

# CS MCQs Collections

By Shuseel Baral

# CS MCQs Collections

By Shuseel Baral

## Contents

|  |    |
|--|----|
| Solved MCQs of Basic of IT .....                       | 4  |
| Solved MCQs of Computer networking .....               | 10 |
| Solved MCQ of Internet Security .....                  | 21 |
| Solved MCQs of Database Management System (DBMS) ..... | 25 |
| Solved MCQs of Data Structure .....                    | 38 |
| Solved MCQs of System Analysis and Design .....        | 45 |
| Solved MCQs of Operating System Principles.....        | 54 |
| Solved MCQs of Computer Security .....                 | 64 |
| Solved MCQs of C .....                                 | 68 |
| Solved MCQs of C++ .....                               | 72 |
| Solved MCQs of Java.....                               | 80 |

## Solved MCQs of Basic of IT

### Set-1

1. Binary code "0" means .....

- A) State of absence
- B) State of presence
- C) State of Negative
- D) State of Positive

2. .... is compulsory part of HTML.

- A) <br>
- B) <body>
- C) <tr>
- D) <img>

3. CAI stands for .....

- A) Computer Aided Instruction
- B) Computer Aided information
- C) Cost Added Information
- D) Computer Aided Infrastructure

4. Maximum font size in HTML is .....

## Collections of Computer Science Multiple Choice Questions

- A) 6
- B) 7
- C) 5
- D) 8

5. MICR reader is an ..... device.

- A) Input
- B) Output
- C) Electric
- D) Storage

6. Internet is .....

- A) Network of Networks
- B) Networks of Communication
- C) Networks of Data
- D) Group of LAN

7. .... is a standalone tag.

- A) <img>
- B) <body>
- C) <head>
- D) <p>

8. FTP stands for

- A) Folder Transfer Protocol
- B) File Transfer Process
- C) File Transfer Protocol

## Collections of Computer Science Multiple Choice Questions

D) File Text Protocol

9. Hexadecimal number system has .....base.a

A) 16

B) 14

C) 12

D) 08

10. HTML stands for

A) Hypertext Mass up language

B) Hypertext Markup language

C) Hypertext Move up language

D) Hypertext Mark of language

11. The default setting for a horizontal rule is .....

A) shaded

B) unshaded

C) both

D) none of the above

12. .... tag is used to embed image in a webpage.

A) 

B) <img src=pic.gif>

C) <img source="pic.gif">

D) None of the above

## Collections of Computer Science Multiple Choice Questions

13. This is a global collection of high-powered computer that are connected together with cables, telephone lines, microwave dishes, satellites etc.

- A) Arpanet
- B) Internet
- C) Network
- D) All of the above

14. .... is used to pointing / selecting the screen co-ordinates by detecting the light.

- A) Light Pen
- B) Bar Code Reader
- C) Digital Camera
- D) Smart Cards

15. .... displays the information about the active document such as page number, section number, number of pages, insertion point, position, etc.

- A) View Bar
- B) Menu Bar
- C) Status Bar
- D) Ruler Line

16. .... a record means a new record to the file.

- A) Amending
- B) Updating
- C) Editing
- D) Appending

17. To move the cursor to end of the document, press .....

## Collections of Computer Science Multiple Choice Questions

A) Ctrl+End

B) End

C) Alt+End

D) Shift+End

18. SMTP stands for

A) Simple Mail Transfer Protocol

B) Simple Mail Transport Protocol

C) Sample Mail Transfer Protocol

D) Sample Mail Transport Protocol

19. JPEG stands for .....

A) Joint Photo Experts Group

B) Joint Photogenic Experts Group

C) Joint Photographic Experts Group

D) Joint Photoelectric Experts Group

20. The short cut key to start a new line without starting a new paragraph is .....

A) Ctrl+Enter

B) Shift+Enter

C) Alt+Enter

D) Enter

## Collections of Computer Science Multiple Choice Questions

### Answers:

|                                  |   |
|----------------------------------|---|
| 1. A) State of absence           | 11. A) shaded                           |
| 2. B) <body>                     | 12. A)               |
| 3. B) Computer Aided information | 13. B) Internet                         |
| 4. B) 7                          | 14. A) Light Pen                        |
| 5. A) Input                      | 15. C) Status Bar                       |
| 6. A) Network of Networks        | 16. D) Appending                        |
| 7. A) <img>                      | 17. A) Ctrl+End                         |
| 8. C) File Transfer Protocol     | 18. A) Simple Mail Transfer Protocol    |
| 9. A) 16                         | 19. C) Joint Photographic Experts Group |
| 10. B) Hypertext Markup language | 20. B) Shift+Enter                      |

## Solved MCQs of Computer networking

### set-1

**1. The computer network is**

- A) Network computer with cable
- B) Network computer without cable
- C) Both of the above
- D) None of the above

**2. FDDI used which type of physical topology?**

- A) Bus
- B) Ring
- C) Star
- D) Tree

**3. FTP stands for**

- A) File transfer protocol
- B) File transmission protocol
- C) Form transfer protocol
- D) Form transmission protocol

**4. Ethernet system uses which of the following technology.**

- A) Bus
- B) Ring
- C) Star
- D) Tree

**5. Which of the following are the network services?**

- A) File service
- B) Print service
- C) Database service
- D) All of the above

**6. If all devices are connected to a central hub, then topology is called**

- A) Bus Topology
- B) Ring Topology
- C) Star Topology
- D) Tree Topology

**7. FDDI stands for**

- A) Fiber Distributed Data Interface
- B) Fiber Data Distributed Interface
- C) Fiber Dual Distributed Interface
- D) Fiber Distributed Data Interface

**8. Which of the following is an application layer service?**

- A) Network virtual terminal

## Collections of Computer Science Multiple Choice Questions

- B) File transfer, access and management
- C) Mail service
- D) All of the above

**9. Which is the main function of transport layer?**

- A) Node to node delivery
- B) End to end delivery
- C) Synchronization
- d) Updating and maintaining routing tables

**10. The ..... layer change bits onto electromagnetic signals.**

- A) Physical
- B) Transport
- C) Data Link
- D) Presentation

**11. In mesh topology, relationship between one device and another is .....**

- A) Primary to peer
- B) Peer to primary
- C) Primary to secondary
- D) Peer to Peer

**12. The performance of data communications network depends on .....**

- A) Number of users
- B) The hardware and software
- C) The transmission
- D) All of the above

**13. Find out the OSI layer, which performs token management.**

- A) Network Layer
- B) Transport Layer
- C) Session Layer
- D) Presentation Layer

**14. The name of the protocol which provides virtual terminal in TCP/IP model is.**

- A) Telnet
- B) SMTP
- C) HTTP

**15. The layer one of the OSI model is**

- A) Physical layer
- B) Link layer
- C) Router layer
- D) Broadcast layer

**16. What is the name of the network topology in which there are bi-directional links between each possible node?**

- A) Ring
- B) Star
- C) Tree
- D) Mesh

## Collections of Computer Science Multiple Choice Questions

**17. What is the commonly used unit for measuring the speed of data transmission?**

- A) Bytes per second
- B) Baud
- C) Bits per second
- D) Both B and C

**18. Which of the communication modes support two way traffic but in only once direction of a time?**

- A) Simplex
- B) Half-duplex
- C) Three - quarter's duplex
- D) Full duplex

**19. The loss in signal power as light travels down the fiber is called .....**

- A) Attenuation
- B) Propagation
- C) Scattering
- D) Interruption

**20. Which of the following TCP/IP protocols is used for transferring files form one machine to another.**

- A) FTP
- B) SNMP
- C) SMTP
- D) RPC

### Answers:

|   |                         |
|---|-------------------------|
| 21. C) Both of the above                | 31. D) Peer to Peer     |
| 22. B) Ring                             | 32. D) All of the above |
| 23. A) File transfer protocol           | 33. C) Session Layer    |
| 24. A) Bus                              | 34. A) Telnet           |
| 25. D) All of the above                 | 35. A) Physical layer   |
| 26. C) Star Topology                    | 36. D) Mesh             |
| 27. A) Fiber Distributed Data Interface | 37. B) Baud             |
| 28. C) Mail service                     | 38. B) Half-duplex      |
| 29. B) End to end delivery              | 39. A) Attenuation      |
| 30. A) Physical                         | 40. A) FTP              |

# Collections of Computer Science Multiple Choice Questions

## Set-2

**1. A network that needs human beings to manually route signals is called....**

- A) Fiber Optic Network
- B) Bus Network
- C) T-switched network
- D) Ring network

**2. TCP/IP ..... layer corresponds to the OSI models to three layers.**

- A) Application
- B) Presentation
- C) Session
- D) Transport

**3. Which of the transport layer protocols is connectionless?**

- A) UDP
- B) TCP
- C) FTP
- D) Nvt

**4. Which of the following applications allows a user to access and change remote files without actual transfer?**

- A) DNS
- B) FTP
- C) NFS
- D) Telnet

**5. The data unit in the TCP/IP layer called a .....**

- A) Message
- B) Segment
- C) Datagram
- D) Frame

**6. DNS can obtain the ..... of host if its domain name is known and vice versa.**

- A) Station address
- B) IP address
- C) Port address
- D) Checksum

**7. Which of the following OSI layers correspond to TCP/IP's application layer?**

- A) Application
- B) IP Address
- C) Session
- D) All of the above

**8. Devices on one network can communicate with devices on another network via a .....**

- A) File Server
- B) Utility Server
- C) Printer Server
- D) Gateway

**9. A communication device that combines transmissions from several I/O devices into one line is a**

- A) Concentrator
- B) Modifier
- C) Multiplexer
- D) Full duplex file

**10. Which layers of the OSI determines the interface often system with the user?**

- A) Network
- B) Application
- C) Data link
- D) Session

**11. Which of the following of the TCP/IP protocols is the used for transferring files from one machine to another?**

- A) FTP
- B) SMTP
- C) SNMP
- D) Rpe

**12. In which OSI layers does the FDDI protocol operate?**

- A) Physical
- B) Data link
- C) Network
- D) A and B

**13. In FDDI, data normally travel on .....**

- A) The primary ring
- B) The Secondary ring

## Collections of Computer Science Multiple Choice Questions

C) Both rings

D) Neither ring

**14. The .....layer of OSI model can use the trailer of the frame for error detection.**

A) Physical

B) Data link

C) Transport

D) Presentation

**15. In a .....topology, if there are n devices in a network, each device has n-1 ports for cables.**

A) Mesh

B) Star

C) Bus

D) Ring

**16. Another name for Usenet is**

A) Gopher

B) Newsgroups

C) Browser

D) CERN

**17. The standard suit of protocols used by the Internet, Intranets, extranets and some other networks.**

A) TCP/IP

B) Protocol

C) Open system

D) Internet work processor

**18. State whether the following is True or False.**

i) In bus topology, heavy Network traffic slows down the bus speed.

ii) It is multipoint configuration.

A) True, True

B) True, False

C) False, True

D) False, False

**19. Which of the following is the logical topology?**

A) Bus

B) Tree

C) Star

D) Both A and B

**20. Which of the following is/ are the drawbacks of Ring Topology?**

A) Failure of one computer, can affect the whole network

B) Adding or removing the computers disturbs the network activity.

C) If the central hub fails, the whole network fails to operate.

D) Both of A and B

### Answers:

|                          |                         |
|--------------------------|-------------------------|
| 1. C) T-switched network | 11. A) FTP              |
| 2. A) Application        | 12. D) A and B          |
| 3. A) UDP                | 13. A) The primary ring |
| 4. C) NFS                | 14. A) Physical         |
| 5. D) Frame              | 15. A) Mesh             |
| 6. B) IP address         | 16. B) Newsgroups       |
| 7. D) All of the above   | 17. A) TCP/IP           |
| 8. D) Gateway            | 18. A) True, True       |
| 9. C) Multiplexer        | 19. C) Star             |
| 10. B) Application       | 20. D) Both of A and B  |

# Collections of Computer Science Multiple Choice Questions

## Set-3

**1. Which of the following is not the layer of TCP/IP protocol?**

- A) Application Layer
- B) Session Layer
- C) Transport Layer
- D) Internetwork layer

**2. .... address use 7 bits for the <network> and 24 bits for the <host> portion of the IP address.**

- A) Class A
- B) Class B
- C) Class C
- D) Class D

**3. .... addresses are reserved for multicasting.**

- A) Class B
- B) Class C
- C) Class D
- D) Class E

**4. State the following statement is true or false.**

- i) In class B addresses a total of more than 1 billion addresses can be formed.
- ii) Class E addresses are reserved for future or experimental use.

- A) True, False
- B) True, True
- C) False, True
- D) False, False

**5. Which of the following statement is true?**

- i) An address with all bits 1 is interpreted as all networks or all hosts.
- ii) The class A network 128.0.0.0 is defined as the loopback network.

- A) i only
- B) ii only
- C) Both A and B
- D) None of the above

**6. Which is not the Regional Internet Registers (RIR) of the following?**

- A) American Registry for Internet Numbers (ARIN)
- B) Europeans Registry for Internet Numbers (ERIN)
- C) Reseaux IP Europeans (RIPE)
- D) Asia Pacific Network Information Centre (APNIC)

## Collections of Computer Science Multiple Choice Questions

**7. Match the following IEEE No to their corresponding Name for IEEE 802 standards for LANs.**

- i) 802.3                      a) WiFi
- ii) 802.11                   b) WiMa
- iii) 802.15.1               c) Ethernet
- iv) 802.16                   d) Bluetooth

- A) i-b, ii-c, iii-d, iv-a
- B) i-c, ii-d, iii-a, iv-b
- C) i-c, ii-a, iii-d, iv-b
- D) i-b, ii-d, iii-c, iv-a

**8. .... was the first step in the evolution of Ethernet from a coaxial cable bus to hub managed, twisted pair network.**

- A) Star LAN
- B) Ring LAN
- C) Mesh LAN
- D) All of the above

**9. .... is the predominant form of Fast Ethernet, and runs over two pairs of category 5 or above cable.**

- A) 100 BASE-T
- B) 100 BASE-TX
- C) 100 BASE-T4
- D) 100 BASE-T2

**10. IEEE 802.3ab defines Gigabit Ethernet transmission over unshielded twisted pair (UTP) category 5, 5e or 6 cabling known as .....**

- A) 1000 BASE-T
- B) 1000 BASE-SX
- C) 1000 BASE-LX
- D) 1000 BASE-CX

**Answers:**

|                     |                              |
|---------------------|------------------------------|
| 1. B) Session Layer | 6. B) Europeans ..... (ERIN) |
| 2. A) Class A       | 7. C) i-c, ii-a, iii-d, iv-b |
| 3. C) Class D       | 8. A) Star LAN               |
| 4. B) True, True    | 9. B) 100 BASE-TX            |
| 5. A) i only        | 10. A) 1000 BASE-T           |

# Collections of Computer Science Multiple Choice Questions

## Set-4

1. .... is a high performance fiber optic token ring LAN running at 100 Mbps over distances up to 1000 stations connected.

- A) FDDI
- B) FDDT
- C) FDDR
- D) FOTR

2. Which of the following are Gigabit Ethernet?

- A) 1000 BASE-SX
- B) 1000 BASE-LX
- C) 1000 BASE-CX
- D) All of the above

3. .... is a collective term for a number of Ethernet Standards that carry traffic at the nominal rate of 1000 Mbits/s against the original Ethernet speed of 10 Mbit/s.

- A) Ethernet
- B) Fast Ethernet
- C) Gigabit Ethernet
- D) All of the above

4. .... is another kind of fiber optic network with active star for switching.

- A) S/NET
- B) SW/NET
- C) NET/SW
- D) FS/NET

5. The combination of ..... and ..... is often termed the local address or the local portion of the IP Address.

- A) Network number and host number
- B) Network number and subnet number
- C) Subnet number and host number.
- D) All of the above

6. State whether true or false.

- i) A connection oriented protocol can only use unicast addresses.
- ii) The any cast service is included in IPV6.

- A) True, False
- B) True, True
- C) False, True
- D) False, False

7. .... implies that all subnets obtained from the same network use the subnet mask.

- A) Static subnetting
- B) Dynamic Subnetting
- C) Variable length subnetting
- D) Both B and C

## Collections of Computer Science Multiple Choice Questions

**8. The most important and common protocols associated TCP/IP internetwork layer are.**

- i) Internet Protocol (IP)
- ii) Internet Control Message Protocol (ICMP)
- iii) Bootstrap Protocol (BOOTP)
- iv) Dynamic Host Configuration Protocol (DHCP)
- v) Address Resolution Protocol (ARP)

- A) i, ii, iii, and iv only
- B) ii, iii, iv and v only
- C) i, iii, iv and v only
- D) All i, ii, iii, iv and v only

**9. .... is responsible for converting the higher level protocol addresses to physical Network Addresses.**

- A) Address Resolution Protocol (ARP)
- B) Reverse Address Resolution Protocol (RARP)
- C) Bootstrap Protocol (BOOTP)
- D) Internet Control Message Protocol (ICMP)

**10. Which of the following is not a mechanism that DHCP supports for IP address allocation?**

- A) Automatic allocation
- B) Static allocation
- C) Dynamic allocation
- D) Manual allocation

**Answers:**

|                         |                                     |
|-------------------------|-------------------------------------|
| 1. A) FDDI              | 6. B) True, True                    |
| 2. D) All of the above  | 7. A) Static subnetting             |
| 3. B) Fast Ethernet     | 8. D) All i, ii, iii, iv and v only |
| 4. A) S/NET             | 9. A) Address .....Protocol (ARP)   |
| 5. C) Subnet... number. | 10. B) Static allocation            |

# Collections of Computer Science Multiple Choice Questions

## Set-5

**1. The examples of Interior Gateway Protocols (IGP) are.**

- i) Open Short Path First (OSPF)
- ii) Routing Information Protocol (RIP)
- iii) Border Gateway Protocol (BGP)
- A) i only
- B) i, and ii only
- C) i and iii only
- D) All i, ii and iii

**2. FTP server listens to connections on port .....**

- A) 19 and 20
- B) 20 and 21
- C) 21 and 22
- D) 20 and 22

**3. Which of the following operations can be performed by using FTP.**

- i) Connect to a remote host
- ii) Select directory
- iii) Define the transfer mode
- iv) List file available
- A) i, and ii only
- B) i, ii and iii only
- C) ii, iii and iv only
- D) All i, ii, iii and iv

**4. A ..... is a set of information that is exchanged between a client and web browser and a web server during an HTTP transaction.**

- A) infoaset
- B) clientinfo
- C) cookie
- D) transkie

**5. Match the following HTTP status code to their respective definitions.**

- i) 400
- ii) 500
- iii) 200
- iv) 100
- a) OK
- b) Not found
- c) Continue
- d) Internal server error

- A) i-b, ii-d, iii-a, iv-c
- B) i-a, ii-b, iii-c, iv-d
- C) i-b, ii-c, iii-a, iv-d
- D) i-b, ii-a, iii-c, iv-d

**6. Loopback address ..... of IPv6 address is equivalent to the IPV4 loopback address 127.0.0.1.**

- A) (: : 1)
- B) (: : )

## Collections of Computer Science Multiple Choice Questions

C) (: : 0)

D) (1 : : )

**7. Unspecified address ..... of IPV6 address is equivalent to the IPV4 unspecified address 0.0.0.0.**

A) (: : 1)

B) (: : )

C) (: : 0)

D) (1 : : )

**8. A simple cabling method, known as the ..... topology allows about 30 computers on a maximum cable length of about 600 feet.**

A) Ring

B) Bus

C) Star

D) Mesh

**9. The ..... layer is responsible for resolving access to the shared media or resources.**

A) Physical

B) Mac sub layer

C) Network

D) Transport

**10. A WAN typically spans a set of countries that have data rates less than ..... Mbps.**

A) 2

B) 1

C) 4

D) 100

### Answers:

|                              |                     |
|------------------------------|---------------------|
| 1. B) i, and ii only         | 6. A) (: : 1)       |
| 2. B) 20 and 21              | 7. B) (: : )        |
| 3. D) All i, ii, iii and iv  | 8. B) Bus           |
| 4. C) cookie                 | 9. B) Mac sub layer |
| 5. A) i-b, ii-d, iii-a, iv-c | 10. B) 1            |

## Solved MCQ of Internet Security

### Set-1

**1. Which of the following are the solutions to network security?**

- i) Encryption
- ii) Authentication
- iii) Authorization
- iv) Non-repudiation

- A) i, ii and iii only
- B) ii, iii and iv only
- C) i, iii and iv only
- D) All i, ii, iii and iv

**2. .... is to protect data and passwords.**

- A) Encryption
- B) Authentication
- C) Authorization
- D) Non-repudiation

**3. The following protocols and system are commonly used to provide various degrees of security services in computer network.**

- i) IP filtering
- ii) Reverse Address Translation
- iii) IP security Architecture (IPsec)
- iv) Firewalls
- v) Socks

- A) i, ii, iii and iv only
- B) i, iii, iv and v only
- C) ii, iii, iv and v only
- D) All i, ii, iii, iv and v

**4. A firewall is installed at the point where the secure internal network and untrusted external network meet which is also known as .....**

- A) Chock point
- B) meeting point
- C) firewall point
- D) secure point

**5. Which of the following is / are the types of firewall?**

- A) Packet Filtering Firewall
- B) Dual Homed Gateway Firewall
- C) Screen Host Firewall
- D) All of the above

**6. The components of IP security includes .....**

- A) Authentication Header (AH)
- B) Encapsulating Security Payload (ESP)
- C) Internet key Exchange (IKE)
- D) All of the above

## Collections of Computer Science Multiple Choice Questions

7. .... is used to carry traffic of one protocol over network that does not support that protocol directly.

- A) Tunneling
- B) Transferring
- C) Trafficking
- D) Switching

8. In ..... Mode, the authentication header is inserted immediately after the IP header.

- A) Tunnel
- B) Transport
- C) Authentication
- D) Both A and B

9. State true or false.

- i) Socks are a standard for circuit level gateways.
- ii) The NAT is used for small number of the hosts in a private network.

- A) True, False
- B) False, True
- C) True, True
- D) False, False

10. A ..... is an extension of an enterprise's private intranet across a public Network such as the Internet across a public Network such as the Internet, creating a secure private connection.

- A) VNP
- B) VPN
- C) VSN
- D) VSPN

### Answers:

|                              |                         |
|------------------------------|-------------------------|
| 11. D) All i, ii, iii and iv | 16. D) All of the above |
| 12. A) Encryption            | 17. A) Tunneling        |
| 13. B) i, iii, iv and v only | 18. A) Tunnel           |
| 14. A) Chock point           | 19. C) True, True       |
| 15. D) All of the above      | 20. B) VPN              |

# Collections of Computer Science Multiple Choice Questions

## set-2

**1. The primary goal of the ..... Protocol is to provide a private channel between communicating application, which ensures privacy of data authentication of the partners, and integrity.**

- A) SSL
- B) ESP
- C) TSL
- D) PSL

**2. The ..... is used to provide integrity check, authentication and encryption to IP datagram.**

- A) SSL
- B) ESP
- C) TSL
- D) PSL

**3. In ..... mode, a common technique in packet-switched networks consists of wrapping a packet in a new one.**

- A) Tunneling
- B) Encapsulation
- C) Both A and B
- D) None of the above

**4. The ..... Is a collection of protocols designed by Internet Engineering Task Force(IETF) to provide security for a packet at the Network level.**

- A) IPsec
- B) Netsec
- C) Packetsec
- D) Protocolsec

**5. At the lower layer of SSL, a protocol for transferring data using a variety of predefined cipher and authentication combinations called the .....**

- A) SSL handshake protocol
- B) SSL authentication protocol
- C) SSL record protocol
- D) SSL cipher protocol

**6. While initiating SSL session, the client code recognizes the SSL request and establishes a connection through TCP Port ..... to the SSL code on the server.**

- A) 420
- B) 1032
- C) 443
- D) 322

**7. On the upper layer of SSL, a protocol for initial authentication and transfer of encryption keys, called the .....**

- A) SSL handshake protocol
- B) SSL authentication protocol

## Collections of Computer Science Multiple Choice Questions

- C) SSL record protocol
- D) SSL cipher protocol

**8. State whether the following statement are true.**

- i) An application-level gateway is often referred to as a proxy.
- ii) In proxy, a direct connection is established between the client and destination server.

- A) True, False
- B) False, True
- C) True, True
- D) False, False

**9. In packet-filtering router, the following information can be external from the packet header.**

- i) Source IP address
- ii) Destination IP address
- iii) TCP/UDP source port
- iv) ICMP message type
- v) TCP/UDP destination port

- A) i, ii, iii and iv only
- B) i, iii, iv and v only
- C) ii, iii, iv and v only
- D) All i, ii, iii, iv and v

**10. .... mode is used whenever either end of a security association is gateway.**

- A) Tunnel
- B) Encapsulating
- C) Transport
- D) Gateway

**Answers:**

|                           |                                |
|---------------------------|--------------------------------|
| 1. A) SSL                 | 6. C) 443                      |
| 2. B) ESP                 | 7. A) SSL handshake protocol   |
| 3. C) Both A and B        | 8. A) True, False              |
| 4. A) IPsec               | 9. D) All i, ii, iii, iv and v |
| 5. C) SSL record protocol | 10. A) Tunnel                  |

## Solved MCQs of Database Management System (DBMS)

### Set - 1

1. DBMS is a collection of ..... that enables user to create and maintain a database.

- A) Keys
- B) Translators
- C) Program
- D) Language Activity

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

- A) Relations
- B) Domains
- C) Queries
- D) All of the above

3. In an ER model, ..... is described in the database by storing its data.

- A) Entity
- B) Attribute
- C) Relationship
- D) Notation

4. DFD stands for

- A) Data Flow Document
- B) Data File Diagram
- C) Data Flow Diagram
- D) Non of the above

5. A top-to-bottom relationship among the items in a database is established by a

- A) Hierarchical schema
- B) Network schema
- C) Relational Schema
- D) All of the above

6. .... table store information about database or about the system.

- A) SQL
- B) Nested
- C) System
- D) None of these

7. .... defines the structure of a relation which consists of a fixed set of attribute-domain pairs.

- A) Instance
- B) Schema
- c) Program
- D) Super Key

## Collections of Computer Science Multiple Choice Questions

**8. .... clause is an additional filter that is applied to the result.**

- A) Select
- B) Group-by
- C) Having
- D) Order by

**9. A logical schema**

- A) is the entire database
- B) is a standard way of organizing information into accessible parts.
- C) Describes how data is actually stored on disk.
- D) All of the above

**10. .... is a full form of SQL.**

- A) Standard query language
- B) Sequential query language
- C) Structured query language
- D) Server side query language

**11. Processed data is called .....**

- A) Raw data
- B) Information
- C) Useful data
- D) Source

**12. .... is a utility to capture a continuous record of server activity and provide auditing capability.**

- A) SQL server Profile
- B) SQL server service manager
- C) SQL server setup
- D) SQL server wizard.

**13. Data items grouped together for storage purposes are called a**

- A) record
- B) title
- C) list
- D) string

**14. .... contains data assisting day to day activities of the organization.**

- A) Control database
- B) Operational database
- C) Strategic database
- D) Sequential database

**15. .... approach reduces time and effort required for design and lesser risk in database management.**

- A) Single global database
- B) Top-down approach
- C) Multiple databases
- D) None of the above

**16. HSAM stands for .....**

## Collections of Computer Science Multiple Choice Questions

- A) Hierarchic Sequential Access Method
- B) Hierarchic Standard Access Method
- C) Hierarchic Sequential and Method
- D) Hierarchic Standard and Method

**17. SQL server stores index information in the ..... system table**

- A) systindexes
- B) systemindexes
- C) sysind
- D) sysindexes

**18. The one guideline to be followed while designing the database is**

- A) A database design may be ambiguous.
- B) Unrelated data should be in the same table so that updating the data will be easy.
- C) It should avoid/reduce the redundancy.
- D) An entity should not have attributes.

**19. Which of the following is not a logical database structure?**

- A) Chain
- B) Network
- C) Tree
- D) Relational

**20. .... is a preferred method for enforcing data integrity**

- A) Constraints
- B) Stored procedure
- C) Triggers
- D) Cursors

### Answers:

|  |   |
|--|---|
| 41. C) Program                               | 51. B) Information                            |
| 42. B) Domains                               | 52. B) SQL server service manager             |
| 43. A) Entity                                | 53. A) record                                 |
| 44. C) Data Flow Diagram                     | 54. B) Operational database                   |
| 45. A) Hierarchical schema                   | 55. C) Multiple databases                     |
| 46. C) System                                | 56. A) Hierarchic Sequential Access Method    |
| 47. B) Schema                                | 57. D) sysindexes                             |
| 48. C) Having                                | 58. C) It should avoid/reduce ... redundancy. |
| 49. B) is a standard ..... accessible parts. | 59. A) Chain                                  |
| 50. A) Standard query language               | 60. A) Constraints                            |

# Collections of Computer Science Multiple Choice Questions

## Set -2

**1. The candidate key is that you choose to identify each row uniquely is called .....**

- A) Alternet Key
- B) Primary Key
- C) Foreign Key
- D) None of the above

**2. .... is used to determine whether of a table contains duplicate rows.**

- A) Unique predicate
- B) Like Predicate
- C) Null predicate
- D) In predicate

**3. To eliminate duplicate rows ..... is used**

- A) NODUPLICATE
- B) ELIMINATE
- C) DISTINCT
- D) None of these

**4. State true or false**

- i) A candidate key is a minimal super key.
  - ii) A candidate key can also refer to as surrogate key.
- A) i-true, ii-false
  - B) i-false, ii-true
  - C) i-true, ii-true
  - D) i-false, ii-false

**5. DCL stands for**

- A) Data Control Language
- B) Data Console Language
- C) Data Console Level
- D) Data Control Level

**6. .... is the process of organizing data into related tables.**

- A) Normalization
- B) Generalization
- C) Specialization
- D) None of the above

**7. A ..... Does not have a distinguishing attribute if its own and mostly are dependent entities, which are part of some another entity.**

- A) Weak entity
- B) Strong entity
- C) Non attributes entity
- D) Dependent entity

**8. .... is the complex search criteria in the where clause.**

- A) Substring

## Collections of Computer Science Multiple Choice Questions

B) Drop Table

C) Predict

D) Predicate

**9. .... is preferred method for enforcing data integrity**

A) Constraints

B) Stored Procedure

C) Triggers

D) Cursors

**10. The number of tuples in a relation is called its ..... While the number of attributes in a relation is called it's .....**

A) Degree, Cardinality

B) Cardinality, Degree

C) Rows, Columns

D) Columns, Rows

**11. Reflexivity property says that  $X \rightarrow Y$  is true if Y is .....**

A) Subset of X

B) Null set of X

C) Super set of Y

D) Subset of Y

**12. Anything that affects the database schema is a part of**

A) DML

B) DCL

C) DDL

D) All of the above

**13. An instance of a relation is a time varying set of .....**

A) Tuples

B) Rows

C) Both of them

D) None of them

**14. In the ..... mode any record in the file can be accessed at random**

A) Sequential access

B) Random access

C) Standard access

D) Source access

**15. Which can be used to delete all the rows if a table?**

A) Delete \* from table\_name

B) Delete from table\_name

C) Delete table\_name

D) all rows cannot be deleted at a time.

**16. Which if the following is not the type of data integrity.**

A) Key integrity

## Collections of Computer Science Multiple Choice Questions

- B) Domain integrity
- C) Entity integrity
- D) Referential integrity

**17. 4NF stands for ..**

- A) Fourth Normal File
- B) Fourth Normal Form
- C) Fourth Normal Fraction
- D) Fourth Negative File

**18. A ..... allows to make copies of the database periodically to help in the cases of crashes & disasters.**

- A) Recovery utility
- B) Backup Utility
- C) Monitoring utility
- D) Data loading utility

**19. .... Allows definitions and query language statements to be entered; query results are formatted and displayed.**

- A) Schema Processor
- B) Query Processor
- C) Terminal Interface
- D) None of the above

**20. The main task carried out in the ..... is to remove repeating attributes to separate tables.**

- A) First Normal Form
- B) Second Normal Form
- C) Third Normal Form
- D) Fourth Normal Form

### Answers:

|                             |                                 |
|-----------------------------|---------------------------------|
| 1. B) Primary Key           | 11. A) Subset of X              |
| 2. A) Unique predicate      | 12. C) DDL                      |
| 3. C) DISTINCT              | 13. C) Both of them             |
| 4. C) i-true, ii-true       | 14. B) Random access            |
| 5. A) Data Control Language | 15. A) Delete * from table_name |
| 6. A) Normalization         | 16. A) Key integrity            |
| 7. A) Weak entity           | 17. B) Fourth Normal Form       |
| 8. D) Predicate             | 18. B) Backup Utility           |
| 9. A) Constraints           | 19. C) Terminal Interface       |
| 10. B) Cardinality, Degree  | 20. D) Fourth Normal Form       |

# Collections of Computer Science Multiple Choice Questions

## Set-3

**1. The number of attributes in relation is called as its .....**

- A) Cardinality
- B) Degree
- C) Tuples
- D) Entity

**2. The DBMS utility, ..... allows to reconstruct the correct state of database from the backup and history of transactions.**

- A) Backup
- B) Recovery
- C) Monitoring
- D) Data loading

**3. In the ..... normal form, a composite attribute is converted to individual attributes.**

- A) First
- B) Second
- C) Third
- D) Fourth

**4. In RDBMS, Data is presented as a collection of .....**

- A) Table
- B) Attributes
- C) Relations
- D) Entities

**5. A ..... normal form normalization will be needed where all attributes in a relation tuple are not functionally dependent only on the key attribute.**

- A) First
- B) Second
- C) Third
- D) Fourth

**6. To select all column from the table the syntax is:**

- A) select all from table\_name
- B) select \* from table\_name
- C) select from table\_name
- D) Non of the above

**7. If an attribute of a composite key is dependent on an attribute of the other composite key, a normalization called ..... is needed.**

- A) DKNF
- B) BCNF

## Collections of Computer Science Multiple Choice Questions

C) Fourth

D) Third

**8. Identify the criteria for designing database from the point of view of user**

A) No redundancy

B) No inapplicable attributes

C) Uniformity in naming & definitions of the data items

D) All of the above

**9. The ..... operator preserves unmatched rows of the relations being joined.**

A) Inner join

B) Outer join

C) Union

D) Union join

**10. The reasons leading to popularity of client-server systems are:**

A) More powerful workstations on LANs

B) Needed for graphical user interfaces of end users.

C) Remove computing load for presentation services from the system managing a shared database resource.

D) All

**11. .... joins are SQL server default**

A) Outer

B) Inner

C) Equi

D) None of the above

**12. The ..... is essentially used to search for patterns in target string.**

A) Like Predicate

B) Null Predicate

C) In Predicate

D) Out Predicate

**13. Which of the following is/are the Database server functions?**

i) Data management

ii) Transaction management

iii) Compile queries

iv) Query optimization

A) i, ii, and iv only

B) i, ii and iii only

C) ii, iii and iv only

D) All i, ii, iii, and iv

**14. To delete a database ..... command is used**

A) delete database database\_name

B) Delete database\_name

C) drop database database\_name

D) drop database\_name

**15. .... is a combination of two or more attributes used as a primary key**

A) Composite Key

## Collections of Computer Science Multiple Choice Questions

- B) Alternate Key
- C) Candidate Key
- D) Foreign Key

**16. Which of the following is not the function of client?**

- A) Compile queries
- B) Query optimization
- C) Receive queries
- D) Result formatting and presentation

**17. .... is a special type of stored procedure that is automatically invoked whenever the data in the table is modified.**

- A) Procedure
- B) Trigger
- C) Curser
- D) None of the above

**18. .... requires that data should be made available to only authorized users.**

- A) Data integrity
- B) Privacy
- C) Security
- D) None of the above

**19. Some of the utilities of DBMS are .....**

- i) Loading      ii) Backup      iii) File organization      iv) Process Organization
- A) i, ii, and iv only
- B) i, ii and iii only
- C) ii, iii and iv only
- D) All i, ii, iii, and iv

**20. .... allows individual row operation to be performed on a given result set or on the generated by a selected by a selected statement.**

- A) Procedure
- B) Trigger
- C) Curser
- D) None of above

### Answers:

|                                |                                    |
|--------------------------------|------------------------------------|
| 1. B) Degree                   | 11. B) Inner                       |
| 2. B) Recovery                 | 12. A) Like Predicate              |
| 3. A) First                    | 13. A) i, ii, and iv only          |
| 4. C) Relations                | 14. C) drop database database_name |
| 5. C) Third                    | 15. A) Composite Key               |
| 6. B) select * from table_name | 16. B) Query optimization          |
| 7. B) BCNF                     | 17. B) Trigger                     |
| 8. D) All of the above         | 18. C) Security                    |
| 9. B) Outer join               | 19. B) i, ii and iii only          |
| 10. D) All                     | 20. C) Curser                      |

# Collections of Computer Science Multiple Choice Questions

## Set-4

1. State true or false.

i) Select operator is not a unary operator.

ii) Project operator chooses subset of attributes or columns of a relation.

- A) i-True, ii-False
- B) i-True, ii-True
- C) i-False, ii-True
- D) i-False, ii-False

2. .... database is used as template for all databases created.

- A) Master
- B) Model
- C) Tempdb
- D) None of the above

3. One aspect that has to be dealt with by the integrity subsystem is to ensure that only valid values can be assigned to each data items. This is referred to as

- A) Data Security
- B) Domain access
- C) Data Control
- D) Domain Integrity

4. .... operator is basically a join followed by a project on the attributes of first relation.

- A) Join
- B) Semi-Join
- C) Full Join
- D) Inner Join

5. Which of the following is not a binary operator in relational algebra?

- A) Join
- B) Semi-Join
- C) Assignment
- D) Project

6. Centralizing the integrity checking directly under the DBMS ..... Duplication and ensures the consistency and validity of the database.

- A) Increases
- B) Skips
- C) Does not reduce
- D) Reduces

7. Which of the following is/are the DDL statements?

- A) Create
- B) Drop
- C) Alter
- D) All of the above

## Collections of Computer Science Multiple Choice Questions

**8. In snapshot, ..... clause tells oracle how long to wait between refreshes.**

- A) Complete
- B) Force
- C) Next
- D) Refresh

**9. .... defines rules regarding the values allowed in columns and is the standard mechanism for enforcing database integrity.**

- A) Column
- B) Constraint
- C) Index
- D) Trigger

**10. For like predicate which of the following is true.**

- i) % matches zero or more characters.
- ii) \_ matches exactly one character.

- A) i-only
- B) ii-only
- C) Both of them
- D) None of them

**11. The relational model is based on the concept that data is organized and stored in two-dimensional tables called .....**

- A) Fields
- B) Records
- C) Relations
- D) Keys

**12. .... contains information that defines valid values that are stored in a column or data type.**

- A) View
- B) Rule
- C) Index
- D) Default

**13. Which of the syntax is correct for insert statement?**

- i) insert into <table\_name> values <list of values>
- ii) insert into <table\_name> (column list) values <list of values>

- A) i-only
- B) ii-only
- C) Both of them
- D) None of them

**14. .... First proposed the process of normalization.**

- A) Edgar. W
- B) Edgar F. Codd
- C) Edward Stephen
- D) Edward Codd

## Collections of Computer Science Multiple Choice Questions

**15. For using a specific database ..... command is used.**

- A) use database
- B) databasename use
- C) Both A & B
- D) None of them

**16. Which of the following is not comparison operator?**

- A) <>
- B) <
- C) =<
- D) >=

**17. An outstanding functionality of SQL is its support for automatic ..... to the target data.**

- A) programming
- B) functioning
- C) navigation
- D) notification

**18. .... is a special type of integrity constraint that relates two relations & maintains consistency across the relations.**

- A) Entity Integrity Constraints
- B) Referential Integrity Constraints
- C) Domain Integrity Constraints
- D) Domain Constraints
- D) Key Constraints

**19. .... specifies a search condition for a group or an aggregate.**

- A) GROUP BY Clause
- B) HAVING Clause
- C) FROM Clause
- D) WHERE Clause

**20. Drop Table cannot be used to drop a table referenced by a ..... constraint.**

- A) Local Key
- B) Primary Key
- C) Composite Key
- D) Foreign Key

## Collections of Computer Science Multiple Choice Questions

### Answers:

|                        |  |
|------------------------|--|
| 1. C) i-False, ii-True | 11. C) Relations                         |
| 2. B) Model            | 12. C) Index                             |
| 3. D) Domain Integrity | 13. C) Both of them                      |
| 4. B) Semi-Join        | 14. B) Edgar F. Codd                     |
| 5. D) Project          | 15. A) use database                      |
| 6. D) Reduces          | 16. C) =<                                |
| 7. D) All of the above | 17. C) navigation                        |
| 8. D) Refresh          | 18. B) Referential Integrity Constraints |
| 9. B) Constraint       | 19. B) HAVING Clause                     |
| 10. C) Both of them    | 20. D) Foreign Key                       |

## Solved MCQs of Data Structure

### Set-1

1. Which if the following is/are the levels of implementation of data structure
  - A) Abstract level
  - B) Application level
  - C) Implementation level
  - D) All of the above
2. A binary search tree whose left subtree and right subtree differ in height by at most 1 unit is called
  - A) AVL tree
  - B) Red-black tree
  - C) Lemma tree
  - D) None of the above
3. .... level is where the model becomes compatible executable code
  - A) Abstract level
  - B) Application level
  - C) Implementation level
  - D) All of the above
4. Stack is also called as
  - A) Last in first out
  - B) First in last out
  - C) Last in last out
  - D) First in first out
5. Which of the following is true about the characteristics of abstract data types?
  - i) It exports a type.
  - ii) It exports a set of operations
  - A) True, False
  - B) False, True
  - C) True, True
  - D) False, False
6. .... is not the component of data structure.
  - A) Operations
  - B) Storage Structures
  - C) Algorithms
  - D) None of above
7. Which of the following is not the part of ADT description?
  - A) Data
  - B) Operations
  - C) Both of the above
  - D) None of the above
8. Inserting an item into the stack when stack is not full is called ..... Operation and deletion of item from the stack, when stack is not empty is called .....operation.

## Collections of Computer Science Multiple Choice Questions

- A) push, pop
- B) pop, push
- C) insert, delete
- D) delete, insert

**9. .... Is a pile in which items are added at one end and removed from the other.**

- A) Stack
- B) Queue
- C) List
- D) None of the above

**10. .... is very useful in situation when data have to stored and then retrieved in reverse order.**

- A) Stack
- B) Queue
- C) List
- D) Link list

**11. Which of the following is not the type of queue?**

- A) Ordinary queue
- B) Single ended queue
- C) Circular queue
- D) Priority queue

**12. The property of binary tree is**

- A) The first subset is called left subtree
- B) The second subtree is called right subtree
- C) The root cannot contain NULL
- D) The right subtree can be empty

**13. State true or false.**

- i) The degree of root node is always zero.
- ii) Nodes that are not root and not leaf are called as internal nodes.

- A) True, True
- B) True, False
- C) False, True
- D) False, False

**14. Any node is the path from the root to the node is called**

- A) Successor node
- B) Ancestor node
- C) Internal node
- D) None of the above

**15. State true or false.**

- i) A node is a parent if it has successor nodes.
- ii) A node is child node if out degree is one.

- A) True, True
- B) True, False
- C) False, True

## Collections of Computer Science Multiple Choice Questions

D) False, False

**16. .... is not an operation performed on linear list**

a) Insertion    b) Deletion    c) Retrieval    d) Traversal

A) only a,b and c

B) only a and b

C) All of the above

D) None of the above

**17. Which is/are the application(s) of stack**

A) Function calls

B) Large number Arithmetic

C) Evaluation of arithmetic expressions

D) All of the above

**18. A ..... is an acyclic digraph, which has only one node with indegree 0, and other nodes have indegree 1.**

A) Directed tree

B) Undirected tree

C) Dis-joint tree

D) Direction oriented tree

**19. .... is a directed tree in which outdegree of each node is less than or equal to two.**

A) Unary tree

B) Binary tree

C) Dinary tree

D) Both B and C

**20. State true or false.**

i) An empty tree is also a binary tree.

ii) In strictly binary tree, the outdegree of every node is either 0 or 2.

A) True, False

B) False, True

C) True, True

D) False, False

**Answers:**

|                             |                                       |
|-----------------------------|---------------------------------------|
| 61. D) All of the above     | 71. B) Single ended queue             |
| 62. A) AVL tree             | 72. D) The right subtree can be empty |
| 63. C) Implementation level | 73. C) False, True                    |
| 64. A) Last in first out    | 74. B) Ancestor node                  |
| 65. C) True, True           | 75. B) True, False                    |
| 66. D) None of above        | 76. D) None of the above              |
| 67. D) None of the above    | 77. D) All of the above               |
| 68. A) push, pop            | 78. A) Directed tree                  |
| 69. B) Queue                | 79. B) Binary tree                    |
| 70. A) Stack                | 80. C) True, True                     |

# Collections of Computer Science Multiple Choice Questions

## Set-2

**1. A directed graph is ..... if there is a path from each vertex to every other vertex in the digraph.**

- A) Weakly connected
- B) Strongly Connected
- C) Tightly Connected
- D) Linearly Connected

**2. In the ..... traversal we process all of a vertex's descendants before we move to an adjacent vertex.**

- A) Depth First
- B) Breadth First
- C) With First
- D) Depth Limited

**3. State True or False.**

- i) Network is a graph that has weights or costs associated with it.
- ii) An undirected graph which contains no cycles is called a forest.
- iii) A graph is said to be complete if there is no edge between every pair of vertices.

- A) True, False, True
- B) True, True, False
- C) True, True, True
- D) False, True, True

**4. Match the following.**

- |                     |   |
|---------------------|---|
| a) Completeness     | i) How long does it take to find a solution                             |
| b) Time Complexity  | ii) How much memory need to perform the search.                         |
| c) Space Complexity | iii) Is the strategy guaranteed to find the solution when there in one. |

- A) a-iii, b-ii, c-i
- B) a-i, b-ii, c-iii
- C) a-iii, b-i, c-ii
- D) a-i, b-iii, c-ii

**5. The number of comparisons done by sequential search is .....**

- A)  $(N/2)+1$
- B)  $(N+1)/2$
- C)  $(N-1)/2$
- D)  $(N+2)/2$

**6. In ....., search start at the beginning of the list and check every element in the list.**

- A) Linear search
- B) Binary search
- C) Hash Search

## Collections of Computer Science Multiple Choice Questions

D) Binary Tree search

### 7. State True or False.

i) Binary search is used for searching in a sorted array.

ii) The time complexity of binary search is  $O(\log n)$ .

A) True, False

B) False, True

C) False, False

D) True, True

### 8. Which of the following is not the internal sort?

A) Insertion Sort

B) Bubble Sort

C) Merge Sort

D) Heap Sort

### 9. State True or False.

i) An undirected graph which contains no cycles is called forest.

ii) A graph is said to be complete if there is an edge between every pair of vertices.

A) True, True

B) False, True

C) False, False

D) True, False

**10. A graph is said to be ..... if the vertices can be split into two sets V1 and V2 such there are no edges between two vertices of V1 or two vertices of V2.**

A) Partite

B) Bipartite

C) Rooted

D) Bisects

**11. In a queue, the initial values of front pointer f and rear pointer r should be .... and ..... respectively.**

A) 0 and 1

B) 0 and -1

C) -1 and 0

D) 1 and 0

**12. In a circular queue the value of r will be ..**

A)  $r=r+1$

B)  $r=(r+1) \% [QUEUE\_SIZE - 1]$

C)  $r=(r+1) \% QUEUE\_SIZE$

D)  $r=(r-1) \% QUEUE\_SIZE$

### 13. Which of the following statement is true?

i) Using singly linked lists and circular list, it is not possible to traverse the list backwards.

ii) To find the predecessor, it is required to traverse the list from the first node in case of singly linked list.

A) i-only

B) ii-only

C) Both i and ii

## Collections of Computer Science Multiple Choice Questions

D) None of both

**14. The advantage of ..... is that they solve the problem of sequential storage representation. But disadvantage is that they are sequential lists.**

A) Lists

B) Linked Lists

C) Trees

D) Queues

**15. What will be the value of top, if there is a size of stack STACK\_SIZE is 5**

A) 5

B) 6

C) 4

D) None

**16. .... is not the operation that can be performed on queue.**

A) Insertion

B) Deletion

C) Retrieval

D) Traversal

**17. There is an extra element at the head of the list called a .....**

A) Antinel

B) Sentinel

C) List header

D) List head

**18. A graph is a collection of nodes, called ..... And line segments called arcs or ..... that connect pair of nodes.**

A) vertices, edges

B) edges, vertices

C) vertices, paths

D) graph node, edges

**19. A ..... is a graph that has weights or costs associated with its edges.**

A) Network

B) Weighted graph

C) Both A and B

D) None A and B

**20. In general, the binary search method needs no more than ..... comparisons.**

A)  $\lceil \log_2 n \rceil - 1$

B)  $\lceil \log n \rceil + 1$

C)  $\lceil \log_2 n \rceil$

D)  $\lceil \log_2 n \rceil + 1$

## Collections of Computer Science Multiple Choice Questions

### Answers:

|                          |  |
|--------------------------|--|
| 1. B) Strongly Connected | 11. B) 0 and -1                        |
| 2. A) Depth First        | 12. C) $r=(r+1)\% \text{ QUEUE\_SIZE}$ |
| 3. B) True, True, False  | 13. C) Both i and ii                   |
| 4. C) a-iii, b-i, c-ii   | 14. B) Linked Lists                    |
| 5. B) $(N+1)/2$          | 15. C) 4                               |
| 6. A) Linear search      | 16. D) Traversal                       |
| 7. D) True, True         | 17. B) Sentinel                        |
| 8. C) Merge Sort         | 18. A) vertices, edges                 |
| 9. A) True, True         | 19. C) Both A and B                    |
| 10. B) Bipartite         | 20. D) $\lceil \log_2 n \rceil + 1$    |

## Solved MCQs of System Analysis and Design

### Set-1

**Q. 1** ..... is an important factor of management information system.

- A) System
- B) Data
- C) Process
- D) All

**Q.2** Which of the following is / are the level(s) of documentation?

- A) Documentation for management
- B) Documentation for user
- C) Documentation for data processing department
- D) All of the above

**Q.3** ..... level supply information to strategic tier for the use of top management.

- A) Operational
- B) Environmental
- C) Competitive
- D) Tactical

**Q.4** In a DFD external entities are represented by a

- A) Rectangle
- B) Ellipse
- C) Diamond shaped box
- D) Circle

**Q.5** ..... can be defined as data that has been processed into a form that is meaningful to the recipient and is of real or perceived value in current or prospective decisions.

- A) System
- B) Information
- C) Technology
- D) Service

**Q.6** Use the new system at the same time as the old system to compare the results. This is known as ...

- A) Procedure Writing
- B) Simultaneous processing
- C) Parallel Operation
- D) File Conversion

**Q.7** Decision making model was proposed by .....

- A) Harry Goode
- B) Herbert A Simon
- C) Recon Michal
- D) None of this

**Q.8** A data flow can

- A) Only emanate from an external entity
- B) Only terminate in an external entity
- C) May emanate and terminate in an external entity
- D) May either emanate or terminate in an external entity but not both

## Collections of Computer Science Multiple Choice Questions

**Q. 9 ..... can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.**

- A) System Analysis
- B) System Data
- C) System Procedure
- D) System Record

**Q.10 SDLC stands for**

- A) System Development Life Cycle
- B) Structure Design Life Cycle
- C) System Design Life Cycle
- D) Structure development Life Cycle

**Q.11 ..... includes review of the existing procedures and information flow.**

- A) Feasibility Study
- B) Feasibility report
- C) System Design
- D) System analysis

**Q.12 A rectangle in a DFD represents**

- A) a process
- B) a data store
- C) an external entity
- D) an input unit

**Q.13 ..... refers to the collection of information pertinent to systems Project.**

- A) Data transfer
- B) Data gathering
- C) Data Embedding
- D) Data Request

**Q.14 ..... means coordinated effort, to communicate the information of the system written form.**

- A) System documentation
- B) Resource required
- C) Development schedule
- D) User Document

**Q.15 MDP stands for**

- A) Master Development Plan
- B) Master Design Program
- C) Mandatory Database Program
- D) Master Database Plan

**Q.16 External Entities may be a**

- A) Source of input data only
- B) Source of input data or destination of results
- C) Destination of results only
- D) Repository of data

**Q.17 ..... is a group of interested components working together towards a common goal by accepting inputs and producing outputs in an organized transformation process.**

- A) System
- B) Network
- C) Team
- D) System Unit

## Collections of Computer Science Multiple Choice Questions

**Q.18 To create vehicle of information to provide evidence in the development process and to monitor the process. This is one of the objectives of**

- A) Analysis
- B) Design
- C) Development
- D) Documentation

**Q.19 A ..... System is no more than idea**

- A) Conceptual
- B) Logical
- C) Physical
- D) All of the above

**Q.20 By an external entity we mean a**

- A) Unit outside the system being designed which can be controlled by an analyst.
- B) Unit outside the system whose behavior is independent of the system being designed
- C) A unit external to the system being designed
- D) A unit which is not part of a DFD

### Answers:

|                                      |   |
|--------------------------------------|---|
| 81. A) System                        | 91. A) Feasibility Study                      |
| 82. D) All of the above              | 92. C) an external entity                     |
| 83. D) Tactical                      | 93. B) Data gathering                         |
| 84. A) Rectangle                     | 94. A) System documentation                   |
| 85. B) Information                   | 95. A) Master Development Plan                |
| 86. C) Parallel Operation            | 96. B) Source of ..... destination of results |
| 87. B) Herbert A Simon               | 97. A) System                                 |
| 88. C) May emanate and .....entity   | 98. D) Documentation                          |
| 89. A) System Analysis               | 99. A) Conceptual                             |
| 90. A) System Development Life Cycle | 100. C) A unit external ..... being designed  |

- [MCQ Questions of C++ With Answers set-3](#)
- [Solved Multiple Choice Questions of C++ set-4](#)
- [Solved MCQ of Programming in C++ set-5](#)

# Collections of Computer Science Multiple Choice Questions

## Set-2

**Q.1 ..... is a sort of blueprint of the system Development Effort.**

- A) MDP
- B) DMP
- C) MPD
- D) DPM

**Q. 2 Data store in a DFD represents.**

- A) a sequential file
- B) a disk store
- C) a repository of data
- D) a random access memory

**Q.3 ..... system consists of programs, data files and documentation**

- A) Conceptual
- B) Logical
- C) Physical
- D) None of the above

**Q.4 ..... is a good example of deterministic system.**

- A) Life cycle
- B) Computer Program
- C) Software Program
- D) None of the above

**Q.5 The main ingredient of the report documenting the ..... is the cost benefit analysis.**

- A) System Analysis
- B) Feasibility Study
- C) System Analyst
- D) System Design

**Q.6 A data flow can**

- A) Only a data store
- B) Only leave a data store
- C) Enter or leave a data Store
- D) Either enter or leave a data store but not both

**Q.7 Changing the relationship with and services provided to customers in such a way that they will not think of changing suppliers is called .....**

- A) Lock in customers
- B) Lock out customers
- C) Lock in competitors
- D) Lock out competitors

**Q.8 ..... can be defined as data that has been processed into a form that is meaningful to the recipient and is of real or perceived value in current or prospective decisions.**

- A) Information
- B) Data collection
- C) Internal data
- D) Sample data

**Q.9 Increased volume of sales is an example of ..... Benefit. Reduction of bad debts is an example of .....**

- A) Tangible, Intangible
- B) Tangible, Tangible

## Collections of Computer Science Multiple Choice Questions

C) Intangible, Tangible

D) Intangible, Intangible

**Q.10 A data cannot flow between a store and**

i) a store      ii) a process      iii) an external entity

A) i and iii

B) i and ii

C) ii and iii

D) ii

**Q.11 The rate of ..... Is always an important factor for management especially in relation to the rate of return**

A) Cost

B) Benefit

C) Sales

D) Investment

**Q.12 Which of the following is / are the Characteristics of information?**

A) Accuracy and Relevance

B) Form of information and Timeliness

C) Completeness and Purpose

D) All A, B & C

**Q.13 The data Flow Diagram is the basic component of ..... system**

A) Conceptual

B) Logical

C) Physical

D) None of the above

**Q.14 State True or False.**

i) Master Development Plan basically is a schedule of various applications to be comprised.

ii) It consists of start and finish dates of a system analysis, design implementation and maintenance activities.

A) i-True, ii-True

B) i-False, ii-True

C) i-True, ii-False

D) i-False, ii-False

**Q.15 The Key considerations involved in the feasibility analysis is / are .....**

A) Economic

B) Technical

C) Behavioral

D) A, B, C

**Q.16 Data cannot flow between two data stores because**

A) it is not allowed in DFD

B) a data store is a passive repository of data

C) data can get corrupted

D) they will get merged

**Q.17 ..... is a schedule of various applications to be computerized.**

A) Materials planning

B) Master development Plan

C) Manufacturing organization

D) None of the above

## Collections of Computer Science Multiple Choice Questions

**Q.18** ..... Costs for a computer based information system include the salaries of the system analysts and computer programmers. .... costs for a computer based information system include the salaries of the computer operator and other data processing personnel.

- A) Development, Development
- B) Development, Operating
- C) Operating, Development
- C) Operating, Operating

**Q.19** The characteristics of well designed system are

- a) Practical    b) Effective    c) Secure    d) Reliable    e) Flexible    f) Economical
- A) a, b, c and d
- B) a, c, d and e
- C) a, b, c, d and e
- D) a, b, c, d, e and f

**Q.20** ..... gives defining the flow of the data through and organization or a company or series of tasks that may or may not represent computerized processing.

- A) System process
- B) System flowchart
- C) System design
- D) Structured System

### Answers:

|                                   |                                |
|-----------------------------------|--------------------------------|
| 1. A) MDP                         | 11. D) Investment              |
| 2. C) a repository of data        | 12. D) All A, B & C            |
| 3. C) Physical                    | 13. B) Logical                 |
| 4. B) Computer Program            | 14. A) i-True, ii-True         |
| 5. B) Feasibility Study           | 15. D) A, B, C                 |
| 6. C) Enter or leave a data Store | 16. D) they will get merged    |
| 7. A) Lock in customers           | 17. B) Master development Plan |
| 8. A) Information                 | 18. B) Development, Operating  |
| 9. D) Intangible, Intangible      | 19. D) a, b, c, d, e and f     |
| 10. A) i and iii                  | 20. B) System flowchart        |

# Collections of Computer Science Multiple Choice Questions

## Set-3

**Q.1 A ..... system in no more than idea.**

- A) Conceptual
- B) Logical
- C) Physical
- D) None

**Q.2 Design Phase consists of .....**

1. Identity the functions to be performed
2. Design the input/output and file design
3. Defining basic parameters for system design

- A) 1 & 2
- B) 2 & 3
- C) 1 & 3
- D) 1, 2 & 3

**Q.3 A context diagram**

- A) Describes the context of a system
- B) is a DFD which gives an overview of the system
- C) is a detailed description of a system
- D) is not used in drawing a detailed DFD

**Q. 4 HIPO stand for**

- A) Hierarchy input process output
- B) Hierarchy input plus output
- C) Hierarchy plus input process output
- D) Hierarchy input output Process

**Q.5 Statement of scope and objectives, opportunities and performance criteria .....**

- A) Problem definition
- B) System analysis
- C) System Design
- D) Documentation

**Q.6 Information can be categorized into .....**

1. Environmental information
2. Competitive information
3. Government information
4. Internal information

- A) 1, 2 & 3
- B) 1, 2 & 4
- C) 2, 3 & 4
- D) 1, 3 & 4

**Q.7 System Development process is also called as .....**

- A) System Development Life Cycle
- B) System Life Cycle
- C) Both A and B
- D) System Process Cycle

**Q.8 The output of problem definition stage is .....**

- A) Master Development Plan
- B) Terms of reference
- C) Feasibility report

## Collections of Computer Science Multiple Choice Questions

D) Final product

**Q.9 Advantages of system flowcharts .....**

- A) Effective communication
- B) Effective analysis
- C) Queasier group or relationships
- D) All A, B, C

**Q.10 Based on the identification of objectives, input, output and file content, the vital document is called ...**

- A) System Definition
- B) System Document
- C) System Requirement Document
- D) System Subject

**Q.11 A context diagram is used**

- A) as the first step in developing a detailed DFD of a system
- B) in systems analysis of very complex systems
- C) as an aid to system design
- D) as an aid to programmer

**Q.12 Which of the following is/are the sources for project requests?**

- A) Request from Department managers
- B) Request from senior executives
- C) Request from system Analyst
- D) All of the above

**Q.13 DDS stands for .....**

- A) Data Data Systems
- B) Data Digital System
- C) Data Dictionary Systems
- D) Digital Data Service

**Q.14 ..... Phase is a time consuming phase and yet a very crucial phase**

- A) Feasibility Study
- B) Requirement Phase
- C) Analysis Phase
- D) Testing Phase

**Q.15 A DFD is normally leveled as**

- A) It is a good idea in design
- B) It is recommended by many experts
- C) it is easy to do it
- D) It is easier to read and understand a number of smaller DFDs than one large DFD

**Q.16 ..... is responsible for all aspects of data processing, operation research, organization and method, system analysis and design investments.**

- A) Management Services Director
- B) Data Processing Manager
- C) Computer Manager
- D) Both B and C

**Q.17 ..... is a tabular method for describing the logic of the decisions to be taken.**

- A) Decision tables
- B) Decision tree
- C) Decision Method
- D) Decision Data

## Collections of Computer Science Multiple Choice Questions

**Q.18 In ..... system the interaction between various subsystems cannot be defined with certainty**

- A) Open System
- B) Closed System
- C) Deterministic System
- D) Probabilistic System

**Q. 19 State True or False.**

1. Term of reference is the final output of Feasibility Study
2. Design specification report is the final output of System Analysis

- A) 1-true, 2-true
- B) 1-false, 2-true
- C) 1-true, 2-false
- D) 1-false, 2-false

**Q.20 The key considerations involved in the feasibility analysis is include**

- i) Economical    ii) Technical    iii) Behavioral    iv) Personal

- A) i, ii, iv
- B) i, ii, iii
- C) ii, iii, iv
- D) All of the above

### Answers:

|   |  |
|---|--|
| 1. A) Conceptual                        | 11. A) as the first step ... DFD of a system |
| 2. D) 1, 2 & 3                          | 12. D) All of the above                      |
| 3. B) is a DFD which .... of the system | 13. C) Data Dictionary Systems               |
| 4. A) Hierarchy input process output    | 14. C) Analysis Phase                        |
| 5. A) Problem definition                | 15. D) It is easier to ..... one large DFD   |
| 6. B) 1, 2 & 4                          | 16. A) Management Services Director          |
| 7. A) System Development Life Cycle     | 17. A) Decision tables                       |
| 8. B) Terms of reference                | 18. D) Probabilistic System                  |
| 9. D) All A, B, C                       | 19. A) 1-true, 2-true                        |
| 10. B) System Document                  | 20. B) i, ii, iii                            |

## Solved MCQs of Operating System Principles

### Set-1

**1. Which of the following is/ are the part of operating system?**

- A) Kernel services
- B) Library services
- C) Application level services
- D) All of the above

**2. The system of ..... generally ran one job at a time. These were called single stream batch processing.**

- A) 40's
- B) 50's
- C) 60's
- D) 70's

**3. In ..... generation of operating system, operating system designers develop the concept of multiprogramming in which several jobs are in main memory at once.**

- A) First
- B) Second
- C) Third
- D) Fourth

**4. State True or False.**

i) In spooling high speed device like a disk is interposed between running program and low-speed device in Input/output.

ii) By using spooling for example instead of writing directly to a printer, outputs are written to the disk.

- A) i-True, ii-False
- B) i-True, ii-True
- C) i-False, ii-True
- D) i-False, ii-False

**5. Which of the following is/are the functions of operating system?**

i) Sharing hardware among users.

ii) Allowing users to share data among themselves.

iii) Recovering from errors.

iv) Preventing users from interfering with one another.

v) Scheduling resources among users.

- A) i, ii, iii and iv only
- B) ii, iii, iv and v only
- C) i, iii, iv and v only
- D) All i, ii, iii, iv and v

**6. .... executes must frequently and makes the fine grained decision of which process to execute the next.**

- A) Long-term scheduling
- B) Medium-term scheduling
- C) Short-term scheduling
- D) None of the above

## Collections of Computer Science Multiple Choice Questions

- 7. With ..... a page is brought into main memory only when the reference is made to a location on that page.**  
A) demand paging  
B) main paging  
C) prepaging  
D) postpaging
- 8. .... provides a larger sized of virtual memory but require virtual memory which provides multidimensional memory.**  
A) Paging method  
B) Segmentation method  
C) Paging and segmentation method  
D) None of these
- 9. .... is a large kernel containing virtually the complete operating system, including, scheduling, file system, device drivers and memory management.**  
A) Multithreaded kernel  
B) Monolithic kernel  
C) Micro kernel  
D) Macro kernel
- 10. .... is a large operating system core provides a wide range of services.**  
A) Multithreaded kernel  
B) Monolithic kernel  
C) Micro kernel  
D) Macro kernel
- 11. Which of the following is not the function of Microkernel?**  
A) File management  
B) Low-level memory management  
C) Inter-process communication  
D) I/O interrupts management
- 12. Match the following.**  
i) Mutual exclusion      a) A process may hold allocated resources while waiting assignment.  
ii) Hold and wait      b) No resource can be forcibly removed from a process holding it.  
iii) No preemption      c) Only one process may use a resource at a time.  
A) i-a, ii-b, iii-c  
B) i-a, ii-c, iii-b  
C) i-b, ii-c, iii-a  
D) i-c, ii-a, iii-b
- 13. A direct method of deadlock prevention is to prevent the occurrences of .....**  
A) Mutual exclusion  
B) Hold and wait  
C) Circular waits  
D) No preemption
- 14. The methods or algorithms which are used to increase the performance of disk storage sub-system is called .....**  
A) Disk performing  
B) Disk scheduling  
C) Disk storing  
D) Disk extending
- 15. .... is the time required to move the disk arm to the required track.**  
A) Seek time

## Collections of Computer Science Multiple Choice Questions

- B) Rotational delay
- C) Latency time
- D) Access time

**16. The ..... policy restricts scanning to one direction only.**

- A) SCAN
- B) C-SCAN
- C) N-Step SCAN
- D) Both A and B

**17. .... policy selects the disk I/O request that requires the least movement of the disk arm from its current position.**

- A) FSCAN
- B) SSTF
- C) SCAN
- D) C-SCAN

**18. .... refers to the ability of an operating system to support multiple threads of execution with a single process.**

- A) Multithreading
- B) Multiprocessing
- C) Multiexecuting
- D) Bi-threading

**19. State whether the following statement is true.**

- i) It takes less time to terminate a thread than a process.
- ii) Threads enhance efficiency in communication between different executing programs.

- A) i-True, ii-False
- B) i-True, ii-True
- C) i-False, ii-True
- D) i-False, ii-False

**20. .... is a special type of programming language used to provide instructions to the monitor simple batch processing schema.**

- A) Job control language (JCL)
- B) Processing control language (PCL)
- C) Batch control language (BCL)
- D) Monitor control language (MCL)

**Answers:**

|                                  |                                    |
|----------------------------------|------------------------------------|
| 101. D) All of the above         | 111. A) File management            |
| 102. B) 50's                     | 112. D) i-c, ii-a, iii-b           |
| 103. C) Third                    | 113. C) Circular waits             |
| 104. B) i-True, ii-True          | 114. B) Disk scheduling            |
| 105. D) All i, ii, iii, iv and v | 115. A) Seek time                  |
| 106. C) Short-term scheduling    | 116. A) SCAN                       |
| 107. A) demand paging            | 117. B) SSTF                       |
| 108. B) Segmentation method      | 118. A) Multithreading             |
| 109. B) Monolithic kernel        | 119. B) i-True, ii-True            |
| 110. D) Macro kernel             | 120. A) Job control language (JCL) |

# Collections of Computer Science Multiple Choice Questions

## Set-2

**1. The first batch operating system was developed in the ..... by General Motors for use on an IBM 701.**

- A) mid 1940's
- B) mid 1950's
- C) mid 1960's
- D) mid 1970's

**2. Process is .....**

- A) A program in execution
- B) An instance of a program running on a computer.
- C) The entity that can be assigned to and executed
- D) All of the above.

**3. .... is a facility that allows programmers to address memory from a logical point of view, without regard to the main memory, physically available.**

- A) Visual memory
- B) Real memory
- C) Virtual memory
- D) Secondary memory

**4. .... is a large kernel, including scheduling file system, networking, device drivers, memory management and more.**

- A) Monolithic kernel
- B) Micro kernel
- C) Macro kernel
- D) Mini kernel

**5. A ..... architecture assigns only a few essential functions to the kernel, including address spaces, Inter process communication(IPC) and basic scheduling.**

- A) Monolithic kernel
- B) Micro kernel
- C) Macro kernel
- D) Mini kernel

**6. State whether true or false.**

- i) Multithreading is useful for application that perform a number of essentially independent tasks that do not be serialized.
- ii) An example of multithreading is a database server that listens for and process numerous client request.

- A) i-True, ii-False
- B) i-True, ii-True
- C) i-False, ii-True
- D) i-False, ii-False

**7. With ..... only one process can execute at a time; meanwhile all other process are waiting for the processor. With ..... more than one process can be running simultaneously each on a different processor.**

- A) Multiprocessing, Multiprogramming

## Collections of Computer Science Multiple Choice Questions

- B) Multiprogramming, Uniprocessing
- C) Multiprogramming, Multiprocessing
- D) Uniprogramming, Multiprocessing

**8. The two central themes of modern operating system are .....**

- A) Multiprogramming and Distributed processing
- B) Multiprogramming and Central Processing
- C) Single Programming and Distributed processing
- D) None of above

**9. .... refers to the ability of multiple process (or threads) to share code, resources or data in such a way that only one process has access to shared object at a time.**

- A) Synchronization
- B) Mutual Exclusion
- C) Dead lock
- D) Starvation

**10. .... is the ability of multiple process to co-ordinate their activities by exchange of information**

- A) Synchronization
- B) Mutual Exclusion
- C) Dead lock
- D) Starvation

**11. .... refers to a situation in which a process is ready to execute but is continuously denied access to a processor in deference to other processes.**

- A) Synchronization
- B) Mutual Exclusion
- C) Dead lock
- D) Starvation

**12. Which of the following is not the approach to dealing with deadlock?**

- A) Prevention
- B) Avoidance
- C) Detection
- D) Deletion

**13. Which of the following are the states of a five state process model?**

- i) Running      ii) Ready      iii) New      iv) Exit      v) Destroy
- A) i, ii, iii and v only
- B) i, ii, iv and v only
- C) i, ii, iii, and iv only
- D) All i, ii, iii, iv and v

**14. State which statement is true for Suspended process?**

- i) The process is not immediately available for execution.
- ii) The process may be removed from suspended state automatically without removal order.
- A) i only
- B) ii only
- C) i and ii only
- D) None

**15. Following is/are the reasons for process suspension.**

- A) Swapping parent process
- B) Inter request
- C) Timing
- D) All of the above

## Collections of Computer Science Multiple Choice Questions

**16. The different types of tables maintained by the operating system are .....**

- A) memory, logical , I/O file
- B) memory, I/O, file, physical
- C) memory, I/O, file, process
- D) memory, logical, I/O, physical

**17. Which of the following information not included in memory table?**

- A) The allocation of main memory to process.
- B) The allocation of secondary memory to process
- C) Any information needed to manage virtual memory
- D) Any information about the existence of file

**18. Process Management function of an operating system kernel includes.**

- A) Process creation and termination.
- B) Process scheduling and dispatching
- C) Process switching
- D) All of the above

**19. The typical elements of process image are .....**

- i) User data      ii) System Data      iii) User program      iv) System stack
- A) i, iii and iv only
- B) i, ii, and iv only
- C) ii, iii, and iv only
- D) All i, ii, iii, and iv

**20. Match the following mechanisms for interrupting the execution of a process and their uses.**

- i) Interrupt      a) Call to an operating system function
- ii) Trap      b) Reaction to an asynchronous external event
- iii) Supervisor Call      c) Handling of a error or an exception condition
- A) i-a, ii-b, iii-c
- B) i-c, ii-a, iii-b
- C) i-b, ii-c, iii-a
- D) i-a, ii-c, iii-b

**Answers:**

|   |                                     |
|---|-------------------------------------|
| 1. B) mid 1950's                        | 11. D) Starvation                   |
| 2. D) All of the above.                 | 12. D) Deletion                     |
| 3. C) Virtual memory                    | 13. C) i, ii, iii, and iv only      |
| 4. A) Monolithic kernel                 | 14. A) i only                       |
| 5. B) Micro kernel                      | 15. D) All of the above             |
| 6. B) i-True, ii-True                   | 16. C) memory, I/O, file, process   |
| 7. C) Multiprogramming, Multiprocessing | 17. D) Any information..... of file |
| 8. A) Multiprogramming .....processing  | 18. D) All of the above             |
| 9. B) Mutual Exclusion                  | 19. A) i, iii and iv only           |
| 10. A) Synchronization                  | 20. C) i-b, ii-c, iii-a             |

# Collections of Computer Science Multiple Choice Questions

## Set-3

**1. The unit of dispatching is usually referred to as a .....**

- A) Thread
- B) Lightweight process
- C) Process
- D) Both A and B

**2. .... is a example of an operating system that support single user process and single thread.**

- A) UNIX
- B) MS-DOS
- C) OS/2
- D) Windows 2000

**3. State true or false.**

- i) Unix, support multiple user process but only support one thread per process.
- ii) A java run time environment is an example of a system of one process with multiple threads.

- A) True, False
- B) True, True
- C) False, True
- D) False, False

**4. .... are very effective because a mode switch is not required to switch from one thread to another.**

- A) Kernel-level threads
- B) User-level threads
- C) Alterable threads
- D) Application level threads

**5. .... is a condition in which there is a set of concurrent processes, only one of which is able to access a given resource or perform a given function at any time.**

- A) Mutual Exclusion
- B) Busy Waiting
- C) Deadlock
- D) Starvation

**6. .... Techniques can be used to resolve conflicts, such as competition for resources, and to synchronize processes so that they can cooperate.**

- A) Mutual Exclusion
- B) Busy Waiting
- C) Deadlock
- D) Starvation

**7. .... Can be defined as the permanent blocking of a set of processes that either complete for system resources or communicate with each other.**

- A) Deadlock
- B) Permanent lock
- C) Starvation
- D) Mutual exclusion

**8. The following conditions of policy must be present for a deadlock to be possible.**

- i) Mutual exclusion
- ii) Hold and wait

## Collections of Computer Science Multiple Choice Questions

iii) No preemption

iv) Circular wait

A) i, ii and iii only

B) ii, iii and iv only

C) i, iii and iv only

D) All i, ii, iii and iv

**9. A direct method of deadlock prevention is to prevent the occurrence of .....**

A) Mutual exclusion

B) Hold and wait

C) Circular waits

D) No preemption

**10. State true or false.**

i) With paging, each process is divided into relatively small, fixed-size pages.

ii) Segmentation provides for the use of pieces of varying size.

A) Partition management

B) Memory management

C) Disk management

D) All of the above

**Answers:**

|                          |                             |
|--------------------------|-----------------------------|
| 1. D) Both A and B       | 6. A) Mutual Exclusion      |
| 2. B) MS-DOS             | 7. A) Deadlock              |
| 3. B) True, True         | 8. D) All i, ii, iii and iv |
| 4. B) User-level threads | 9. C) Circular waits        |
| 5. A) Mutual Exclusion   | 10. B) Memory management    |

# Collections of Computer Science Multiple Choice Questions

## Set-4

**1. .... Involves treating main memory as a resource to be allocated to and shared among a number of active processes.**

- A) Partition management
- B) Memory management
- C) Disk management
- D) All of the above

**2. A process that execute only in main memory is referred to as ..... and that allocated in disk is referred to a .....**

- A) virtual memory, true memory
- B) virtual memory, real memory
- C) real memory, virtual memory
- D) imaginary memory, real memory

**3. In process scheduling, ..... determines when new processes are admitted to the system.**

- A) long term scheduling
- B) medium term scheduling
- C) short term scheduling
- D) none of the above

**4. In process scheduling, ..... determines which ready process will be executed next by processor.**

- A) long term scheduling
- B) medium term scheduling
- C) short term scheduling
- D) none of the above

**5. The sum of the seek time, and the rotational delay is called the .....**

- A) reached time
- B) access time
- C) arrived time
- D) common time

**6. The ..... policy segments the disks request queue into sub queues of the length N.**

- A) SCAN
- B) C-SCAN
- C) N-Step SCAN
- D) FSCAN

**7. Which of the following are the functions of operating system?**

- i) recovering from errors
  - ii) facilitating input/output
  - iii) facilitating parallel operation
  - iv) sharing hardware among users
  - v) implementing user interface
- A) i, ii, iii, and v only
  - B) i, ii, iii, and iv only
  - C) ii, iii, iv and v only
  - D) All i, ii, iii, iv and v

**8. File management function of the operating system includes**

- i) File creation and deletion
- ii) Disk scheduling

## Collections of Computer Science Multiple Choice Questions

iii) Directory creation

iv) Mapping file in secondary storage.

A) i, ii and iii only

B) i, iii and iv only

C) ii, iii and iv only

D) All i, ii, iii and iv

**9. The ..... Determines when a page should be brought into main memory.**

A) Fetch policy

B) Placement policy

C) Replacement policy

D) Resident set management

**10. With ..... A page is written out to secondary memory only when it has been selected for replacement.**

A) pre-cleaning

B) demand cleaning

C) required cleaning

D) fast cleaning

### Answers:

|                                |                                |
|--------------------------------|--------------------------------|
| 1. B) Memory management        | 6. C) N-Step SCAN              |
| 2. C) real .... virtual memory | 7. D) All i, ii, iii, iv and v |
| 3. A) long term scheduling     | 8. B) i, iii and iv only       |
| 4. C) short term scheduling    | 9. A) Fetch policy             |
| 5. B) access time              | 10. B) demand cleaning         |

## Solved MCQs of Computer Security

### Set -1

**1. In computer security, ..... means that computer system assets can be modified only by authorized parties.**

- A) Confidentiality
- B) Integrity
- C) Availability
- D) Authenticity

**2. In computer security, ..... means that the information in a computer system only be accessible for reading by authorized parties.**

- A) Confidentiality
- B) Integrity
- C) Availability
- D) Authenticity

**3. The type of threats on the security of a computer system or network are .....**

- i) Interruption                      ii) Interception                      iii) Modification
- iv) Creation                          v) Fabrication

- A) i, ii, iii and iv only
- B) ii, iii, iv and v only
- C) i, ii, iii and v only
- D) All i, ii, iii, iv and v

**4. Which of the following is independent malicious program that need not any host program?**

- A) Trap doors
- B) Trojan horse
- C) Virus
- D) Worm

**5. The ..... is code that recognizes some special sequence of input or is triggered by being run from a certain user ID or by unlikely sequence of events.**

- A) Trap doors
- B) Trojan horse
- C) Logic Bomb
- D) Virus

**6. The ..... is code embedded in some legitimate program that is set to “explode” when certain conditions are met.**

- A) Trap doors
- B) Trojan horse
- C) Logic Bomb
- D) Virus

**7. Which of the following malicious program do not replicate automatically?**

- A) Trojan Horse
- B) Virus
- C) Worm
- D) Zombie

## Collections of Computer Science Multiple Choice Questions

8. .... programs can be used to accomplish functions indirectly that an unauthorized user could not accomplish directly.

- A) Zombie
- B) Worm
- C) Trojan Horses
- D) Logic Bomb

9. State whether true or false.

- i) A worm mails a copy of itself to other systems.
- ii) A worm executes a copy of itself on another system.

- A) True, False
- B) False, True
- C) True, True
- D) False, False

10. A ..... is a program that can infect other programs by modifying them, the modification includes a copy of the virus program, which can go on to infect other programs.

- A) Worm
- B) Virus
- C) Zombie
- D) Trap doors

Answers:

|                              |                      |
|------------------------------|----------------------|
| 11. B) Integrity             | 16. C) Logic Bomb    |
| 12. A) Confidentiality       | 17. A) Trojan Horse  |
| 13. C) i, ii, iii and v only | 18. C) Trojan Horses |
| 14. D) Worm                  | 19. C) True, True    |
| 15. A) Trap doors            | 20. B) Virus         |

# Collections of Computer Science Multiple Choice Questions

## Set – 2

1. .... are used in denial of service attacks, typically against targeted web sites.

- A) Worm
- B) Zombie
- C) Virus
- D) Trojan horse

2. Select the correct order for the different phases of virus execution.

- i) Propagation phase
- ii) Dormant phase
- iii) Execution phase
- iv) Triggering phase

- A) i, ii, iii, and iv
- B) i, iii, ii and iv
- C) ii, i, iv and iii
- D) ii, iii, iv and i

3. A ..... attaches itself to executable files and replicates, when the infected program is executed, by finding other executable files to infect.

- A) Stealth virus
- B) Polymorphic Virus
- C) Parasitic Virus
- D) Macro Virus

4. .... is a form of virus explicitly designed to hide itself from detection by antivirus software.

- A) Stealth virus
- B) Polymorphic Virus
- C) Parasitic Virus
- D) Macro Virus

5. A ..... creates copies during replication that are functionally equivalent but have distinctly different bit patterns.

- A) Boot Sector Virus
- B) Polymorphic Virus
- C) Parasitic Virus
- D) Macro Virus

6. A portion of the Polymorphic virus, generally called a ....., creates, a random encryption, key to encrypt the remainder of the virus.

- A) mutual engine
- B) mutation engine
- C) multiple engine
- D) polymorphic engine

7. State whether the following statement is true.

- i) A macro virus is platform independent.
- ii) Macro viruses infect documents, not executable portions of code.

- A) i-only
- B) ii-only
- C) Both i and ii
- D) Non i and ii

## Collections of Computer Science Multiple Choice Questions

**8. The type(s) of auto executing macros, in Microsoft word is/are**

- A) Auto execute
- B) Auto macro
- C) Command macro
- D) All of the above

**9. In ....., the virus places an identical copy of itself into other programs or into certain system areas on the disk.**

- A) Dormant phase
- B) Propagation phase
- C) Triggering phase
- D) Execution phase

**10. A ..... is a program that secretly takes over another Internet-attached computer and then uses that computer to launch attacks.**

- A) Worm
- B) Zombie
- C) Virus
- D) Trap doors

### Answers:

|                         |                         |
|-------------------------|-------------------------|
| 1. B) Zombie            | 6. B) mutation engine   |
| 2. C) ii, i, iv an iii  | 7. C) Both i and ii     |
| 3. C) Parasitic Virus   | 8. D) All of the above  |
| 4. A) Stealth virus     | 9. B) Propagation phase |
| 5. B) Polymorphic Virus | 10. B) Zombie           |

## Solved MCQs of C

### Set-1

1. C language has been developed by
  - A) Martin Richards
  - B) Bijarne Stroustrup
  - C) Dennis Ritchie
  - D) Ken Thompson
2. `int a[] = {5,6,7,8,9}` What is the value of `a[3]`?
  - A) 9
  - B) 8
  - C) 7
  - D) 6
3. C can be used on
  - A) Only MS-Dos operating System
  - B) Only Linux operating system
  - C) Only Windows operating system
  - D) All of the above
4. `Float a[15]`, what is the size of array?
  - A) 17
  - B) 14
  - C) 15
  - D) 16
5. C programs are converted into machine language with the help of
  - A) An Editor
  - B) A compiler
  - C) An operating system
  - D) None of the above
6. Array is
  - A) Primary data type
  - B) Pointer data type
  - C) Heterogeneous data type
  - D) Homogenous data type
7. Which of the following is allowed in a C Arithmetic Instruction?
  - A) `[]`
  - B) `{ }`
  - C) `( )`
  - D) None of the above

## Collections of Computer Science Multiple Choice Questions

8. To accept 100 different values into the array we require

- A) Loop
- B) If condition
- C) Function
- D) Structure

9. If a is an integer variable,  $a=7/3$ ; will return a value

- A) 2.5
- B) 3
- C) 0
- D) 2

10. Pointer holds

- A) Value of variable
- B) Address of variable
- C) Value and address of variable
- D) Always null

11. Hierarchy decides which operator

- A) is most important
- B) is used first
- C) is fastest
- D) Operates on largest numbers

12. A pointer can hold

- A) Single address at a time
- B) Two addresses at a time
- C) Number of addresses at a time
- D) No address

13. An integer constant in C must have

- A) At least one digit
- B) At least one decimal point
- C) A comma along with digits
- D) Digits separated by commas

14. `main() {`

```
    Int a=3, b=2, c*d*e;  
    d=&a; e=&b;  
    c=*d+*e;  
}
```

Which one of the given answers is correct?

- A)  $a=4$ ,  $c=6$
- B)  $a=3$ ,  $c=5$
- C)  $a=3$ ,  $c=6$
- D)  $a=3$ ,  $c=8$

15. In C a variable cannot contain

- A) Blank Spaces
- B) Decimal Point

## Collections of Computer Science Multiple Choice Questions

C) Hyphen

D) All of the above

16. Assume that variable x resides at memory location 1234, y at 1111 and p at 2222.

```
Int x=1, y=2, *p;
```

```
p=&x;
```

```
y=*p;
```

What will be the value of y after execution of above code?

A) 2

B) 1

C) 1234

D) 1111

17. Which of the following is FALSE in C?

A) Keywords can be used as variable names

B) Variable names can contain a digit

C) Variable names do not contain a blank space

D) Capital letters can be used in variables

18. If an integer occupies 4 bytes and a character occupies 1 byte of memory, each element of the following structure would occupy how many bytes ?

```
struct name {
```

```
int age;
```

```
char name[30];
```

```
};
```

A) 30

B) 32

C) 34

D) 36

19. The expression  $x=4+2 \% -8$  evaluates to

A) -6

B) 6

C) 4

D) None of the above

20. A structure brings together a group of

A) items of the same data type

B) related data items and variables

C) integers with user defined names

D) floating points with user defined names

## Collections of Computer Science Multiple Choice Questions

### Answers:

|                            |  |
|----------------------------|--|
| 1. C) Dennis Ritche        | 11. B) is used first                     |
| 2. B) 8                    | 12. A) Single address at a time          |
| 3. D) All of the above     | 13. A) At least one digit                |
| 4. C) 15                   | 14. B) a=3, c=5                          |
| 5. B) A complier           | 15. A) Blank Spaces                      |
| 6. D) Homogenous data type | 16. B) 1                                 |
| 7. C) ( )                  | 17. A) Keywords can ..... variable names |
| 8. A) Loop                 | 18. C) 34                                |
| 9. D) 2                    | 19. B) 6                                 |
| 10. B) Address of variable | 20. B) related data items and variables  |

## Solved MCQs of C++

### Set-1

1. C++ is an extension of C with a major addition of the class construct feature of .....
  - A) Simula67
  - B) Simula57
  - C) Simula47
  - D) Simula87
2. C++ has the name ..... before it was changed to C++.
  - A) Improved C
  - B) Integrated C
  - C) C with classes
  - D) C with Simula
3. .... Refer to the names of variables, functions, arrays, classes etc. created by the programmer.
  - A) Keywords
  - B) Identifiers
  - C) Constraints
  - D) Strings
4. In C++, the keyword void was used .....
  - A) To specify the return type of function when it is not returning any value.
  - B) To indicate an empty argument list to a function.
  - C) To declare the generic pointers.
  - D) All of the above.
5. Match the following
  - a) :: i) Pointer to member declarator
  - b) :.\* ii) Pointer to member operator
  - c) ->\* iii) Scope resolution operator
  - A) a-ii, b-iii, c-i
  - B) a-iii, b-i, c-ii
  - C) a-i b-ii, c-iii
  - D) a-iii, b-ii, c-i
6. If m and n are int type variables, what will be the result of the expression  $m \% n$  when  $m=5$  and  $n=2$  ?
  - A) 0
  - B) 1
  - C) 2
  - D) None of the above
7. Some of the C++ operators cannot overloaded which are
  - i) Member access operators (. And .\*)
  - ii) Conditional operator (? :)
  - iii) Scope resolution operator (: :)
  - iv) Size operator (sizeof)

## Collections of Computer Science Multiple Choice Questions

- A) only i, ii and iii
  - B) only ii, iii and iv
  - C) only ii and iv
  - D) All i, ii, iii and iv
8. Some of the situations where inline expansion may not work are:
- A) For functions returning values, if a loop, a switch or goto exists.
  - B) If functions contain static variables and they are re-cursive.
  - C) For functions not returning values, if return statement exist.
  - D) All of the above.
9. Which of the following control expressions are valid for an if statement?
- A) an integer expression
  - B) a Boolean expression
  - C) either A or B
  - D) Neither A nor B
10. .... is a way to bind the data and its associated functions together which allows the data and functions to be hidden.
- A) Structure
  - B) Class
  - C) Enum
  - D) Both A and B
11. When a function is defined inside a class, this function is called .....
- A) Inside function
  - B) Class function
  - C) Inline function
  - D) Interior function
12. Which of the following cannot be passed to a function?
- A) Reference variable
  - B) Arrays
  - C) Class objects
  - D) Header files
13. State true or false.
- i) We cannot make the function inline by defining a function outside the class.
  - ii) A member function can be called by using its name inside another member function of the same class, this is known as nesting of member function.
- A) True, True
  - B) True, False
  - C) False, True
  - D) False, False
14. Which of the following operators could be overloaded?
- A) Size of
  - B) +
  - C) +=
  - D) ::

## Collections of Computer Science Multiple Choice Questions

15. Which of the following is true about the static member variable in C++.

- i) It is initialized to zero when the first object of its class is created. Other initialization is also permitted.
- ii) It is visible only within the class, but its lifetime is the entire program.

- A) i-True, ii-True
- B) ii-False, ii-True
- C) i-True, ii-False
- D) i-False, iii-False

16. Which of the following keywords are used to control access to a class member?

- A) default
- B) break
- C) protected
- D) goto

17. What will be the values of x, m and n after execution of the following statements?

```
Int x, m, n;
```

```
m=10;
```

```
n=15;
```

```
    x= ++m + n++;
```

- A) x=25, m=10, n=15
- B) x=27, m=10, n=15
- C) x=26, m=11, n=16
- D) x=27, m=11, n=16

18. The major goal of inheritance in C++ is

- A) To facilitate the conversion of data types
- B) To help modular programming
- C) To facilitate the reusability of code
- D) To extend the capabilities of a class

19. A variable is defined within a block in a body of a function. Which of the following are true?

- A) It is visible throughout the function.
- B) It is visible from the point of definition to the end of the program.
- C) It is visible from the point of definition to the end of the block.
- D) It is visible throughout the block.

20. The friend functions are used in situations where

- A) We want to exchange data between classes
- B) We want to have access to unrelated classes
- C) Dynamic binding is required
- D) We want to create versatile overloaded operators.

## Collections of Computer Science Multiple Choice Questions

### Answers:

|                               |   |
|-------------------------------|---|
| 121. A) Simula67              | 131. C) Inline function                       |
| 122. C) C with classes        | 132. D) Header files                          |
| 123. B) Identifiers           | 133. C) False, True                           |
| 124. D) All of the above.     | 134. B) +                                     |
| 125. B) a-iii, b-i, c-ii      | 135. B) ii-False, ii-True                     |
| 126. B) 1                     | 136. C) protected                             |
| 127. D) All i, ii, iii and iv | 137. C) x=26, m=11, n=16                      |
| 128. D) All of the above      | 138. C) To facilitate the reusability of code |
| 129. B) a Boolean expression  | 139. D) It is visible throughout the block.   |
| 130. B) Class                 | 140. A) We want to exchange ..... classes     |

# Collections of Computer Science Multiple Choice Questions

## Set-2

1. The ..... Operator is known as insertion operator.

- A) >>
- B) >
- C) <<
- D) <

**2. State True or False.**

i) A static function can have access to only other static members (functions or variables) declared in the same class.

ii) A static member function can be called using the class name (instead of its objects)

- A) True, True
- B) True, False
- C) False, True
- D) False, False

3. Which of the following condition is true for an object used as a function argument.

- i) A copy of the entire objects is passed to the function.
- ii) Only the address of the object is transferred to the function.

- A) Only i
- B) Only ii
- C) Both i and ii
- D) None of them

4. .... enable us to hide, inside the object, both the data fields and the methods that act on that data.

- A) Encapsulation
- B) Polymorphism
- C) Inheritance
- D) Overloading

5. Which of the following is/ are the characteristics of friend function.

- A) It is not in the scope of the class to which it has been declared as friend.
- B) It can invoke like a normal function without the help of any object.
- C) Usually, it has the objects as arguments.
- D) All of the above.

6. The dereferencing operator ..... is used to access a member when we use pointers to both the object and the member.

- A) ->\*
- B) .\*
- C) Any of the above
- D) None of the above

7. A ..... Is a class whose instances themselves are classes.

- A) Subclass
- B) Abstract Class
- C) Meta Class

## Collections of Computer Science Multiple Choice Questions

D) Object Class

8. The dereferencing operator ..... is used when the object itself is used with in the member pointer.

A) ->\*

B) .\*

C) Any of the above

D) None of the above

9. A constructor that accepts no parameters is called the .....

A) Paramless constructor

B) No parameter constructor

C) Default constructor

D) Argumentless constructor

10. Automatic initialization of object is carried out using a special member function called .....

A) Friend

B) Casting

C) Reference Parameter

D) Constructor

11. Which of the following characteristics of constructor are true.

i) They should be declared in the public section.

ii) They are invoked automatically when the objects are created.

iii) They do not have return type and void also.

iv) We cannot refer their address.

v) Constructors cannot virtual.

A) Only i, ii, iii and v

B) Only ii, iii, iv, and v

C) Only i, iii, iv and v

D) All i, ii, iii, iv and v

12. A ..... takes a reference to an object of the same class as itself as an argument.

A) Reference constructor

B) Copy Constructor

C) Self Constructor

D) None of the above

13. State True or False

i) A destructor never takes any argument nor does it return any value.

ii) It releases memory space for future use.

A) True, True

B) True, False

C) False, True

D) False, False

14. Which of the following operators cannot be overloaded?

i) Size of operator (sizeof)

ii) Scope resolution Operator

iii) Conditional operator (?:)

iv) Assignment Operator (=)

A) i, ii, iii only

## Collections of Computer Science Multiple Choice Questions

B) ii, iii, iv only

C) i, iii, iv only

D) all i, ii, iii, iv

15. .... Is the process of creating new classes, called derived classes from existing classes called base class.

A) Inheritance

B) Encapsulation

C) Polymorphism

D) Overloading

16. State True or False.

i) While overloading operators new operator can be overloaded.

ii) The binary operator such as +, -, \* and must explicitly return a value.

A) True, True

B) True, False

C) False, True

D) False, False

17. .... function writes a string of text to a window.

A) cputs ()

B) put ()

C) gets ()

D) tputs ()

18. Which of the following condition (s) should satisfy the casting operator.

i) It must be a class member.

ii) It must not satisfy a return type.

iii) It must have any arguments.

iv) All of the above.

19. Find the Hierarchy of Data Types.

i) Long double    ii) Double    iii) Float    iv) Long    v) Int    vi) Char

A) 1-2-3-4-5-6

B) 1-3-2-4-5-6

C) 1-2-3-5-4-6

D) 1-2-4-3-5-6

20. .... function sets the fill pattern and color.

A) floodfill ()

B) setcolor()

C) setfillstyle()

D) fillstyle ()

## Collections of Computer Science Multiple Choice Questions

### Answers:

|                           |                                 |
|---------------------------|---------------------------------|
| 1. C) <<                  | 11. D) All i, ii, iii, iv and v |
| 2. B) True, False         | 12. B) Copy Constructor         |
| 3. C) Both i and ii       | 13. A) True, True               |
| 4. A) Encapsulation       | 14. A) i, ii, iii only          |
| 5. D) All of the above.   | 15. A) Inheritance              |
| 6. A) ->*                 | 16. C) False, True              |
| 7. C) Meta Class          | 17. A) cputs ()                 |
| 8. B) .*                  | 18. iv) All of the above.       |
| 9. C) Default constructor | 19. A) 1-2-3-4-5-6              |
| 10. D) Constructor        | 20. C) setfillstyle()           |

## Solved MCQs of Java

### Set-1

**1. Java programs are**

- A) Faster than others
- B) Platform independent
- C) Not reusable
- D) Not scalable

**2. Java has its origin in**

- A) C programming language
- B) PERRL
- C) COBOL
- D) Oak programming language

**3. Which one of the following is true for Java?**

- A) Java is object oriented and interpreted
- B) Java is efficient and faster than C
- C) Java is the choice of everyone.
- D) Java is not robust.

**4. The command javac is used to**

- A) debug a java program
- B) compile a java program
- C) interpret a java program
- D) execute a java program

**5. Java servlets are an efficient and powerful solution for creating ..... for the web.**

- A) Dynamic content
- B) Static content
- C) Hardware
- D) Both a and b

**6. Filters were officially introduced in the Servlet ..... specification.**

- A) 2.1
- B) 2.3
- C) 2.2
- D) 2.4

**7. Which is the root class of all AWT events**

- A) java.awt.ActionEvent
- B) java.awt.AWTEvent
- C) java.awt.event.AWTEvent
- D) java.awt.event.Event

**8. OOP features are**

- i) Increasing productivity
- ii) Reusability
- iii) Decreasing maintenance cost
- iv) High vulnerability

## Collections of Computer Science Multiple Choice Questions

A) 1,2 & 4

B) 1,2 & 3

C) 1, 2 & 4

D) none of the above

**9. break statement is used to**

i) get out of method

ii) end a program

iii) get out of a loop

iv) get out of the system

A) 1 & 2

B) 1,2 & 3

C) 1 & 3

D) 3

**10. Native – protocol pure Java converts ..... into the ..... used by DBMSs directly.**

A) JDBC calls, network protocol

B) ODBC class, network protocol

C) ODBC class, user call

D) JDBC calls, user call

**11. The JDBC-ODBC bridge allows ..... to be used as .....**

A) JDBC drivers, ODBC drivers

B) Drivers, Application

C) ODBC drivers, JDBC drivers

D) Application, drivers

**12. Which of the following is true about Java.**

A) Java does not support overloading.

B) Java has replaced the destructor function of C++

C) There are no header files in Java.

D) All of the above.

**13. .... are not machine instructions and therefore, Java interpreter generates machine code that can be directly executed by the machine that is running the Java program.**

A) Compiled Instructions

B) Compiled code

C) byte code

D) Java mid code

**14. The command javac**

A) Converts a java program into binary code

B) Converts a java program into bytecode

C) Converts a java program into machine language

D) None of the above.

**15. Which of the following is not the java primitive type**

A) Byte

B) Float

C) Character

D) Long double

**16. All java classes are derived from**

## Collections of Computer Science Multiple Choice Questions

- A) java.lang.Class
- B) java.util.Name
- C) java.lang.Object
- D) java.awt.Window

### 17. Java Servlet

- i) is key component of server side java development
- ii) is a small pluggable extension to a server that enhances functionality
- iii) runs only in Windows Operating System
- iv) allows developers to customize any java enabled server

- A) i, ii & iii are true
- B) i, iii & iv are true
- C) ii, iii & iv are true
- D) i, ii & iv are true

### 18. Inner classes are

- A) anonymous classes
- B) nested classes
- C) sub classes
- D) derived classes

### 19. How many times does the following code segment execute

```
int x=1, y=10, z=1;  
do{y--; x++; y-=2; y=z; z++;} while (y>1 && z<10);
```

- A) 1
- B) 10
- C) 5
- D) infinite

### 20. State whether the following statement is true or false for EJB.

- 1. EJB exists in the middle-tier
- 2. EJB specifies an execution environment
- 3. EJB supports transaction processing

- A) 1-true, 2. true, 3. true
- B) 1- true, 2. false, 3. true
- C) 1- false, 2- false, 3- false
- D) 1-true, 2-true, 3-false

## Collections of Computer Science Multiple Choice Questions

### Answers:

|  |   |
|--|---|
| 141. B) Platform independent             | 151. C) ODBC drivers, JDBC drivers        |
| 142. D) Oak programming language         | 152. D) All of the above.                 |
| 143. A) Java is object ..... interpreted | 153. C) byte code                         |
| 144. B) compile a java program           | 154. B) Converts a java ....into bytecode |
| 145. A) Dynamic content                  | 155. D) Long double                       |
| 146. B) 2.3                              | 156. D) java.awt.Window                   |
| 147. B) java.awt.AWTEvent                | 157. D) i, ii & iv are true               |
| 148. B) 1,2 & 3                          | 158. B) nested classes                    |
| 149. D) 3                                | 159. A) 1                                 |
| 150. A) JDBC calls, network protocol     | 160. A) 1-true, 2. true, 3. true          |

# Collections of Computer Science Multiple Choice Questions

## Set-2

**1. All java classes are derived from**

- A) java.lang.Class
- B) java.util.Name
- C) java.lang.Object
- D) java.awt.Window

**2. The jdb is used to**

- A) Create a jar archive
- B) Debug a java program
- C) Create C header file
- D) Generate java documentation

**3. What would happen if "String[]args" is not included as argument in the main method.**

- A) No error
- B) Compilation error
- C) Program won't run
- D) Program exit

**4. For execution of DELETE SQL query in JDBC, ..... method must be used.**

- A) executeQuery()
- B) executeDeleteQuery()
- C) executeUpdate()
- D) executeDelete()

**5. Which method will a web browser call on a new applet?**

- A) main method
- B) destroy method
- C) execute method
- D) init method

**6. Which of the following is not mandatory in variable declaration?**

- A) a semicolon
- B) an identifier
- C) an assignment
- D) a data type

**7. When a program class implements an interface, it must provide behavior for**

- A) two methods defined in that interface
- B) any methods in a class
- C) only certain methods in that interface
- D) all methods defined in that interface

**8. In order to run JSP ..... is required.**

- A) Mail Server
- B) Applet viewer
- C) Java Web Server
- D) Database connection

**9. State true or false.**

## Collections of Computer Science Multiple Choice Questions

- i) AWT is an extended version of swing
- ii) Paint( ) of Applet class cannot be overridden
- A) i-false, ii-false
- B) i-false,ii-true
- C) i-true, ii-false
- D) i-true, ii-true

**10. Prepared Statement object in JDBC used to execute..... queries.**

- A) Executable
- B) Simple
- C) High level
- D) Parameterized

**Answers:**

|                            |                                 |
|----------------------------|---------------------------------|
| 1. C) java.lang.Object     | 6. C) an assignment             |
| 2. B) Debug a java program | 7. D) all methods ... interface |
| 3. C) Program won't run    | 8. C) Java Web Server           |
| 4. C) executeUpdate()      | 9. A) i-false, ii-false         |
| 5. D) init method          | 10. D) Parameterized            |

# Collections of Computer Science Multiple Choice Questions

## Set-3

**1. In Java variables, if first increment of the variable takes place and then the assignment occurs. This operation is also called .....**

- A) pre increment
- B) post increment
- C) incrementation
- D) pre incrementation

**2. When the operators are having the same priority, they are evaluated from ..... in the order they appear in the expression.**

- A) right to left
- B) left to right
- C) any of the order
- D) depends on compiler

**3. In java, ..... can only test for equality, where as ..... can evaluate any type of the Boolean expression.**

- A) switch, if
- B) if, switch
- C) if, break
- D) continue, if

**4. The ..... looks only for a match between the value of the expression and one of its case constants.**

- A) if
- B) match
- C) switch
- D) None of the above

**5. System.in.read() is being used, the program must specify the ..... clause.**

- A) throws.java.out.IOException
- B) throws.java.in.IOException
- C) throws.java.io.IOException
- D) throws.java.io.InException

**6. By using ..... you can force immediate termination of a loop, by passing the conditional expression and any remaining code in the body of the loop.**

- A) Break
- B) Continue
- C) Terminate
- D) Loop Close

**7. The out object is an object encapsulated inside the ..... class, and represents the standard output device.**

- A) standard
- B) local
- C) global
- D) system

## Collections of Computer Science Multiple Choice Questions

8. The third type of comment is used by a tool called ..... for automatic generation of documentation.

- A) Java commenting
- B) Java generator
- C) Java doc
- D) Java loc

9. In the second type the information written in java after // is ignored by the .....

- A) Interpreter
- B) Compiler
- C) Programmer
- D) All of the above

10. The compiled java program can run on any ..... platform having Java Virtual Machine (JVM) installed on it.

- A) program
- B) java
- C) hardware
- D) non java

### Answers:

- 1. A) pre increment
- 2. B) left to right
- 3. A) switch, if
- 4. C) switch
- 5. C) throws.java.io.IOException
- 6. A) Break
- 7. D) system
- 8. C) Java doc
- 9. B) Compiler
- 10.C) hardware

# Collections of Computer Science Multiple Choice Questions

## Set-4

**1. PreparedStatement Object in JDBC is used to execute ..... queries.**

- A) executable
- B) simple
- C) high level
- D) parameterized

**2. In JDBC ..... imports all Java classes concerned with database connectivity.**

- A) javax.sql.\*
- B) java.mysql.\*
- C) java.sql.\*
- D) com.\*

**3. MS-SQL stores data in a ..... file format.**

- A) .DAT
- B) .MDB
- C) .MSSQL
- D) .OBJ

**4. Ingres is a .....**

- A) Socket
- B) Compiler
- C) Database
- D) Web server

**5. In Java servlet method init() is called ..... times.**

- A) 1
- B) 2
- C) 0
- D) multiple

**6. State true or false for Java Program.**

- i) All class variables are instance variables
- ii) All protected methods are friendly methods

- A) i-false, ii-false
- B) i-false, ii-true
- C) i-true, ii-false
- D) i-true, ii-true

**7. State true or false for Java Program.**

- i) Data members of an interface are by default final
- ii) An abstract class has implementations of all methods defined inside it.

- A) i-false, ii-false
- B) i-false, ii-true
- C) i-true, ii-false

## Collections of Computer Science Multiple Choice Questions

D) i-true, ii-true

**8. .... of a remotely accessible object must implement .....**

- A) all methods, RemoteException
- B) class, RemoteException
- C) class, RemoteInterface
- D) all methods, RemoteInterface

**9. ....is the key to .....**

- A) Serialization, persistence
- B) Persistence, inheritance
- C) Inheritance, object
- D) Persistence, serialization

**10. A method name myMethod( ) that needs two integer arguments is declared as**

- A) public void myMethod( );
- B) public void myMethod(int a, int b);
- C) public void myMethod(int a, b);
- D) public int myMethod(a, b);

### Answers:

- 1. D) parameterized
- 2. C) java.sql.\*
- 3. A) .DAT
- 4. C) Database
- 5. A) 1
- 6. B) i-false, ii-true
- 7. C) i-true, ii-false
- 8. C) class, RemoteInterface
- 9. A) Serialization, persistence
- 10.B) public void myMethod(int a, int b);

# Collections of Computer Science Multiple Choice Questions

## Set-5

**1. JSP embeds in ..... in .....**

- A) Servlet, HTML
- B) HTML, Java
- C) HTML, Servlet
- D) Java, HTML

**2. The class at the top of exception class hierarchy is .....**

- A) ArithmeticException
- B) Throwable
- C) Class
- D) Exception

**3. In a java program, package declaration ..... import statements.**

- A) must precede
- B) must succeed
- C) may precede or succeed
- D) none

**4. The class string belongs to ..... package.**

- A) java.awt
- B) java.lang
- C) java.applet
- D) java.string

**5. .... package is used by compiler itself. So it does not need to be imported for use.**

- A) java.math
- B) java.awt
- C) java.applet
- D) java.lang

**6. State true or false for the following statements in Java.**

- i) Java beans slow down software development process.
  - ii) Java Servlets do not have built in multithreading feature.
- A) i-false, ii-false
  - B) i-false, ii-true
  - C) i-true, ii-false
  - D) i-true, ii-true

**7. State whether true or false.**

- i) init( ) of servlet is called after a client request comes in
  - ii) Servlets are ultimately converted into JSP
- A) i-false, ii-false
  - B) i-false, ii-true
  - C) i-true, ii-false

## Collections of Computer Science Multiple Choice Questions

D) i-true, ii-true

**8. What will be the result of compiling following code.**

```
public class MyClass{  
    public static void main(string args[]){  
        system.out.println("In first main()");  
    }  
    public static void main(char args[]){  
        system.out.println('a');  
    }  
}
```

- A) Code will not compile and will give "Duplicate main() method declaration" error
- B) Code will compile correctly but will give a runtime exception
- C) Code will compile correctly and will print "In first main()" (without quotes) when it is run
- D) Code will compile correctly and will print "a" (without quotes) when it is run

**9. Match the following.**

- |          |   |
|----------|---|
| a) Java  | 1) is a tool for debugging java program       |
| b) Javah | 2) is a tool for creating C-like header files |
| c) Javap | 3) runs java bytecode                         |
| d) jdb   | 4) prints java code representation            |

- A) a-3, b-2, c-1
- B) a-3, b-1, c-4, d-2
- C) a-1, b-2, c-3, d-4
- D) a-2, b-1, c-3, d-4

**10. State true or false.**

- i) init() is called after start() in applet
- ii) applets are used for networking
- iii) inheritance is a part of Java Foundation Classes
- iv) final does not prevent inheritance

- A) i-true, ii-true, iii-false, iv-true
- B) i-false, ii-false, iii-false, iv-false
- C) i-true, ii-true, iii-true, iv-true
- D) i-true, ii-false, iii-false, iv-false

**Answers:**

- 1. D) Java, HTML
- 2. B) Throwable
- 3. A) must precede
- 4. B) java.lang
- 5. D) java.lang
- 6. A) i-false, ii-false

## Collections of Computer Science Multiple Choice Questions

- 7. A) i-false, ii-false
- 8. C) Code will compile correctly and will print "In first main()" (without quotes) .. run
- 9. B) a-3, b-1, c-4, d-2
- 10.B) i-false, ii-false, iii-false, iv-false

[www.siteforinfotech.com](http://www.siteforinfotech.com)

# Collections of Computer Science Multiple Choice Questions

## Set-6

**1. The ..... and ..... classes are abstract classes that support reading and writing of byte streams.**

- A) reader, writer
- B) inputstream, outputstream
- C) objectinputstream, objectoutputstream
- D) none

**2. What is the error in the following code?**

```
class Test
{
    abstract void display( );
}
```

- A) No error
- B) Method display( ) should be declared as static
- C) Test class should be declared as abstract
- D) Test class should be declared as public

**3. A package is a collection of**

- A) classes
- B) interfaces
- C) editing tools
- D) classes and interfaces

**4. Which of the following methods belong to the string class?**

- A) length( )
- B) compare To ( )
- C) equals ( )
- D) All of them

**5. What will be the output of the following code?**

```
byte x=64, y;
y= (byte) (x<<2);
System.out.println(y);
```

- A) 0
- B) 1
- C) 2
- D) 64

**6. If m and n are int type variables, what will be the result of the expression**

m%n  
when m=5 and n=2 ?

- A) 0
- B) 1
- C) 2

## Collections of Computer Science Multiple Choice Questions

D) None of the above

**7. Which of the following control expressions are valid for an if statement?**

- A) An integer expression
- B) A Boolean expression
- C) Either A or B
- D) Neither A nor B

**8. The concept of multiple inheritance is implemented in Java by**

- A) extending two or more classes
- B) extending one class and implementing one or more interfaces
- C) implementing two or more interfaces
- D) both B and C

**9. Which of the following do not represent legal flow control statements?**

- A) break;
- B) return;
- C) exit();
- D) continue outer;

**10. Data input is**

- A) an abstract class defined in java.io
- B) a class we can use to read primitive data types
- C) an interface that defines methods to open files.
- D) an interface that defines methods to read primitive data types.

### Answers:

1. B) inputstream, outputstream
2. C) Test class should be declared as abstract
3. D) classes and interfaces
4. D) All of them
5. A) 0
6. B) 1
7. B) A Boolean expression
8. D) both B and C
9. C) exit();
10. D) an interface that defines methods to read primitive data types.

# Collections of Computer Science Multiple Choice Questions

## Set-7

**1. Using which keyword we can access value of the instance variables and class variables of that class inside the method of that class itself.**

- A) super
- B) final
- C) this
- D) either super or this

**2. If a variable is declared final, it must include ..... value.**

- A) integer
- B) no
- C) initial
- D) float

**3. State true or false.**

- i) JPanel is a class included in awt package.
- ii) Anonymous classes are mostly used for event handling.
- iii) Names of anonymous classes must be unique
- iv) JOptionPane is an inner class

- A) i-false, ii-false, iii-true, iv-true
- B) i-true, ii-false, iii-true, iv-false
- C) i-false, ii-true, iii-false, iv-false
- D) i-true, ii-false, iii-false, iv-true

**4. In java, string is a .....**

- A) primitive data type
- B) abstract data type
- C) combination of boolean
- D) None of the above

**5. Methods can be overloaded with a difference only in the type of the return value ..**

- A) Not supported
- B) False
- C) True
- D) None of the above

**6. Each method in a java class must have a unique name .**

- A) Not necessary
- B) True
- C) False
- D) None of the above

**7. State true or false.**

- i) comparisons precede logical operations in java
- ii) assignment operations succeed increment operations

## Collections of Computer Science Multiple Choice Questions

- iii) arithmetic operations succeed comparisons
- iv) x precede +

- A) i-true, ii-true, iii-false, iv-true
- B) i-true, ii-false, iii-true, iv-false
- C) i-false, ii-true, iii-false, iv-false
- D) i-true, ii-false, iii-false, iv-true

**8. It is important feature of java that it always provides a default constructor to a class.**

- A) Not supported
- B) False
- C) True
- D) None of the above

**9. .... is the key to .....**

- A) Serialization, persistence
- B) Persistence, inheritance
- C) Inheritance, object
- D) Persistence, serialization

**10. State true or false.**

- i) Public can only be assigned to class
- ii) Protected protects a statement
- iii) Protected method is never accessible outside the package
- iv) Friendly variable may be accessible outside class

- A) i-true, ii-true, iii-false, iv-true
- B) i-true, ii-false, iii-true, iv-false
- C) i-false, ii-true, iii-false, iv-false
- D) i-true, ii-false, iii-false, iv-true

### Answers:

- 1. C) this
- 2. C) initial
- 3. C) i-false, ii-true, iii-false, iv-false
- 4. B) abstract data type
- 5. B) False
- 6. A) Not necessary
- 7. A) i-true, ii-true, iii-false, iv-true
- 8. C) True
- 9. A) Serialization, persistence
- 10. C) i-false, ii-true, iii-false, iv-false