

TYBSc CS SEM – V Sample Questions

SUBJECT: ARTIFICIAL INTELLIGENCE

1. _____ is used in standard implementation of Breadth First Search.
a)Stack b)Linked list c)Queue d)Array
2. _____ algorithm imposes a fixed depth limit on the nodes.
a)BFS b)DFS c)DLS d)A*
3. Self driving car is an example of _____ environment.
a)partially observable b)deterministic c)static d)fully observable
4. A queue has a _____ structure.
a)FIFO b)array c)LIFO d)tree
5. _____ implements stack operation for searching the states.
a)Breadth-first search b)Depth-first search c)A* d)DLS and A*
6. Simple reflex agent works on _____ type(s) of environment.
a)fully observable b)partially observable c)dynamic d)partially and fully observable both
7. _____ search is implemented with first-in-first-out method.
a)Depth first search b)Breadth first search c)Heuristic search
d)Best first search
8. In AI, _____ is not the property of Environment.
a)Static b)Dynamic c)No agent d)Deterministic
9. Which component is used to improve the agent's performance?
a)Sequence b)Learning c>Action d)State
10. _____ is not a type of agent in Artificial Intelligence.
a)Utility based b)Model based c)Simple reflex d)Input based
11. Rationality of an agent does not depend on _____.
a)Actions b)Performance c)Reaction d)Percept sequence
12. _____ is the main task of AI agents.
a)Humanly action b)Perceiving and acting on the environment
c)Moving objects d)Input and output

13. Which of the following classification of the environment are not valid?
- a)Deterministic and Non-Deterministic b)Fully observable and Partially observable
c)Static and Dynamic d)Agent and No Agent
14. Task Environment of an agent does not consist of _____.
- a)Transmitter b)Sensors c)Actuators d)Performance measure
15. When is breadth-first search is optimal?
- a)When there is less number of nodes in the graph b)When all step costs are equal.
c)When all step costs are unequal. d)When there is more number of nodes in the graph.
16. An AI Agent is composed of _____.
- a)Architecture b)Agent Function c)Perception Sequence
d)Architecture and Program
17. State TRUE or FALSE.
- i) Rational Agent is one who does not take the correct path.
ii) The game of Poke is a single agent.
- a)TRUE, TRUE b)TRUE, FALSE c)FALSE, TRUE d)FALSE, FALSE
18. A child can identify other dogs based on past data, is an example of _____.
- a)Supervised Learning b)Unsupervised Learning
c)Active Learning d)Reinforcement Learning
19. Which of the following is also called as exploratory learning?
- a)Supervised Learning b)Unsupervised Learning
c) Formal Learning d)Passive Learning
20. In ANN, _____ is the network which involves backward links from output to the input and hidden layers.
- a)Single layer perceptron b)Feed Forward c)Perceptron d)Recurrent Neural Network

21. ANN stands for _____.
a)Artificial Neural Network b)Artificial Node Network
c)Artificial Neutral Node d)Artificial Neutral Network
22. Information flow in Feed Forward ANN is _____.
a)bidirectional b)backward c)unidirectional d)has no direction
23. ReLU is one of the activation function used in ANN which stands for _____.
a)Rectangle Lost Unit b)Rectified Lost Unit c)Rectangle Linear Unit d)Rectified Linear Unit
24. Select the most correct statement about ANN.
a)ANN does not use activation function. b)Each neural node computes it's weighted input.
c)Information flow in ANN has no direction. d)ANN cannot use back-propagation.
25. _____ is a decision support tool that uses a tree like graph or model of decisions.
a)Decision tree b)Flow chart c)Tree d)Neural networks
26. State true or false.
i)Decision tree can be used for classification tasks.
li)Decision tree can be used for regression tasks.
a)TRUE, TRUE b)TRUE, FALSE c)FALSE, TRUE d)FALSE, FALSE
27. High entropy means that the partitions in classification are _____.
a)pure b)not pure c)useful d)useless
28. Which of the following areas do not contribute to build an intelligent system ?
a)Geology b)Statistics c)Maths d)Computer Science
29. Neural Networks are complex _____ with many parameters.
a)Linear Functions b)Nonlinear Functions c)Discrete Functions d)Exponential Functions

30. _____ consists of many simple processing units which are wired together in a complex communication network.
- a)Tree b)Knowledge base agent c)ANN d)Ensemble Learning
31. In Cross Validation, extreme $k = n$, is known as _____.
- a)K-fold CV b)LOOCV c)Stratified CV d)Roll-up CV
32. In a Simple Regression equation, $Y = c + mX$, the term c represents the _____.
- a)etimated slope b)estimated intercept c)predicted response
d)independent variable
33. _____ are techniques that create multiple models and then combine them to produce improved results.
- a)Decision trees b)Linear Regression c)SVM d)Ensemble methods
34. A simple regression assumes a _____ relationship between the input variable and the output variable.
- a)reciprocal b)linear c)non-linear d)quadratic
35. _____ hypothesis is given by the value of θ that maximizes this expression.
- a)The log b)The maximum-likelihood c)A random variable
d)Incomplete
36. Two events are _____ if the outcome of the first event affects the outcome of the second event.
- a)incomplete b)complete c)independent d)dependent
37. Hidden variables are also called as _____.
- a)Local variables b)Latent variables c)Global variables d)Real variables
38. _____ can dramatically reduce the number of parameters required to specify a Bayesian network.
- a)Local variables b)Global variables c)Real variables d)Latent variables

39. EM algorithm stands for _____.
- a)Expert-Maximization b)Expectation-Minimization
c)Expectation-Maximization d)Expert-Minimization
40. _____ algorithm is used to estimate the missing data from the dataset and then use the hidden data to update the values of the parameters.
- a)EM b)Hill climbing c)Beam search algorithm d)Genetic algorithm
41. The EM Algorithm is an _____ method to find the MLE estimate for models.
- a)probing b)linear search c)iterative d)Ensemble
42. It is possible to derive an EM algorithm for a specific application once the appropriate _____ have been identified.
- a)dynamic values b)global variables c)local variables c)hidden variables
43. Where does the Bayes rule can be used?
- a)Answering probabilistic queries b)Increasing complexity
c)Increasing model cost d)Decreasing model cost
44. _____ is about taking suitable action to maximize reward in a particular situation.
- a)Unsupervised b)Supervised c)Guidance d)Reinforcement
45. _____ look at the examples nearest to the point in question.
- a)Kernel methods b)Nearest-neighbors methods c)Static model
d)Dynamic model
46. _____ learns a policy that maps directly from states to actions.
- a)Q learning agent b)Utility based agent c)Reflex agent d)Action-utility agent
47. There is an alternative Temporal Difference method, called _____.
- a)G-learning b)E-learning c)Q-learning d)F-learning

48. Reinforcement learning problems is called as _____.

- a) policy search b) linear search c) non-linear search d) off-policy search

49. _____ is the strategy that the agent employs to determine next action based on the current state.

- a) Action b) State c) Policy d) Reward

50. _____ is when we want an agent to learn about the utilities of various states under a fixed policy.

- a) Active reinforcement learning b) Passive reinforcement learning
c) Positive learning d) Negative learning

SUBJECT : STQA

1. _____ refers to the characteristics that designers specify for an item.
 - A. Quality of Design
 - B. Quality of Cost
 - C. Quality of Conformance
 - D. Quality of Development

2. _____ includes a feedback loop to the process that created the work product.
 - A. Quality Design
 - B. Quality Cost
 - C. Quality Analysis
 - D. Quality Control

3. Identify the disadvantage of the Spiral Model.
 - A. Doesn't work well for smaller projects
 - B. High amount of risk analysis
 - C. Strong approval and documentation control
 - D. consumes more time

4. Methodology in which project management processes were step-by step.
 - A. Incremental
 - B. Waterfall
 - C. Spiral
 - D. Prototyping

5. An error of _____ are the errors in the logic of the code.
 - A. Submission
 - B. Ambition
 - C. Commission
 - D. Omission

6. The term SQA stands for _____.
 - A. Software Quality Analysis
 - B. Software Quality Arrangements
 - C. System Quality Analysis
 - D. Software Quality Assurance

7. _____ is the capability to provide appropriate performance relative to the amount of resources used.
 - A. Functionality
 - B. Reliability
 - C. Usability
 - D. Efficiency

8. _____ means "Are we building the product right?"
 - A. Verification
 - B. Validation
 - C. Reviewing
 - D. Analysing

9. _____ means "The better it works, the more efficiently it can be tested".
- A. Operability
 - B. Observability
 - C. Controllability
 - D. Decomposability
10. White-box testing is also called as _____ testing.
- A. Black-box
 - B. Non-functional
 - C. Glass-box
 - D. Behavioral
11. _____ testing is a test case design method that exercises the logical conditions contained in a program module.
- A. Operation
 - B. Condition
 - C. Comparison
 - D. Flow Graph
12. Black-box testing is also called as _____ testing.
- A. White-box
 - B. Structural
 - C. Glass-box
 - D. Behavioral
13. In _____ modelling, the nodes represent different user observable states & the links represent the transitions.
- A. Transaction Flow
 - B. Finite State
 - C. Data Flow
 - D. Timing
14. _____ is also called as back-to-back testing.
- A. Condition Testing
 - B. Flow Graph Testing
 - C. Comparison Testing
 - D. Transaction Testing
15. A deviation from the specified or expected behaviour that is visible to end-users is called:
- A. an error
 - B. a failure
 - C. a fault
 - D. a defect
16. Find out odd Activity from Activities of Software Quality Management:
- A. Quality Assurance
 - B. Quality Planning
 - C. Quality
 - D. Quality Control

17. MTBF Stands for

- A. Mean time between failure
- B. Method time between failure
- C. most time between failure
- D. mean time below failure

18. " _____ is the process of finding all the defects "

- A. coding
- B. testing
- C. swapping
- D. hashing

19. _____ step involves detecting a defect

- A. locate
- B. identify
- C. fit
- D. assign

20. " _____ is much more efficient in reducing the defects "

- A. closing process
- B. defect prevention
- C. early detection
- D. open file

21. "the process of finding causes of bugs is known as -----"

- A. searching
- B. closing
- C. debugging
- D. solving

22. Which of the following is largest bug producer?

- A. Code
- B. Design
- C. Specification
- D. other

23. Cost of the defect does not increase over the period of time.

- A. TRUE
- B. FALSE
- C. cant say
- D. most probably

24. Software Tester focuses more on complex part of the software. Which of the following testing principles implies this?

- A. Testing shows presence of defects
- B. Pesticide paradox
- C. Testing is context dependent
- D. Defect Clustering

25. Tester should not provide much attention to typographical defects.

- A. TRUE

B. FALSE

C. tester should focus only on quality

D. cant say

26. Which is not involved in debugging?

A. Identifying

B. Isolating

C. Test

D. Fixing

27. How severe the bug is affecting the application is called as?

A. Severity

B. Priority

C. Traceability

D. flexibility

28. Which of the following is not included in External failure costs?

A. testing

B. help line support

C. warranty work

D. complaint resolution

29. The intent of project metrics is:

A. minimization of development schedule

B. for strategic purposes

C. assessing project quality on ongoing basis

D. minimization of development schedule and assessing project quality on ongoing basis

30. Defects removal efficiency (DRE) depends on:

A. E – errors found before software delivery

B. D – defects found after delivery to user

C. both Errors & Defects

D. Varies with project

31. In size oriented metrics, metrics are developed based on the _____.

A. number of Functions

B. number of user inputs

C. number of lines of code

D. amount of memory usage

32. "In what manner, coding and testing are done?"

A. Ad-hoc

B. Bottom-up

C. Top-down

D. Cross sectional

33. "In size oriented metrics, metrics are developed based on the _____."

A. number of Functions

B. number of lines of code

C. number of user inputs

D. amount of memory usage

34. "Developers often combine functional tests with _____ tests."

- A. Unit
- B. Stress
- C. Integration
- D. acceptance

35. Which requirements are the foundation from which quality is measured?

- A. Hardware
- B. Software
- C. Programmers
- D. Tester

36. The primary objective of formal technical reviews is to find _____ during the process so that they do not become defects after release of the software.

- A. errors
- B. equivalent faults
- C. failure cause
- D. Bug

37. "Which of the following is not a core step of Six Sigma?"

- A. Define
- B. Control
- C. Measure
- D. Analyse

38. Which of the following is not a phase of "bathtub curve" of hardware reliability?

- A. Useful Life
- B. Burn-in
- C. Wear-out
- D. Time

39. Suitability, Accuracy, Interoperability, and security are what type quality attribute of ISO 9126?

- A. Reliability
- B. Efficiency
- C. Functionality
- D. Usability

40. "Which of the following is an example of QA?"

- A. Verification
- B. Software testing
- C. Validation
- D. Documentation

41. Review summary report answers _____.

- A. Terminate project, Replace producer, Request a time extension
- B. What defects were found, What caused defects, Who was responsible
- C. What was reviewed, Who reviewed it, What were the findings
- D. Quality Assurance of a product

42. Full form of MTBF is _____

- A. Mean Time Between Failures
- B. Mean Time Before Failure
- C. More Time Before Finals
- D. Minutes To Backup Floppies

43. "Which of the quality factor identifies how far a software program executes its intended function?"

- A. Testability
- B. Portability
- C. Reusability
- D. Flexibility

44. " Maximum possible value of reliability is _____ "

- A. 100
- B. 10
- C. 1
- D. 0

45. "Which 'time' unit is not used in reliability studies?"

- A. Execution time
- B. Machine time
- C. Clock time
- D. Calendar time

46. In DMAIC of Six Sigma, c stands for _____

- A. connect
- B. Control
- C. cover
- D. correct

47. Pareto diagram is named after _____

- A. Vilfredo Pareto
- B. William Deming
- C. Joseph Juran
- D. Philip Crosby

48. The Pareto concept refers to:

- A. Quality at the source
- B. The probability that a product will be functional when used
- C. 80% of the problems being caused by 20 percent of the factors
- D. Competitive benchmarking

49. Which of the following is the limitation of Quality circle?

- A. higher cost
- B. lack of resources
- C. development of leadership
- D. training time and cost

50. The result of run charts processes which among the following state.

- A. Statistical
- B. Plot axis
- C. State of Determinant
- D. Threshold

SUBJECT: INFORMATION & NETWORK SECURITY

1. CIA stands for _____.
a) Confidentiality, Identity, Availability b) Confidentiality, Integrity, Authenticity
c) Confidentiality, Integrity, Availability d) Confidentiality, Identity, Authenticity
2. Any action that compromises the security of information owned by an organization is called as _____.
a) Security service b) security attack
c) confidentiality d) security mechanism
3. Passive attacks does not include _____.
a) Modification of data stream b) Eavesdropping on transmission
c) Monitoring of transmission d) Obtain the information that is being transmitted
4. _____ attack involves retransmission of data unit.
a) Masquerade b) Release of message contents
c) Denial of service d) Replay
5. Which of the following is not true about playfair cipher?
a) It is based on the use 5*5 matrix b) It makes use of a keyword
c) Plaintext is encrypted two letters at a time d) Single letter cipher
6. Rail fence is an example of _____.
a) Transposition technique b) Substitution technique
c) Caesar cipher d) Steganography
7. The method of _____ conceals/ hides the existence of the message.
a) Cryptography b) Encryption
c) Digital signature d) Steganography
8. The key used in symmetric-key cryptography is a _____ key.
a) Public b) Private c) Secret d) Sub
9. DES follows _____.
a) Feistel Cipher Structure b) SP Network c) Hash algorithm d) Caesar cipher
10. The Key length of DES algorithm is _____ bits.
a) 128 b) 32 c) 64 d) 16
11. The 4x4 byte matrices in the AES algorithm are called _____.
a) States b) Words c) Transitions d) Permutation
12. How many modes of operation are there in in DES and AES?
a) 2 b) 3 c) 4 d) 5
13. DES is a _____ cipher.

a)Block b)Stream c)Bit d)Byte

14. AES was published by the _____.

a)TIST b)NIST c)TTIT d)STIT

15. _____ algorithm uses asymmetric key.

a)RSA b)ASA c)SAS d)SSR

16. PGP / SMIME uses _____ algorithm.

a)1DES b)2DES c)3DES d)DES

17. How many handshake rounds are required in the Public-Key Distribution Scenario?

a)7 b)5 c)3 d)4

18. ElGamal encryption system is _____.

a) symmetric key encryption algorithm b) asymmetric key encryption algorithm
c) not a key encryption algorithm d)Block cipher method

19. Digital signature cannot provide _____ for the message.

a)integrity b)confidentiality c)nonrepudiation d)authentication

20. A digital signature needs a(n)_____ system.

a)symmetric key b)asymmetric key c)public key d)private key

21. A(n) _____ is a hierarchical system that answers queries about key certification.

a)KDC b)PKI c)PA d)CA

22. What is the effectiveness of an n-bit hash value?

a) 2^n b) 2^{-n} c) 2^{2n} d) 2^{-2n}

23. A hash function guarantees the integrity of a message. It guarantees that the message has not be_____.

a)Replaced b)overview c)changed d)violated

24. _____ describe the notion of digital signature scheme.

a) Whitfield Diffie b) Diffie-Hellman c) Adi Shamir d) Leonard Adleman

25. How many algorithms digital signature consists of?

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

26. A _____ produces a signature for the document.

a) Key generation algorithm b) Signature verifying algorithm
c) Signing algorithm d)Authenticaton

27. SHA-1 produces _____ bit of hash.

a)128 b)150 c)160 d)112

28. Digital signature envelope is decrypted by using _____.

- a) merchant private key. b) payment's private key.
c) payment's public key. d) merchant public key.

29. Kerberos runs as a third-party trusted server known as _____.
a) Key Distribution Center b) symmetric-key
c) asymmetric-key d) private key
30. In public key cryptography, _____ is a key that decrypts the message.
a) public key b) unique key c) private key d) security key
31. _____ Certificates are used as the base of the Public Key Infrastructure.
a) SSL b) TLS c) X.509 d) HAS
32. How many combinations of keys can be constructed from a 72 cipher text stream cipher?
a) 4271 b) 7345 c) 3291 d) 2556
33. A honey pot is an example of what type of software?
a) Intrusion-detection b) Encryption c) Security policy d) Virus
34. In a computer, McAfee is a/an _____.
a) virus b) anti virus c) hacker d) worm
35. Third generation antivirus software incorporated _____.
a) full featured protection b) heuristic scanners c) activity traps d) simple scanner
36. ____ is a person who attempts to gain unauthorized access to a network.
a) Intruder b) Hacker c) Developer d) Tester
37. Which of the following is a combination of firewalls?
a) Screened firewall b) Router based firewalls
c) Dual homed firewalls d) Bastion host firewalls
38. What is a device that hide its internal IP addresses called?
a) Screened host b) Bastion Firewall c) Proxy server d) Dual homed host
39. Some ____ firewalls are able to examine the contents of packets as well as the headers for signs that they are legitimate.
a) boundry b) personal c) stateless d) stateful
40. A system that monitors traffic into and out of a network and automatically alerts personnel when suspicious traffic patterns occur, indicating a possible unauthorized intrusion attempt is called a(n) _____.
a) IDS b) firewall c) antivirus software d) router
41. A(n) ____ host is sometimes called a dual-homed gateway or bastion host.
a) proxy b) screened c) stub d) blocked
42. How many generations of antivirus software have evolved?

a)3 b) 4 c) 5 d) 6

43. PGP makes use of which cryptographic algorithm?

a)AES b) DES c) RSA d) RABIN

44. Dual Signature concept is used in _____.

a)SSL b) IPSec c) SET d) PGP

45. SSL defines _____ protocols in two layers.

a)Two b) Three c) Four d) Five

46. In SET protocol a customer sends a purchase order_____.

a) encrypted with his public key b) in plain text form
c) encrypted using Bank's public key d) using digital Signature system

47. _____ provide security at the transport layer.

a)HTTPs b)IPSec c) SSL d) SHA-1

48. Which protocol/s is/are example of application layer security?

a) PGP;SMIME b)SSL;TLS c)IPSec d) HTTP;SMTP

49. In PGP, to exchange e-mail messages, a user needs a ring of _____ keys.

a)Private b) Public c) Symmetric d) Asymmetric

50. Which protocol is used to convey SSL related alerts to peer entity.

a)Alert b) Upper-layer c) Hand shake d) Change cipher

SUBJECT: ARCHITECTING OF IoT

- What is the formula to calculate Duty Cycle?
a) $[\text{Ton} / (\text{Ton} + \text{Toff})] * 100$ b) $[(\text{Ton} + \text{Toff}) / \text{Ton}] * 100$
c) $(\text{Ton} + \text{Toff}) * 100$ d) $[\text{Ton} / (\text{Ton} + \text{Toff})] * 10$
- One of the Basic building blocks of IoT system is _____.
a) Serial port b) Parallel port c) Firewall d) Sensor
- ETSI stands for _____.
a) European Telegraph Standards Institute b) Egypt Telecommunications Standards Institute
c) European Telecommunications Standards Institute d) European Telecommunications Stamp Institute
- _____ command is used to find the IP address of Raspberry Pi.
a) Rasconfig b) config c) ipConfig d) ifConfig
- _____ are responsible for routing the processed data and send it to proper locations for its proper utilization.
a) Gateways b) Processors c) Sensors d) Applications
- _____ collects data from the environment or object under measurement and turn it into useful data.
a) Internet Gateway b) Sensors/Actuators c) Edge IT d) Data Center and Cloud
- Which are the 2 modes of Programming in Raspberry Pi?
a) BOARD & BCM b) Board & Bcm c) board & bcm d) BOARD & Bcm
- The client side in IOT Architecture layer is called as _____.
a) IOT Component Layer b) IOT Gateway Layer
c) IOT Platform Layer d) IOT Device Layer
- MQTT clients exchange messages via the _____.
a) Broker b) Publisher c) Subscriber d) Node
- Write a Bash script to create 2 folders (A1 & A2) and display its Tree structure.
a) `# !/bin/bash mkdir A1 mkdir A2 ls` b) `# !/bin/bash mkdir A1 mkdir A2 tree`
c) `# !/bin/bash mkdir A1 mkdir A2 cd A1 tree` d) `# !/bin/bash mkdir A1 mkdir A2 ls tree`
- _____ command sets the last modified time-stamp of the specified file(s) or creates it if it does not already exist.
a) CD b) TOUCH c) PWD d) MAN
- Command to run a Bash script by name "TEST" is _____.
a) `.\TEST` b) `chmod +x TEST` c) `chmod TEST` d) `./TEST`
- MQTT is a telemetry protocol based on the _____ communication model.
a) publish-subscript b) publish-Broker c) Broker-subscribe d) publish-subscribe

14. In IOT Reference Architecture, Description of the data and information that the system handles, comes under _____ View.
a) Deployment b) Functional c) Operation d) Information
15. Duty Cycle is always calculated in _____.
a) Percentage b) Fraction c) Whole Number d) Mod Value
16. _____ are the front end of the IOT Devices.
a) Processors b) Sensors c) Gateways d) Application
17. _____ transmission is slower than Bluetooth.
a) Network Field Communication(NFC)
b) Near Field Communication(NFC)
c) Near Force Communication(NFC)
d) Near Force Commuter(NFC)
18. Bluetooth provides a data transfer rate of 3 Mbps in a range of _____ to _____.
a) 15m to 50m b) 50m to 150m c) 500m to 1500m d) 5m to 150m
19. Zigbee supports _____ or _____ network topology.
a) Bus or Star b) Bus or Hybrid c) Star or Mesh d) Star or Hybrid
20. IEEE 802.11 is _____ and IEEE 802.15 is _____.
a) sigfox, Bluetooth b) sigfox, Wifi c) Bluetooth, Wifi d) Wifi, Bluetooth
21. 3GPP organises its work into _____ different streams.
a) 3 b) 2 c) 4 d) 5
22. RFID stands for _____.
a) Radio Frequency Identification b) Radio Frequent Identification
c) Radio Frequency Internet d) Radar Frequency Identification
23. IEEE stands for _____.
a) Institute of Elective and Electrical Engineers
b) Institute of Electronics and Electrical Engineers
c) Institute of Electronics and Electromagnetic Engineers
d) Institute of Entity and Electrical Engineers
24. BLE offers _____ communication between connected devices.
a) Unidirectional b) Bidirectional c) Multidirectional d) No specific direction needed
25. Zigbee's best quality is its _____ consumption rate and battery life.
a) Low power b) High power c) low resistance d) low impedance
26. ZSE stands for _____.
a) Zigbee Slow Energy b) Zigbee Small Energy
c) Zigbee Smart Energy d) ZB Energy

27. Zigbee SE transmission distances range from _____ to _____ metres.
 a) 10, 100 b) 10, 1000 c) 10, 10000 d) 10, 1
28. ZHA stands for _____.
 a) ZB Home Automation b) Zigbee Home Automatic
 c) Zigbee Hour Automation d) Zigbee Home Automation
29. What is 3GPP?
 a) 3rd General Partnership Project b) 3rd Generation Partnership Project
 c) 3rd Generation Partnership Process d) 3rd Generation Parallel Project
30. _____ is a form of data communication which involves one or more entities that do not necessarily need human interaction.
 a) MTC b) MCT c) MTT d) MTA
31. MTC server is located in the _____.
 a) operator door b) operator domain c) operational domain d) operator function
32. MTC stands for _____.
 a) Mechanical Type Communication b) Machine Type Command
 c) Machine Type Communication d) Machine Communication
33. The 3rd Generation Partnership Project (3GPP) unites _____ telecommunications standard development organizations.
 a) 7 b) 6 c) 5 d) 4
34. Three Technical Specification groups in 3GPP are _____, _____ and _____.
 a) RRA, SSA, CNT b) RAT, SSA, CNN c) RAN, SSA, CNT d) RUN, SSA, CNT
35. SCTP combines the best features of _____ and _____.
 a) UDP, TCP b) UDP, SMTP c) MQTT, TCP d) TCP, XMPP
36. XMPP stands for _____.
 a) Extensible Messaging Presence Protocol
 b) Extended Messaging Presence Protocol
 c) Extensible Markup Presence Protocol
 d) Extended Messaging Predefined Protocol
37. In XMPP, device identity is by _____.
 a) Contact Number b) JabberID c) Email ID d) Name
38. In Technical terms P(Presence) in XMPP protocol determines the _____.
 a) Standard of the XMPP Entity b) State of the Server
 c) State of the XMPP Entity d) Signal to XMPP Entity
39. In Technical terms P(Presence) in XMPP protocol determines the _____.

40. XMPP has been designed to _____ and _____.
 a) shrink and neglect b) grow and accommodate changes
 c) grow and neglect d) shrink and accommodate
41. XMPP is formerly known as _____.
 a)Zaber b) Jaber c) Zabber d) Jabber
42. MQTT is a _____ Protocol.
 a)Heavy b) Complex c) Visible d) lightweight
43. In MQTT Protocol, message can be a _____ or _____.
 a) Text, Numeric b) Command,tag c) Command, Data d) Number,tag
44. In MQTT Protocol, Topics are _____.
 a)Data Sensitive b) Case Sensitive c) Angle Sensitive d) Direction Sensitive
45. In MQTT Protocol, device has to _____ for a Topic to receive the message.
 a)Subscribe b) Publish c) Broker d) Answer
46. MQTT stands for _____.
 a) Message Quing Telemetry Track b) Message Quing Telephony Transport
 c) Message Quing Telemetry Transport d) Message Quick Telemetry Transport
47. What is IETF stands for?
 a) Internet Engineering Task Force b) Internet Engineering Telecom Force
 c) Internet Engaging Task Force d) Internet Engineering Task Frequency
48. Constrained means in COAP, small devices with limited _____, _____ and _____.
 a) GPU, Memory,Power Resources b) CPU,Memory,Power Resources
 c) APU, Memory,Power Resources d) CPU,Memory,MU
49. _____ is basically a Client-Server IOT protocol.
 a)COAP b) MQTT c) XMPP d) MQQT
50. COAP stands for _____.
 a) Constrained Application Process b) Constrained Applicable Protocol
 c) Constrained Application Protocol d) Constant Application Protocol

SUBJECT: GAME PROGRAMMING

1. _____ vector has a magnitude of 1.
 - A. Position
 - B. Unit
 - C. Cartesian
 - D. Normalized
2. _____ are used to represent some things that require more than one number to represent them for example wind, force, weight, velocity and sound.
 - A. Scalar
 - B. Variable
 - C. Constant
 - D. Vectors
3. CPU is called _____ processors.
 - A. General Purpose
 - B. Special Purpose
 - C. Unique Purpose
 - D. Integrated Purpose
4. Rotation is a transformation that moves an object along an _____ path.
 - A. straight line
 - B. angular
 - C. circular
 - D. rectangular
5. _____ is the angle of rotation about the x axis.
 - A. Roll
 - B. Yaw
 - C. Pitch
 - D. Cut
6. Linear functions produce _____ graphs.
 - A. Parabolic
 - B. Straight Line
 - C. Wave-like
 - D. S-shaped
7. If vectors r and s are given as $r = 12i + 9j + 4k$ and $s = 5i + 6j + 7k$ then $r - s =$ _____.
 - A. $17i + 15j + 11k$
 - B. $7i + 3j - 3k$
 - C. $7i + 3j + 3k$
 - D. $7i + 3j + 6k$
8. Given a vector n , $2n$ means that the vector's components are _____.
 - A. doubled
 - B. tripled

- C. cubed
- D. rooted

9. A Cartesian coordinate system is a coordinate system that specifies each point _____ in a plane by a set of numerical coordinates

- A. seperately
- B. connected
- C. uniquely
- D. disconnected

10. The transformation in which an object can be shifted to any coordinate position in three dimensional plane are called _____.

- A. Scaling
- B. Rotation
- C. Translation
- D. Reflection

11. GPU is very good at processing _____

- A. sequential tasks
- B. unique tasks
- C. parallel tasks
- D. batch tsaks

12. On the Cartesian plane, the point 'O' is known as

- A. function
- B. origin
- C. ordinate
- D. coordinate

13. _____ is the loss of one degree of freedom in a three-dimensional

- A. Shifting Lock
- B. Paths Lock
- C. Gimbal lock
- D. Position Lock

14. vectors do not obey all the rules of _____

- A. Planer
- B. scalars
- C. Rotation
- D. Translation

15. For 2D transformation the value of third coordinate i.e. w =?

- A. 1
- B. 0
- C. -1
- D. Any value

16. Polygons are _____ dimensional shapes

- A. 3
- B. 1
- C. 2

D. 4

17. Cartesian coordinates provide a _____ between number and shape, such that when we change a shape's coordinates, we change its geometry.

- A. Normal relationship
- B. one-to-one relationship
- C. one-to-many relationship
- D. many-to-many relationship

18. Direct X is a _____ library.

- A. Rendering
- B. API
- C. Graphics
- D. GPU

19. GPU performing rendering operation and time CPU continue with other task such operations are called _____.

- A. Synchronous operations
- B. Asynchronous operations
- C. time operations
- D. geometric transformation

20. _____ is a set of pixels that approximates the shape of primitive

- A. Rasterization
- B. vertex
- C. Texture
- D. Fragment

21. The _____ shows region of the rendering picture

- A. World space
- B. viewport
- C. image buffer
- D. shader

22. The name of a visible surface detection algorithm are

- A. Back face detection
- B. Back face removal
- C. Ray tracing
- D. None of these

23. At the time of calculating area of a polygon if we define its vertex sequence in anti-clockwise direction then its result is _____.

- A. positive value
- B. negative value
- C. infinity
- D. zero

24. The vector product of two vector is also known as. _____.

- A. Scalar Product
- B. Dot product
- C. Point Product

D. Cross Product

25. In graphical system, the array of pixels in the picture are stored in_____.

- A. Memory
- B. Frame buffer
- C. Processor
- D. Ram

26. Linear equation represents _____.

- A. Straight Lines
- B. Wave like
- C. S shape
- D. Parabola

27. COM is an abbreviation for _____.

- A. Compare Object Model
- B. Component Object Model
- C. Component Object Module
- D. Component Object Method

28. Heat supplied to the cathode by directing a current through a coil of wire is called_____.

- A. Electron gun
- B. Electron beam
- C. Filament
- D. Anode and cathode

29. Positive values for the rotation angle Θ defines_____.

- A. Counterclockwise rotations about the end points
- B. Counterclockwise translation about the pivot point
- C. Counterclockwise rotations about the pivot point
- D. Negative direction

30. Two successive translations are_____.

- A. Multiplicative
- B. Inverse
- C. Subtractive
- D. Additive

31. What does Open GLSL stand for?

- A. Graphical Library of Shader Languages
- B. Geographic Land and Survey Library
- C. Graphics Library Shader Language
- D. Graphical Language and Shading Library

32. Linear interpolation is a method of_____.

- A. Line Fitting
- B. Point Fitting
- C. Polygon Fitting
- D. Curve fitting

33. _____ is the technology that allows DirectX to be programming language independent & have backward compatibility.

- A. Computer object model
- B. Composite object model
- C. Component object model
- D. Compiler object model

34. Trigonometric ratios are $\sin(\beta)$

- A. Opposite/hypotenuse
- B. adjacent/hypotenuse
- C. opposite/ adjacent
- D. sin/cos

35. _____ technology able to take an existing environment and add a layer of virtual information on top of it?

- A. AR
- B. VR
- C. Invested Reality(IR)
- D. Reality Augmentation(RA)

36. What group was one of the first to start using Augmented Reality?

- A. Doctors
- B. The Military
- C. Businessmen
- D. Engineers

37. Wearable computing device in the form of computerized eyeglasses.

- A. HMD
- B. Helmets
- C. Smart Glasses
- D. VR Glasses

38. Assetbundlers are _____ in unity.

- a. Content
- b. Files
- c. Objects
- d. Tags

39. When an application is close the correct order of execution of event function is:

- A. Awake() , start(), onEnable()
- B. onEnable(), awake(), start()
- C. awake() , onEnable() , start()
- D. Awake() , start(), Enable()

40. Local cache for imported assets and meta data

- A. Library
- B. Temp/obj
- C. Project Settings
- D. Pre-fabricated object

41. _____ makes the scene render all pixels without illumination

- A. Highly lighting
- B. Deferred Lighting
- C. Flame attribute
- D. Blurr lighting

42. The _____ shows the current scene structure.

- A. Scripts
- B. Hierarchy panel
- C. Inspection Pannel
- D. Render Panel

43. Technologies that completely involve a user inside a synthetic environment.

- A. AR
- B. VR
- C. AI
- D. ML

44. HMD stands for?

- A. Head Mounted Display
- B. Head Masked Display
- C. Head Made Display
- D. Head Mounted Detection

45. Why does virtual reality enhance instruction?

- A. It tally's rewards to help with classroom management
- B. It allows teachers to communicate with parents
- C. It provides a deeper understanding with realistic 3D imagery
- D. It provides a deeper understanding with realistic 2D imagery

46. A cooking app placed on the kitchen wall is an example of _____?

- A. AR
- B. VR
- C. MR
- D. HMD

47. In unity, _____ function contains the code which handles the frame update for the GameObject.

- A. Modify()
- B. Change()
- C. Create()
- D. Update()

48. Vuforia platform is cross platform application development platforms, it used to develop the _____ Application.

- A. AR & VR
- B. AR & MR
- C. 3D & 2D
- D. MR & VR

49. Which function is collection of classes that are referred to using a selected prefix on the class name.

- A. Public class
- B. Namespace
- C. Input
- D. Update

50. _____ coroutine will continue after a specified time delay, after all Update functions have been called for the frame

- A. yeild()
- B. yeild WaitForSeconds()
- C. yeild WaitForFixedUpdate()
- D. yeild WaitForMinutes()

51. _____ event is called on the drag object when a drag is happening.

- A. IDragHandler
- B. IEndDragHandler
- C. IDragUPHandler
- D. IDragOnHandler