Choose ( 2 qns for each team ) : → 18 qns

1. Round robin scheduling is essentially the preemptive version of \_\_\_\_\_\_\_\_ ?

[A]FIFO

[B]Shortest job first

[C]Shortest remaining

[D]Longest time first

Answer: Option [A]

Explanation: Round-robin (RR) is one of the simplest scheduling algorithms for processes in an

operating system.The name of the algorithm comes from the round-robin principle known from

other fields, where each person takes an equal share of something in turn.

2.A page fault occurs ?

[A]when the page is not in the memory

[B]when the page is in the memory

[C]when the process enters the blocked state

[D]when the process is in the ready state

Answer: Option [A]

Explanation: A page fault (sometimes #pf or pf) is a trap to the software raised by the hardware

when a program accesses a page that is mapped in the virtual address space, but not loaded in

physical memory.

3.Which of the following algorithm suffers from the Belady's anomly ?

[A]FIFO

[B]LIFO

[C]Optimal Algorithm

[D]None of above

Ans : Option [A]

Explanation: Belady's anomaly proves that it is possible to have more page faults when

increasing the number of page frames while using the First in First Out (FIFO) page replacement

algorithm

4. Size of the virtual memory depends upon ?

[A]Data Bus

[B]Address Bus

[C]Size of main memory

[D]Memory buffer register

Option [B]

5.An approach that permits the computer to work on several programs instead of one is---

[A]on-line thesaurus

[B]over lapped processing

[C]multiprogramming

Ans : Option [B]

6. Which of the following topologies consists of multiple CPUs connected by a single

communication line running the length of the network

[A]Tree

[B]Ring

[C]Bus

[D]Star

Ans : Option [C]

**Networks :**

1. Error detection at the data link layer is achieved by?

[A]Bit stuffing

[B]Cyclic redundancy codes

[C]Hamming codes

[D]Equalization

Ans: Option [B]

2.The topology with highest reliability is ?

[A]Bus topology

[B]Star topology

[C]Ring Topology

[D]Mesh Topology

Answer: Option [D]

3.Baud means?

[A]The number of bits transmitted per unit time

[B]The number of byted transmitted per unit time

[C]The rate at which the signal changes

[D]None of above

Option [C]

4.How long is an IPv6 address?

[A]32 bits

[B]128 bits

[C]128 bytes

[D]64 bits

Option [B] Explanation: An IPv6 address is 128 bits long.

5.How often are BPDUs sent from a layer 2 device?

[A]Every 2 seconds

[B]Never

[C]Every 10 minutes

[D]Every 30 seconds

Answer: Option [A] Explanation: Every 2 seconds, BPDUs are sent out from all active bridge ports by default.

6.Which protocol does Ping use?

[A]TCP

[B]ARP

[C]ICMP

[D]BootP

Ans : Option [C]

Explanation: ICMP is the protocol at the Network layer that is used to send echo requests and

replies

7.Which of the following is private IP address?

[A]192.168.24.43

[B]168.172.19.39

[C]172.15.14.36

[D]12.0.0.1

Ans : Answer: Option [A]

Explanation: Class A private address range is 10.0.0.0 through 10.255.255.255. Class B private

address range is 172.16.0.0 through 172.31.255.255, and Class C private address range is

192.168.0.0 through 192.168.255.255.

General :

1 - What cable connects a cable modem to a wireless router?

1. CAT5 cable ------------------------

2. Coaxial cable

3. RJ-11 cable

4. No wire

2 - What program allows an Apple computer to run Microsoft Windows?

1. Bonjour

2. Boot camp-------------------------

3. iBoot

4.None of the above

3 - Which of the following people was a co-founder of Microsoft?

1. Steve Wozniak

2. Paul Allen-----------------------

3. Bill Moggridge

4.Gary Starkweather

4 - What are three types of networks?

1. LAN TAN WAN

2. LAN SAN WAN

3. LAN PAN WAN

4.LAN MAN WAN----------------------

5 - How many blocks of numbers are in an IP address?

1. 1

2. 2

3. 3

4. 4-----------------------------

6 - Which of the following is not a type of hard drive?

1. IDE

2. IDS----------------------------------

3. SATA

4. SCSI

7 - How many layers are in the OSI model?

1. 4

2. 5

3. 6

4. 7----------------------------------------

8 - Which of the below lines of HTML is correct?

1. <strong>bold text<strong>

2. </strong>bold text</strong>

3. <b>Bold text<b>

4. <b>bold text</b>-------------------------------------

9 - Who is considered to be the first programmer?

1. Ada Lovelace---------------------------------------

2. Alan Turing

3. Bill Gates

4.Tim Berners-Lee

10- JavaScript is ....?

1. a client-side scripting language---------------------------

2. a server-side scripting-language

3. a virus

4. another name for Java

11 - A six digit Hex color code (#ADD8E6) defines values of Red, Blue, and Green in what order?

1. #RRBBGG

2. #GGRRBB

3. #RRGGBB-------------------------------------------

4. ##BBRRGG

12 - What is phishing?

1. A computer virus

2. A corrupt website

3. A distribution of spam

4. An identity theft scheme--------------------------------

13 - What is a firewall?

1. Antivirus program

2. Internet blocker

3. Internet filter-----------------------------------------------

4. Internet logger

14- What is the default port number for Apache and most web servers?

1. 20

2. 27

3. 80-----------------------------------------------------------

4. 887

15 - What company built the first processor in the Apple Macintosh

1. AMD

2. Apple

3. Intel

4. Motorola--------------------------------------------------------------

16. How many keys does the standard Windows US keyboard with number pad have?

1. 108

2. 84

3. 94

4.104 (ans)

17) Which of the above policies can be used for preventing deadlock?

1. Any one of I and III but not II or IV
2. Any one of I, III and IV but not II
3. Any one of II and III but not I or IV
4. Any one of I, II, III and IV

Answer: D

18)Which of the following statements is NOT correct about HTTP cookies?

1. A cookie is a piece of code that has the potential to compromise the security of an Internet user
2. A cookie gains entry to the user's  work area through an HTTP header
3. A cookie has an expiry date and time
4. Cookies can be used to track the browsing pattern of a user at a particular site

Answer : B

Qns : ( 1 for each team )

1.Company that owns watson and is called the big blue? IBM

2.Company with tag line “Do no evil” ? Google

3.A famous website that helps fund ideas? Kick starter

4.The recent apple i  phone  feature that uses touch id and NFC ? Apple Pay

5. 1+ company’s OS ? Oxygen os

6.Name the browser that windows 10 uses? Spartan

7. What is MEAN stack in web technology ?

MongoDB, ExpressJS, AngularJS, NodeJS

8. Language developed by google ? Go

9. what is the rendering engine used by Chromium ? Blink

10. Relate V8 and Chrome ? V8 is Google's open source JavaScript engine.

Qns: ( 1 for each team )

1.What is a shell ?

Explanation: A Shell is the command line interpreter that provides the traditional user interface for

the UNIX operating system. Users direct the operation of the computer by entering commands as

text for a command line interpreter to execute or by creating text scripts of one or more such

commands.

2. What is the memory from 1K - 640K called ?

Conventional memory, also called base memory

3. What is Page stealing ?

Explanation: Before an application can access a page of data, it must be read into a buffer pool. If

the buffer pool is full, then DB2 must delete an existing page before it can read the new one in. This

process of page removal is called page-stealing.

4)In the network [200.10.11.144/27](http://200.10.11.144/27), the fourth octet (in decimal) of the last IP address of the network which can be assigned to a host is \_\_\_\_\_.

Answer:158

5)Consider a binary tree T that has 200 leaf nodes. Then the number of nodes in T that have exactly two children are \_\_\_\_\_\_.

Answer:199

6)Consider the following array of elements.

 89, 19, 50, 17, 12, 15, 2, 5, 7, 11, 6, 9, 100

The minimum number of interchanges needed to convert it into a max-heap is

Answer:3

7)Consider a software program that is artificially seeded with 100 faults. While testing this program, 159 faults are detected, out of which 75 faults are from those artificially seeded faults. Assuming that both real and seeded faults are of same nature and have same distribution, the estimated number of undetected real faults is \_\_\_\_\_\_\_.

Answer:28

8) What is Banker's Algorithm ??

Ans : It is to prevent deadlock in operating systems

9) What is a stub network?

Stub networks have only one connection to an internetwork. Only default routes can

be set on a stub network or network loops may occur.

Final Rounds :

1)

Given below are some algorithms, and some algorithm design paradigms.

|  |  |
| --- | --- |
| 1. Dijkstra's Shortest Path | i. Divide and Conquer |
| 2. Floyd-Warshall algorithm to compute all pairs shortest path | ii. Dynamic Programming |
| 3. Binary search on a sorted array | iii. Greedy design |
| 4. Backtracking search on a graph | iv. Depth-first search |
|  | v. Breadth-first search |

Match the above algorithms on the left to the corresponding design paradigm they follow.

1. 1-i, 2-iii, 3-i, 4-v
2. 1-iii, 2-iii, 3-i, 4-v
3. 1-iii, 2-ii, 3-i, 4-iv
4. 1-iii, 2-ii, 3-i, 4-v

Answer: 3

2)

\* X Award is presentd by ACM to the most promising computer professional who makes a single,

significant technical or service contribution at or before age 35

\* X was called "Grandma COBOL" for X's mastery and contribution to the language.

\* X found the first 'literal' instance of bug

Id X

Ans : Murray Grace Hopper

3)

\* The deep web is where search engines have not indexed the information, and so invisible to the mainstream public

\* X is a medium to felicitate exchange of goods and "services" across the deep Web

\* X is the first of its kind to be cryptologically encrypted, open source and free from 3rd party validation

\* A vast amount of innovation has gone through modifying ASICs(Application Specific Integrated Circuits) to "mine" cryptographic information for producing more of X.

Id X

Ans: Bitcoin

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4 )

\* X derived its name from from a South African term that means human-ness.

\* X was created by Mike Shuttlework and is now a rave among computer science students and in general developers

\* Its versions are named after African animals in alphabetical order just as Android versions are named after  desserts (v1.6: Donut, 2.0: Eclair, 2.1: Froyo etc)

\* The next stable version is going to be named Vervet

Id X

Ans: Ubuntu

5 )

\* The Great Fire of Rome was an urban fire that started on the night between 18 and 19 July in the year 64 AD

\* The fire was supposed to be started by King \_, the Roman Emperor.

\* A very popular Disk authoring software of yesteryear took its name from this incident.

Id the software

Ans: Nero burning ROM

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6)

\* In the 14th century Europe was under the Plague that killed millions of people

\* The Italians would force ships coming from other countries to wait in an isolated island for 40 days so that they could ensure that the people coming in the ship did not have disease

\* X literally means 40 in Italian

\* X is a very commonly used security term.

Id X

Ans: Quarantine