through many versions until an adequate system has been developed. | |
|  | a) Waterfall Model | b) Evolutionary development |
|  | c) Component-based software engineering | d) None of the above |
| ANSWER:b | | |
| 16 | The objective of the process is to work with the customer to explore their requirements and deliver a final system is known as…………. | |
|  | a) Evolutionary development | b) Exploratory development |
|  | c) Throwaway prototyping | d) Component-based software engineering |
| ANSWER:b | | |
| 17. | The objective of the evolutionary development process is to understand the customer’s requirements and hence develop a better requirements definition for the system. | |
|  | a) Evolutionary development | b) Exploratory development |
|  | c) Throwaway prototyping | d) Component-based software engineering |
| ANSWER:c | | |
| 18. | Given the requirements specification, a search is made for components to implement that specification. | |
|  | a) Component analysis | b) Requirements modification |
|  | c) System design with reuse | d) Development and integration |
| ANSWER:a | | |
| 19. | The software specification, design and implementation are broken down into a series of increments that are each developed in turn is known as……………… | |
|  | a) Spiral development | b) Incremental delivery |
|  | c) Exploratory development | d) Evolutionary development |
| ANSWER:b | | |
| 20. | …………………..is intended to show that a system conforms to its specification and that the system meets the expectations of the customer buying the system. | |
|  | a)Software design | b)Software Implementation |
|  | c)Software Validation | d)All of the above |
| ANSWER:c | | |
| 21. | The system is tested with data supplied by the system customer rather than with simulated test data is known as……….. | |
|  | a)Component Testing | b)System Testing |
|  | c) Acceptance testing | d) all of the above |
| ANSWER:c | | |
| 22. | ………………is the process of understanding and defining what services are required from the system and identifying the constraints on the system’s operation and development. | |
|  | a) Software specification | b)Software Design |
|  | c)Software Implentation | d)Software Evolution |
| ANSWER:a | | |
| 23. | ………………is the process of taking the system out of service after the end of its useful operational lifetime. | |
|  | a)System development | b)System Integration |
|  | c)System Evolution | d)System decommissioning |
| ANSWER:d | | |
| 24. | ………………………..Example of emergent properties. | |
|  | a) Volume | b) Reliability |
|  | c) Security | d)All of the above |
| ANSWER:d | | |
| 25. | …………….appear when all the parts of a system work together to achieve some objective. | |
|  | a) Functional emergent properties | b) Non-functional emergent properties |
|  | c)Both a & b | d)Neither a nor b |
| ANSWER:a | | |
| 26. | You should normally respect the ……………. of your employers or clients irrespective of whether a formal agreement has been signed. | |
|  | a) Confidentiality | b) Competence |
|  | c) Intellectual property rights | d) Computer misuse |
| ANSWER:a | | |
| 27. | Software should be written in such a way that it may evolve to meet the changing needs of customers. | |
|  | a) Dependability | b) Maintainability |
|  | c) Efﬁciency | d) Usability |
| ANSWER: b | | |
| 28. | …………….. represents the process as a set of activities, each of which carries out some data transformation. | |
|  | a) workflow model | b) role/action model |
|  | c) dataflow or activity model | d)None of the above |
| ANSWER: c | | |
| 29. | ………………….includes responsiveness, processing time, memory utilisation. | |
|  | a) Dependability | b) Maintainability |
|  | c) Efﬁciency | d) Usability |
| ANSWER: c | | |
| 30. | …………………….Emits an audible warning when an intruder is suspected. | |
|  | a) Siren | b) Movement sensors |
|  | c) Alarm controller | d) Voice synthesiser |
| ANSWER: a | | |

**SET UNIT-2**

1. What are the types of requirements?

A) Availability

B) Reliability

C) Usability

D) All of the mentioned

2. Select the developer-specific requirement?

A) Portability

B) Maintainability

C) Availability

D) Both Portability and Maintainability

3. Which one of the following is not a step of requirement engineering?

A) elicitation

B) design

C) analysis

D) documentation

4. FAST stands for

A) Functional Application Specification Technique

B) Fast Application Specification Technique

C) Facilitated Application Specification Technique

D) None of the mentioned

5. QFD stands for

A) quality function design

B) quality function development

C) quality function deployment

D) none of the mentioned

6. A Use case actor is always a person having a role that different people may play.

A) True

B) False

7. The user system requirements are the parts of which document?

A) SDD

B) SRS

C) DDD

D) SRD

8. A stakeholder is anyone who will purchase the completed software system under development.

A) True

B) False

9. Conflicting requirements are common in Requirement Engineering, with each client proposing his or her version is the right one.

A) True

B) False

10. Which is one of the most important stakeholder from the following?

A) Entry level personnel

B) Middle level stakeholder

C) Managers

D) Users of the software

11. Functional Requirements are more critical than Non functional requirement

A) TRUE

B) FALSE

12. Whenever possible Non functional requirement should be written quantitatively

A) TRUE

B) FALSE

13. User requirements should be written by using natural language

A) TRUE

B) FALSE

14. System requirements

A) Provide more detailed specification of system functions

B) are intended as a basis for designing the system

C) Both the options

D) none of the options

15. Readers for system requirements are System architects, software developers, client engineers

A) TRUE

B) FALSE

16. Types of Interface to be defined are

A) Procedural Interface

B) Data structure that are exchanged

C) Data representations

D) All of the options

17. AS per IEEE guideline Requirement document should include

A) Functional requirements

B) Non functional requirement

C) Interface requirements

D) All of the options

18. System models showing relationship between system components, the system and environment are part of requirement document

A) TRUE

B) FALSE

19. System requirements specification describes functional and non functional requirements in more detail

A) TRUE

B) FALSE

20. A requirement document should set WHAT the system should do rather than HOW it should do it

A) TRUE

B) FALSE

21. The interface specification should be specified early and included in Requirement document

A) TRUE

B) FALSE

22. Requirement is

A) Description of services provided by the system

B) Description of operational contraints of the system

C) Both of the options

D) none of the options

23. The system requirement should not describe how the system should react to particular inputs and how the system should behave in particular situations

A) TRUE

B) FALSE

24. A requirement is said to be consistent when

A) There are no conflicts or contradictions in the descriptions of the system facilities

B) It includes descriptions of all facilities required

C) It can not be interpreted in different ways by developers and users

D) none of the mentioned

25. Use of a particular design method can also be a part of requirement

A) TRUE

B) FALSE

26. Which is the example of non functional requirement metric

A) screen refresh time

B) kilo bytes of program

C) mean time between failure

D) All of the option

27. If domain requirements are not satisfied, the system may be unworkable

A) TRUE

B) FALSE

28. Domain specialists understand the area so well that they do not think of making the domain requirements explicit

A) TRUE

B) FALSE

29. User requirements should also describe the system implementation

A) TRUE

B) FALSE

30. In a sequence diagram to see the order of the actions that take place we read

A) from top to bottom

B) from left to right

C) from right to left

D) from bottom to top

**Extra Questions Of Sunil Manoli**

|  |  |  |
| --- | --- | --- |
|  | **Unit-2** | |
| 16 | Consider a system where, a heat sensor detects an intrusion and alerts the security company.” What kind of a requirement the system is providing? | |
|  | a) Functional | b) Non-Functional |
|  | c) Known Requirement | d) None of the mentioned |
|  | ANSWER : a | |
| 17 | Which one of the following is TRUE? | |
|  | a) The requirements document also describes how the requirements that are listed in the document are implemented efficiently. | b) Consistency and completeness of functional requirements are always achieved in practice. |
|  | c) Prototyping is a method of requirements validation. | d) Requirements review is carried out to find the errors in system design |
|  | ANSWER : c | |
| 18 | A Software Requirements Specification (SRS) document should avoid discussing which one of the following? | |
|  | a) User interface issues | b) Non-functional requirements |
|  | c) Design specification | d) Interfaces with third party software |
|  | ANSWER : c | |
| 19 | The prototyping model of software development is: | |
|  | a) a reasonable approach when requirements are well-defined | b) a useful approach when a customer cannot define requirements clearly. |
|  | c) the best approach to use for projects with large development teams | d) a risky model that rarely produces a meaningful product |
|  | ANSWER : b | |
| 20 | The extent to which a software performs its intended functions without failures, is termed as | |
|  | a) Robustness | b) Correctness |
|  | c) Reliability | d) Accuracy |
|  | ANSWER : c | |
| 21 | Which one of the following non-functional qualities attributes is not highly affected by the architecture of the software? | |
|  | a) Performance | b) Reliability |
|  | c) Usability | d)Portability |
|  | ANSWER : c | |
| 22 | Considering the example of issue/return of a book, cataloging etc. in a library management. What type of management requirement is being depicted here? | |
|  | a)Enduring | b)Volatile |
|  | c)Both Enduring & Volatile | d)All of the mentioned |
|  | ANSWER : a | |
| 23 | Why is Requirements Management Important? It is due to the changes | |
|  | a)to the environment | b)in technology |
|  | c)in customer’s expectations | d)in all of the mentioned |
|  | ANSWER : d | |
| 24 | Requirements traceability is one of the most important part requirement management. It may also be referred to as the heart of requirement management. | |
|  | a)True | b)False |
|  | ANSWER : a | |
| 25 | According to a statistical report: “over 30% of all software projects are cancelled before completion and over 70% of the remainder fail to deliver expected features”. What must be the reason for such a situation? | |
|  | a) Poor change management | b) Poor requirements management |
|  | c) Poor quality control | d) All of the mentioned |
|  | ANSWER : b | |
| 26 | Prototyping aims at | |
|  | a) end-user understanding and approval | b)program logic |
|  | c)planning of dataflow organization | d)none of these |
|  | ANSWER : a | |
| 27 | SRS document is called black box specification of a system because | |
|  | a) it does not contain the contradictory materials | b)it does not contain user documentation |
|  | c)SRS document should specify only the external behavior of the system | d)none of the above |
|  | ANSWER : c | |
| 28 | The best way to conduct a requirements validation review is to | |
|  | a)examine the system for errors | b)have the customer look at the requirements |
|  | c)send them to the design team and see if they have any concerns | d)use a checklist of questions/errors to examine each requirement |
|  | ANSWER : d | |
| 29 | Requirements Traceability matrix facilitates | |
|  | a)debug programs following the detection of run-time errors | b)determine the performance of algorithm implementations |
|  | c)identify, control, and track requirement changes | d)none of the above |
|  | ANSWER : c | |
| 30 | Which of the following is a component of ethnographic research? | |
|  | a)being immersed in a social grouping or setting | b)participant observation, interviews, and/or documentary analysis |
|  | c)A written account of an ethnography study | d)All of the above |
|  | ANSWER : d | |
| 31 | Which is not a step of requirement engineering? | |
|  | a) Requirements elicitation | b) Requirements analysis |
|  | c) Requirements design | d) Requirements documentation |
|  | ANSWER : c | |
| 32 | Under requirements validation process realism check is performed to check | |
|  | a) Whether the requirements in the document are conflicting | b) Whether the requirements document includes requirements, which define all functions, and constraints intended by the system user. |
|  | c) Whether the requirements can actually be implemented | d) write a set of tests that can demonstrate that the delivered system meets each specified requirement |
|  | ANSWER : c | |
| 33 | Eliciting and understanding stakeholder requirements is difficult for several reasons | |
|  | a) Stakeholders find it difficult to articulate what they want the system to do or make unrealistic demands | b) Stakeholders like requirements engineers, without experience in the customer’s domain must understand the requirements |
|  | c) Political factors may influence the requirements of the system | d) all the above |
|  | ANSWER : d | |
| 34 | The activity Feasibility study is normally part of which phase of systems development? | |
|  | a) Development | b) Implementation |
|  | c) Maintenance | d) Initiation |
|  | ANSWER : d | |
| 35 | Mutable Requirements | |
|  | a) Requirements which change because of changes to the environment in which the organisation is operating | b) Requirements which emerge as the customer’s understanding of the system develops during the system development |
|  | c) Requirements which result from the introduction of the computer system | d) Requirements which depend on the particular systems or business processes within an organisation |
|  | ANSWER : a | |
| 36 | Software maintenance is necessary because | |
|  | a) Humans never get it right the first time. | b) The deployment platform may change over time. |
|  | c) The user's needs may change over time. | d)All of the above |
|  | ANSWER : d | |
| 37 | A structured document setting out detailed descriptions of the systems functions, services, and operational constraints. Defines what should be implemented. | |
|  | a)Use case generalization | b)User requirements |
|  | c)System Requirements | d)Domain Requirements |
|  | ANSWER : c | |
| 38 | Speed. Size, Ease of use, Reliability, Robustness, Portability are | |
|  | a)User requirements | b)Non functional requirements |
|  | c)use case association | d)metrics for specifying non functional requirements |
|  | ANSWER : d | |
| 39 | Which question does a non-functional requirement answer? | |
|  | a) What does the system do? | b) Where does the system do it? |
|  | c) Why does the system do it? | d) How well does the system do it? |
|  | ANSWER : d | |
| 40 | Which of the following is a non-functional requirement? | |
|  | a) The system enables users to place lunch orders. | b) The system always responds to user clicks in less than one tenth of a second. |
|  | c) The system displays a list of hotel vacancies. | d) None of the above |
|  | ANSWER : b | |
| 41 | Feasibility Study is conducted based on | |
|  | a) Preliminary business requirements | b)Detailed Business requirements |
|  | c)both a & b | d)none of the above |
|  | ANSWER : a | |
| 42 | What type of maintenance deals with the problems that arise during usage of the software | |
|  | a)Corrective maintenance | b)Adaptive maintenance |
|  | c)Perfective maintenance | d)none of the above |
|  | ANSWER : a | |
| 43 | Changes made periodically to a system after its implementation is called | |
|  | a)System analysis | b)system review |
|  | c)system maintenance | d)all the above |
|  | ANSWER : c | |
| 44 | This activity checks the requirements for realism, consistency and completeness. | |
|  | a)requirements specification | b)requirements validation |
|  | c)requirements discovery | d)requirements negotiation |
|  | ANSWER : b | |
| 45 | Domain requirements are | |
|  | a) requirements that come from the application domain of the system | b) Constraints on the services or functions offered by the system. |
|  | c) statements of services the system should  provide | d)none of the above |
|  | ANSWER : a | |

1.Which of the two is the software development model that can better respond to changes in the requirements?

A. AgileModel

B. Waterfall model

Answer: A

2. Agile software development model performs software development activities sequentially

A. True

B. False

Answer: B

3. Rapid software development processes are designed to produce useful software quickly.

A. True B. False

Answer: A

4. Rapid software development, share some fundamental characteristics:

I)The processes of specification, design and implementation are concurrent

II) The system is developed in a series of increments

A. Only I true

B. Both I and II true

C. Only II true

D. None of the aboves

Answer: B

5. Advantages of adopting an incremental approach to software development are : I) Accelerated delivery of customer services II) User User engagement with the system

A. Only I true

B. Both I and II true

C. Only II true

D. None of the above

Answer: B

6. The Principles of Agile Methods

A. Customer involvement

B. Incremental delivery

C. Embrace change

D. All of the above

Answer: D

7. Customer involvement and Incremental delivery are principles of agile methods

A. True

B. False

Answer: A

8. Extreme programming (XP) is perhaps the best known and most widely used of the

agile methods.

A. True

B. False

Answer: A

9.In XP, Programmers work in pairs and develop tests for each task before writing the code.

A. True

B. False

Answer: A

10. In XP, all tests must be successfully executed when new code is integrated into the system

A.True

B. False

Answer: A

11. Extreme programming practices

A. Incremental planning

B. Small releases

C. Refactoring

D. All of the above

Answer: D

12. Refactoring is a principle of Extreme Programming(XP)

A. True

B. False

Answer: A

13. Pair programming is a principle of Extreme Programming(XP)

A. True

B. False

Answer: A

14. Test-first development is a principle of Extreme Programming

A. True

B. False

Answer: A

15. The tools that are included in a RAD environment are:

A. A database programming

B*.*An interface generator

C. A report generator

D. All of the above

Answer: D

16. All RAD environments support the development of database interfaces based

on web browsers.

A. True

B. False

Answer: A

17. Agile methods involve the customer directly in the development process. A. True

B. False

Answer: A

18. Software evolution is important to organisations because

A. Systems are critical business assets

B. Passionate about development process

C. Employees to involve in development process

D. None of the above

Answer: A

19. Systems are critical business assets , so software evolution is required

A. True

B. False

Answer: A

20. The process of changing the software after delivery is often called

A. Software maintenance

B. Software deployment

C. Software release

D. All of above

Answer: A

21. Lehman’s laws

A. Continuing change

B. Increasing complexity

C. Large program evolution

D. All of the above

Answer: D

22. Software maintenance is the general process of changing a system after it has been

delivered.

A. True

B. False

Answer: A

23. Software maintenance

A.Maintenance to repair software faults

B.Maintenance to adapt the software to a different operating environment

C. Maintenance to add to or modify the system’s functionality

D.All of the ab*ove*

Answer: D

24. In software maintenance, coding errors are usually relatively cheap to correct; design errors are more expensive.

A. True

B. False

Answer: A

25. Lehman’s law is concerned with the change increments in each system release

A. True

B. False

Answer: A

26. According to Lehman the functionality offered by systems has to continually increase to maintain user satisfaction.

A. Continuing growth

B. Continuing decline

C. Continuing decline and growth

D. None

Answer: A

27. Evolution processes incorporate multi-agent, multi-loopfeedback systems and you have to treat them as feedback systems to achieve significant product improvement.

A. It is a law of Lehman

B. It is law of Newton

C. It is law of Somervillie

D. None of the above

Answer: A

28.According to Lehman,s law the functionality offered by systems has to continually increase to maintain user satisfaction.

A. True

B. FAlse

Answer: A

29. lehman,s law give importance to

A. Continuing growth

B. Declining quality

C.Feed back system

D. All of the above

Answer: D

30. Refactoring is characteristics of Extreme programming

A. True

B. False

**SET UNIT-3**

1: Which one of the following is product related

A. Quality control

B. Quality assurance

C. Both A. and B.

D. None of the above

2: Howden claims that

A. No general purpose testing can be used to prove program correctness

B. There is no such thing as an absolute proof of correctness

C. Both A. and B.

D. None of the above

3: Static testing involves

A. Symbolic execution

B. Code walk through

C. Inspections

D. All of the above

4: The role of V&V in SDLC is given in which of the following standards

A. IEEE std. 1012

B. IEEE std. 9012

C. IEEE std. 83b

D. None of the above

5: Detailed designs are addressed by a

A. Preliminary Design Review

B. Critical Design Review

C. Both A. and B.

D. None of the above

6: A planned meeting is also known as a

A. Informal review

B. Formal review

C. Technical review

D. Dynamic review

7: Structured walkthrough is a

A. Dynamic testing technique

B. Formal static testing technique

C. Informal static testing

D. Acceptance testing technique

8: Which of the following is not a validation activity

A. Unit testing

B. System testing

C. Acceptance testing

D. Walkthroughs

9: Which of the following is not a verification activity

A. Acceptance testing

B. Inspections

C. Walkthroughs

D. Buddy check

10: During validation

A. Process is checked

B. Product is checked

C. Developer’s performance is evaluated.

D. The customer checks the product

11: Which testing enables the tester to evaluate the software behaviour when exceptions occur

A) Fault Injection Testing

B) Fuzz Testing

C) Active Testing

D) Passive Testing

12: Which is not the state of bug in bug Life Cycle?

A) Verified

B) Deferred

C) Critical

D) Postponed

13: What is Disaster Recovery

A) Is needed by every installation

B) Not needed every time

C) Varies in degree between installation

D) Requires off-site computer for immediate use

14: A tester is executing a test to evaluate and it complies with the user requirement for a certain field be populated by using a dropdown box containing a list of values, at that time tester is performing

A) White-box Testing

B) Black-box Testing

C) Load Testing

D) Regression Testing

15: Test cases are created in which phase

A) Test Specification

B) Test Planning

C) Test Requirement

D) Test Configuration

16: Which of the following Use Cases are useful

A) Performance Testing

B) Business Scenarios

C) Static Testing

D) Unit Testing

17: When can customer says that the quality of the product is too good

A) Software meets its defined specification

B) Software is technically excellent

C) Software has few bugs

D) Software fulfills expectations of customer

18: The order in which test levels are performed is

A) Unit, Integration, Acceptance, System

B) Unit, System, Integration, Acceptance

C) Unit, Integration, System, Acceptance

D) It depends on the nature of a project.

19: System testing is a

A) Black box testing

B) Grey box testing

C) White box testing

D) Both a and b

20: What is V Model

A) Test Design Technique

B) Test Type

C) SDLC Model

D) Test Level

21: The technique applied for usability testing is:

A) White box

B) Grey box

C) Black box

D) Combination of all

22: Which is not a type of incremental testing approach?

A) Bottom up

B) Top down

C) Big-bang

D) Functional incrimination

23: White-box testing can be started:

A) After installation

B) After SRS creation

C) After programming

D) After designing

24: A program with high cyclometic complexity is likely to be:

A) Large

B) Small

C) Difficult to write

D) Difficult to test

25: Error guessing is a:

A) Test verification techniques

B) Test data management techniques

C) Test control management techniques

D) Test execution techniques

26: Error guessing is a

A) Test verification techniques

B) Test data management techniques

C) Test control management techniques

D) Test execution techniques

27: White Box techniques are also classified as

A) Design based testing

B) Structural testing

C) Error guessing technique

D) None of the mentioned

28: Boundary value analysis belong to?

A) White Box Testing

B) Black Box Testing

C) White Box & Black Box Testing

D) None of the mentioned

29. Alpha testing is done at

A) Developer end

B) User end

C) Developer & User end

D) None of the mentioned

30. When Acceptance Test Cases are prepared in V model

A) After system testing is done.

B) As soon as testing begins.

C) When user asks.

D) When user requirements are gathered.

31. Bug is the same name of

A) Error

B) Incident

C) Mistake

D) Defect

32. Who is responsible for Integration Testing?

A) Developer

B) Software Tester

C) Specialist Integration Tester

D) Both a and c

33. Why it is difficult for a developer to do a testing job

A) lack of Training

B) lack of Testing Tools

C) lack of Technical Documents

D) lack of Objectives

34. How much percentage of budget should be dedicated to testing activity for achieving its effectiveness?

A) 10-20

B) 40-50

C) 60-70

D) 5-10

35. Where do the testers fail to find the incidents?

A) Requirements

B) Design

C) Test cases

D) Improvements suggested by users

36. The fundamental notions of software engineering does not account for ?

A) Software Security

B) Software reuse

C) Software processes

D) Software Validation

37. Which one of the following models is not suitable for accommodating any change?

A) Prototyping Model

B) RAD Model

C) Build & Fix Model

D) Waterfall Model

38) To check whether we are developing the right product according to the customer requirements are not. It is a static process

A) Validation

B) Verification

C) Quality Assurance

D) Quality Control

39) Which defect amplification model is used to illustrate the generation and detection of errors during the preliminary steps of a software engineering process?

A) Design

B) Detailed design

C) Coding

D) All mentioned above

40) Which method is used for evaluating the expression that passes the function as an argument?

A) Strict evaluation

B) Recursion

C) Calculus

D) Pure functions

41) Organization can have in-house inspection, direct involvement of users and release of beta version are few of them and it also includes

usability, compatibility, user acceptance etc. is called

A) Task analysis

B) GUI requirement gathering

C) GUI design & implementation

D) Testing

42) Which testing is the re-execution of some subset of tests that have already been conducted to ensure the changes that are not propagated?

a. Unit testing

b. Regression testing

c. Integration testing

d. Thread-based testing

43) The longer a fault exists in software

a. the more tedious its removal becomes

b. the more costly it is to detect and correct

c. the less likely it is to be properly corrected

d. All of the mentioned

44. Which condition defines the circumstances for a particular operation is valid?

a. Postcondition

b. Precondition

c. Invariant

d. None of the above

45. Which is not a SQA activity?

a. Black box testing

b. White box testing

c. Integration testing

d. Unit testing

46. What is the testing to ensure the WebApp properly interfaces with other applications or databases?

a. Compatibility

b. Interoperability

c. Performance

d. Security

47. What do you understand by V&V in software testing?

a. Verified Version

b. Version Validation

c. Verification and Validation

d. Version Verification

48. Which granularity level of testing checks the behavior of module cooperation?

a. Unit Testing

b. Integration Testing

c. Acceptance Testing

d. Regression Testing

49. Which test refers to the retesting of a unit, integration and system after modification, in order to ascertain that the change has not introduced new faults?

a. Regression Test

b. Smoke Test

c. Alpha Test

d. Beta Test

50. Which of the following is a black box testing strategy?

a. All Statements Coverage

b. Control Structure Coverage

c. Cause-Effect Graphs

d. All Paths Coverage

51. A set of inputs, execution preconditions and expected outcomes is known as a

a. Test plan

b. Test case

c. Test document

d. Test Suite

**Extra Question Of Sunil Manoli**

|  |  |  |
| --- | --- | --- |
|  | **Unit-3** | |
| 1 | Static analysis can be best described as | |
|  | a) The reviewing of test plans | b)  The analysis of batch programs |
|  | c) The use of black box testing | d) The analysis of program code |
| 2 | **The order in which test levels are performed is** | |
|  | a) Unit, Integration, Acceptance, System | b) Unit, System, Integration, Acceptance |
|  | c) Unit, Integration, System, Acceptance | d) depends on the nature of a project  ppproproject |
| 3 | **System testing is a** | |
|  | a)  Black box testing | b) Grey box testing |
|  | c) White box testing | d) Both a and b |
| 4 | Unit Testing is done by: | |
|  | a) Users | b) Developers |
|  | c) Customers | d) None of the mentioned |
| 5 | Error guessing is a: | |
|  | a) Test verification techniques | b)  Test data management techniques |
|  | c) Test control management techniques | d) Test execution techniques |
| 6 | What are the various Testing Levels | |
|  | a) Unit Testing | b) System Testing |
|  | c) Integration Testing | d) All of the mentioned |
| 7 | What is V&V in Software Testing? | |
|  | a) Verified and Version | b)Version and Validation |
|  | c)Verification and Validation | d)Version and Verification |
| 8 | A set of inputs, execution preconditions and expected outcomes is known as a | |
|  | a) Test plan | b) Test case |
|  | c) Test document | d)Test Suite |
| 9 | The testing in which code is checked | |
|  | a) Black box testing | b)White box testing |
|  | c) Red box testing | d) Green box testing |
| 10 | Which of the following is not regression test case? | |
|  | a)A representative sample of tests that will exercise all software functions | b) Additional tests that focus on software functions that are likely to be affected by the change |
|  | c)Tests that focus on the software components that have been changed | d) Low-level components are combined into clusters that perform a specific software sub-function |
| 11 | The construction of object-oriented software begins with the creation of | |
|  | a) design model | b) analysis model |
|  | c) code levels | d) both design and analysis model |
| 12 | In which of the following testing strategies, a smallest testable unit is the encapsulated class or object? | |
|  | a) Unit testing | b) Integration testing |
|  | c) System testing | d)None of the mentioned |
| 13 | What is testing process’s first goal? | |
|  | a) Bug prevention | b) Testing |
|  | c) Execution | d)Analyses |
| 14 | Software mistakes during coding are known as | |
|  | a) errors | b) failures |
|  | c) bugs | d) defects |
| 15 | Effective testing will reduce \_\_\_\_\_\_\_ cost. | |
|  | a) maintenance | b) design |
|  | c) coding | d)documentation |
| 16 | Main difference between program testing and system testing is | |
|  | a) System testing is tough and program testing is easy. | b) Program testing is more comprehensive than system testing |
|  | c) System testing focuses on testing the interfaces between programs, program testing focuses on individual programs | d) None of the above |
| 17 | Testing a program thoroughly | |
|  | a) Only some errors will be found | b) Guarantees all defects will be found |
|  | c)Guarantees all errors will be found | d) None of the above |
| 18 | Testing can only be initiated | |
|  | a) from the design stage only | b)when the implementation is done |
|  | c)from the beginning of the project when planning is done | d)none of the above |
| 19 | Choose the correct statement | |
|  | a) testing can always be exhaustive | b)testing can always find all the bugs |
|  | c) if we test enough then we can find all of the bugs. | d) testing can show the presence of bugs but never their absence |
| 20 | What are the Types of Integration Testing? | |
|  | a) Big Bang Testing | b) Bottom Up Testing |
|  | c) Top Down Testing | d) All the above |
| 21 | Defects generally fall into the following categories? | |
|  | a)Wrong | b)Missing |
|  | c)Extra | d)All the above |
| 22 | What is Fault Masking? | |
|  | a) Creating a test case which does not reveal a fault | b) Error condition hiding another error condition |
|  | c) Masking a fault by developer | d) Masking a fault by a tester |
| 23 | All the modules of the system are integrated and tested as complete system in the  case of | |
|  | a) Bottom up testing | b) Top-down testing |
|  | c) Sandwich testing | d) Big-Bang testing |
| 24 | Modules X and Y operate on the same input and output data, then the cohesion is | |
|  | a) Sequential | b) Communicational |
|  | c) Procedural | d) Logical |
| 25 | Each time a defect gets detected and fixed, the reliability of a software product | |
|  | a) Increases. | b) Decreases. |
|  | c) Remains constant | d) Cannot say anything |
| 26 | Alpha and Beta Testing are forms of | |
|  | a) Acceptance testing | b) Integration testing |
|  | c) System Testing | d) Unit testing |
| 27 | If a program in its functioning has not met user requirements is some way, then it is | |
|  | a) an error | b) a failure. |
|  | c) a fault. | d) a defect. |
| 28 | What can static analysis NOT find? | |
|  | a)  the use of a variable before it has been defined | b) unreachable (“dead”) code |
|  | c) memory leaks | d) array bound violations |
| 29 | Testing where in we subject the target of the test , to varying workloads to measure and evaluate the performance behaviors and ability of the target and of the test to continue to function properly under these different workloads. | |
|  | a) Load Testing | b)  Integration Testing |
|  | c) System Testing | d) Usability Testing |
| 30 | To check whether we are developing the right product according to the customer requirements are not. It is a static process | |
|  | a) Validation | b) Verification |
|  | c) Quality Assurance | d) Quality Control |

**SET UNIT-4**

1. A shopping website gives discount based on prices of total purchased items. Suppose customer purchases are below 2000 rs. then no discount,for purchases till 20000, it gives 10% discount and above 20000 it gives 15% discount. Which of the following sets of values lie in 3 different equivalence classes?  
   A) 1800,2000,8000  
   B) 2001,10000,20002  
   C) 1800, 2003,58,000  
   D) 100,1800,20001

**ANSWER: C**

1. In final examination, student can get 0 to 3000 marks. Students has to get 50% in order to pass the examination. If he gets 2000 or below that he will be given C grade ,if he gets 2000-2500 then he will get B grade and above that he is eligible for A grade. Using boundary value analysis what will be the values for testing if we are testing for C grade?  
   A) 1500,1501,1999,2000  
   B) 1499,1500,1999,2000  
   C) 1500,1501,2000,2001  
   D) 1499,1500,2000,2001

**ANSWER:D**

1. A theme park charges entry fee based on age group. For children below 3 it charges nothing, for 3-10 it charges 500/-, for 10-18 it charges 800/-,then for 18-60 it charges 1000 and above 60 it charges 500 again. Using boundary value analysis, what will be the values to test if person pays 500 rs entry fee?  
   A) 0,2,3  
   B) 2,3,10,11,59,60,100,101  
   C) 2,3,10,11,59,60,100,101  
   D) 59,60,100,101

**ANSWER:C**

1. A city field in software accepts 3 to 25 alpha characters only. Using BVA technique what will be possible number of combinations?  
   A) 3,4,24,25  
   B) 2,3,25,26  
   C) 2,3,24,25  
   D) 3,5,25,26

**ANSWER:B**

1. Which is/are the characteristics of equivalence partitioning?  
   A) In equivalence-partitioning technique we need to test only one condition from each partition.  
   B) If one condition in a partition works, we assume all of the conditions in that partition will work.  
   C) if one of the conditions in a partition does not work, then we assume that none of the conditions in that partition will work.  
   D) Equivalence partitions and equivalence classes both terms mean exactly the same thing.  
   E) All of the above

**ANSWER:E**

1. Equivalence partitioning and boundary value analysis techniques are used only during system testing. True or false.  
     
   a) True  
   b) False

**ANSWER:B**

1. A particular text field accepts only alpha characters. Which of the following is invalid equivalence partition?  
   A) APPLE  
   B) apple  
   C) aPPle  
   D) a2pple

**ANSWER:D**

1. Which of the following is not a specification based technique?  
   A) Cause-effect table  
   B) State transition testing  
   C) Decision coverage  
   D) Use case testing

**ANSWER:C**

1. The speedometer of a car uses 7 colors to show the speed. Each color covers a range of 20 km, with an operating minimum and maximum of 0 and 140. Which of the following values is LEAST likely to have been identified when applying the boundary value test design technique?  
   A) -1  
   B) 0  
   C) 7  
   D) 121

**ANSWER:C**

1. A on line bus reservation system asks number of seats to be reserved by user where user can reserve seats till its capacity will be full. If a tester wants to test that particular field using boundary value, what do you think will be a correct set of input values?  
   A) 1, 2, capacity -1, capacity, capacity + 1  
   B) 0, 1, capacity, capacity + 1  
   C) 0, 1, 2, capacity + 1, a very large number

D) 0, 1, 10, 100, capacity, capacity+1

**ANSWER:B**

1. To pass an Exam, a candidate has to score minimum of 50 marks in order to clear the exam. The maximum that he can score is 100 marks. Identify the Valid Equivalence values if the student passes the exam.  
   A) 50,58,75  
   B) 49,50,51  
   C) 52,60,99  
   D) 0,15,50

**ANSWER:C**

1. Which of the following values for age are in the same equivalence partition?  
   If you are less than 18, you are too young to be registered for program  
   Between 18 and 50 inclusive, you will receive a 20% discount.  
   Anyone over 50 is not eligible for a discount.  
   A) 17, 18, 19  
   B) 51, 52, 53  
   C) 18, 49, 50  
   D) 17, 49, 51

**ANSWER:B**

1. What is an equivalence partition?  
   A) A set of test cases for testing classes of objects  
   B) An input or output range of values such that only one value in the range becomes a test case  
   C) An input or output range of values such that each value in the range becomes a test case  
   D) An input or output range of values such that every tenth value in the range becomes a test case.

**ANSWER:B**

**14. One of the fields on a form contains a text box which accepts numeric values in the range of 18 to 25. Identify the invalid Equivalence class.**

A)17  
 B)19  
 C)24  
 D)21

15. **In an Examination a candidate has to score minimum of 24 marks in order to clear the exam. The maximum that he can score is 40 marks.  Identify the Valid Equivalence values if the student clears the exam.**

A)22, 23, 26  
b)21, 39, 40  
c) 29, 30, 31  
d) 0, 15, 22

**ANSWER:C**

**16. One of the fields on a form contains a text box which accepts alpha numeric values. Identify the Valid Equivalence class**

a) BOOK  
b) Book  
c) Boo01k  
d) Book

**ANSWER:C**

**17.** **The Switch is switched off once the temperature falls below 18 and then it is turned on when the temperature is more than 21. When the temperature is more than 21. Identify the Equivalence values which belong to the same class.**a) 12, 16, 22  
b) 24, 27, 17  
c) 22, 23, 24  
d) 14, 15, 19

**ANSWER:C**

**18.** **A program validates a numeric field as follows: values less than 10 are rejected, values between 10 and 21 are accepted, values greater than or equal to 22 are rejected. Which of the following input values cover all of the equivalence partitions?**a. 10, 11, 21  
b. 3, 20, 21  
c. 3, 10, 22  
d. 10, 21, 22

**ANSWER:C**

**19.** **A program validates a numeric field as follows: values less than 10 are rejected, values between 10 and 21 are accepted, values greater than or equal to 22 are rejected. Which of the following covers the MOST boundary values?**a. 9,10,11,22  
b. 9,10,21,22  
c. 10,11,21,22  
d. 10,11,20,21

**ANSWER:B**

**20. In a system designed to work out the tax to be paid:An employee has £4000 of salary tax free.**  
**The next £1500 is taxed at 10%.** **The next £28000 after that is taxed at 22%.** **Any further amount is taxed at 40%.** To the nearest whole pound, which of these groups of numbers fall into three DIFFERENT equivalence classes?  
a)    £4000; £5000; £5500  
b)    £32001; £34000; £36500  
c)    £28000; £28001; £32001  
d)    £4000; £4200; £5600

**ANSWER:D**

**21. In a system designed to work out the tax to be paid:**  
**An employee has £4000 of salary tax free.**  
**The next £1500 is taxed at 10%.**  
**The next £28000 after that is taxed at 22%.**  
**Any further amount is taxed at 40%.**

To the nearest whole pound, which of these is a valid Boundary Value Analysis test case?  
a)    £28000  
b)    £33501  
c)    £32001  
d)    £1500

**ANSWER:B**

**22.** **Given the following specification, which of the following values for age are in the SAME equivalence partition?**  
If you are less than 18, you are too young to be insured.  
Between 18 and 30 inclusive, you will receive a 20% discount.Anyone over 30 is not eligible for a discount.  
a)    17, 18, 19  
b)    29, 30, 31  
c)    18, 29, 30  
d)    17, 29, 31

**ANSWER:C**

23. W**hich of the following statements is NOT correct?**a)    A minimal test set that achieves 100% LCSAJ coverage will also achieve 100% branch coverage.  
b)    A minimal test set that achieves 100% path coverage will also achieve 100% statement coverage.  
c)    A minimal test set that achieves 100% path coverage will generally detect more faults than one that achieves 100% statement coverage.  
d)    A minimal test set that achieves 100% statement coverage will generally detect more faults than one that achieves 100% branch coverage.

**ANSWER:D**

**24. Analyse the following highly simplified procedure:**

Ask: “What type of ticket do you require, single or return?”  
IF the customer wants ‘return’  
Ask: “What rate, Standard or Cheap-day?”  
IF the customer replies ‘Cheap-day’  
Say: “That will be £11:20″  
ELSE  
Say: “That will be £19:50″  
ENDIF  
ELSE  
Say: “That will be £9:75″  
ENDIF

Now decide the minimum number of tests that are needed to ensure that all the questions have been asked, all combinations have occurred and all  
replies given.  
a)    3  
b)    4  
c)    5  
d)    6

**ANSWER:A**

**25.** **In a system designed to work out the tax to be paid:**An employee has £4000 of salary tax free. The next £1500 is taxed at 10% The next £28000 is taxed at 22% Any further amount is taxed at 40% To the nearest whole pound, which of these is a valid Boundary Value Analysis test case?  
a)    £1500  
b)    £32001  
c)    £33501  
d)    £28000

**ANSWER:C**

**26.** **In a system designed to work out the tax to be paid:  
An employee has £4000 of salary tax free. The next £1500 is taxed at 10%**The next £28000 is taxed at 22%  
Any further amount is taxed at 40%  
Which of these groups of numbers would fall into the same equivalence class?  
a) £4800; £14000; £28000  
b) £5200; £5500; £28000  
c) £28001; £32000; £35000  
d) £5800; £28000; £32000

**ANSWER:D**

**27.**  Order numbers on a stock control system can range between 10000 and 99999 inclusive. Which of the following inputs might be a result of designing tests for only valid equivalence classes and valid boundaries?  
a) 1000, 50000, 99999  
b) 9999, 50000, 100000  
c) 10000, 50000, 99999  
d) 10000, 99999, 100000

**ANSWER:C**

**28.** Given the following code, which statement is true about the minimum number of test cases required for full statement and branch coverage?  
Read p  
Read q  
IF p+q > 100 THEN  
Print “Large”  
ENDIF  
IF p > 50 THEN  
Print “p Large”  
ENDIF  
a) 1 test for statement coverage, 3 for branch coverage  
b) 1 test for statement coverage, 2 for branch coverage  
c) 1 test for statement coverage, 1 for branch coverage  
d) 2 tests for statement coverage, 2 for branch coverage

**ANSWER:B**

**29.**  Consider the following statements:  
i.100% statement coverage guarantees 100% branch coverage.  
ii.100% branch coverage guarantees 100% statement coverage.  
iii.100% branch coverage guarantees 100% decision coverage.  
iv.100% decision coverage guarantees 100% branch coverage.  
v.100% statement coverage guarantees 100% decision coverage.  
a) ii is True; i, iii, iv & v are False  
b) i & v are True; ii, iii & iv are False  
c) ii & iii are True; i, iv & v are False  
d) ii, iii & iv are True; i & v are False

**ANSWER:D**

**30. If the pseudo code below were a programming language, how many tests are required to achieve 100% statement coverage?**If x=3 then  
Display\_messageX;  
If y=2 then  
Display\_messageY;  
Else  
Display\_messageZ;  
Else  
Display\_messageZ;  
a. 1  
b. 2  
c. 3  
d. 4

**ANSWER:C**

**31. Using the same code example as question 17, how many tests are required to achieve 100% branch/decision coverage?**a. 1  
b. 2  
c. 3  
d. 4

**ANSWER:C**

**32.** **A program validates a numeric field as follows:**  
**Values less than 10 are rejected, values between 10 and 21 are accepted, values greater than or equal to 22 are rejected. Which of the following input values cover all of the equivalence partitions**?  
a. 10, 11, 21  
b. 3, 20, 21  
c. 3, 10, 22  
d. 10, 21, 22

**ANSWER:C**

**33.** **Using the same specifications as question 29, which of the following covers the MOST boundary values?**a. 9,10,11,22  
b. 9,10,21,22  
c. 10,11,21,22  
d. 10,11,20,21

**ANSWER:B**

**34.  An input field takes the year of birth between 1900 and 2004.** **The boundary values for testing this field are:**

a. 0,1900,2004,2005  
b. 1900, 2004  
c. 1899,1900,2004,2005  
d. 1899, 1900, 1901,2003,2004,2005

**ANSWER:C**

**35. Given the Following program**  
IF X < Y  
THEN Statement 1;  
ELSE IF Y >= Z  
THEN Statement 2;  
END  
Cyclomatic Complexity is :

a. 2  
b. 3  
c. 4  
d. 5

**ANSWER: B**

**36. For retail shopping software which table would be example of Decision Table?**  
**a.** A table containing rules of discount.

**b.** A table containing rules for interfaces between components.

**c.** A table containing rule of employee behavior.

**d.** A table containing rules for combination of input.

**ANSWER:A**

**37.**When different combination of input requires different combination of actions,Which of the following technique is used in such situation?

a. Boundary Value Analysis

b. Equivalence Partition

c. Decision Table

d. Decision Coverage

**ANSWER:C**

**38.** A decision table is

a. a truth table

b. a table which facilitates taking decisions

c. a table listing conditions and actions to be taken based on the testing of conditions

d. a table in a Decision Support System

**ANSWER:C**

**39.** A decision table

a. has a structured English equivalent representation

b. cannot be represented using structured English

c. does not have an equivalent algorithmic representation

d. cannot be used to represent processes in a DFD

**ANSWER:A**

**40.** A decision table is preferable when the number of

a. conditions to be checked in a procedure is small

b. conditions to be checked in a procedure is large

c. actions to be carried out are large

d. actions to be carried out are small

**ANSWER:B**

**41.** Decision table description of data processing is

a. non-procedural specification

b. procedural specification

c. purely descriptive specification

d. very imprecise specification

**ANSWER:A**

**42.** In a limited entry decision table the condition stub

a. lists X or – corresponding to actions to be executed

b. lists the conditions to be tested

c. has Y or N or – entries

d. lists the actions to be taken

**ANSWER:B**

**43.** In a limited entry decision table the condition entries

a. list X or – corresponding to actions to be executed

b. list the conditions to be tested

c. have Y or N or – entries

d. list the actions to be taken

**ANSWER:C**

44.In a limited entry decision table the action stub

a. lists X or – corresponding to actions to be executed

b. lists the conditions to be tested

c. has Y or N or – entries

d. lists the actions to be taken

**ANSWER:D**

45. In a limited entry decision table the action entries

a. list X or – corresponding to actions to be executed

b. list the conditions to be tested

c. have Y or N or – entries

d. list the actions to be taken

**ANSWER:A**

46. In a limited entry decision table the condition entries may be

a. Y or N only

b. Y, N or –

c. A binary digit

d. Any integer

**ANSWER:B**

47. In a limited entry decision table a—entry against a condition signifies that

a. the outcome of testing the condition is irrelevant

b. it is an important condition

c. the condition should be tested

d. the condition is a Boolean condition

**ANSWER:A**

48. A rule in a limited entry decision table is a

a. row of the table consisting of condition entries

b. row of the table consisting of action entries

c. column of the table consisting of condition entries and the corresponding action entries

d. columns of the tables consisting of conditions of the stub

**ANSWER:C**

**49.**The conditions in the condition stub of a limited entry decision table

a. must be in sequential order

b. must be in the order in which they are to be tested

c. may be in any order

d. must be in the order in which they are to be executed

**ANSWER:C**

50.The actions in the action stub of a limited entry decision table

a. must be in sequential order

b. must be in the order in which they are to be tested

c. may be in any order

d. must be in the order in which they are to be executed

**ANSWER:D**

6.29 A X against an action in an action row signifies that the

a. action is not to be taken

b. action is to be taken

c. action is important

d. action is not important

**ANSWER:B**

51. A—against an action in an action row signifies that the

a. action is not to be taken

b. action is to be taken

c. action is important

d. action is not important

**ANSWER:A**

52. An extended entry decision table has

a. only Y, N or – entries

b. entries which extend the condition

c. questions asked extended into the condition entry part of the table

d. only numerical entries

**ANSWER:C**

53. An extended entry decision table

a. has no limited entry equivalent

b. cannot be replaced by a table with only Y, or – entries

c. may have Yes, No answers to conditions

d. can always be converted to an equivalent limited entry decision table

**ANSWER:D**

54. An extended entry decision table is

a. very difficult to understand

b. quite concise compared to a limited entry decision table developed for the same task

c. large compared to a limited entry table developed for the same task

d. is not very often used

**ANSWER:B**

**55.** Decision Tables are preferred when

a. Too many conditions need to be tested

b. Sequencing of testing conditions is important

c. When there are many loops to be performed

d. When too many actions are to be taken

**ANSWER:A**

56.Decision trees are superior to decision tables when

a. The number of conditions to be tested is very large

b. When sequence of testing conditions is not particularly important

c. When sequence of testing conditions is not particularly important

d. When a large number of actions are to be specified

**ANSWER:C**

**57.** Logical correctness of a specifications can be systematically checked by

a. Using decision trees

b. Using structured English

c. Using DFD’s

d. Using decision tables

**ANSWER:D**

58.Decision tables are better then Decision trees when

a. Conditions are to be isolated from actions in a word statement

b. Condition sequences are to be found from a word statement

c. Logical correctness of a word statement is to be established

d. Large number of actions is to be performed

**ANSWER:C**

**59.**  Which of the following Review Technique is / are not time bound?  
a. Inspection

b. walkthrough

c. Both of These

d. None of These

**ANSWER:B**

**60.** Which of the following comes under the Control Structure Testing?  
a. Condition testing

b. Loop testing

c. Data Flow Testing

d. All of the above

**ANSWER:D**

**61.**  Which of the following is / are characteristics of testable software?  
a. Observability

b. Simplicity

c. Stability

d. All of the above

**ANSWER:D**

**62. Which of the following categories, Black-box testing attempts to find errors?**  
**a.** Incorrect or missing functions

**b.** Interface errors

**c.** Behavior or performance errors

**d.** All of the above

**ANSWER:D**

**63.**  Equivalence Partitioning comes under which type of Testing?  
a. White Box Testing

b. Black Box Testing

c. Grey Box Testing

d. None of the above

**ANSWER:B**

**64. Black Box Testing is also known as \_\_\_\_\_\_\_\_ .**  
**a.** Behavioral Testing

**b.** Flow Testing

**c.** Data Testing

**d.** None of the above

**ANSWER:A**

**65. In a flow graph, node contains a condition and it is characterized by two or more edges emanating from it, is called as \_\_\_\_\_\_\_\_ .**  
**a.** Parent node

**b.** Two Edge node

**c.** Predicate node

**d.** None of the above

**ANSWER:C**

**66.  Which of the following is/are characteristic of Exploratory Testing?**  
**a.** Minimum planning and maximum execution.

**b.** Formal testing techniques are also used.

**c.** Test design and test execution are done in parallel.

**d.** Useful in situations with poor specification and limited time.

**e.** All of the above.

**ANSWER:E**

**67. Cyclomatic Complexity is computed as \_\_\_\_\_\_\_\_\_\_\_ .**  
**a.** The number of regions of the flow graph corresponds to the Cyclomatic Complexity.

**b.** Cyclomatic Complexity, V(G), for a flow graph, G, is defined as V(G) = E - N + 2 where E is the number of flow graph edges, N is the number of flow graph nodes.

**c.** Cyclomatic Complexity, V(G), for a flow graph, G, is also defined as V(G) = P + 1 where P is the number of predicate nodes contained in the flow graph G.

**d.** All of the above.

**ANSWER:D**

**68.** Which of the following is a software metric that provides a quantitative measure of the logical complexity of a program?  
a. Cyclomatic Complexity

b. LOC

c. Function Point

d. None of the above.

**ANSWER:A**

**69.** Which of the following is a software metric that provides a quantitative measure of the logical complexity of a program?

a. Cyclomatic Complexity

b. LOC

c. Function Point

d. None of the above.

**ANSWER:A**

**70.   A logical collection of test cases which naturally work together is called as \_\_\_\_\_\_\_ .**

**a.** Test log

**b.** Test procedure

**c.** Test data

**d.** Test suite

**ANSWER:D**

**71.** White Box techniques are also classified as  
a) Design based testing  
b) Structural testing  
c) Error guessing technique  
d) None of the mentioned

**ANSWER:B**

**72.**  Which of the following is/are White box technique?  
a) Statement Testing  
b) Decision Testing  
c) Condition Coverage  
d) All of the mentioned

**ANSWER:D**

**73.** What are the various Testing Levels?  
a) Unit Testing  
b) System Testing  
c) Integration Testing  
d) All of the mentioned

**ANSWER:D**

**74.** Boundary value analysis belong to?  
a) White Box Testing  
b) Black Box Testing  
c) White Box & Black Box Testing  
d) None of the mentioned

**ANSWER:B**

**75.** Which of the following is black box testing  
a) Basic path testing  
b) Boundary value analysis  
c) Code path analysis  
d) None of the mentioned

**ANSWER:B**

**76.** Which of the following is not a software testing generic characteristics?  
a) Different testing techniques are appropriate at different points in time  
b) Testing is conducted by the developer of the software or an independent test group  
c) Testing and debugging are different activities, but debugging must be accommodated in any testing strategy  
d) None of the mentioned

**ANSWER:A**

**77.** In which testing level the focus is on customer usage?  
a) Alpha Testing  
b) Beta Testing  
c) Validation Testing  
d) Both Alpha and Beta

**ANSWER:D**

**78.** In ……………….., test cases are derived to ensure that all statements in the program have been executed at least once during testing and that all logical conditions have been exercised.  
A) White-box testing  
B) Control structure testing  
C) Black-box testing  
D) Gray-box testing

**ANSWER:A**

**79.**. ……………………. probes the programs ability to handle data at the limits of acceptability.  
A) Boundary value analysis  
B) Graph-based testing  
C) Equivalence partitioning  
D) loop testing

**ANSWER:A**

**80.** …………………. divides the input domain into classes of data that are likely to exercise specific software function.  
A) Boundary value analysis  
B) Graph-based testing  
C) Equivalence partitioning  
D) loop testing

**ANSWER:C**

**81.** . ………………… can be used to define various classes and input and associated interactions.  
A) equivalence partitioning and graph based testing  
B) equivalence partitioning and boundary value analysis  
C) condition testing and equivalence partitioning  
D) graph based testing and boundary value analysis

**ANSWER:B**

**82.** The independent versions from the basis of a black-box testing technique are called …………….  
A) Condition testing  
B) Graph-based testing  
C) Comparison testing  
D) loop testing

**ANSWER:C**

**83.** Boundary value analysis is a test design technique that complements …………………..  
A) Condition testing  
B) Graph-based testing  
C) Equivalence partitioning  
D) loop testing

**ANSWER:C**

**84.** Cyclomatic Complexity method comes under which testing method.  
a) Yellow box  
b) White box  
c) Gray box  
d) Black box

**ANSWER:B**

**85.** Which of the following is NOT a white box technique?

a) Statement testing  
b) Path testing  
c) State transition testing  
d) Data flow testing

**ANSWER:C**

**86.** Which of the following is NOT true of test coverage criteria?

a) A measure of test coverage criteria is the percentage of user  
requirements covered.  
b) Test coverage criteria can be measured in terms of items exercised  
by a test suite.  
c) A measure of test coverage criteria is the percentage of faults found.  
d) Test coverage criteria are often used when specifying test  
completion criteria.

**ANSWER:C**

**87.** Which one of the following statements about system testing is NOT true?

a) System tests are often performed by independent teams.  
b) Functional testing is used more than structural testing.  
c) Faults found during system tests can be very expensive to fix.  
d) End-users should be involved in system tests.

**ANSWER:D**

**88.** Which of the following characterizes the cost of faults?

a) They are easiest to find during system testing but the most  
expensive to fix then.  
b) They are cheapest to find in the early development phases and the  
most expensive to fix in the latest test phases.  
c) Faults are cheapest to find in the early development phases but the  
most expensive to fix then.  
d) Although faults are most expensive to find during early development  
phases, they are cheapest to fix then.

**ANSWER:B**

**89.** What is the important criterion in deciding what testing technique to use?

a) How well you know a particular technique  
b) How appropriate the technique is for testing the application  
c) The objective of the test  
d) Whether there is a tool to support the technique

**90.** A program with high cyclometic complexity is almost likely to be:

a) Difficult to test  
b) Small  
c) Difficult to write  
d) Large

**91.** Given the following sets of test management terms (v-z), and activity descriptions (1-5), which one of the following best pairs the two sets?

v – Test control  
w – Test monitoring  
x – Test estimation  
y – Incident management  
z – Configuration control

1 – Calculation of required test resources  
2 – Maintenance of record of test results  
3 – Re-allocation of resources when tests overrun  
4 – Report on deviation from test plan  
5 – Tracking of anomalous test results

a) v-3,w-2,x-1,y-5,z-4  
b) v-2,w-5,x-1,y-4,z-3  
c) v-3,w-4,x-1,y-5,z-2  
d) v-2,w-1,x-4,y-3,z-5

**92.** A failure is:

a) Found in the software; the result of an error.  
b) A human action that produces an incorrect result.  
c) An incorrect step, process or data definition in a computer program.  
d) Departure from specified behavior.

93. The most important thing about early test design is that it:

a) Means inspections are not required.  
b) Makes test preparation easier.  
c) Can prevent fault multiplication.  
d) Will find all faults.

**94.Basis Path Testing falls under**

**a) System Testing**

**b) white box Testing**

**c) Black box Testing**

**D) Unit Testing**

95.Lowest level DFDs my add new data flows to represent exception handling i.e error messages

A) True

B) False

96.A DFD provides no information about the timing or ordering of processes, or about whether processes will operate in sequence or in parallel.

A) True

B) False

97.A……. is represented graphically by an arrow into or out of a process

A) Process

B) Entity

C) Level

D) Flow

98.A data flow may or may not be attached to at least one process

A) True

B) False

99) .**……… is to organize the overall DFD in a series of levels so that each level provides successively more detail about a portion of the level above it.**

**A) Split DFDs**

**B) LEVELED DFDs**

**C) Flow DFDs**

**D) All of above**

100) Context Diagram defines the scope of the system by identifying the system Boundary.

A) Context Diagram

B) Level 0 DFD

C) Level 1 DFD

D) Level 2 DFD

**Extra Questions Of Sunil Manoli**

|  |  |  |
| --- | --- | --- |
|  | **Unit-4** | |
| 1 | In a Decision table rules indicate | |
|  | a) Condition stub, Condition entries | b) Maximum value a variable can have |
|  | c) Which actions are taken for the circumstances indicated in the condition portion of the rule | d) Minimum boundary value |
| 2 | The Decision table components are | |
|  | a) Condition stub | b) Condition entries |
|  | c) Action stub | d) Condition stub, Condition entries, Action stub, Action entries |
| 3 | In a Decision table Rules are interpreted as | |
|  | a) test cases | b) Inputs |
|  | c) outputs | d) cyclomatic complexity |
| 4 | In a Decision table which is true for rule counting | |
|  | a) a rule with dont care entries counts as 1 | b) a rule with dont care entries counts as 0 |
|  | c) each don’t care entry in a rule doubles the rule count | d) a rule with no dont care entries counts as 0 |
| 5 | In a Decision table there are 4 conditions then the maximum number of test cases will be | |
|  | a) 4 | b) 16 |
|  | c) 3 | d) 8 |
| 6 | Boundary value testing is focused on the | |
|  | a) input domain | b) output domain |
|  | c) independent of input and output | d) domain knowledge |
| 7 | One of the variations of boundary value testing is | |
|  | a) Worst-case boundary value testing | b) Normal Robust boundary value testing |
|  | c) Robust worse case boundary value testing | d) Normal random testing |
| 8 | The basic idea of boundary value analysis is to use input variable values | |
|  | a) at their minimum | b) at their nominal value |
|  | c) at their maximum | d) at their minimum, just above the minimum, a nominal value, just below their maximum, and at their maximum |
| 9 | In Robust boundary value testing | |
|  | a) a value slightly greater than the maximum and a value slightly less than the minimum is added | b) a value slightly greater than the maximum and a nominal value is added |
|  | c) a nominal value and a value slightly less than the minimum is added | d) ) a value at minimum and a value at the maximum is added |
| 10 | For worst case boundary Value testing for 2 variables the number of test cases are | |
|  | a) 4 | b) 16 |
|  | c) 5 | d) 25 |
| 11 | In Special value testing, to devise test cases a tester uses | |
|  | a) experience with similar programs | b) domain knowledge, experience with similar programs, and information about soft spots |
|  | c) domain knowledge | d) information about soft spots |
| 12 | Given a program written in a programming language, its program graph is a directed graph in which | |
|  | a) nodes are statements | b) edges are statements |
|  | c) nodes and edges are equal | d) nodes are sum of all the decision statement |
| 13 | For a control flow graph of a C program if there are 8 edges and 4 nodes then the McCabes cyclomatic complexity is | |
|  | a) 8 | b) 6 |
|  | c) 4 | d) 12 |
| 14 | For a control flow graph, which one is true for McCabes cyclomatic complexity | |
|  | a) if the number of bounded area is 3 then the cyclomatic complexity is 4 | b) If the decision statements are 5, then the cyclomatic complexity is 4 |
|  | c) there is no relation between cyclomatic complexity and bounded area | d) there is no relation between number of decision statements and cyclomatic complexity |
| 15 | Computation of Cyclomatic complexity | |
|  | a) Provides a method of determining the maximum number of test cases required for basis path testing | b) Does not provide a method of determining the maximum number of test cases required for basis path testing |
|  | c) Provides a way for drawing linearly independent path for a program | d) Provides a method of determining the minimum number of test cases required for basis path testing |
| 16 | In a control flow graph a Basis path is | |
|  | a) any path through the program that introduces at least one new edge not included in any other independent path | b) any path through the program that does not introduces a new edge not included in any other independent path |
|  | c) path through the program from starting node to ending node | d) path through program which includes Decision true statements |
| 17 | For Basis path testing | |
|  | a) It is difficult to identify the basis paths for a complex program | b) Basis paths can be identified by calculating cyclomatic complexity |
|  | c) paths can be identified by checking decision statement | d) It is easy to identify the basis paths for any program. |
| 18 | The use of equivalence classes as the basis for functional testing provides | |
|  | a) a sense of complete testing | b) a hope to avoid redundancy |
|  | c) test cases for structural testing | d) a sense of complete testing and a hope to avoid redundancy. |
| 19 | The idea of equivalence class testing is to identify | |
|  | a) multiple test cases from each equivalence class | b) one test case from each equivalence class |
|  | c) which classes are same | d) which classes are equivalent |
| 20 | One of the categories of Equivalence class testing is | |
|  | a) Weak Normal Equivalence Class | b) Strong completeness class |
|  | c) weak duplication class | d) strong duplication class |
| 21 | Suppose in a program there are 2 Variable. One variable has 4 equivalence classes and second has 5 equivalence classes then total number of sufficient test cases in weak normal Equivalence case is | |
|  | a) 5 | b) 2 |
|  | c) 4 | d) 10 |
| 22 | Suppose in a program there are 2 variable. one variable has 3 equivalence classes and second has 3 equivalence classes then total number of sufficient test cases in strong normal equivalence class is | |
|  | a) 3 | b) 6 |
|  | c) 9 | d) 8 |
| 23 | Suppose in a program there are 2 variable. one variable has 2 equivalence classes and second has 4 equivalence classes then total number of sufficient test cases in strong robust equivalence class is | |
|  | a) 6 | b) 8 |
|  | c) 16 | d) 24 |
| 24 | Suppose in a program there are 2 variable. one variable has 3 equivalence classes and second has 4 equivalence classes then total number of sufficient test cases in weak robust equivalence class is | |
|  | a) 6 | b) 3 |
|  | c) 7 | d) 9 |
| 25 | Data flow testing | |
|  | a) uses data flow diagram | b) has no link with data flow diagram |
|  | c) is used in functional testing | d) uses data from Boundary value analysis |
| 26 | Data flow testing focus on | |
|  | a) the points at which variables receive values and the points at which these values are used | b) checking the correctness of data structure of the program |
|  | c) memory allocation & release of a variable | d) data flow from main program to function and back to main program |
| 27 | Data flow testing can help in avoiding data Anomalies like | |
|  | a) Variable is out of range | b) Variable is used but never defined |
|  | c) Variable is wrongly defined | d) Variable has constant value |
| 28 | A variable X is said to be live at statement S1, if | |
|  | a) X is defined at statement S and there exists a path from S to S1 not containing any definition of X | b) X is defined at statement S and there exists a path from S to S1 containing repeat definition of X |
|  | c) X is defined at statement S and there does not exists a path from S to S1 not containing any definition of X | d) X has been used multiple times from S to S1 without defining it |
| 29 | For data flow testing, generally we | |
|  | a) test all DU path | b) test only those DU path which are definition clear |
|  | c) test only paths where variable has been defined | d) test only paths where variable has been used |
| 30 | In slice testing | |
|  | a) Dynamic slices are generally smaller | b) Static slices are generally smaller |
|  | c) Dynamic and static slices are same | d) dynamic slices are half of static slices |
|  |  |  |

Choose the correct option in terms of Issues related to professional responsibility

1. Confidentiality
2. Intellectual property rights
3. **Both Confidentiality & Intellectual property rights**
4. Managing Client Relationships ans:c

“Software engineers should not use their technical skills to misuse other people’s computers.”Here the term misuse refers to: Unauthorized access to computer material

a) Unauthorized access to computer material  
b) Unauthorized modification of computer material  
c) Dissemination of viruses or other malware  
d) **All of the mentioned**

ans:d

Explain what is meant by PRODUCT with reference to one of the eight principles as per the ACM/IEEE Code of Ethics ?

1. The product should be easy to use
2. **Software engineers shall ensure that their products and related modifications meet the highest professional standards possible**
3. Software engineers shall ensure that their products and related modifications satisfy the client
4. It means that the product designed /created should be easily available ans:b

Identify an ethical dilemma from the situations mentioned below:

1. **Your employer releases a safety-critical system without finishing the testing of the system**
2. Refusing to undertake a project
3. Agreement in principle with the policies of senior management
4. All of the mentioned

Answer: a

Identify the correct statement: �Software engineers shall

1. act in a manner that is in the best interests of his expertise an favour.�
2. **act consistently with the public interest.�**
3. ensure that their products only meet the SRS.�
4. all of the mentioned ans:b

Efficiency in a software product does not include

1. responsiveness
2. **licensing**
3. memory utilization
4. processing time ans:b

As per an IBM report, �31%of the project get cancelled before they are completed, 53% overrun their cost estimates by an average of 189% and for every 100 projects, there are 94 restarts�.What is the reason for these statistics ?

1. **Lack of adequate training in software engineering**
2. Lack of software ethics and understanding
3. Management issues in the company
4. All of the mentioned ans:a

RAD stands for

1. Relative Application Development
2. **Rapid Application Development**
3. Rapid Application Document
4. None of the mentioned

ans:b

Which one of the following models is not suitable for accommodating any change?

1. Build & Fix Model
2. Prototyping Model
3. RAD Model
4. Waterfall Model ans:d

SDLC stands for

1. **Software Development Life Cycle**
2. System Development Life cycle
3. Software Design Life Cycle
4. System Design Life Cycle ans:a

Which one of the following is a functional requirement ?

1. Maintainability
2. Portability
3. Robustness
4. None of the mentioned ans:d

Which one of the following is a requirement that fits in a developer�s module ?

1. Availability
2. **Testability**
3. Usability
4. Flexibility ans:b

�Consider a system where, a heat sensor detects an intrusion and alerts the security company.� What kind of a requirement the system is providing ?

1. **Functional**
2. Non-Functional
3. Known Requirement
4. None of the mentioned ans:a

Which of the following statements explains portability in non-functional requirements?

1. **It is a degree to which software running on one platform can easily be converted to run on another platform**
2. It cannot be enhanced by using languages, OS� and tools that are universally available and standardized
3. The ability of the system to behave consistently in a user-acceptable manner when operating within the environment for which the system was intended
4. None of the mentioned ans:a

Functional requirements capture the intended behavior of the system.

1. **True**
2. False ans:a

Choose the incorrect statement with respect to Non-Functional Requirement(NFR).

1. Product-oriented Approach � Focus on system (or software) quality
2. Process-oriented Approach � Focus on how NFRs can be used in the design process
3. **Quantitative Approach � Find measurable scales for the functionality attributes**
4. Qualitative Approach � Study various relationships between quality goals ans:c

Does software wear & tear by decomposition ?

1. Yes
2. **No** ans:b

What are the four dimensions of Dependability ?

1. Usability, Reliability, Security, Flexibility
2. Availability, Reliability, Maintainability, Security
3. **Availability, Reliability, Security, Safety**
4. Security, Safety, Testability, Usability ans:c

What is the first step of requirement elicitation ?

1. **Identifying Stakeholder**
2. Listing out Requirements
3. Requirements Gathering
4. All of the mentioned ans: a

What kind of approach was introduced for elicitation and modelling to give a functional view of the system ?

1. Object Oriented Design (by Booch)
2. **Use Cases (by Jacobson)**
3. Fusion (by Coleman)
4. Object Modeling Technique (by Rumbaugh) ans:b

Requirements elicitation is a cyclic process

1. **True**
2. False ans:a

How is throwaway prototype different from evolutionary prototype ?

1. It involves successive steps
2. **It involves just one task**
3. The prototype is built with the idea that it will eventually be converted into final system
4. It has a shorter development time ans:b

A characteristic of a software system that can lead to a system error is known as?

1. Human error or mistake
2. **System fault**
3. System error
4. System failure ans:b

An erroneous system state that can lead to system behavior that is unexpected by system users is known as?

1. Human error or mistake
2. System fault
3. **System error**
4. System failure ans:c

An event that occurs at some point in time when the system does not deliver a service as expected by its users is called

1. Human error or mistake
2. System fault
3. System error
4. System failure ans:d

chemical plant system may detect excessive pressure and open a relief valve to reduce these pressures before an explosion occurs. What kind of dependability and security issue the example states?

1. Hazard avoidance
2. Damage limitation
3. Hazard detection
4. Hazard detection and removal ans:d

An aircraft engine normally includes automatic fire extinguishers.What kind of dependability and security issue the example states?

1. Hazard avoidance
2. **Damage limitation**
3. Hazard detection
4. Hazard detection and removal ans:b

which of the following terms is a measure of the probability that the system will cause an accident?

1. **Risk**
2. Hazard probability
3. Accident
4. Damage ans:a

A weakness in a computer-based system that may be exploited to cause loss or harm is known as?

1. **Vulnerability**
2. Attack
3. Threat
4. Exposure ans:a

A password checking system that disallows user passwords that are proper names or words that are normally included in a dictionary is an example of with respect to security systems.

1. risk
2. **control**
3. attack

b) asset ans:b

The safety of a system is a system attribute that reflects the system�s ability to operate, normally or abnormally, without injury to people or damage to the environment.

1. **True**
2. False ANS: a

A sociotechnical system is a system that includes

1. people
2. software
3. hardware
4. all of the mentioned ANS: d

Consider an example of a system which has a police command and control system that may include a geographical information system to provide details of the location of incidents. What kind of system the example represents?

1. Complex System
2. Technical computer-based system
3. Sociotechnical System
4. Both Complex and Sociotechnical System ANS: d

Which property of a sociotechnical system varies depending on how the component assemblies are arranged and connected?

1. security
2. usability
3. **volume**
4. reliability ANS: c

Which property of a sociotechnical system depends on the technical system components, its operators, and its operating environment?

1. security
2. **usability**
3. volume
4. reliability ANS: b

In a sociotechnical system, you need to consider reliability from perspectives namely:

1. only software reliability
2. only hardware reliability
3. hardware and software reliability
4. hardware, software and operator reliability ANS: d

Which one of the following is not a software process quality?

1. Productivity
2. **Portability**
3. Timeliness
4. Visibility ANS: b

& are two kinds of software products.

1. CAD, CAM
2. Firmware, Embedded
3. **Generic, Customised**
4. None of the mentioned ANS: c

Software costs more to maintain than it does to develop.

1. **True**
2. False ANS: a

Identify a fourth generation language(4GL) from the given below.

1. FORTRAN
2. COBOL
3. **Unix shell**
4. C++ ANS: c

The Linear Sequential or Classic Life Cycle is also called

1. **Waterfall Model**
2. Incremental Model
3. Spiral model
4. Prototyping Model ANS: A

Spiral model was developed by

1. Victor Bisili
2. **Berry Boehm**
3. Bev Littlewood
4. Roger Pressman ANS: B

Software evolution does not comprises:

1. Development activities
2. **Negotiating with client**
3. Maintenance activities
4. Re-engineering activities ANS: B

Processes for evolving a software product depend on:

1. Type of software to be maintained
2. Development processes used
3. Skills and experience of the people involved
4. All of the mentioned ANS: D

Which technique is applied to ensure the continued evolution of legacy systems ?

1. Forward engineering
2. Reverse Engineering
3. Reengineering
4. Reverse Engineering and Reengineering ANS: D

Program modularization and Source code translation are the activities of

1. Forward engineering
2. Reverse Engineering
3. **Reengineering**
4. Reverse Engineering and Reengineering ANS: C

Reverse engineering is the last activity in a reengineering project.

1. True
2. **False** ANS: B

The cost of re-engineering is often significantly less than the costs of developing new software.

1. **True**
2. False ANS: A

Which of the following UML diagrams has a static view?

1. Collaboration
2. **Use case**
3. State chart
4. Activity ANS: B

Which of the following diagram is time oriented?

1. Collaboration
2. **Sequence**
3. Activity
4. None of the mentioned ANS: B

The process of developing a software product using software engineering principles and methods is referred to as,

1. Software myths
2. Scientific Product
3. Software Evolution
4. None of the mentioned ANS: D

Activities and action taken on the data that are represented by Circle or Round-edged Rectangles are called,

1. **Process**
2. Data storage
3. Data flow
4. Entities ANS: A

Changes are made to the system to reduce the future system failure chances is called

1. **Preventive Maintenance**
2. Adaptive Maintenance
3. Corrective Maintenance
4. Perfective Maintenance ANS: A

What can static analysis NOT find?

1. The use of a variable before it has been defined.
2. Unreachable (�dead�) code.
3. **Memory leaks.**
4. Array bound violations. ANS: C

In software engineering (specifically software maintenance) to refer to the process of developing software initially, then repeatedly updating it for various reasons.

1. **Software evolution**
2. software process
3. software maintenance
4. None of the mentioned ANS: A

Law which states that 'functional content of E type systems (implemented in real world computing) must be continually increased to maintain user satisfaction over system's lifetime' is

1. **law of continuity growth**
2. law of continuing change
3. law of conservation of organizational stability
4. law of self regulation ANS: A

Model in which overall success of a project highly depends on risks analysis phase is called

1. **risk-driven model**
2. phase-driven model
3. risk-process model
4. risk-safe model ANS: A

Stand alone programs that solve a specific business need is

1. application software
2. system software
3. engineering software
4. product line software ANS: A

Today, Unified Process and UML are widely used on

1. Sequential projects
2. linear projects
3. OD projects
4. **OO project** ANS: D

Modification of a software product after delivery to correct faults, to improve performance or other attributes is termed as

1. software corruption
2. software installation
3. software reinstallation
4. software maintenance ANS: D

Application in which set of linked hypertext files are present which displays information using text and limited graphics is

1. system application
2. embedded application
3. engineering application
4. web application ANS: D

A process of involves building a system from its components.

1. System instrumentation
2. System modification
3. **System Integration**
4. System Design ANS: C

A process of developing skeleton of the system first and then adding components is called as-

1. Bottom up approach
2. Waterfall approach
3. **Incremental approach**
4. Top down approach ANS: C

A process of integrating the components which provide services then adding the functional components is called as-

1. Top down approach
2. Bottom up approach
3. **Spiral approach**
4. Exploratory approach ANS: C

A retail company purchased commercial-off-the-shelf application for automating their billing process. But before introducing it on large scale they are going for beta testing .What will be the reason for doing this?

1. To find defects
2. To train employees
3. **To gain confidence in system**
4. All of the mentioned ANS: C

Which of the following is the largest bug producer?

1. Code
2. Design
3. **Specification**
4. All of the mentioned ANS: C

What is a software ? A)computer program

1. source code
2. computer programs and associated documents D)operating system

Ans: C

Software can be created by A)developing new programs B)Reusing existing software

C)configuring generic software systems D)All of the options

Ans: D

What is software process?

1. set of activities for validating software
2. Set of activities for development or maintenance of software
3. model of development activity
4. none of the mentioned Ans: B

Attributes of good software includes A)Efficiency

1. Effectiveness
2. Dependability, Maintainability, Usability D)none of the mentioned

Ans: C

A Socio technical system includes A)hardware and software B)people

1. technical system
2. technical system, operational processes and people Ans: D

Emergent properties of system is A)property of a system as a whole

1. Non deterministic
2. Both the options
3. none of the options

Ans: B

Development model suited for system engineering is A)Waterfall model

1. Incremental model
2. component based engineering model D)All of the options

Ans: A

What is a Legacy system? A)system built for legal profession

1. system built for medical domain
2. system that has been developed in past using obsolete technology
3. none of the mentioned Ans: C

Failures in critical systems can cause A)Threat to human life

1. Physical damage
2. Great economic loss
3. All of the mentioned Ans: D

For Critical systems Usefulness and Trustworthiness are same A)TRUE

B)FALSE

Ans: B

In waterfall model of software development

A)following phase cannot start until previous phase is completed B)software can be released in increments

C)components are joined to develop software D)none of the options

Ans: A

The advantage of waterfall model is that no documents are produced A)TRUE

B)**FALSE**

Ans: B

The objective of throw away prototyping is to A)**undertand the system requirement**

1. build test cases for validation
2. complete the feasibility
3. none of the mentioned Ans: A

THe drawback of evolutionary development is A)specification is developed incrementally B)less useful than waterfall model

C)lack of process visibility Ans: A or All the above

Incremental model are best suited for large systems development A)TRUE

B)**FALSE**

Ans: B

Requirement modification is a phase in Component based software engineering A)**TRUE**

B)FALSE

Ans: A

The Component based software development model is less risky A)**TRUE**

B)FALSE

Ans: A

In Spiral model

1. there are small frequent releases of the system
2. **Risks are assessed and resolved throughout the process**
3. Pair programming is used
4. none of the mentioned Ans: B

Constant refactoring of code is usually done in A)Waterfall model

1. **Spiral model**
2. Extreme programming Ans: B

Software design is a description of A)structure of the software to be developed B)data which is part of the system C)Interfaces between system components D)**all of the mentioned**

Ans: D

CASE tools are software to support software development and evolution processes A)**TRUE**

B)FALSE

Ans: A

Which are the best practices of software engineering A)Develop iteratively

1. Manage requirements
2. Model software visually
3. all of the mentioned Ans: D

As requirements change through changing business circumstances,the software that supports the business must also evolve and change

1. **TRUE**
2. FALSE

Ans: A

Testing with customer data to check that the system meets the customer needs is called A)**Alpha testing**

B)Beta testing C)Structural testing D)All of the mentioned Ans: A

In software engineering a component may mean A)Function

B)Procedure C)Class

D)All of the mentioned Ans: D

In software engineering Verification and validation is intended to show that a system conforms to its specification and meets the expectation of the customer

1. **TRUE** B)FALSE

Ans: A

Objective setting,Risk assessment and reduction, development and validation are phases of A)Waterfall model

1. Spiral model C)Component model

D)Rational unified model Ans: B

Requirement Elicitation and Analysis may involve models and prototypes for better understanding A)TRUE

B)FALSE

Ans: A

In component based software engineering the maintenance may be difficult A)TRUE

B)FALSE

Ans: A

During system integration which approach may be better A)Incremental approach

1. Big bang approach
2. test first approach D)Component based approach Ans: A

Management of software development is dependent upon?

1. People
2. Product
3. Process
4. All of above Ans: D

Which is not a software life cycle model?

1. Spiral Model
2. Waterfall Model
3. Prototyping Model
4. Capability maturity Model Ans: D

//SRS stands for?

1. **Software requirement specification**
2. Software requirement solution
3. System requirement specification
4. None of Above Ans: A

Waterfall model is not suitable for?

1. Small Projects
2. Complex Projects
3. **Accommodating change**
4. None of Above Ans: C

RAD stands for?

1. **Rapid Application Development**
2. Relative Application Development
3. Ready Application Development
4. Repeated Application Development

Ans: A

Software engineering aims at developing?

1. Reliable Software
2. Cost Effective Software
3. **Reliable and cost effective Software**
4. None Of Above Ans: C

A good specification should be?

1. Unambiguous
2. Distinctly Specific
3. Functional
4. All of Above Ans: D

Which of the following is a tool in design phase?

1. Abstraction
2. Refinement
3. Information Hiding
4. All of Above Ans: D

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

1. Reviewing policies and procedures
2. Using questionnaires to contact surveys
3. Conducting Interviews
4. All of above Ans: D

The model remains operative until the software is retired ?

1. Waterfall
2. Incremental
3. **Spiral**
4. None of these Ans: C

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

1. Measure
2. Measurement
3. **Metric**
4. None of these Ans: C

Which one of the following is not a maintenance model?

1. **Waterfall model**
2. Reuse-oriented model
3. Iterative enhancement model
4. Quick fix model Ans: A

Which of the following manuals is a user documentation?

1. SRS -Software Requirement Specification
2. SDD -Software Design Document
3. **System Overview**
4. None of the mentioned Ans: C

What is the major advantage of using Incremental Model?

1. Customer can respond to each increment
2. Easier to test and debug
3. It is used when there is a need to get a product to the market early
4. Easier to test and debug & It is used when there is a need to get a product to the market early Ans: D

Identify the disadvantage of Spiral Model.

1. **Does not work well for smaller projects**
2. High amount of risk analysis
3. Strong approval and documentation control
4. Additional Functionality can be added at a later date Ans: A

Spiral Model has user involvement in all its phases.

1. True
2. **False** Ans: B

How is Incremental Model different from Spiral Model?

1. **Progress can be measured for Incremental Model**
2. Changing requirements can be accommodated in Incremental Model
3. Users can see the system early in Incremental Model
4. All of the mentioned Ans: A

Choose the correct option in terms of Issues related to professional responsibility

1. Confidentiality
2. Intellectual property rights
3. **Both Confidentiality & Intellectual property rights**
4. Managing Client Relationships Ans: C

Software engineers should not use their technical skills to misuse other people computers. Here the term misuse refers to

1. Unauthorized access to computer material
2. Unauthorized modification of computer material
3. Dissemination of viruses or other malware
4. All of the mentioned Ans: D

Identify an ethical dilemma from the situations mentioned below:

1. **Your employer releases a safety-critical system without finishing the testing of the system**
2. Refusing to undertake a project
3. Agreement in principle with the policies of senior management
4. All of the mentioned Ans: A

Which of these software engineering activities are not a part of software processes?

1. **Software dependence**
2. Software development
3. Software validation
4. Software specification Ans: A

Which of these is true?

1. Generic products and customized products are types of software products
2. Generic products are produced by organization and sold to open market
3. Customized products are commissioned by particular customer
4. All of the mentioned Ans: D

Which of these is not true?

1. Web has led to availability of software services and possibility of developing highly distributed service based systems
2. **Web based systems have led to degradation of programming languages**
3. Web brings concept of software as service
4. Web based system should be developed and delivered incrementally Ans: B

Selection of a model is based on

1. Requirements
2. Development team & Users
3. Project type and associated risk
4. All of the mentioned Ans: D

Which of the following life cycle model can be chosen if the development team has less experience on similar projects?

1. **Spiral**
2. Waterfall
3. RAD
4. Iterative Enhancement Model Ans: A

If you were a lead developer of a software company and you are asked to submit a project/product within a stipulated time-frame with no cost barriers, which model would you select?

1. Waterfall
2. Spiral
3. **RAD**
4. Incremental Ans: C

A company is developing an advance version of their current software available in the market, what model approach would they prefer?

1. RAD
2. Iterative Enhancement
3. **Both RAD & Iterative Enhancement**
4. Spiral Ans: C

One can choose Waterfall Model if the project development schedule is tight.

1. True
2. **False** Ans: B

Spiral Model has high reliability requirements.

1. **True**
2. False Ans: A

RAD Model has high reliability requirements.

1. True
2. **False** Ans: B

What are the types of requirements?

1. Availability
2. Reliability
3. Usability
4. **All of the mentioned**

Answer: d

Select the developer-specific requirement?

1. Portability
2. Maintainability
3. Availability
4. **Both Portability and Maintainability**

Answer: d

Which one of the following is not a step of requirement engineering?

1. elicitation
2. **design**
3. analysis
4. documentation

Answer: b

FAST stands for

1. Functional Application Specification Technique
2. Fast Application Specification Technique
3. **Facilitated Application Specification Technique**
4. None of the mentioned

Answer: c

QFD stands for

1. quality function design
2. quality function development
3. **quality function deployment**
4. none of the mentioned

Answer: c

A Use case actor is always a person having a role that different people may play.

1. True
2. **False**

Answer: b

The user system requirements are the parts of which document?

1. SDD
2. **SRS**
3. DDD
4. SRD

Answer: b

A stakeholder is anyone who will purchase the completed software system under development.

1. True
2. **False**

Answer: b

Conflicting requirements are common in Requirement Engineering, with each client proposing his or her version is the right one.

1. **True**
2. False

Answer: a

Which is one of the most important stakeholder from the following?

1. Entry level personnel
2. Middle level stakeholder
3. Managers
4. **Users of the software**

Answer: d

Who writes the Software Requirement Specifications Document?

1. ASystem Developer
2. System Tester
3. **System Analyst**
4. None of these above

Answer: c

What is the goal of the requirements analysis and specifications phase of software development life cycle?

1. **Understanding the customer requirements and organize them in an informal document**
2. Analyzing the cost of development
3. Determining scope of the software
4. None of these above

Answer: a

What is the final outcome of the requirements analysis and specifications phase?

1. Drawing the data flow diagram
2. **The SRS Document**
3. Coding the project
4. The User Manual

Answer: b

Which of the following is not a desirable characteristic of SRS document?A

1. Concise
2. **Ambiguous**
3. Traceable
4. Verifiable

Answer: b

What is noise in terms of software development?

1. **Writing irrelevant statement to the software development in the SRS document**
2. Adding contradictory requirements in SRS document
3. Writing over-specific requirements
4. None of these above

Answer: a

Which of the following is not included in the Software Requirements Specification(SRS) Document

1. Functional Requirements
2. Non-functional requirement
3. Goals of implementation
4. **User manual**

Answer: d

SRS document is called black box specification of a system because

1. It does not contain the contradictory materials
2. It does not contain the user documentation
3. **SRS document should specify only the external behaviour of the system**
4. None of these above

Answer: c

Which of the following expects cost estimation from SRS document?

1. **Project Manager**
2. User documentation writer
3. Software developers
4. Maintenance engineers

Answer: a

The goal of reading SRS document by the software developer is to

1. ensure requirements are understandable from a functionality point of view
2. understand the features of the product
3. **ensure that the software is developed as per customer needs**
4. none of these

Answer: c

Which of the following quality of SRS document ensures to compare the results of a phase with another phase?

1. Structured
2. Verifiable
3. **Traceable**
4. Concise

Answer: c

In Agile development testing is treated as a separate phase. True or false.

1. True
2. **False**

Answer: b

Agile is

1. Sequential
2. Iterative
3. Incremental
4. **Both b & c**

Answer: d

What is or are advantages of Agile testing?

1. Saves time
2. requires less planning and creates less documentation
3. Regular feedback from end users
4. Solves issue in advance by daily meeting
5. **All the above**

Answer: e

Who will test the system in agile development?

1. software tester
2. Developer
3. Business Analyst
4. **All the above**

Answer: d

When acceptance testing is performed in Agile development?

1. On request of customer
2. After system is ready
3. **At the end of each iteration**
4. Daily

Answer: c

In agile development, lengthy documentation is created. True or false.

1. True
2. **False**

Answer: b

Which skill are required by Agile tester?

1. Domain knowledge
2. Keen to learn and adopt new technology
3. Effective communicator who maintains good relationship with development teeam
4. **All the above**

Answer: d

Who is responsible for sprint meeting?

1. Product owner
2. Scrum team
3. **Scrum master**
4. All the above

Answer: c

Who prioritizes product backlog?

1. **Product owner**
2. Scrum team
3. Scrum master
4. All the above

Answer: a

What type of software testing is generally used in Software Maintenance

1. **Regression Testing**
2. System Testing
3. Unit Testing
4. Integration Testing

Answer: a

Choose the correct option in terms of Issues related to professional responsibility

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2. Prototyping Model
3. RAD Model
4. **Waterfall Model** ans: d

SDLC stands for

1. **Software Development Life Cycle**
2. System Development Life cycle
3. Software Design Life Cycle
4. System Design Life Cycle ans:a

Which one of the following is a functional requirement ?

1. Maintainability
2. Portability
3. Robustness
4. **None of the mentioned** ans:d

Which one of the following is a requirement that fits in a developer�s module ?

1. Availability
2. **Testability**
3. Usability
4. Flexibility ans:b

�Consider a system where, a heat sensor detects an intrusion and alerts the security company.� What kind of a requirement the system is providing ?

1. **Functional**
2. Non-Functional
3. Known Requirement
4. None of the mentioned ans:a

Which of the following statements explains portability in non-functional requirements?

1. **It is a degree to which software running on one platform can easily be converted to run on another platform**
2. It cannot be enhanced by using languages, OS� and tools that are universally available and standardized
3. The ability of the system to behave consistently in a user-acceptable manner when operating within the environment for which the system was intended
4. None of the mentioned ans:a

Functional requirements capture the intended behavior of the system.

1. **True**
2. False ans:a

Choose the incorrect statement with respect to Non-Functional Requirement(NFR).

1. Product-oriented Approach � Focus on system (or software) quality
2. Process-oriented Approach � Focus on how NFRs can be used in the design process
3. **Quantitative Approach � Find measurable scales for the functionality attributes**
4. Qualitative Approach � Study various relationships between quality goals ans:c

Does software wear & tear by decomposition ?

1. Yes
2. **No** ans:b

What are the four dimensions of Dependability ?

1. Usability, Reliability, Security, Flexibility
2. Availability, Reliability, Maintainability, Security
3. **Availability, Reliability, Security, Safety**
4. Security, Safety, Testability, Usability ans:c

What is the first step of requirement elicitation ?

1. **Identifying Stakeholder**
2. Listing out Requirements
3. Requirements Gathering
4. All of the mentioned ans: A

What kind of approach was introduced for elicitation and modelling to give a functional view of the system ?

1. Object Oriented Design (by Booch)
2. **Use Cases (by Jacobson)**
3. Fusion (by Coleman)
4. Object Modeling Technique (by Rumbaugh) ans:b

Requirements elicitation is a cyclic process

1. **True**
2. False ans:a

How is throwaway prototype different from evolutionary prototype ?

1. It involves successive steps
2. **It involves just one task**
3. The prototype is built with the idea that it will eventually be converted into final system
4. It has a shorter development time ans:b

A characteristic of a software system that can lead to a system error is known as?

1. Human error or mistake
2. **System fault**
3. System error
4. System failure ans:b

An erroneous system state that can lead to system behavior that is unexpected by system users is known as?

1. Human error or mistake
2. System fault
3. **System error**
4. System failure ans:c

An event that occurs at some point in time when the system does not deliver a service as expected by its users is called

1. Human error or mistake
2. System fault
3. System error
4. **System failure** ans:d

chemical plant system may detect excessive pressure and open a relief valve to reduce these pressures before an explosion occurs. What kind of dependability and security issue the example states?

1. Hazard avoidance
2. Damage limitation
3. Hazard detection
4. **Hazard detection and removal** ans:d

An aircraft engine normally includes automatic fire extinguishers.What kind of dependability and security issue the example states?

1. Hazard avoidance
2. **Damage limitation**
3. Hazard detection
4. Hazard detection and removal ans:b

which of the following terms is a measure of the probability that the system will cause an accident?

1. **Risk**
2. Hazard probability
3. Accident
4. Da mage ans:a

A weakness in a computer-based system that may be exploited to cause loss or harm is known as?

1. **Vulnerability**
2. Attack
3. Threat
4. Expo sure ans:a

A password checking system that disallows user passwords that are proper names or words that are normally included in a dictionary is an example of

with respect to security systems.

1. risk
2. control
3. attack b)

asse t ans:

b

The safety of a system is a system attribute that reflects the system�s ability to operate, normally or abnormally, without injury to people or damage to the environment.

1. True
2. F alse ans:

a

Software Maintenance includes

1. Error corrections
2. Enhancements of capabilities
3. Deletion of obsolete capabilities
4. **All of the mentioned**

What type of software testing is generally used in Software Maintenance?

1. **Regression Testing**
2. System Testing
3. Integration Testing
4. Unit Testing

Regression testing is a very expensive activity.

A. **True**

B False

often involves acceptance and suitability with external customers

1. **Validation**
2. Verification
3. Unit testing
4. Integration testing

Checking whether all the program data variables are initialized before their values are used, is

1. Control fault inspection
2. Interface fault inspection
3. Storage management fault inspection
4. **Data fault inspection**

Identify the correct statement with respect to Evolutionary development:

1. **Evolutionary development usually has two flavors; exploratory development, and throw-away prototyping**
2. Very large projects are usually done using evolutionary development based approach
3. It facilitates easy project management, through the high volume of documentation it generates
4. Sometimes the construction of a throw-away prototype is not followed by a re- implementation of the software system using a more structured approach

Team members of program inspection does not include

1. Author of the code
2. Reader
3. Tester
4. **Customer**

Spiral model was developed by

1. Victor Bisili
2. **Berry Boehm**
3. Bev Littlewood
4. Roger Pressman

Software evolution does not comprises:

1. Development activities
2. **Negotiating with client**
3. Maintenance activities
4. Re-engineering activities

Processes for evolving a software product depend on:

1. Type of software to be maintained
2. Development processes used
3. Skills and experience of the people involved
4. **All of the mentioned**

Which technique is applied to ensure the continued evolution of legacy systems ?

1. Forward engineering
2. Reverse Engineering
3. Reengineering
4. **Reverse Engineering and Reengineering**

Program modularization and Source code translation are the activities of

1. Forward engineering
2. Reverse Engineering
3. **Reengineering**
4. Reverse Engineering and Reengineering

Reverse engineering is the last activity in a reengineering project.

1. True
2. **False**

The cost of re-engineering is often significantly less than the costs of developing new software.

1. **True**
2. False

Which of the following UML diagrams has a static view?

1. Collaboration
2. **Use case**
3. State chart
4. Activity

Which of the following diagram is time oriented?

1. Collaboration
2. **Sequence**
3. Activity
4. None of the mentioned

Which of the following techniques is not a White box technique?

1. Statement Testing and coverage
2. Decision Testing and coverage C. Condition Coverage

D. **Boundary value analysis**

The process of developing a software product using software engineering principles and methods is referred to as,

1. Software myths
2. Scientific Product
3. **Software Evolution**
4. None of the mentioned

Activities and action taken on the data that are represented by Circle or Round-edged Rectangles are called,

1. **Process**
2. Data storage
3. Data flow
4. Entities

Changes are made to the system to reduce the future system failure chances is called

1. **Preventive Maintenance**
2. Adaptive Maintenance
3. Corrective Maintenance
4. Perfective Maintenance

What can static analysis NOT find?

1. The use of a variable before it has been defined.
2. Unreachable (�dead�) code.
3. **Memory leaks.**
4. Array bound violations.

Alpha and Beta Testing are forms of .

1. **Acceptance testing**
2. Integration testing
3. System Testing
4. Unit testing

In software engineering (specifically software maintenance) to refer to the process of developing software initially, then repeatedly updating it for various reasons.

1. **Software evolution**
2. software process
3. software maintenance
4. None of the mentioned

Law which states that 'functional content of E type systems (implemented in real world computing) must be continually increased to maintain user satisfaction over system's lifetime' is

1. **law of continuity growth**
2. law of continuing change
3. law of conservation of organizational stability
4. law of self regulation

Model in which overall success of a project highly depends on risks analysis phase is called

* 1. **risk-driven model**
  2. phase-driven model
  3. risk-process model
  4. risk-safe model

Stand alone programs that solve a specific business need is

1. **application software**
2. system software
3. engineering software
4. product line software

Today, Unified Process and UML are widely used on

1. **Sequential projects**
2. linear projects
3. OD projects
4. OO project

Modification of a software product after delivery to correct faults, to improve performance or other attributes is termed as

1. software corruption
2. software installation
3. software reinstallation
4. **software maintenance**

Verification helps to identify many major errors before the development starts which otherwise would result in an expensive rework

1. **True**
2. False

Application in which set of linked hypertext files are present which displays information using text and limited graphics is

1. system application
2. embedded application
3. engineering application
4. **web application**

Are we building the product right?

1. Validation
2. **Verification**
3. Unit testing
4. Integration testing

: Are we building the right product?

1. **Validation**
2. Verification
3. Unit testing
4. Integration testing

The goal of defect testing is

1. check the design document
2. **Find inconsistencies between a program and its specification**
3. Correct the located defects
4. Find user tolerance of the system

Establishing standards for testing process and help managers to allocate resources and estimate testing schedule is

1. Software inspection
2. **Test planning**
3. Constraints management
4. Static analysis

Requirement for inspection process is

1. **The complete specification document**
2. List of errors
3. System integration test plan
4. Data set for acceptance testing

Checking whether all the program data variables are initialized before their values are used, is

1. Control fault inspection
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Team members of program inspection does not include

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2. Reader
3. Tester
4. **Customer**

often involves acceptance and suitability with external customers

1. **Validation**
2. Verification
3. Unit testing
4. Integration testing

Typically does the unit testing of the code written by an individual as an essential part of code verification

1. **Tester**
2. Programmer
3. Manager
4. Team lead

Which of the following situations can we say �There is a Defect�?

1. A requirement is not implemented
2. A requirement is wrongly implemented
3. Something extra is implemented which is not specified in URS
4. **All of the mentioned**

Component testing is

1. Testing the interfaces
2. Testing the design activities
3. **Testing the parts of the system**
4. Testing the system

Defect testing is the process used to find the

1. Errors
2. Bugs
3. Failures
4. **Defects**

A type of testing where every possible program execution sequence is tested is called as

1. Robust testing
2. Exhaustive testing
3. Worst case testing
4. **Defect testing**

A company named ABC has developed a Software system, XYZ. The software has the various units namely P, Q, R and S. To test whether P, Q, R and S parts are working properly, which type of testing is appropriate?

1. System testing
2. Component testing
3. Exhaustive testing
4. **Regression testing**

A company named ABC has developed a Software system, XYZ. The software has the various units namely P, Q, R and S. To test whether XYZ as a whole, which type of testing is appropriate?

1. **System testing**
2. Component testing
3. Exhaustive testing
4. Regression testing

A company named ABC has developed a Software system, XYZ. The software has the various units namely P, Q, R and S. To test the system just befoer release, customer's real time data was used. what type of testing is this?

1. System testing
2. Component testing
3. Integration testing
4. **Acceptance testing**

A test case has

1. **Set of inputs, outputs and statement of what is being tested**.
2. Inputs and outputs only
3. Expected output and obtained output only
4. None of the mentioned

Two important phases of system testing are-

1. Release testing and Component testing
2. Integration testing and Component testing
3. Component testing and Exhaustive testing
4. **Integration testing and Release testing**

A version of the system which will be released to the users and tested is called as-

1. **Acceptance testing**
2. White-box testing
3. Clear-box testing
4. Incremental testing

A process of involves building a system from its components.

1. System instrumentation
2. System modification
3. **System Integration**
4. System Design

A process of developing skeleton of the system first and then adding components is called as-

1. Bottom up approach
2. Waterfall approach
3. Incremental approach
4. **Top down approach**

A process of integrating the components which provide services then adding the functional components is called as-

1. Top down approach
2. **Bottom up approach**
3. Spiral approach
4. Exploratory approach

Rerunning an existing set of tests is called as

1. Exhaustive testing
2. **Regression testing**
3. Extreme testing
4. Release testing

A retail company purchased commercial-off-the-shelf application for automating their billing process. But before introducing it on large scale they are going for beta testing .What will be the reason for doing this?

1. To find defects
2. To train employees
3. To gain confidence in system
4. **All of the mentioned**

Release testing is testing process

1. White box
2. Grey box
3. **Black box**
4. Clear box

Black box testing process is also called as

1. Functional testing
2. **Structural testing**
3. Regression testing
4. Stress testing

As a test manager you will be getting delayed delivery of build for testing which has to be deployed on time. You have limited resources. By applying which measures are you able to perform testing in given time?

1. Argue with development team and convince them to deliver build on time.
2. Ask for more resources.
3. Request customer about extending time.
4. **Prioritize testing based on risk & make sure critical functionality is tested earlier.**

Where do the testers fail to find the incidents?

1. User manual
2. Design
3. Test cases
4. **Improvements suggested by users**

Bug is the same name of .

1. Error
2. Incident
3. Mistake D) **Defect**

The customer is very cautious about the quality of a product. He needs all the combination of inputs and preconditions to be tested. Among using which of the testing principles the tester should tell the customer that such kind of testing is not feasible?

1. Absence of error fallacy
2. Defect clustering
3. Pesticide paradox
4. **Exhaustive testing**

A logical collection of test cases which naturally work together is called as .

1. Test log
2. Test procedure
3. Test data
4. **Test suite**

During which activity tester decides if extra test cases are required or not?

1. Test implementation and execution
2. Test planning and control
3. Test analysis and design
4. **Evaluating exit criteria**

Where do the testers fail to find the incidents?

1. Requirements
2. Design
3. Test cases
4. **Improvements suggested by users**

Which of the following is the largest bug producer?

1. Code
2. Design
3. **Specification**
4. All of the mentioned

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4. **All of the mentioned**

What is a role of Test Manager?

1. **Determine when to release a system**
2. Reallocate resources to meet objectives
3. Report deviations in project plan
4. Raise incidents on fault

A logical collection of test cases which naturally work together is called as .

1. Test log
2. Test procedure
3. Test data
4. **Test suite**

When the Testing Principles are useful while building the Software Product?

1. During testing
2. During execution
3. During review
4. **Throughout life-cycle**

Testing helps us to

1. Fix defect
2. Improve quality
3. Measure quality
4. **All of the mentioned**

of product by finding defects in product.

A deviation from the specified or expected behavior that is visible to end- users is called:

1. error
2. fault
3. **failure**
4. defect

A configuration management system would NOT normally provide:

1. Linkage of customer requirements to version numbers.
2. The precise differences in versions of software component source code.
3. **Facilities to compare test results with expected results**
4. Restricted access to the source code library

Test cases are designed during:

1. Test recording
2. Test configuration
3. Test planning
4. **Test specification**

Which of the following will be the best definition for Testing :

1. **Testing is executing Software for the purpose of finding defects**
2. The purpose of testing is to demonstrate that the program is defect free
3. The purpose of testing is to demonstrate that the program does what it is supposed to do
4. The goal / purpose of testing is to demonstrate that the program works.

Test Conditions are derived from

1. Test Design
2. Test Cases
3. Test Data
4. **Specifications**

Fault Masking is

1. Creating a test case which does not reveal a fault
2. **Error condition hiding another error condition**
3. Masking a fault by developer
4. Masking a fault by a tester

Acceptance test cases are based on what?

1. Decision table
2. Design
3. Code
4. **Requirements**

testing life cycle correct order is

1. Req Specification, Coding, Design, Testing, fault resolution
2. Req Specification, fault resolution, Coding, Design, Testing
3. Req Specification, Design, Testing, Coding,fault resolution
4. Req Specification, Design, Coding, Testing, fault resolution

The problem that threatens the success of a project but which has not yet happened is called as

1. bug
2. error
3. **risk**
4. defect

Which of the followings is NOT a White Box Technique?

1. Statement testing
2. Path testing
3. Data flow testing
4. **None of the mentioned**