

SECTION 1 - SECTION 1

Question No.1

Cyclomatic complexity is given by

- $V(G) = E + N - 2$
- $V(G) = E - N$
- $V(G) = E + N$
- $V(G) = E - N + 2$

Question No.2

Identify the ERP vendor

- PATNI
- TCS
- SAP
- CTS

Question No.3

Which of the following addresses both software and hardware quality management?

- PCMM
- TQM
- CMMI
- CMM

Question No.4

The data is stored, retrieved and updated in _____

- FTP
- OLTP
- OLAP
- SMTP

Question No.5

Management Information System (MIS) can be built using

- Visual Programming
- Assembly Language Programming
- Embedded system
- Web Based Application

Question No.6



Which of the following statements is false?

- The data dictionary contains the name and description of each data element
- The data dictionary is tool used exclusively by the database administrator
- Data elements in the database can be modified by changing the data dictionary
- The data dictionary is normally maintained by the database administrator

Question No.7



In the conventional method of encryption and decryption, which key is publicly known?

- Only K_d
- K_e and K_d
- Only K_e
- Neither K_e nor K_d

Question No.8



The running time for merge sort algorithm under best case is

- $O(\log n)$
- $O(\log n * n)$
- $O(n)$
- $O(n \log n)$

Question No.9



_____ is an umbrella activity that is applied throughout the software process.

- V&V
- change management
- SQA
- configuration management

Question No.10



_____ tools analyze financial data and throw light on key insights that can be useful to top management in making organization-wide decisions.

- Visualization
- Analytical
- Virtual

- Crypto

Question No.11



Which of the following conditions is used to transmit two packets over a medium at the same time?

- Asynchronous
- Synchronous
- Contention
- Collision

Question No.12



A high speed communication equipment typically would not be needed for

- Supporting communication between nodes in LAN
- Email
- Facebook
- Transferring large volume of data

Question No.13



Which one of these is not software maintenance activity?

- Adaptation
- Error Correction
- Implementation of enhancement
- Establishing scope

Question No.14



How are the risks documented in SDLC?

- KPA
- using RIS
- using Risk Table
- RMMM

Question No.15



Which of the following is a feature of ERP software?

- It is flexible
- It supports CRM
- It integrates information
- ERP is packaged software

Question No.16

Which of the following is not a part of software testing?

- fixing bugs
- V&V
- fault tolerance
- debugging

Question No.17

Which of the following reflects the balance factor for a node in AVL tree?

- {-1,0,1}
- {0,-1,1}
- {0,1}
- {0,1,2}

Question No.18

How many swaps are required to extract the maximum element from the below max-heap? <16,15,14,6,8,12,13,7>

- Zero
- 2
- 1
- 3

Question No.19

A bridge forwards or filters a packet by comparing the information in its address table to the packet's

- Layer 2 destination address
- Layer 2 source address
- Layer 3 destination address
- Source node's physical address

Question No.20

Which of the following is not true of software requirement specification?

- A high quality SRS increases the development Cost
- An SRS establishes the basis for agreement between the client and the supplier on what the software product will do
- A high quality SRS is a prerequisite to high quality software
- An SRS provides a reference for validation of the final product

Question No.21

Axis Bank, India's third-largest private sector bank, launched an innovation lab called _____ last year to accelerate the development of innovative AI technology solutions for the banking sector.

- IVA
- SIA
- EVA
- SBI bot

Question No.22

Which of the following returns a random number?

- rand()
- r ()
- random()
- randomize()

Question No.23

The loss in signal power as light travels down the fibre is called

- Scattering
- Propagation
- Attenuation
- interruption

Question No.24

The Clique problem is

- NP-Soft
- NP-Complete
- NP-Hard
- MST

Question No.25

The page fault frequency parameter 'p' is usually measured in

- number of page faults per second
- number of page faults per minute
- mm
- number of page faults per millisecond

Question No.26

The end of an SQL command is denoted by

- An enter-key marker

- Entering F4 key
- An end of line character
- A semicolon (;)

Question No.27

Banker's algorithm is used for _____ Purpose.

- Deadlock removal
- Deadlock avoidance
- Deadlock prevention
- Deadlock continuation

Question No.28

Which of the following is not a part of SDLC?

- analysis
- design
- software cost estimation
- SRS

Question No.29

A lack of normalization can lead to which one of the following problems?

- Lost updates
- Deferred updates
- Deadlock
- Insertion problems

Question No.30

A network node consisting of both hardware and software that isolates a private network from public networks is

- internet mall
- firewall
- intermediary
- fare tracker

Question No.31

The reservation system of Indian railways is an example of

- Expert System
- Transaction Processing System
- Management Controls System
- Interactive decision support system

Question No.32

What is the purpose of using ALE signal high?

- To disable data bus latch
- To latch low order address from bus to separate $A_0 - A_7$ lines
- To enable data bus latch
- To latch data $D_0 - D_7$ from bus to separate data bus

Question No.33

What can greatly reduce TCP/IP configuration problems?

- PDC
- WINS server
- DHCP server
- WINS proxy

Question No.34

The microprocessor uses _____ register to sequence the execution of the instructions.

- Program Counter
- Flag
- Instruction Register
- Accumulator

Question No.35

Symmetric encryption algorithm is same as

- SHA algorithm
- Secret key encryption algorithm
- Public key encryption algorithm
- RSA algorithm

Question No.36

Consider a system has p processes. Each process need a maximum of m resources and a total of r resources available. What condition must hold to make the system deadlock free?

- $r \geq p(m-1)+1$
- $r \leq p(m-1)+1$
- $r \leq p(m-1)$
- $r \geq p(m-1)$

Question No.37

Average Level inventory level is reduced by

- Decreasing the order quantity
- Decreasing the vendor lead time
- Lowering the reorder point
- Increasing the usage rate

Question No.38

Find the correct pass numbers for each of the following activities: i. Object code generations ii. Literals added to literal table. iii. Listing printed. iv. Address resolution to local symbols that in two pass assembler.

- 2,1,1,2
- 1,2,1,2
- 1,2,2,2
- 2,1,2,1

Question No.39

Which of the following was introduced by Adelson-Velskii and Landis in 1962?

- AVL tree
- binary search tree
- binary tree
- balanced tree

Question No.40

A compiler that runs on one machine and produces code for a different machine is called

- One-pass compilation
- Cross-compilation
- Multi-pass compilation
- Two pass compilation

Question No.41

A B-Tree of order m is an m -way search tree with

- each node, except for root and leaves, having less than $m/2$ subtrees
- all leaves of the tree on the same level
- all its leaves connected to form a linked list
- the root of the tree having more than m subtrees

Question No.42

Which of the following is used for grouping of characters into tokens in a compiler?

- Parser
- Code generator
- Code Optimizer
- Scanner

Question No.43

Which of the following represents processor activities, methods and procedures in a data flow diagram?

- Datagram
- Actigram
- Feedback
- Flow Chart

Question No.44

To fuel its AI mission, this year, SBI launched a national hackathon, _____, for developers, startups and students to come up with innovative ideas and solutions for the banking sector, focusing on technologies such as predictive analytics, fintech/blockchain, digital payments, IoT, AI, machine learning, BOTS and robotic process automation.

- Hack the bank
- Code for Bank
- Mission of bank
- Vision of bank

Question No.45

The processing time of a business process from beginning to end is

- cycle time
- process time
- lead time
- lapsed time

Question No.46

The initial configuration of queue is a,b,c,d. a is at the front. To get the configuration d,c,b,a, how many deletions and additions required?

- 3 deletions, 2 additions
- 2 deletions, 3 additions
- 3 deletions, 4 additions
- 3 deletions, 3 additions

Question No.47

Top-Down design does not require

- Loop invariants
- Modularity
- Flow Charting
- Step-Wise refinement

Question No.48

If a relation is in 2 NF and 3 NF forms, then

- Prime attribute is functionally independent of all non-prime attributes
- All attributes are functionally independent
- No non-prime attribute is functionally dependent on other non-prime attributes
- No non-prime attribute is functionally dependent on prime attributes

Question No.49

After serving a page fault, the control returns to

- depends on operating system
- the same instruction but the program hangs
- the next instruction
- the same instruction but the program halts

Question No.50

The _____ Flag indicates the availability of a router.

- Host specific
- Gateway
- Added by redirection
- UP

Question No.51

Web client talks to web server through

- TCP port 80
- UDP port 21
- TCP port 21
- UDP port 80

Question No.52

Error reports are an example of

-

Demand reports

- Predictive reports
- Exception reports
- Scheduled reports

Question No.53

The process of encrypting and decrypting messages is called _____

- cryptanalysis
- cryptography
- authenticity
- authentication

Question No.54

Which scheduling policy is most suitable for a time-shared operating system?

- Shortest job first
- Round-Robin
- First come first serve
- Last In First Out

Question No.55

WINDOWS NT is designed as

- CACHE
- both a & b
- RISC
- CISC

Question No.56

What will be the output of the following statement?

Printf (3+”goodbye”);

- Goodbye
- Odbye
- dbye
- Bye

Question No.57

What is a statistically optimal classifier?

- A classifier which calculates the nearest neighbor for a given test example.
- A classifier which gives the lowest probability of making classification errors

- A classifier which minimizes the sum squared error on the training set
- A classifier which gives results in minimum response time

Question No.58

The interrupt-request line is a part of the

- Control line
- Address line
- Data line
- Strobe line

Question No.59

An System has a stored knowledge base and an inference engine.

- Expert
- Control
- Centers
- MIS

Question No.60

Which of the following is used to convert a string to an integer?

- atoi()
- govt()
- itoa()
- strcmp()

Question No.61

DLL stands for

- dynamic language list
- dynamic language library
- dynamic load library
- dynamic link library

Question No.62

In Unix, which symbol will be used with grep command to match the pattern pat at the beginning of a line?

- \$ pat
- pat ^
- pat \$
- ^ pat

Question No.63

Which of the following can be the nodes examined in a binary search tree while searching for key 98?

- 100,50,75,60,98
- 200,70,100,95,98
- 100,120,90,95,98
- 75,150,90,80,98

Question No.64

What are the two primitive operations of semaphore?

- BUSY & WAIT
- SIGNAL & WAIT
- FREE & SIGNAL
- WAIT & FREE

Question No.65

Globally, banks are seeking to use _____ for operations such as money transfer, record keeping and other back-end functions. This technology can be used in banking activities like secure document management, reporting, payments, treasury & securities and trade finance.

- block chain technology (BCT)
- bit coin
- Virtual coin
- Chat bot

Question No.66

The data structure required for breath first traversal on a graph is

- Tree
- Array
- Queue
- Stack

Question No.67

The address of the operand is given in instruction itself is

- Direct Addressing
- Implicit Addressing
- Register Indirect Addressing
- Register Addressing

Question No.68

ERP stands for

- Entire resource planning
- Enterprise requirements planning
- Enterprise resource planning
- Enterprise resource programme

Question No.69

Speed of microprocessor depends on

- Access time
- Data bus width
- Address bus width
- Response time

Question No.70

JAVA is a

- script language
- object based language
- pure OOPS language
- hypertext language

Question No.71

A recursive function would result in infinite recursion, if the following were left out:

- Subtraction
- Recursive call
- Local variable declarations
- Base case

Question No.72

The requirement report includes

- A hierarchy chart showing the top-level modules
- A structure flow
- A list of alternative solutions considered
- A data flow diagram describing the proposed new system

Question No.73

_____ helps in analyzing the intrinsic parallelism of a program.

decision table

- structured chart
- decision tree
- DFD

Question No.74

The transmission on the asynchronous bus is also called as _____

- Switch mode transmission
- Variable transfer
- Hand-Shake transmission
- Bulk Transfer

Question No.75

A situation where a business is selling online to an individual consumer is

- banner
- Business-to-Business E-Commerce
- Business-to-Consumer E-Commerce
- E-Business

Question No.76

A program written using the data structure _____ results in minimum page faults.

- priority lists
- priority queue
- stack
- hash queue

Question No.77

SAP stands for

- System, Applications, Products in data processing
- Software, Applications, Projects
- Software, Applications, Products
- Software administration programme

Question No.78

FTR (Formal technical review) is a _____ performed by software engineers.

- software testing activity
- change management activity

- configuration management activity
- software quality assurance activity

Question No.79

The COCOMO model deals with

- scheduling
- software risk
- software cost
- testing

Question No.80

Which among the following is not a structured data type in C?

- boolean
- pointer
- string
- union

Question No.81

A web server sends a program to be stored on the user's hard drive called a _____ frequently without a disclosure or the user's content.

- server
- datastore
- cookie
- website

Question No.82

A network that links the intranets of business partners using the virtually private network on the Internet is

- VAN
- Extranet
- Intranet
- MAN

Question No.83

Apart from humanoid robots providing customer service, _____ are also getting deployed in functions such as retail banking operations, agri-business, trade , treasury and human resource management to name a few.

- chatbots
- block chain
- bitcoins

- software robots

Question No.84

Virtual memory is implemented by

- dynamic partitioned memory management
- simple paging
- demand paging
- static partitioned memory management

Question No.85

An open source testing tool used to test the performance of the application when it is under heavy load is

- Loadrunner
- TSL
- Apache JMeter
- PSP

Question No.86

The running time for insertion sort algorithm under best case is

- $O(n \log n)$
- $O(n)$
- $O(\log n * n)$
- $O(\log n)$

Question No.87

Which of the following is not a datamining functionality?

- Clustering and Analysis
- Selection and interpretation
- Characterization and Discrimination
- Classification and regression

Question No.88

Scheduler in an operating system is

- a compiler
- an operating system module
- a loader
- a system call

Question No.89

Decisions can be classified on three levels, strategic, _____ and operational

- Accessible
- Predictive reports
- Tactical
- Preparation

Question No.90

The four major corporate resources are money, materials, information and

- people
- Software
- Program
- Resources

Question No.91

Computer-to-Computer direct transfer of standard business documents is

- EFT (Electronic Fund transfer)
- EDI (Electronic data interchange)
- e-broker
- Electronic distributor

Question No.92

_____ can also be applied at the behavioral (black-box) level. The graph will assist in identifying those loops that need to be tested.

- smoke testing
- loop testing
- control testing
- regression testing

Question No.93

In a relational schema, each tuple is divided into fields called

- Domains
- Class
- Queries
- Relations

Question No.94

Routers function in the _____ Layers

-

Physical and data link

- Physical data link and network
- Network and transport
- Data link and network

Question No.95

The concept of delivering the ordered items at a designated time is

- ontime shipping
- online delivery
- JIT (Just-in-time)
- Made-to-Order

Question No.96

How many layers are in the OSI reference model?

- 8
- 6
- 4
- 7

Question No.97

_____ is actually a multiport repeater.

- Hub
- Bridge
- Router
- VLAN

Question No.98

RARP is used to find the

- Correct IP route from the routing table
- MAC address of a known IP address
- IP address of a known MAC address
- Subnet mask of a known network address

Question No.99

The five items A, B, C, D, and E are pushed in a stack, one after the other starting from A. The stack is popped four times and each element is inserted in a queue. Then, two elements are deleted from the queue and pushed back on the stack. Now, one item is popped from the stack. The popped item is

- A
- D

B

C

Question No.100



The completeness constraint has rule

Specialization, generalization

Supertype, subtype

Total specialization, partial specialization

Partial specialization, partial generalization