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Time taken	1 hour 3 mins
Marks	61.00/150.00
Grade	**40.67** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

Data Definition language (DDL) is not to:-

- ○ a. Alter table in the database
- ○ b. Rename the table name
- ○ c. Create information table in the database
- ◉ d. Truncate tuples in the table ✓

Question **2**

Incorrect

Mark 0.00 out of 1.00

Concentrates on what the user does, not what the product does is _____.

- ◉ a. Validation Testing ✗
- ○ b. Fault-Based Testing
- ○ c. Scenario-Based Testing
- ○ d. Random Class Testing

Question **3**

Incorrect

Mark 0.00 out of 1.00

Which of the following is NOT a common technique used for software requirement validation?

- ○ a. Reviews with stakeholders
- ○ b. Prototyping
- ◉ c. User interface mockups ✗
- ○ d. Unit testing

Question **4**

Incorrect

Mark 0.00 out of 1.00

Which of the following statements not true?

- ⊙ a.   A protected member of a class can be accessed from its derived class. ✗
- ○ b.   A private member of a class cannot be accessed from its derived class
- ○ c.   A public member of a class can be accessed in all the packages
- ○ d.   A private member of a class cannot be accessed by the methods of the same class

Question **5**

Incorrect

Mark 0.00 out of 1.00

What is the time complexity of binary search in the worst case?

- ○ a.   O(n log n)
- ⊙ b.   O👎 ✗
- ○ c.   O(1)
- ○ d.   O(log n)

Question **6**

Correct

Mark 1.00 out of 1.00

Which operator is used for assignment in C++?

- ⊙ a.   = ✓
- ○ b.   /=
- ○ c.   ==
- ○ d.   +=

Question **7**

Incorrect

Mark 0.00 out of 1.00

Which of the following is not a typical operation that can be defined for an ADT?

- ○ a.   Delete
- ○ b.   Search
- ○ c.   Insert
- ⊙ d.   Compile ✗

Question **8**

Correct

Mark 1.00 out of 1.00

Which one of the following requirements could represent a functional requirement?

○ a.   The user interface should be easy to navigate for beginners

◉ b.   The login system must validate usernames and passwords ✔

○ c.   The software should be accessible for users with disabilities

○ d.   The software must be able to run on a Windows operating system

Question **9**

Incorrect

Mark 0.00 out of 1.00

In First order predicate logic a Statement contains_____.

◉ a.   Predicate and Preposition ✘

○ b.   Predicate and Subject

○ c.   Subject and an Object

○ d.   True/False statement

Question **10**

Incorrect

Mark 0.00 out of 1.00

What is the role of a project manager in fostering effective communication within a software project team?

○ a.   Restricting access to project information

○ b.   Minimizing stakeholder involvement

○ c.   Avoiding team meetings

◉ d.   Encouraging transparency and open dialogue ✘

Question **11**

Correct

Mark 1.00 out of 1.00

Which subfield of AI is used for visual perception ?

○ a.   Speech recognition

◉ b.   Computer vision ✔

○ c.   Natural language processing

○ d.   Reinforcement learning

Question **12**

Incorrect

Mark 0.00 out of 1.00

The PEAS in the task environment is about_____.

○ a. Performance, Actuator, Sensor, Environment
◉ b. Perceiving, Environment, Actuator, Sensor ✕
○ c. Peer, Environment, Actuator, Sensor
○ d. Performance, Environment, Actuator, Sensor

Question **13**

Correct

Mark 1.00 out of 1.00

Suppose you have received a message from your friend but the message is scrambled for the sake of security. Your friend has used a program to encode messages into scrambled text, In, order to read the message which program would you use?

○ a. Secret key
○ b. Encryption program
○ c. Plaintext
◉ d. Decryption program ✓
○ e. Cipher text

Question **14**

Incorrect

Mark 0.00 out of 1.00

How can you pass the value of a function by value in C++?

◉ a. By assigning the value to a global variable ✕
○ b. By using the "return" statement in the function
○ c. By passing the value directly as a function argument
○ d. By declaring a pointer variable as a function parameter

Question **15**

Incorrect

Mark 0.00 out of 1.00

Which agile practice involves estimating the effort required for each user story?

- a.   Backlog grooming
- b.   Sprint planning
- c.   Daily stand-up meetings ✗
- d.   Story pointing

Question **16**

Incorrect

Mark 0.00 out of 1.00

In the TCP/IP model, which layer of the OSI reference model corresponds to the TCP/IP Host to Host network layer?

- a.   Network
- b.   Physical
- c.   Transport
- d.   Physical and Data Link ✗

Question **17**

Correct

Mark 1.00 out of 1.00

What is the purpose of the address operator (&) in C++?

- a.   To access the value of a variable
- b.   To assign a value to a variable
- c.   To obtain the memory address of a variable ✔
- d.   To declare a variable

Question **18**

Incorrect

Mark 0.00 out of 1.00

What does the projection operation (π) in relational algebra result in?

- a.   vertical partitioning
- b.   The removal of duplicate tuples from the relation
- c.   The selection of specific rows based on a given condition ✗
- d.   horizontal partitioning

Question **19**

Incorrect

Mark 0.00 out of 1.00

Which one of the following is not part of Toast.makeText🌀 method signature?

- ○ a.   message
- ◉ b.   context
- ◉ c.   time span ✗
- ○ d.   none

Question **20**

Correct

Mark 1.00 out of 1.00

What does the term "float" refer to in project scheduling?

- ◉ a.   The amount of time an activity can be delayed without delaying the project's finish date ✓
- ○ b.   The amount of time allocated for each project team member
- ○ c.   The difference between the planned and actual duration of an activity
- ○ d.   The total time available for completing a project

Question **21**

Correct

Mark 1.00 out of 1.00

Which resource is typically time multiplexed in an operating system?

- ◉ a.   CPU ✓
- ○ b.   Memory
- ○ c.   Compact Disk
- ○ d.   Network

Question **22**

Correct

Mark 1.00 out of 1.00

Which is the following activities is NOT typically part of Goal Based Requirement Engineering?

- ◉ a.   Unit testing the developed software ✓
- ○ b.   Conducting interviews with stakeholders
- ○ c.   Decomposing high-level goals into subgoals
- ○ d.   Defining system functionalities

Question **23**

Incorrect

Mark 0.00 out of 1.00

Which operator is used to increment a variable by a specific value in C++?

- ⊙ a. ++ ✗
- ○ b. =
- ○ c. +=
- ○ d. *=

Question **24**

Incorrect

Mark 0.00 out of 1.00

What is the primary purpose of a variance analysis in project cost management?

- ⊙ a. To compare actual project performance against the planned performance ✗
- ○ b. To allocate additional resources to the project
- ○ c. To avoid project delays
- ○ d. To identify deviations from the project scope

Question **25**

Incorrect

Mark 0.00 out of 1.00

Which method is used to retrieve a value from SharedPreferences?

- ⊙ a. getAll() ✗
- ○ b. getBoolean(0,"key")
- ○ c. getInt("key")
- ○ d. getString("key",null)

Question **26**

Incorrect

Mark 0.00 out of 1.00

Which one of the following is the technique used in black box testing?

- ○ a. Equivalence partitioning
- ⊙ b. Control flow based testing ✗
- ○ c. A and C
- ○ d. Boundary value analysis

Question **27**

Incorrect

Mark 0.00 out of 1.00

In android OS stack HAL acts a runtime enviroment replacing the earlier DVM.

- ○ a.   All
- ○ b.   false
- ◉ c.   true ✗
- ○ d.   None

Question **28**

Correct

Mark 1.00 out of 1.00

Which loop statement is used when the number of iterations is known in advance?

- ○ a.   If...else statement
- ○ b.   While loop statement
- ○ c.   Switch statement
- ◉ d.   For loop statement ✓

Question **29**

Correct

Mark 1.00 out of 1.00

Which one of the following is Candidate Key?

- ○ a.   Name
- ○ b.   ID and Address
- ◉ c.   Email Address ✓
- ○ d.   Name and ID

Question **30**

Correct

Mark 1.00 out of 1.00

Which of the following is an example of a knowledge-based authentication factor?

- ○ a.   Smart card
- ◉ b.   Username and password ✓
- ○ c.   Facial detection
- ○ d.   One-time password (OTP)
- ○ e.   Fingerprint scan

Question **31**

Incorrect

Mark 0.00 out of 1.00

An entity in A is associated with at least one entity in B, and an entity in B is associated with at most one entity in A. This is called as_____?

- ○ a.   One-to-many ✗
- ○ b.   One-to-one
- ○ c.   Many-to-one
- ○ d.   Many-to-many

Question **32**

Incorrect

Mark 0.00 out of 1.00

Which search algorithm is better suited for searching in a dynamic, frequently updated dataset?

- ○ a.   Linear search
- ○ b.   Both linear and binary search are equally suitable
- ○ c.   Binary search ✗
- ○ d.   Neither linear nor binary search is suitable

Question **33**

Correct

Mark 1.00 out of 1.00

Which operator is used to compare two values for equality in C++?

- ○ a.   /=
- ○ b.   == ✓
- ○ c.   =
- ○ d.   +=

Question **34**

Correct

Mark 1.00 out of 1.00

Which design activity involves defining the relationships and interactions between software components?

- ○ a.   Architectural design ✓
- ○ b.   High-level design
- ○ c.   Detailed design
- ○ d.   Functional design

Question **35**

Incorrect

Mark 0.00 out of 1.00

Which sorting algorithm is considered the most efficient for small data sets?

- ○ a.   Merge sort
- ◉ b.   Insertion sort ✗
- ○ c.   Radix sort
- ○ d.   Heapsort

Question **36**

Correct

Mark 1.00 out of 1.00

Which one of the following requirements could represent a non-functional requirement?

- ○ a.   The system shall allow users to search for books by title, author, or keyword.
- ◉ b.   The system shall be compatible with all major web browsers and operating systems. ✓
- ○ c.   The system shall allow users to browse products by category
- ○ d.   The system shall allow users to create a profile and upload a photo.

Question **37**

Correct

Mark 1.00 out of 1.00

What is the primary goal of requirements elicitation?

- ○ a.   To write the software code
- ◉ b.   To gather information about the desired system ✓
- ○ c.   To define the software architecture
- ○ d.   To test the software functionality

Question **38**

Incorrect

Mark 0.00 out of 1.00

Which activity involves breaking down high-level requirements into detailed, specific requirements?

- ○ a.   Validating requirements
- ○ b.   Documenting requirements
- ◉ c.   Eliciting requirements ✗
- ○ d.   Analyzing requirements

Question **39**

Correct

Mark 1.00 out of 1.00

What is the time complexity for inserting a new element at the end of a singly linked list?

- a.   O(n^2)
- b.   O👎
- c.   O(1) ✔
- d.   O(log n)

Question **40**

Incorrect

Mark 0.00 out of 1.00

Social media platforms leverage big data to:

- a.   Personalize user experience and targeted advertising
- b.   Censor user comments
- c.   Enhance data security measures ✖
- d.   Restrict user access to certain content

Question **41**

Correct

Mark 1.00 out of 1.00

The technique used in user-centered interaction design to evaluate a product by testing it on users is called?

- a.   Usability testing ✔
- b.   Unit testing
- c.   Software testing
- d.   Black box testing

Question **42**

Incorrect

Mark 0.00 out of 1.00

Runtime polymorphism feature in java is

- a.   Method overloading
- b.   Constructor overloading ✖
- c.   Operator overloading
- d.   Method overriding

Question **43**

Incorrect

Mark 0.00 out of 1.00

Which network security issue shows the level of weakness in networks and devices?

- ○ a.   Vulnerability
- ○ b.   Threat
- ◉ c.   Attack ✗
- ○ d.   Risk
- ○ e.   Availability

Question **44**

Correct

Mark 1.00 out of 1.00

Which of the following is NOT an objective of software security assurance?

- ○ a.   Detecting and preventing vulnerabilities in software
- ◉ b.   Protecting software from physical damage or theft ✓
- ○ c.   Protecting develop and implement robust software
- ○ d.   Ensuring the confidentiality and integrity of software
- ○ e.   Verifying that software meets security requirements

Question **45**

Incorrect

Mark 0.00 out of 1.00

A functional dependency is a relationship between/among _____

- ○ a.   Rows
- ○ b.   Attributes
- ◉ c.   Entities ✗
- ○ d.   Tables

Question **46**

Incorrect

Mark 0.00 out of 1.00

What is the responsibility of the operating system in allocating resources to various applications?

- ○ a. A virtual machine
- ◉ b. A multiplexer ✗
- ○ c. An extended machine
- ○ d. A resource manager

Question **47**

Incorrect

Mark 0.00 out of 1.00

What is the main benefit of using asymptotic analysis when comparing algorithms?

- ○ a. It determines the memory usage of the algorithms
- ◉ b. It focuses on the long-term behavior of the algorithms ✗
- ○ c. It provides the exact running time of the algorithms
- ○ d. It measures the communication bandwidth

Question **48**

Incorrect

Mark 0.00 out of 1.00

In procurement management, what is the purpose of performing a vendor evaluation?

- ○ a. To increase project risks
- ○ b. To limit vendor participation in the project
- ○ c. To ensure vendors are excluded from the project
- ◉ d. To compare potential vendors and select the most suitable one ✗

Question **49**

Correct

Mark 1.00 out of 1.00

What is the purpose of role-based access control (RBAC)?

- ○ a. To prevent unauthorized access to a system
- ○ b. To monitor and detect suspicious activities or attacks
- ◉ c. To assign permissions based on users' job functions or roles ✓
- ○ d. To encrypt data at rest
- ○ e. To encrypt data on the transmission

Question **50**

Incorrect

Mark 0.00 out of 1.00

Which of the following is a common way to represent the flow of control in an algorithm?

- a.   Using variables
- b.   Using data structures
- c.   Using conditional statements and loops ✗
- d.   Using mathematical equations

Question **51**

Correct

Mark 1.00 out of 1.00

Among the provided options, the SQLiteDatabase methods that returns a cursor is

- a.   rawQuery() ✔
- b.   execQuery()
- c.   update()
- d.   execSQL()

Question **52**

Correct

Mark 1.00 out of 1.00

Which software development model involves a linear, sequential approach with distinct phases?

- a.   Spiral model
- b.   Waterfall model ✔
- c.   Agile model
- d.   RAD model

Question **53**

Correct

Mark 1.00 out of 1.00

What is the major characteristic of a computer virus?

- a.   It replicates by attaching itself to other files ✔
- b.   It steals sensitive data from a system
- c.   It encrypts files and demands ransom for their release
- d.   It spreads through email attachments
- e.   It spreads through network connections

Question **54**

Incorrect

Mark 0.00 out of 1.00

In a software project, what is the primary purpose of a communication plan?

- ○ a. To exclude project sponsors from communication channels
- ○ b. To limit communication among team members
- ○ c. To delay the exchange of project information
- ◉ d. To facilitate effective communication among stakeholders ✗

Question **55**

Incorrect

Mark 0.00 out of 1.00

If the method is not static; how to invoke in the java programming language?

- ○ a. Variablename.methodname
- ○ b. Objectname.methodname()
- ◉ c. Classname.methodname() ✗
- ○ d. Methodname()

Question **56**

Incorrect

Mark 0.00 out of 1.00

Which type of agent is most suitable for dynamic and unknown environments where the state of the world changes frequently?

- ○ a. Learning agent
- ○ b. Reflex agent
- ◉ c. Rational agent ✗
- ○ d. Goal-based agent

Question **57**

Incorrect

Mark 0.00 out of 1.00

Intent filter is used to define

- ○ a. data type used by the app component
- ○ b. All
- ◉ c. relationship between the app component and intent ✗
- ○ d. category of app

Question **58**

Correct

Mark 1.00 out of 1.00

In 2NF, which form of dependency is removed?

- ○ a. Functional
- ○ b. Associative
- ○ c. Transitive
- ◉ d. Partial ✔

Question **59**

Incorrect

Mark 0.00 out of 1.00

Which method is used to stop a bound service?

- ○ a. System.exit(0)
- ○ b. stopService()
- ○ c. None
- ◉ d. selfStop() ✗

Question **60**

Incorrect

Mark 0.00 out of 1.00

Which of the following best describes the purpose of normalization in database management systems (DBMS)?

- ○ a. To eliminate data redundancy and ensure data integrity.
- ○ b. To improve data inconsistency and integrity.
- ○ c. To increase data redundancy and duplication.
- ◉ d. To simplify database maintenance and updates. ✗

Question **61**

Correct

Mark 1.00 out of 1.00

Which industry is NOT typically associated with Big Data applications?

- ○ a. Manufacturing
- ○ b. Healthcare
- ○ c. Agriculture
- ◉ d. Small retail shops ✔

Question **62**

Incorrect

Mark 0.00 out of 1.00

_____is one of the basic principles of object oriented programming that use one object in multiple forms.

- a. None of the above
- b. Inheritance
- c. Encapsulation
- d. Interface ✗

Question **63**

Incorrect

Mark 0.00 out of 1.00

What is the primary goal of data mining?

- a. To visualize data through graphs and charts ✗
- b. To extract useful patterns and insights from data
- c. To ensure data security and privacy
- d. To store and manage large volumes of data

Question **64**

Incorrect

Mark 0.00 out of 1.00

Which of the following algorithms uses a recursive implementation?

- a. Linear/sequential search
- b. Binary search ✗
- c. Heap sort
- d. Insertion sort

Question **65**

Correct

Mark 1.00 out of 1.00

What is a PRIMARY factor that distinguishes Big Data from traditional data management approaches?

- a. Requirement for specialized data processing tools ✓
- b. Inability to handle complex data formats
- c. Focus on analyzing historical trends
- d. Limited data storage capacity

Question **66**

Incorrect

Mark 0.00 out of 1.00

In a software project, the planned value (PV) is $50,000, the earned value (EV) is $40,000, and the actual cost (AC) is $45,000. Calculate the schedule variance (SV).

- a. $2,000
- ◉ b. $10,000 ✗
- c. -$10,000
- d. $4,000

Question **67**

Incorrect

Mark 0.00 out of 1.00

Which term refers to the process of summarizing data to improve efficiency in data warehousing?

- a. Data mashing
- b. Data mining
- c. Data aggregation
- ◉ d. Data scrubbing ✗

Question **68**

Incorrect

Mark 0.00 out of 1.00

Among the reasons that lead to deadlock in operating systems, which one is used to solve the inter-process communication problem?

- ◉ a. Hold and Wait Condition ✗
- b. Circular wait
- c. No preemption
- d. Mutual exclusion

Question **69**

Correct

Mark 1.00 out of 1.00

Which communication channel is most suitable for conveying complex technical information to a distributed team?

- ◉ a. Email ✓
- b. Video conference
- c. Instant messaging
- d. Telephone call

Question **70**

Correct

Mark 1.00 out of 1.00

Which one of the following computers can be most secured compared to the rest?

- ○ a.   A computer connected to the Internet having strong intrusion detection system
- ○ b.   A computer connected to the Internet and the latest anti-virus installed on it
- ◉ c.   A computer that is not connected to the Internet ✔
- ○ d.   A computer connected to the Internet with the latest firewall system
- ○ e.   A computer connected to the Internet having strong software firewall system

Question **71**

Incorrect

Mark 0.00 out of 1.00

Which class does the IP address 172.16.1.20 belong to?

- ○ a.   Class D
- ◉ b.   Class A ✘
- ○ c.   Class B
- ○ d.   Class C

Question **72**

Incorrect

Mark 0.00 out of 1.00

During Software Requirement Management, which two types of requirements typically receive the highest priority?

- ○ a.   Enduring Requirements and Volatile Requirements
- ○ b.   User Stories and Bug Fixes
- ○ c.   Security Requirements and Performance Requirements
- ◉ d.   Functional Requirements and Non-Functional Requirements ✘

Question **73**

Correct

Mark 1.00 out of 1.00

Which machine learning models are trained to make decision based on the reward and feedback they receive from their action.

- ◉ a.   Reinforcement learning ✔
- ○ b.   Unsupervised learning
- ○ c.   Supervised learning
- ○ d.   All of the above

Question **74**

Correct

Mark 1.00 out of 1.00

What is the purpose of classless addressing in IP networks?

○ a.   To allocate IP addresses based on geographical location.

○ b.   To classify IP addresses into different classes for easier routing.

○ c.   To improve the security of IP addresses by encrypting them.

◉ d.   To provide more flexible allocation of IP addresses by allowing variable-length subnet masks. ✓

Question **75**

Incorrect

Mark 0.00 out of 1.00

What is the purpose of a change control board (CCB) in project management?

○ a.   To prevent any changes from being made to the project

◉ b.   To approve or reject changes to the project scope, schedule, and cost ✗

○ c.   To allocate project resources

○ d.   To escalate all project issues to senior management

Question **76**

Incorrect

Mark 0.00 out of 1.00

which one of the following search algorithm requires less memory?

○ a.   Depth First Search

○ b.   Optimal Search

○ c.   Breadth-First Search

◉ d.   Linear Search ✗

Question **77**

Correct

Mark 1.00 out of 1.00

What does validation ensure in software development?

○ a.   That the software is free from defects

○ b.   That the software conforms to its specifications

◉ c.   That the software meets the requirements and fulfills its intended purpose ✓

○ d.   That the software is written according to coding standards

Question **78**

Incorrect

Mark 0.00 out of 1.00

Which of the following is NOT an input to the process of scope management?

- ○ a.   Cost Baseline ✗
- ○ b.   Project Charter
- ○ c.   Work Breakdown Structure (WBS)
- ○ d.   Project Management Plan

Question **79**

Incorrect

Mark 0.00 out of 1.00

Which scheduling technique involves identifying dependencies between project activities?

- ○ a.   Agile sprint planning
- ○ b.   Gantt charts ✗
- ○ c.   Critical Path Method (CPM)
- ○ d.   Earned Value Management (EVM)

Question **80**

Incorrect

Mark 0.00 out of 1.00

In software testing, what is the term for testing performed by the end-users before a software release?

- ○ a.   Alpha Testing
- ○ b.   Regression Testing ✗
- ○ c.   Beta Testing
- ○ d.   Smoke Testing

Question **81**

Incorrect

Mark 0.00 out of 1.00

Which one of the following approaches define AI is "The art of creating machines that perform functions that require intelligence when performed by people."

- ○ a.   Thinking rationally ✗
- ○ b.   Thinking humanly
- ○ c.   Acting humanly
- ○ d.   Acting rationally

Question **82**

Correct

Mark 1.00 out of 1.00

What is the purpose of access control in security mechanisms?

○ a.   To detect and remove malware from a system
⦿ b.   To prevent unauthorized access to resources ✔
○ c.   To encrypt digital assets at rest
○ d.   To encrypt data during transmission
○ e.   To monitor network traffic for security threats

Question **83**

Incorrect

Mark 0.00 out of 1.00

How can a project manager promote teamwork and collaboration within a software project team?

○ a.   Celebrate individual achievements only
○ b.   Encourage competition among team members
⦿ c.   Promote a supportive and inclusive team environment ✘
○ d.   Foster a blame culture

Question **84**

Correct

Mark 1.00 out of 1.00

Which programming paradigm emphasizes breaking down a program into smaller, reusable components?

○ a.   Functional programming
⦿ b.   Object-oriented programming ✔
○ c.   Procedural programming
○ d.   Aspect-oriented programming

Question **85**

Incorrect

Mark 0.00 out of 1.00

Which team structure involves team members reporting to functional managers but working on projects led by project managers?

○ a.   Matrix teams
⦿ b.   Functional teams ✘
○ c.   Hierarchical teams
○ d.   Agile teams

Question **86**

Correct

Mark 1.00 out of 1.00

Which statement about the round-robin scheduling algorithm is false?

○ a.   It's the fairest algorithm and most widely used algorithm

◉ b.   Characterized by its non-preemptive nature ✔

○ c.   Has higher context switch overhead

○ d.   Characterized by using a quantum number for scheduling

Question **87**

Correct

Mark 1.00 out of 1.00

Which control statement is used for executing different blocks of code based on multiple conditions?

○ a.   If...else statement

○ b.   While loop statement

◉ c.   Switch statement ✔

○ d.   For loop statement

Question **88**

Incorrect

Mark 0.00 out of 1.00

What type of traceability shows how a requirement is designed and implemented?

○ a.   Forward traceability

◉ b.   Horizontal traceability ✗

○ c.   Vertical traceability

○ d.   Backward traceability

Question **89**

Correct

Mark 1.00 out of 1.00

Which one of the following statements contains an error?

○ a.   SELECT empid FROM emp;

○ b.   SELECT * FROM emp WHERE empid = 1001;

○ c.   SELECT empid WHERE empid = 1002 AND lastname = 'Abebe';

◉ d.   SELECT empid FROM emp WHERE empid = 1003 ✔

Question **90**

Correct

Mark 1.00 out of 1.00

What is the main focus of Goal-Based Requirement Engineering?

- a.   Eliciting and refining stakeholder goals ✔
- b.   Writing efficient code
- c.   Defining technical specifications
- d.   Identifying user interface elements

Question **91**

Correct

Mark 1.00 out of 1.00

Which of the following is not an OOPS concept?

- a.   Exception ✔
- b.   Encapsulation
- c.   Polymorphism
- d.   Abstraction

Question **92**

Incorrect

Mark 0.00 out of 1.00

Which software engineering approach focuses on capturing and managing requirements from stakeholders?

- a.   RAD (Rapid Application Development) ✘
- b.   CASE (Computer-Aided Software Engineering)
- c.   JAD (Joint Application Development)
- d.   RUP (Rational Unified Process)

Question **93**

Incorrect

Mark 0.00 out of 1.00

Design, development, and maintenance of applications for mobile devices is referred as

- a.   developing mobile apps
- b.   mobile computing ✘
- c.   mobile software engineering
- d.   software engineering

Question **94**

Correct

Mark 1.00 out of 1.00

Consider the following sequential free memory block (partition) sizes available for allocation: Block A=100 KB, Block B=200 KB, Block C=150 KB, Block D=300 KB, and Block E=250 KB. By using the First Fit algorithm if we allocate the following processes: P1 requires 120 KB, P2 requires 250 KB, P3 requires 180 KB. Which process goes into which memory block?

○ a.   P1: Block B, P2: Block D, P3: Block E ✔

○ b.   P1: Block D, P2: Block E, P3: will not be allocated to any partition

○ c.   P1: Block A, P2: Block D, P3: Block E

○ d.   P1: Block B, P2: Block E, P3: Block A

Question **95**

Correct

Mark 1.00 out of 1.00

Which component is used to define a service in the AndroidManifest.xml file?

○ a.   ≪service> ✔

○ b.   ≪provider>

○ c.   ≪receiver>

○ d.   ≪activity>

Question **96**

Incorrect

Mark 0.00 out of 1.00

In android the super class for all ViewGroup is

○ a.   Activity ✘

○ b.   View

○ c.   All

○ d.   Object

Question **97**

Incorrect

Mark 0.00 out of 1.00

Suppose stakeholder complains that a requirement is unclear and open to interpretation. What is the most appropriate action to take?

- a. Ignore the complaint and proceed with development.
- b. Refine the requirement to be more specific and unambiguous
- c. Delegate the clarification to the development team
- d. Explain to the stakeholder why the requirement is written in this way. ✗

Question **98**

Incorrect

Mark 0.00 out of 1.00

Which human resource management technique involves identifying and documenting project roles and responsibilities?

- a. Resource leveling
- b. Resource histogram
- c. Responsibility assignment matrix (RAM) ✗
- d. Maslow's Hierarchy of Needs

Question **99**

Incorrect

Mark 0.00 out of 1.00

Which procurement document is used to solicit proposals from potential vendors?

- a. Statement of Work (SOW)
- b. Request for Proposal (RFP) ✗
- c. Request for Information (RFI)
- d. Invitation to Bid (ITB)

Question **100**

Incorrect

Mark 0.00 out of 1.00

What is the time complexity of the algorithm given below?

```
for(i=1;i<n;i=i/2) {
        statement;
}
```

- a.   O(log n) ✗
- b.   O(n log n)
- c.   O👎
- d.   O(n^2)

Question **101**

Incorrect

Mark 0.00 out of 1.00

What is the triple constraint in project management?

- a.   Time, Scope, and Cost
- b.   Scope, Quality, and Stakeholders
- c.   Time, Scope, and Quality
- d.   Quality, Cost, and Schedule ✗

Question **102**

Incorrect

Mark 0.00 out of 1.00

According to the OSI reference model, to which layer do routers and core switches belong when delivering routing services?

- a.   Physical Layer ✗
- b.   Data Link Layer
- c.   Network Layer
- d.   Transport Layer

Question **103**

Correct

Mark 1.00 out of 1.00

Among the following options, which one shows the correct lifecycle method for an Activity?

- ○ a.   onCreate - onStart - onPause - onStop
- ○ b.   onCreate - onStart - onResume - oStop
- ◉ c.   onCreate - onStart - onPause - onResume - onStop ✔
- ○ d.   onCreate - onStart - onResume - onPause - onStop

Question **104**

Correct

Mark 1.00 out of 1.00

White-box testing focuses on what aspect of the software?

- ○ a.   User requirements
- ○ b.   System specifications
- ○ c.   User interface design
- ◉ d.   Internal code structure ✔

Question **105**

Incorrect

Mark 0.00 out of 1.00

In which phase of the project management process are project risks identified and documented?

- ○ a.   Executing
- ○ b.   Closing
- ○ c.   Planning
- ◉ d.   Monitoring and Controlling ✘

Question **106**

Incorrect

Mark 0.00 out of 1.00

In a system using virtual memory, the physical memory is divided into _____ and the virtual address space is divided into equally-sized partitions called_____.

- ○ a.   Pages, Page frames
- ○ b.   Page frames, Pages
- ◉ c.   Page, Segment ✘
- ○ d.   Segment, Page

Question **107**

Incorrect

Mark 0.00 out of 1.00

Imagine you're a data scientist working with a massive dataset for a new project. What is one of the biggest obstacles you might face when trying to analyze this data?

- ⦿ a. Finding enough data sources to supplement the existing dataset. ✗
- ○ b. The sheer processing power and time required to analyze the data effectively.
- ○ c. The limited number of software tools available for data analysis.
- ○ d. The high cost of storing all this data on traditional storage devices.

Question **108**

Incorrect

Mark 0.00 out of 1.00

What does the term "scope creep" refer to in project management?

- ○ a. The intentional expansion of project scope to meet stakeholder expectations
- ○ b. The completion of project deliverables ahead of schedule
- ⦿ c. The inability to define project scope clearly ✗
- ○ d. The unauthorized changes or continuous growth in project scope

Question **109**

Correct

Mark 1.00 out of 1.00

Which type of cable can be used to directly connect two computers to form a peer-to-peer network?

- ○ a. Coaxial cable
- ⦿ b. Crossover cable ✔
- ○ c. Straight-through cable
- ○ d. Console cable

Question **110**

Incorrect

Mark 0.00 out of 1.00

What is the purpose of a stakeholder register in project management?

- ○ a. To identify and document all project stakeholders
- ○ b. To avoid communication with stakeholders
- ○ c. To ignore stakeholders' concerns
- ⦿ d. To allocate resources to project stakeholders ✗

Question **111**

Correct

Mark 1.00 out of 1.00

Which term refers to the degree to which software meets specified requirements and user expectations?

- ○ a. Software architecture
- ○ b. Software complexity
- ○ c. Software maintenance
- ⦿ d. Software quality ✔

Question **112**

Correct

Mark 1.00 out of 1.00

Which of the following statement is correct, when an overridden method is called from within a subclass?

- ⦿ a. It will always refer to the version of that method defined by the superclass ✔
- ○ b. Compile time error will occur
- ○ c. It will always refer to the version of that method defined by the subclass
- ○ d. The Compiler will choose randomly the method to be executed

Question **113**

Incorrect

Mark 0.00 out of 1.00

Which tree traversal visits the nodes in the following order: left subtree, root, right subtree?

- ○ a. Postorder traversal
- ⦿ b. Level-order traversal ✘
- ○ c. Preorder traversal
- ○ d. Inorder traversal

Question **114**

Incorrect

Mark 0.00 out of 1.00

Which protocol is commonly used for routing packets across different networks on the Internet?

- ○ a. Internet Protocol (IP)
- ○ b. Transmission Control Protocol (TCP)
- ⦿ c. Hypertext Transfer Protocol (HTTP) ✘
- ○ d. User Datagram Protocol (UDP)

Question **115**

Incorrect

Mark 0.00 out of 1.00

What is the purpose of a Work Breakdown Structure (WBS) in scope management?

- a.   To schedule project activities
- b.   To define project deliverables
- ⦿ c.   To assign resources to project tasks ✗
- d.   To estimate project costs

Question **116**

Correct

Mark 1.00 out of 1.00

Which network topology is referred to as an active network topology?

- a.   Star Topology
- b.   Bus Topology
- ⦿ c.   Ring Topology ✓
- d.   Mesh Topology

Question **117**

Incorrect

Mark 0.00 out of 1.00

Which two features of object-oriented programming are the same?

- a.   Encapsulation and Polymorphism features are the same
- b.   Abstraction and Polymorphism features are the same
- c.   Encapsulation and Abstraction
- ⦿ d.   Inheritance and Encapsulation features are the same ✗

Question **118**

Correct

Mark 1.00 out of 1.00

What is the purpose of an Intrusion Detection System (IDS) in computer security?

- a.   To encrypt data during transmission
- b.   To encrypt data during transmission
- c.   To prevent unauthorized access to a network
- ⦿ d.   To detect and alert on suspicious network activities ✓
- e.   To recover data after a system failure or disaster

Question **119**

Correct

Mark 1.00 out of 1.00

Which software development methodology emphasizes incremental, iterative development?

- ○ a.   V-model
- ○ b.   Spiral model
- ◉ c.   Agile methodology ✔
- ○ d.   Waterfall model

Question **120**

Incorrect

Mark 0.00 out of 1.00

Given three classes A, B and C, where class C is derived from class B, which is derived from class A. If those classes are public classes and found in different package, then a class C object can access

- ○ a.   Any data in C and Only Protected and public data in A and B.
- ○ b.   Protected, default and public data only in C.
- ◉ c.   Protected, default and public data only in C and B. ✘
- ○ d.   Any data in C and only public data in A and B.

Question **121**

Correct

Mark 1.00 out of 1.00

What is the primary advantage of biometric authentication?

- ○ a.   It is very easy to hack the key.
- ○ b.   It can be easily shared or transferred.
- ○ c.   It is easy to remember and use.
- ○ d.   It can be easily reset or changed.
- ◉ e.   It provides a high level of uniqueness and security. ✔

Question **122**

Correct

Mark 1.00 out of 1.00

What is the purpose of system backups in administering systems?

○ a. To encrypt data during transmission

○ b. To monitor and detect suspicious activities or attacks

○ c. To develop software applications

◉ d. To recover data in the event of data loss or system failure ✔

○ e. To prevent unauthorized access to a system

Question **123**

Incorrect

Mark 0.00 out of 1.00

```
Consider the program:

public class Student {
    int id; int section;
    void display(){
        System.out.println("ID : " + id);
        System.out.println("Section : " + section);}
        public static void main(String[] args){
```

```
            /*Create an object*/ }
```

```
        }
```

Which of the following is a correct way to create an object in the main method of the above program?

○ a. Student stud;

◉ b. Student stud =new Student (3983,2); ✘

○ c. Student stud = Student (3983,20);

○ d. Student stud=new Student ();

Question **124**

Incorrect

Mark 0.00 out of 1.00

What is the purpose of multifactor authentication in security mechanisms?

○ a. To authenticate users using multiple credentials

○ b. To monitor network traffic for security threats

◉ c. To prevent unauthorized access to a system ✘

○ d. To encrypt data during transmission

○ e. To monitor network traffic for security threats

Question **125**

Correct

Mark 1.00 out of 1.00

You are validating a software requirement that states "The system shall respond to user input within 2 seconds." What additional information is most helpful for validation purposes?

- a.   The programming language used for development.
- b.   The specific user actions that trigger the response. ✔
- c.   The development team's experience level.
- d.   The hardware specifications of the target platform.

Question **126**

Incorrect

Mark 0.00 out of 1.00

Which routing protocol is used for routing within an autonomous system (AS)?

- a.   Exterior Routing Protocol ✘
- b.   Transmission Control Protocol (TCP)
- c.   Interior Routing Protocol
- d.   Internet Protocol (IP)

Question **127**

Correct

Mark 1.00 out of 1.00

A key advantage of NoSQL databases for big data is:

- a.   Limited access control features
- b.   Enhanced data encryption capabilities
- c.   Enforcing strict data schema
- d.   Scalability to handle growing data volumes ✔

Question **128**

Incorrect

Mark 0.00 out of 1.00

Which metric measures the number of paths through a piece of code?

- a.   Lines of code
- b.   Defect density
- c.   Code coverage ✘
- d.   Cyclomatic complexity

Question **129**

Incorrect

Mark 0.00 out of 1.00

In which search problem, to find the shortest path, each city must be visited once only?

- ⚪ a.   Travelling Salesman problem
- ⚪ b.   Finding the shortest path between a source and a destination
- ⚫ c.   Depth-first search traversal on a given map represented as a graph ✗
- ⚪ d.   Map coloring Problem

Question **130**

Incorrect

Mark 0.00 out of 1.00

In relational model terminology, _____ is a set of allowable values for one or more attributes.

- ⚪ a.   domain
- ⚪ b.   relation
- ⚫ c.   range ✗
- ⚪ d.   tuple

Question **131**

Incorrect

Mark 0.00 out of 1.00

_____ describes the structure of the whole database for a community of users.

- ⚪ a.   Conceptual level
- ⚪ b.   Physical level
- ⚪ c.   View level
- ⚫ d.   Internal level ✗

Question **132**

Incorrect

Mark 0.00 out of 1.00

What is a key advantage of NoSQL databases in Big Data management?

- ⚫ a.   Structured data storage ✗
- ⚪ b.   ACID compliance
- ⚪ c.   Flexible schema
- ⚪ d.   Limited scalability

Question **133**

Correct

Mark 1.00 out of 1.00

In Naive Bayes classification, how is the probability of a class calculated?

○ a.   By using a decision tree algorithm

◉ b.   By considering the joint prior frequencey of all features given in the dataset ✓

○ c.   By random selection of classes

○ d.   By averaging the feature values in each class

Question **134**

Correct

Mark 1.00 out of 1.00

What is the purpose of the "if...else if...else" statement in C++?

◉ a.   To execute different blocks of code based on multiple conditions ✓

○ b.   To declare variables in C++

○ c.   To define a function in C++

○ d.   To repeat a block of code until a condition is met

Question **135**

Incorrect

Mark 0.00 out of 1.00

What technique involves predicting project effort based on historical data from similar projects?

○ a.   Algorithmic models

○ b.   Analogy-based estimation

○ c.   Parametric estimation

◉ d.   Expert judgment ✗

Question **136**

Incorrect

Mark 0.00 out of 1.00

In problem solving using search the representation of internal state is _____.

◉ a.   Information Retrieval ✗

○ b.   Factored

○ c.   Mining of data

○ d.   Atomic

Question **137**

Correct

Mark 1.00 out of 1.00

What is the purpose of organization and team structures in software project management?

- ○ a. To allocate resources
- ○ b. To define project requirements
- ○ c. To create project schedules
- ◉ d. To define roles and responsibilities within the project ✓

Question **138**

Correct

Mark 1.00 out of 1.00

Which one of the following is Object-based data model DBMS?

- ○ a. Frame Memory
- ○ b. Unifying Model
- ◉ c. The E-R Model ✓
- ○ d. Relational Data Model

Question **139**

Incorrect

Mark 0.00 out of 1.00

Which of the following is true according to EER concept?

- ○ a. Subclass member is the same as the entity in the super class, but in a distinct specific role.
- ○ b. Super class inherits all the attributes of the entity as the member of the subclass.
- ◉ c. The set of subclasses that forms a generalization is defined on the basis of some distinguishing characteristics. ✗
- ○ d. Subclass cannot participate in specific relationship types.

Question **140**

Correct

Mark 1.00 out of 1.00

A relation that has no transitive dependencies is in which normal form?

- ○ a. Second
- ◉ b. Third ✓
- ○ c. First
- ○ d. Fourth

Question **141**

Incorrect

Mark 0.00 out of 1.00

Which one of the following is correct about Hierarchical Model?

○ a.   The relationship between child to parent is one-to-many ✗
○ b.   The relationship between child to parent is Many-to-many
○ c.   The relationship between parent to child is Many-to-many
○ d.   The relationship between parent to child is one-to-many

Question **142**

Correct

Mark 1.00 out of 1.00

What is the main goal of a man-in-the-middle (MITM) attack?

○ a.   Exploiting network vulnerabilities
○ b.   To gain unauthorized access to a network
○ c.   To steal sensitive data from a network
○ d.   To disrupt network availability
◉ e.   To intercept and manipulate communication between two parties ✓

Question **143**

Correct

Mark 1.00 out of 1.00

Which concept allows you to store the memory address of a variable in C++?

○ a.   Strings
○ b.   Arrays
○ c.   Structures
◉ d.   Pointers ✓

Question **144**

Incorrect

Mark 0.00 out of 1.00

What is the primary purpose of the Delphi technique in project estimation?

○ a.   To use historical data from similar projects to make estimates
○ b.   To achieve consensus among a group of experts regarding project estimates
◉ c.   To rely on the expertise of individuals or groups familiar with the project domain ✗
○ d.   To compare the project to predefined standards

Question **145**

Correct

Mark 1.00 out of 1.00

Consider the following reference string: 1, 2, 3, 4, 1, 2, 5, 1, 2, 3, 4, 5. Apply the FIFO page replacement algorithm with a frame size of 3. How many page faults occur?

- ○ a. 12
- ⦿ b. 9 ✓
- ○ c. 10
- ○ d. 11

Question **146**

Correct

Mark 1.00 out of 1.00

Which sorting technique is known to have a time complexity of O(n log n)?

- ○ a. Selection sort
- ⦿ b. Bubble sort ✓
- ○ c. Quicksort
- ○ d. Insertion sort

Question **147**

Incorrect

Mark 0.00 out of 1.00

What does architectural design primarily focus on?

- ○ a. Defining detailed specifications for individual components
- ○ b. Defining the high-level structure and organization of the system
- ○ c. Decomposing the system into functional modules
- ⦿ d. Refining the high-level design into detailed specifications ✗

Question **148**

Incorrect

Mark 0.00 out of 1.00

Which of the following is NOT a responsibility of a project manager in human resource management?

- ○ a. Staffing the project
- ○ b. Providing performance feedback
- ⦿ c. Ignoring team conflicts ✗
- ○ d. Motivating team members

Question **149**

Incorrect

Mark 0.00 out of 1.00

The time complexity of the push operation in a stack is:

- ⚪ a. O👎
- ⚪ b. O(1)
- ⚫ c. O(log n) ✗
- ⚪ d. O(n^2)

Question **150**

Incorrect

Mark 0.00 out of 1.00

Which one of the following is not true about gradle?

- ⚫ a. packs the compiled code and resources into an APK file ✗
- ⚪ b. None
- ⚪ c. compiles the app's code
- ⚪ d. downloads and resolves the app's dependencies