# Combined Bank
*Sonali & Janata Bank Officer (IT/ICT)-2019*
Exam Taker: AUST

**1. Suppose a C program has floating constant 1.414, what's the best way to convert it as a float data type?**
a) (float)1.414     b) float(1.414)     c) 1.414f or 1.414F     d) None of these     **Ans. c**

✎**Explanation:** By default floating constant is of double data type. By suffixing it with f or F, it can be converted to float data type.

**2. Consider the following variable declarations and definitions in C**
i. int var_9=1     ii. int 9_var=2     iii. int _=3
**Choose the correct statement w.r.t above variables.**
a) Both i) and ii) are valid                    b) Only i) is valid
c. Both i) and iii) are valid                    d) All of these                    **Ans. c**
✎**Explanation:  Rules for naming an identifier**
Consists only letters, digits and underscore
Starts only with an alphabet or underscore
Keywords cannot be used. Keywords are reserved.
Can be as long as you like, first 31 characters are significant.

**3. For a given integer, which of the following operators can be used to set and reset a particular bit respectively?**
a) | and &          b) && and ||          c) & and |          d) || and &&          **Ans. a**
✎**Explanation:** Bitwise operator | can be used to "set" a particular bit while bitwise operator & can be used to "reset" a particular bit. Please note that && and || are logical operators which evaluate their operands to logical TRUE or FALSE. It should be noted that bitwise operator & can be used for checking a particular bit also i.e. whether a bit is set or not.

**4. Let x be an integer which can take a value of 0 or 1. The statement if(x==0) x=1; else x=0; is equivalent to which of the following?**
a) x=1+x          b) x=1-x          c) x= x -1          d) x=1%x          **Ans. b**

**5. The maximum number of processes that can be in ready state in computer system with n CPU's is—**
a) n          b) $n^2$          c) 2n          d) indepent of n     **Ans. d**
✎**Explanation:**   The size of ready queue doesn't depend on number of processes. A single processor system may have a large number of processes waiting in ready queue.

**6. Which of the following is not a stable sorting algorithm in its typical implementation?**
a) Heap Sort          b) Quick Sort          c) Merge sort          d) Insertion sort     **Ans. b**

✎**Explanation: Efficient** implementations of Quicksort are not a stable sort, meaning that the relative order of equal sort item is **not** preserved. Quicksort can operate in-place on an array, requiring small additional amounts of memory to perform the sorting.

7. **You have to sort 1GB of data with only 100MB of available main memory. Which sorting technique will be more appropriate?**
   a) Heap sort      b) Insertion sort      c) Quick sort      d) Merge sort      **Ans. d**

✎**Explanation:** The data can be sorted using external sorting which uses merging technique. This can be done as follows:
   1. Divide the data into 10 groups each of size 100.
   2. Sort each group and write them to disk.
   3. Load 10 items from each group into main memory.
   4. Output the smallest item from the main memory to disk. Load the next item from the group whose item was chosen.
   5. Loop step #4 until all items are not outputted.
   The step 3-5 is called as merging technique.

8. **Randomized quicksort is an extension of quicksort where the pivot is chosen randomly.What is the worst case complexity of sorting n numbers using randomized quicksort?**
   a) $O(n)$      b) $O(n^2)$      c) $O(n \log n)$      d) $O(n!)$      **Ans. c**

✎**Explanation:** Randomized quicksort has expected time complexity as $O(n \log n)$, but worst case time complexity remains same. In worst case the randomized function can pick the index of corner element every time.

9. **Consider the following recursive function fun(x,y). What is the value of fun(4,3)?**
   ```
   int fun(int x, int y)
   {
   if(x==0)
   return y;
   return fun(x-1,x+y)
   }
   ```
   a) 9      b) 10      c) 12      d)13      **Ans. d**

10. **The average number of key comparisons done in a successful sequential search in a list of length it is**
    a) log n      b) (n+1)/2      c) (n-1)/2      d) n/2      **Ans. b**

11. **In UNIX, processes that have finished execution but have not yet had their status collected are known as-**
    a) Sleeping processes      b) Stopped processes
    c) Zombie processes      d) Orphan processes      **Ans.c**

✎**Explanation: Zombie process**: By default, the UNIX system assumes that if child process terminates, the parent process collects some data about the child. As soon as this collection is made, the system releases information bits about the child process and removes its pid from the process table. However, if the parent process fails to collect the child's data, the

UNIX is forced to keep the child's pid and termination data in the process table indefinitely. Such a terminated process whose status is not collected is called a zombie process, or simply a zombie

**Orphan process:** opposite situation to zombie processes. In this a parent process terminates before its child processes. UNIX redefines the "parent PID" field in the child process's data to process init.

12. **In UNIX. the login prompt can be changed by changing the content of the file -**
    a) getydefs      b) contrab      c) initab      d) init      **Ans. b**
    ✎**Explanation: Crontab** For commands that need to be executed repeatedly (e.g., hourly, daily, or weekly), you can use the crontab command. The crontab command creates a crontab file containing commands and instructions for the cron daemon to execute

13. **Which of the following UNIX commands allows scheduling a program to be executed at specifies time?**
    a) nice      b) cron      c) date and time      d) schedule      **Ans. b**
    ✎**Explanation: cron** is the daemon responsible for executing scheduled and recurring commands (every day, every week, etc.); **atd** is that which deals with commands to be executed a single time, but at a specific moment in the future.

14. **Which of the following is major part of time taken when accessing data on the disk?**
    a) Settle time      b) Rotational delay      c) Waiting time      d) Seek time      **Ans. d**
    ✎**Explanation:** Seek time is time taken by the head to travel to the track of the disk where the data to be accessed is stored.

15. **Which of the following programming helps you to learn Android programming?**
    a) C      b) SQL      c) Java      d) Python      **Ans. c**

16. **Which tool could be used for detecting vulnerability through SQL injection?**
    a) nmap      b)metasploit      c) bit defender      d) UML      **Ans. b**
    ✎**Explanation:** Metasploit has several modules that exploit SQL injection vulnerabilities, allowing us to test and verify whether our targets are susceptible to this attack.

17. **Which of the following data structure is non-linear type?**
    a)Strings      b) Lists      c) Stacks      d) None of these      **Ans. d**
    ✎**Explanation::** Examples of non-linear data-structures are Graphs and Trees. However Linked List and Arrays are linear data structures.

18. **Which of the following is not a standard synchronous communication protocol?**
    a) PAS      b) SDLC      c) SLIP      d) SMTP      **Ans. a**

19. **Which of the standard protocol for network management features?**
    a) FTP      b) SNA      c) SNMP      d) SMTP      **Ans. c**

20. **How many pairs of stations can simultaneously communicate on Ethernet LAN?**
    a) 1      b) 2      c)3      d) Multiple      **Ans. a**
    ✎**Explanation:** only 1 pair of stations can communicate on Ethernet LAN. LAN is defined as local area network. It is used for short distances.

21. **A path for carrying signals between a source and a destination is known as -**
    a) Router      b) Channel      c) Link      d) Block      **Ans. b**

**22. In SQL, the-------command is used to recompile a view.**
a) COMPILE VIEW   b) DEFINE VIEW    c) ALTER VIEW    d) CREATE VIEW   **Ans. c**

✎**Explanation:** The ALTER VIEW command allows you to modify a view

**23. Which of the following requires the most time in SDLC?**
a) Requirement Analysis    b) Testing     c) Deployment       d) Design       **Ans. d**

**24. Which of the declaration is correct?**
a) int length;      b) char int           c)int long;          d) float double;    **Ans. a**

**25. POP3 is a protocol for-**
a) Email Sending   b) Email Composing    c) Email Receiving    d) Email Storing    **Ans. c**

**26. Which server can you use to dynamically assign IP addresses to the PCs in a LAN?**
a) DHCP Server    b) Web Server       c) DNS Server         d) FTP Server     **Ans. a**

✎**Explanation:** DHCP is an abbreviation Dynamic Host Configuration Protocol. It is an application layer protocol used by hosts for obtaining network setup information. The DHCP is controlled by DHCP server that dynamically distributes network configuration parameters such as IP addresses, subnet mask and gateway address.

**27. The operator that cannot be overloaded is ---**
(a)++           b) ()             (c) ~             d) ::          **Ans. d**

**28. Which of the following is the destructor of class Vehicle?**
a) *Vehicle0    b)~Vehicle()      c)~Vehicle(int value)   d)*Vehicle(int value)     **Ans. b**

**29. An n*n armay v is defined as follows: v[i, j]=i-j for all i,j; 1<=i<=n, 1<=j<=n , the sum of the element of array v is**
a) 0          b) n-1            c) $n^2$ -3n+2       d) $n^2(n+1)/2$    **Ans. a**

**30. The maximum number of binary trees that can be formed with three unlabeled nodes is-**
a) 1          b) 3             c) 5             d) 4          **Ans. c**

✎**Explanation::** We can find the number of binary tree by: Here n = 3
Number of binary tree = $(^{2n}C_n)/$ n+1    = $(^{2*3}C_3)/$ 4+1 = 5.

**31. What is time complexity of Huffman coding?**
a) O(n)        b) O(n log n)       c) O(n (log n)^2)    d) O(n^2)      **Ans.b**

✎**Explanation:** The time complexity of the Huffman algorithm is **O(nlogn)**.

**32. Which of the following TCP/IP addresses constitute the loopback address?**
a) 1.1.1.1       b) 255.255.255.255    c) 127.0.0.0       d) 127.0.0.1     **Ans. d**

✎**Explanation:** A loopback address is a type of **IP address** that is used to test the communication or transportation medium on a local network card and/or for testing network applications. Data packets sent on a loopback address are re-routed back to the orginating node without any alteration or modification.

**33. Which of the following operator functions cannot be global i.e must be a member function?**
a) Conversion operator    b) new          c) delete          d) all of these      **Ans. a**

**34. Which of the following is not an operator in Java?**
a) instanceof      b) sizeof          c) new           d) All of this       **Ans. b**

✎**Explanation:** There is no sizeof operator in Java. We generally don't need size of objects.

35. **Find the output of following Java code line:**
    ```
    System.out.println(math.floor(-7.4)
    ```
    a) -7              b) -7.4              c) -8              d) -7.2              **Ans. c**

✎**Explanation:**
```
public class FloorCeilTest {
public static void main(String args[]) {
double d1 = 84.6;
double d2 = -7.4;

System.out.println("Ceiling of '" + d1 + "' = " +
Math.ceil(d1));
System.out.println("Floor of '" + d1 + "' = " +
Math.floor(d1));
System.out.println("Ceiling of '" + d2 + "' = " +
Math.ceil(d2));
System.out.println("Floor of '" + d2 + "' = " +
Math.floor(d2));}}
```
Output:
Ceiling of '84.6' = 85.0
Floor of  '84.6' = 84.0
Ceiling of '-7.4' = -7.0
Floor of '-7.4' = -8.0

36. **Which functions overload the >> operator?**
    a) gt()            b) more()            c) ge()            d) None of this     **Ans. d**
✎**Explanation::**  rshift() overloads the >> operator

37. **What is the output of following code? Print 9//2**
    a) 4              b)4.0              c)4.5              d)Error              **Ans. b**
✎**Explanation::**   The '//' operator in Python returns the integer part of the floating number.
    In python : 10/3=3.333 and 10//3 =3

38. **Which of these is not a core data type?**
    a) Lists          b) Dictionary        c) Class          d) Tuples+95       **Ans. c**
✎**Explanation:**   Class is a user defined data type.

39. **Which of the following function converts a string into float in python?**
    a) int(x[.base])      b) float(x)        c) long(x[,base])      d) str(x)        **Ans. b**
✎**Explanation:**   float(x) − Converts x to a floating-point number

40. **Which of the following process scheduling algorithm may lead to starvation?**
    a) FIFO           b) Round Robin       c) Shortest Job Next   d) None of these   **Ans. c**
✎**Explanation:**
    shortest job next may lead to process starvation for processes which will require a long time
    to complete if short processes are continually added

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*Programmer (MCQ Test-20-09-2019)*
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1.  **Which of the following provides a programmer with the facility of using object of a class inside other classes?**
    a)Inheritance      b) Abstraction      c) Encapsulation      d) Composition      **Ans:d**
    **Explanation:** Composition is one of the fundamental concepts in object-oriented programming. It describes a class that references one or more objects of other classes in instance variables. This allows you to model a *has-a* association between objects.

2.  **Type of software which is designed for users to customize programs is**
    a)freeware      b) shareware      c) macros      d) none of these      **Ans. a**
    **Explanation: Freeware** is any copyrighted **software**, application or **program** that may be freely downloaded, installed, used and shared. .**Freeware** differs from **free software**, as the latter allows a user to modify source code for republishing or integration with other **software**.

3.  **A major challenge in mixing SQL with a general-purpose language is mismatching in the**
    a) Definition of data b) Manipulation of data  c) Execution of data d) Output of data      **Ans.b**

4.  **In user facilities, copying of all records onto a main store from permanent store is considered as**
    a) delete file      b) rename file      c) save file      d) load file      **Ans.d**
    **Explanation:** In programming, **load** means to copy data from main memory into a data register.

5.  **To divide a class C network into a maximum of 14 subnets - each capable of having up to 14 hosts, the subnet mask used should be:**
    a) 255.255.255.0  b) 255.255.255.192      c)255.255.255.240      d) 255.255.255.78      **Ans.c**

6.  **If master and transaction file have keys in same order then it takes**
    a)less time      b) more time      c) many hours      d) many days      **Ans.a**

7.  **What is not the advantage of IPV6 over IPV4?**
    a)longer address                      b) Classification of traffic
    c) More real IP addresses              d) Jumbo Payload      **Ans.a**

8.  **What is the precedence of arithmetic operators (from highest to lowest)?**
    a)%,+,/,*,-      b)+,-,%,*,/      c)%,+,-,*,/      d)%,*,/,+,-      **Ans.d**

9.  **Once connection is set up, program can send SQL commands to database by using**
    **a)** SQLExcelConn  b) SQLDirect      c) SQLExcelDirect      d) SQIConnect      **Ans.d**

10. **File used to update information in computer's master file is classified as**
    a) transaction file   b) direct file      c) order file      d) sequence file      **Ans.a**

11. **Testing of software with actual data and in actual environment is known as?**
    a) Regression testing    b) Beta testing      c) Alpha testing      d) None of these      **Ans. b**

✍**Explanation:**A **beta test** is a type of testing period for a computer product prior to any sort of commercial or official release. Beta testing is considered the last stage of testing, and normally involves distributing the product to *beta test sites* and individual users ("beta testers") outside the company for real-world exposure.

12. **What are the values of the following expressions:**
    2** (3**2), (2**3)**2 , 2**3**2
    a) 64, 512, 64          b)64, 64, 64          c) 512, 512, 512          d) 512, 64, 512     **Ans. d**

✍**Explanation:**Expression 1 is evaluated as: 2**9, which is equal to 512.Expression 2 is evaluated as 8**2, which is equal to 64. The last expression is evaluated as 2** (3**2). This is because the associativity of ** operator is from right to left. Hence the result of the third expression is 512.

13. **Special set of characters that computer associates with specific user identification is classified as**
    a) password          b)identity code          c) inquiry code          d) dump code     **Ans. a**

14. **What will be the output of the following PHP code?**   <? php  "Hello World" ?>
    a)Error          b) Hello World          c) Nothing          d) None of this     **Ans. c**

15. **What is the output of the code shown?** %(qty)d more %(food)s' %{'qty': 1, 'food': 'spam'}
    a)Error          b) 1 more spam          c)No output          d) 1 more foods     **Ans. b**

✍**Explanation:** Here qty and food are simple string and key in xml. So print there value.

16. **Number of bits in 'BCD' code used in computing are**
    a) seven bits          b) twelve bits          c) eighteen bits          d) six bits     **Ans. d**

17. **To cheek to see of the Web server you are trying to reach is available or is down, which command line utility should you use?**
    a)PING          b) ICS          c) Telnet          d) None of these     **Ans.a**

18. **Device which converts digital signals into sound and sound from telephone handset into digital signals is classified as**
    a) digital coupler    b) analogue coupler          c) acoustic coupler          d) terminal coupler  **Ans.c**

✍**Explanation:**
     An **acoustic coupler** is a hardware device that enables a modem (a device that converts signals from analog to digital and from digital back to analog) to connect to a voice circuit.

19. **What type of network provides access to the regional service providers and typically span distances greater than 100 miles?**
    a) LAN          b) MAN          c) WAN          d) WLAN          **Ans.c**

20. **----Provides a connection- oriented reliable service for sending message.**
    a)TCP          b) IP          c) UDP          d) None of these

✍**Explanation:** Transmission Control Protocol (TCP) is a connection-oriented protocol. For connection-oriented communications, each end point must be able to transmit so that it can communicate. ... Because they can keep track of a conversation, connection-oriented protocols are sometimes described as stateful.

21. **Which of the following type is not supported for mobile application viewing for Google docs?**
    a) Spreadsheets   b) Word processor files  c) Database files          d) All of these     **Ans.c**

22. **The term push and pop is related to the**
    a)array          b)stacks          c)lists          d)All of these     **Ans. b**

23. **Type of error which occurs when data is transferred from one device to another is classified as**
    a) transmission error  b) interval error   c) software error     d) discontinued error     **Ans. a**

24. **A Non-Functional Software testing done to check if the user interface is easy to use and understand**
    a) Security Testing b) Unit testing     c) Block Box Testing     d)Usability Testing     **Ans.d**

25. **A device that allows one of several analog or digital input signals which are to be selected and transmits input that is selected into a single medium is called**
    a) signal changer    b)multiplexer       c) demultiplexer     d) digital transmitter     **Ans. b**

 ❧**Explanation::** a **multiplexer** (or mux), also known as a data selector, is a device that selects between several analog or digital input signals and forwards it to a single output line.
    A **multiplexer** of inputs has select lines, which are used to select which input line to send to the output.

26. **Which of the following medium is used for broadband local networks?**
    a) Coaxial             b) Optic fiber             c) CATV                 d)DUTP             **Ans. c**

 ❧**Explanation:** **CATV** is one of the most common methods of transmitted television signals to a consumer's home, using radio frequency signals transmitted through coaxial cable. More recently, **CATV** can also be transmitted using optical fiber, which utilizes pulses of light to transmit a signal.

27. **Interleaving of records to form one file containing all records is classified as**
    a) merging            b) finding              c) file learning         d) searching         **Ans. a**

28. **Program background, program functions and computing requirements are part of**
    a) decision box          b) statement box       c) operations detail    d)none of these     **Ans. a**

29. **Variable which use same name in whole program and in its all routines thus best classified as**
    a) middle variable  b) default variable       c) local variable        d) global variable  **Ans.d**

 ❧**Explanation:** In computer programming, a **global variable** is a **variable** with **global** scope, meaning that it is visible (hence accessible) throughout the program, unless shadowed. The set of all **global variables** is known as the **global** environment or **global** state.
    **Example:**
```
int a =4;
int b=5;
public int add(){
return a+b;}
```

30. **The name of the testing which is done to make sure the existing features are not affected by new changes**
    a) Recursive testing  b) Regression testing  c) Whitebox testing  d) Unit testing       **Ans. b**

 ❧**Explanation:**
    Regression Testing is defined as a type of software testing to confirm that a recent program or code change has not adversely affected existing features. Regression Testing is nothing but a full or partial selection of already executed test cases which are re-executed to ensure existing functionalities work fine. Wheather whitebox testing is tested by developer and unit testing is small portion testing.

31. **Set of numbers used to check all groups record within limits of data is classified as**
    a) variable check   b) decimal check        c) type check            d) range check       **Ans. d**

32. **Process of converting data or information in the form of which is readily available for processing is called**
    a) encoding     b) decoding     c) translating      d) data organization    **Ans. a**

33. **All decimal values and integers are included in set of**
    a) whole numbers   b) natural numbers   c) real numbers      d) integers     **Ans. b**

34. **Which of the following is not a Software Development Life Cycle Phase?**
    a) Test Closure     b) Coding      c) Testing      d) None of these    **Ans. a**

✎**Explanation: Test Closure** is a document that gives a summary of all the **tests** conducted during the software development life cycle, it also gives a detailed analysis of the bugs removed and errors found. In other words, **Test Closure** is a memo that is prepared prior to formally completing the **testing** process.

35. **Any hardware or software which is used to connect two devices by enabling them to communicate is classified as**
    a) analogue modem   b) digital modem     c) analogue interface   d) interface      **Ans. d**

36. **Waterfall model phase in which system design is prepared and this system design helps in specifying system requirements and define overall system architecture is**
    a) planning      b) modeling      c) construction       d) communication   **Ans. b**

37. **Language compilers and interpreters does not translate statements correctly when they have**
    a) transcription error   b) base errors      c) syntax error       d) logical error     **Ans.c**

38. **Which of the following web service can be controlled by iAWSManager cloud app from an iPhone?**
    a) EC2          b) ELB          c) SQS          d) All of these     **Ans. d**

39. **Issuance of cash through terminal outside bank is an example of**
    a) terminals    b) interfaces      c) hardware devices      d) telecommunication    **Ans. a**

40. **Five components that make up a data communications system are message, sender, receiver, medium and**
    a) Code         b) connecting device   c) protocol        d) All of these    **Ans. c**

✎**Explanation:** It is a digital language through which we communicate with others on the Internet. **Protocol** meaning is that it a set of mutually accepted and implemented rules at both ends of the communications channel for the proper exchange of information

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**Probashi Kallyan Bank**
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1. **Link list can be implemented using?**
   a) Array       b) Pointers      c) Both A & B      d) None of these    **Ans.b**

2. **Which of the following is a design pattern?**
   a) Factory      b) List      c) Queue       d) All of these    **Ans.d**

3. **Method used in writing and designed of a program is termed as**
   a) bottom-up method   b) top-down method   c) split method     d) None of these    **Ans.b**

4. **Place where large amount of data are stored outside central processing unit is called**
   a) peripherals     b) control unit     c) AL unit     d) backing store    **Ans.d**

✎**Explanation:** The term **backing storage** refers to any non-volatile data **storage** that will retain a **computer's** data, even after the **computer** is powered off. Common types of **backing storage** devices are hard drives, SSD, external hard disk drives, optical media such as CD or DVD, and flash media such as thumb drives and memory sticks.

5. **Which of the following programme helps you to learn Android programming**
   a) C     b)SQL     c) Java     d) Python    **Ans.c**

6. **Which one is modern light weight message exchange format?**
   a) JSON     b)XML     c)MX     d)HTML    **Ans.a**

7. **In C++,the idea to hiding the details of how something is implemented is known as**
   a)inheritance     b)encapsulation   c)recursion     d)polymorphism   **Ans.b**

8. **The only language understood by a digital computer is called**
   a)Assembly language   b)High level language   c)Binary language    d)None of these    **Ans.c**

9. **Which of the following is a project scheduling method that can be applied to software development?**
   a)PERT     b)CPM     c)Both A & B     d)CMM    **Ans.c**

✎**Explanation:** Program evaluation and review technique (PERT) and critical path method (CPM) are two project scheduling methods that can be applied to software development.

10. **"The time to communicate between Bangladesh and USA is the same as that to communicate between two adjacent houses in Bangladesh."-In which case is the above true?**
    a)Satellite     b)Fiber optic     c)Twisted pair     d)Radio link    **Ans.a**

11. **Which kind of software testing strategy starts with testing the fundamental components first?**
    a) Top-down testing             b)Bottom-up testing
    c) Stress testing               d)Back to back testing

12. **A path for carrying signals between a source and a destination is known as**
    a)Router     b)Channel     c) Link     d) Block    **Ans.b**

13. **Which of the standard protocol for network management features?**
    a)SNMP     b)SNA     c)FTP     d)SMTP    **Ans.a**

14. **In SQL,the----command is used to recompile a view**
    a) COMPILE VIEW   b)DEFINE VIEW    c)ALTER VIEW    d) CREATE VIEW    **Ans.c**

15. **Which of the following is not a standard synchronous communication protocol?**
    a)SDLC     b)SNA     c)FTP     d)SMTP    **Ans.c**

16. **In Java, which operator is used to create an object**
    a) class     b)scanf     c)print     d) None of these    **Ans.d**

✎**Explanation:** new () is used to create an object.

17. **Which of the following term refers to the degree to which data in a database system are accurate and correct?**
    a)Data integrity    b)Data security     c) Data validity     d)None of these    **Ans.a**

18. **The complexity of Bubble sort algorithm is**
    a)$O(n)$     b)$O(\log n)$     c) $O(n^2)$     d) $O(n \log n)$    **Ans.c**

*Remaining all the questions are same as which is taken by AUST.*

**Bangladesh Rural Electrification Board (BREB)**
*Assistant Junior Engineer (IT)-2019*

1. What is the modulus of 3+4i?
   a)7              b)2              c)5              d)none          **Ans.c**
2. What is the frequency (Hz) for a 4 pole generator of speed 1200rpm?
   a) 50            b)60            c)40             d)none
3. তড়িৎ চৌম্বক আবেশের আবিষ্কারক হলেন?
   a) নিউটন        b)গালিলিও        c)ফারাডে         d)ম্যাক্স
4. Which one is a Web Browser?
   a)Google Chrome  b)Mozilla Firefox    c)Internet Explorer   d)All    **Ans.d**
5. কারাগারের রোজনামচা গ্রন্থেও লেখক কে?
   a) শেখ হাসিনা     b)শেখ মুজিবুর রাহমান    c)শেরু ই- বাংলা     d) কেহইনা
6. Fill in the blanks with appropriate preposition in the sentence, "I am capable--doing it".
   a)in             b)of            c)with           d)for
7. What is the approximate number of consumers (crore) under BREB?
   a)2.50           b)2.40          c)2.70           d)None
8. What one is the Unipolar Transistor?
   a)PNP            b)NPN           c)JFET           d)None
9. Write the name of the Gate.
   a)NOR            b)OR            c)NAND           d)None
10. What is the past participle of "sing",
    a)song          b)sang          c)sung           d)singed
11. কোন বস্তুও লদ্ধি বল যে বিন্দু দিয়ে অতিক্রম করে তাকে বলে
    a)ভারকেন্দ্র      b)ভরকেন্দ্র       c)বল কেন্দ্র       d)কোনটা না
12. The step-by-step instruction that solve a problem is called:
    a)an algorithm    b)a list      c)a plan              d)a sequential structure  **Ans. a**
13. Which layer of OSI determines the interface of the system with the user?
    a)Network        b)Application    c)Data-link      d)Session        **Ans. b**
14. What is the value of sin 3690?
    a) 0             b) 1            c)0.5            d) undefined
15. A hardware device that is capable of executing a sequence of instructions is known as:
    a)CPU            b)ALU           c)CU             d)Processor      **Ans.d**
16. What is the value of Form Factor of a sinusoidal wave?
    a)1.11           b)0.636         c)1.73            d)1
17. Write the name of parts of speech of "fertile"
    a)noun           b)pronoun       c)adverb         d)adjective
18. Considering the Voltage Regulation of transformers,which one is the best?
    a) 6%            b)20%           c)5%             d)0%
19. Which is the easiest component to environmentally recycle?
    a)Motherboards   b)CMOS batteries    c)Toner cartridges   d)Cathode ray tubes
20. একটি থলিতে ৪ টি লাল , ৫ টি সবুজ ও ৬ টি নিল কলম আছে। ওই থলি থেকে একটি কলম নেয়া হলে উহা সবুজ হওয়ার সম্ভাবনা কত?
    a)4/15           b)6/15          c)1/5            d)1/3

21. What is the Address bit for an 8-bit Microprocessor?
    a)4                b)8                c)16                d)None                **Ans.c**

22. বঙ্গবন্ধু ঐতিহাসিক ৬ দফা কোন সালে ঘোষণা করেন।
    a)1996            b) 1968            c)1997            d)1970

23. What tool is used to test serial and parallel ports?
    a)high volt probe   b)cable scanner    c)loop backs (wrap plugs)      d)sniffer

24. What command is used to remove files in UNUX?
    a)dm              b)rm              c)delete            d)erase            **Ans.b**

25. সেন্ট মার্তিন কোন জেলায় অবস্থিত?
    a) ভোলা           b)পটুয়াখালী        c)কক্সবাজার         d)নোয়াখালী

26. Which one is the synonym of "adult"?
    a)mature          b)child            c)immature          d)none

27. Which one can only be used for read?
    a)RAM             b)ROM             c)Both a & b        d)none            **Ans.b**

28. Which motor is used for constant speed?
    a) Induction       b) Synchronous     c) Single phase     d) None

29. Which one is used to close a running document?
    a)ctrl+W          b)ctrl+S           c)ctrl+A            d)none

30. What a battery is?
    a)Current source   b)Voltage source    c)Power source      d)None

31. Which Format Specifier is used for typing double data?
    a)%f              b)%1f             c)%d                d)%s              **Ans.b**

32. What type of material Silicon (Si) is?
    a)Conductor        b)Insulator        c)Semiconductor     d)Good conductor  **Ans.c**

33. What is the radius circle,$x^2+y^2-6x+9=$?
    a)0               b)1               c)2                 d)None

34. At what region a transistor operates?
    a)Active          b)Cut off          c)Saturation        d)None

35. Which one is pure object oriented language?
    a)C++             b)C+              c)JAVA              d)None            **Ans.d**

36. Write the name of the symbol.
    a)Op Amp          b)DIAC             c)TRIAC             d)SCR

37. What is to be added in an electric line to increase voltage?
    a)Capacitor        b)Inductor         c)Resistor          d)All

38. Write the name of the symbol
    a)Zener diode      b)Schottkey diode   c)SCR               d)None

39. সিগন্যালের পারস্পারিক রূপান্ড়ও করে?
    a) মডেম           b)হাব              c)রাউটার            d)গেটঅয়ে          **Ans.a**

40. পলি বিদ্যুৎ সমিতি গুলো ?
    a)সায়াত্তসাশিত      b)সরকারি           c)অর্ধ সরকারি        d)বেসরকারি

41. A nibble is equal to:
    a)4 bits          b)6 bits           c)8 bits            d)16 bits         **Ans.a**

42. What is the full name of LCD?
    a)Light control diode                  b)Light crystal display

    c)Liquid crystal diode         d)Liquid crystal display     **Ans.b**

43. The OR, XOR & AND functions can be performed by
    a)ALU       b)CU        c)Memory        d)Register     **Ans.a**

44. What device separates a single network into two segments but lets the two segments appear as one to higher protocols?
    a)Switch       b)Bridge        c)Gateway        d)Router

45. Which one is design language?
    a)DDL       b)DML        c)Both a & b        d)None     **Ans.a**

46. একটি ওয়েব এক সাইকেল এ যে দূরত্ব অতিক্রম করে তাকে বলে
    a)Frequency       b)Cycle        c) Wavelength        d) None     **Ans.a**

47. What can greatly reduce TCP/IP configuration problem?
    a)WINS Server       b)WINS Power        c)DHCP Server        d)PDC

## BPSC Network Engineer-2019
### Exam Taker: PSC

1. Change the narration: He said to me, "Thank you."
    ক)He thanked me.            খ)He had thanked me.
    গ)He told me that thank you.        ঘ)He wished thank to me.

2. He has recently parted…...his wife.
    ক)with       খ)from        গ)to        ঘ)at

3. IP address থেকে MAC address আনার protocol কোনটি?
    ক)RIP       খ)BGP        গ)ARP        ঘ)TCP

4. সার্ক কত সালে গঠিত হয় ?
    ক)1982       খ)1985        গ)1986        ঘ)1988

5. You can park your car outside our house.Here 'outside' is used as a/an--.
    ক)preposition       খ)adverb        গ)adjective        ঘ)conjunction

6. Intel 8086 মাইক্রো প্রসেসর কত বিট রেজিস্টার থাকে?
    ক)4       খ)8        গ)14        ঘ)16     **Ans. d**

7. অতিশ দীপঙ্কও কোন দেশে বৌদ্ধ ধর্ম প্রচার করেন?
    ক) তিব্বত       খ) শ্রীলঙ্কা        গ) ভারত        ঘ) আফ্রিকা

8. 192.168.1.100 এই IP address টি কোন class এর অন্তর্ভুক্ত?
    ক)Class A       খ)Class B        গ)Class C        ঘ)Class D     **Ans. c**

9. Had I known in advance,I___enough money.
    ক)would take       খ)took        গ)will take        ঘ)would have taken

10. LIFO data structure কোনটি ?
    ক)Queue       খ)Stack        গ) File        ঘ) কোনটি নয়     **Ans. b**

11. কোন device টি Broadcast traffic আটকাতে পারে?
    ক)Hub       খ)Router        গ)Switch        ঘ)RJ45

12. The door--automatically,
    ক)Opened       খ)Was opened        গ)Has been opened        ঘ)Had been opened

13. START:MOV AX,BX একটি assembly language instruction এখানে MOV হ'ল-
ক)লেবেল     খ)সোর্স     গ)Opcode     ঘ)ডেসটিনেশন

14. The number of students seeking admission---
ক) have increased    খ) have been increased    গ)has increased    ঘ)is increased

15. যে বর্তনী ১-বিট ডাটা সংরক্ষণ করতে পাওে তা হ'ল-
ক)রেজিস্টার     খ)এনকোডার     গ)ডিকোডার     ঘ)ফ্লিপ-ফ্লপ     **Ans. d**

16. নৃত্য-কলায় শিল্পকলা পদক ২০১৮ কে পেয়েছেন?
ক)রানী সরকার     খ)রওশন জালিম     গ)শুকলা সরকার     ঘ)জুনু খান

17. কোনটি দিয়ে Database Table এ uniqueness নিশ্চিত করা হয়?
ক)Primary Key     খ)Foreign Key     গ)Entity     ঘ)Relation     **Ans. a**

18. নিচের কোনটি দিয়ে Graph represent করা যায়?
ক) Queue     খ)Stack     গ)Adjacency list     ঘ)Pointer

19. Domain Name থেকে IP-mapping করতে কোনটি কাজ করে?
ক)HTTP     খ)SMTP     গ)DNS     ঘ)Telnet     **Ans. c**

20. C-programming এ address রাখার জন্য কোনটি সাধারনত ব্যবহৃত হয়?
ক) break     খ)pointer     গ)char     ঘ)float     **Ans. b**

21. Chess game এর Environment কী ধরনের?
ক) Stochastic     খ)Fully observable     গ)Partially observable     ঘ)কোনটি নয়

22. The king left---heir.
ক) the     খ)an     গ)a     ঘ)no article needed

23. দশমিক পদ্ধতির সংখ্যা $300_{(10)}$ কে Hexadecimal এ রূপান্তর করলে কত হবে?
ক)$C3_{(15)}$     খ)$12C_{(15)}$     গ)$C2_{(15)}$     ঘ)$A2C_{(15)}$

24. What kind of 'money' is?
ক)Countable noun    খ)Uncountable noun    গ)Collective noun    ঘ)Proper noun

25. ইন্টারনেট নেটওয়ার্কে Media Acess করার জন্য কোন পদ্ধতি ব্যবহৃত হয়?
ক)CSMA/CD     খ)CSMA/CA     গ)Demand Priority     ঘ)Polling

26. Which one is passive form of 'I knew him'?
ক)He is known with me           খ)He was known by me
গ)He was known to me           ঘ)He was known with me

27. Binary Search Tree এর Time complexity কত?
ক)$O(n)$     খ)$O(nlog\ n)$     গ)$O(log;n)$     ঘ)$O(n^2)$     **Ans. c**

28. কোনটি মুক্তিযুদ্ধ নির্ভর কাব্যনাট্য?
ক)আবার তোরা মানুষ হ    খ)অরুণোদয়ের অগ্নিসাক্ষী
গ)চরকাঁকড়ার ডকুমেন্টারি           ঘ)পায়ের আওয়াজ পাওয়া যায়

29. শ্রীকৃষ্ণকীর্তনকাব্য'-র রচয়িতা কে?
ক)অনন্ত চণ্ডীদাস     খ)বড়ু চণ্ডীদাস     গ)দ্বিজ চণ্ডীদাস     ঘ)দীন চণ্ডীদাস

30. FTP protocol নিচের কোনটি ব্যবহার করে?
ক)IP     খ)TCP     গ)UDP     ঘ)SMTP     **Ans. a,b**

31. Which of the following words can be used as both masculine and feminine?
ক)actor     খ)gander     গ)spinster     ঘ)spouse

32. Congestion Control কোন layer-এ করা হয়?
ক)Physical     খ)Data link     গ)Network     ঘ)Transport     **Ans.d**

33. He always lags behind---?Choose the correct tag question:
    ক)didn't he ⠀⠀খ)doesn't he ⠀⠀গ)did he ⠀⠀ঘ)won't he

34. বাংলাদেশের ই-পাসপোর্টে কত ধরণের নিরাপত্তা ফিচার সংযুক্ত করা হয়েছে?
    ক)৪০ ⠀⠀খ)৩৫ ⠀⠀গ)৩৮ ⠀⠀ঘ)৪১

35. Have you ever---to Rajbari?
    ক)went ⠀⠀খ)gone ⠀⠀গ)been ⠀⠀ঘ)go

36. নিচের কোনটি Genetic algorithm এর একটি operator?
    ক)Mulation ⠀⠀খ)Population ⠀⠀গ)Gene ⠀⠀ঘ)Individual ⠀⠀**Ans.b**

37. Virtually memory হিসেবে RAM এর পাশাপাশি বোনটি ব্যবহার হয়?
    ক)Cache ⠀⠀খ)CPU Register ⠀⠀গ)CD-ROM ⠀⠀ঘ)Hard link ⠀⠀**Ans.d**

38. চাঁদে অভিযানকারী চতুর্থ দেশ কোনটি?
    ক)চীন ⠀⠀খ)রশিয়া ⠀⠀গ)ইসরাইল ⠀⠀ঘ)ভারত

39. মীর মোশাররফ হোসেন রচিত গ্রন্থ হচ্ছে-
    ক)উদাসীন পথিকের মনের কথা ⠀⠀খ)সুচিরাম পুড়ের আত্মকথা
    গ)হাঁসুলী বাঁকের উপকথা ⠀⠀ঘ)ইতিহাসের পরের কথা

40. শুদ্ধ বানানে লেখা হয়েছে কোনটি?
    ক)লবণ ⠀⠀খ)পবণ ⠀⠀গ)ভবণ ⠀⠀ঘ)মগণ

41. C programming Language এ কোনো loop থেকে তৎক্ষণাৎ বের করার জন্য উল্লিখিত কোনটি ব্যবহৃত হয়?
    ক)break ⠀⠀খ)switch ⠀⠀গ)continue ⠀⠀ঘ)if ⠀⠀**Ans.a**

42. What is the plural form of 'it'?
    ক)its ⠀⠀খ)it's ⠀⠀গ)they ⠀⠀ঘ)those

43. স্বত:সিদ্ধভাবে 'ণ' বসেছে কোন শব্দে?
    ক)কারণ ⠀⠀খ)বারণ ⠀⠀গ)আপণ ⠀⠀ঘ)রাবণ

44. বঙ্কিমচন্দ্র চট্টোপাধ্যায় রচিত কৌতুকরসের গ্রন্থ কোনটি?
    ক)পরিব্রাজক ⠀⠀খ)লোকরহস্য ⠀⠀গ)নিভৃতচিন্তা ⠀⠀ঘ)রত্নরহস্য

45. নিম্নের কোন প্রত্নতাত্ত্বিক স্থানটি আদি ঐতিহাসিক সময়ের প্রতিনিধিত্ব করে?
    ক)ময়নামতি ⠀⠀খ)সোনারগাঁ ⠀⠀গ)চাকলাপুঞ্জি ⠀⠀ঘ)উয়ারী বটেশ্বর

46. What type of noun the word 'infancy' is?
    ক)common ⠀⠀খ)abstract ⠀⠀গ)material ⠀⠀ঘ)collective

47. কোন Routing Protocol এ Dijkstra Algorithm ব্যবহার করা হয়?
    ক)ARP ⠀⠀খ)OSPF ⠀⠀গ)RIP ⠀⠀ঘ)IGRP ⠀⠀**Ans.b**

48. উষ্ণতার একক কিভাবে প্রকাশ করা হয়?
    ক)মিটার ⠀⠀খ) অ্যাম্পিয়ার ⠀⠀গ)কেলভিন ⠀⠀ঘ)ফারেন হাইট

49. 'খোকাবাবুর প্রত্যাবর্তন' শীর্ষক ছোটগল্পের রচয়িতা কে?
    ক)সৈয়দ মুজতবা আলী ⠀⠀খ)মানিক বন্দ্যোপাধ্যায় ⠀⠀গ)রবীন্দ্রনাথ ঠাকুর ⠀⠀ঘ)হাসান আজিজুল হক

50. গণপ্রজাতন্ত্রী বাংলাদেশের সংবিধান প্রণয়নকারী প্রতিষ্ঠানের নাম কী?
    ক)জাতীয় সংসদ ⠀⠀খ)জাতীয় পরিষদ ⠀⠀গ)গণপরিষদ ⠀⠀ঘ)মন্ত্রীপরিষদ

51. 'স্পষ্ট'-র বিপরীতার্থক শব্দ কোনটি?
    ক)গ্রাহ্য ⠀⠀খ)উহ্য ⠀⠀গ)সহ্য ⠀⠀ঘ)গুহ্য

52. 300 HZ থেকে JKHZ Band width এর কত স্তর signal কে AM (Amplitude Modulation)করলে

53. Modulatied signal এর Band width কত হবে?
    ক)300 HZ ⠀⠀খ)3KHZ ⠀⠀গ)6KHZ ⠀⠀ঘ)600HZ

# Combined Bank
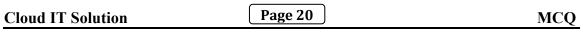*Senior Officer (IT/ICT)- MCQ Test-31-11-2018*
## Exam Taker: DU

1. **Which operator is used to declare the destructor in C++?**
   a)#                b) ~                c) @                d) $                **Ans. b**
2. **Which alternative can replace the throw statement in c++?**
   a) for            b) break          c) return         d) exit            **Ans. c**
   ✍**Explanation:** throw and return does the same job as return a value. So it can be replaced.
3. **What type of reference should be used in vector arithmetic in C++?**
   a)Dynamic        b) const          c) a and b        d) none of the mentioned      **Ans. b**
   ✍**Explanation:**As we are using the vector and it will give accurate result if we use const reference.
4. **Which of these data types is used by operating system to manage the Recursion in Java?**
   a)Array           b)  Stack          c) Queue          d) Tree            **Ans.b**
   ✍**Explanation:** Recursions are always managed by using stack.
5. **Which of the following is an incorrect statement about packages?**
   a) Package defines a namespace in which classes are stored
   b) A package can contain other packages within
   c)Java uses file system directories to store packages
   d) A package can be renamed without renaming the directory, in which the classes are stored
   **Ans. d**
6. **A derived class inherits attributes from a _ _**
   a) Super Class       b) Sub Class          c) Inner Class          d)Upper Class        **Ans.a**
7. **Multiple inheritances in Java can be implemented using which of the following?**
   a) Interfaces     b) Multithreading     c) Protected methods   d) Private methods     **Ans.a**
   ✍**Explanation:** Multiple inheritances in java is implemented using interfaces. Multiple interfaces can be implemented by a class.
8. **Which component is used to compile, Debug and execute java program?**
   a) JVM            b) JDK                c) JIT                d) JRE            **Ans. b**
   ✍**Explanation:** JDK is a core component of Java Environment and provides all the tools, executables and binaries required to compile, debug and execute a Java Program.
9. **Which of the following statements is the negation of the statements "4 is odd or -9 is positive"?**
   a) 4 is even or -9 is not negative        b)  4 is odd or -9 is not negative
   c) 4 is even and -9 is negative           d) 4 is odd and -9 is not negative          **Ans. c**

   ✍**Explanation:** Using De Morgan's Law ~(A V B) <-> ~A ∧ ~B.

10. **Which of the following options is suitable, if A is"10110110", B is "11100000"and C is"10100000" ?**
    a) C=A or B       b) C=~A             c) C=~B             d) C=A and B       **Ans. d**

✎**Explanation:** Output of and is 1 when both other inputs are one.

11. **If A={1,2,3} and B={1,2,5} then A-B=?**
    a){1}  b) {5}  c) {3}  d) {2}  **Ans. c**

12. **If set A={1,2} and C={3,4}, then AxB(Cartesian product of set A and B) is**
    a){1,2,3,4}  b) {(1,3),(2,4)}  c) {(1,3),(2,4),(1,4),(2,3)}  d) {(3,1),(4,1)}  **Ans.c**

13. **If determinant of a matrix A is Zero then---------------**
    a) A is a Singular matrix
    b) A is a non-Singular matrix
    c) First and last rows of the matrix must be same
    d) First and last columns of the matrix must be same  **Ans.a**

14. **The complexity of Binary search algorithm is**
    a) O(n)  b) O(log n)  c) $O(n^2)$  d) O(nlog n)  **Ans.b**

15. **A non standard HTML extension that causes scrolling text to appear as pan of a Web page is-----------------**
    a) DHCP  b) mask off  c) Dhrystone  d) marquee  **Ans. d**

✎**Explanation:** This marquee causes the text to scroll continuously from right to left. Once it disappears from the left, it reappears from the right.

16. **Object being passed to a copy constructor------**
    a) Must be passed by reference  b) Must be passed by value
    c) Must be passed with integer type  d) Must not be mentioned in parameter list **Ans.a**

17. **Why do we need to handle exceptions?**
    a) To prevent abnormal termination of program  b) To encourage exception prone program
    c)To avoid syntax errors  d)To save memory  **Ans.a**

18. **If same message is passed to objects of several different classes and all of those can respond in a different way, what is this feature called?**
    a) Inheritance  b) Overloading  c) Polymorphism  d) Overriding  **Ans. c**

✎**Explanation:** The feature defined in question defines polymorphism feature. Here the different objects are capable of responding to the same message in different ways, hence polymorphism.

19. **Does constructor overloading include different return types for constructors to be overloaded?**
    a) Yes, if return types are different, signature becomes different
    b) Yes, because return types can differentiate two functions
    c) No, return type can't differentiate two functions
    d) No, constructors doesn't have any return type  **Ans.d**

✎**Explanation:** The constructors don't have any return type. When we can't have return type of a constructor, overloading based on the return type is not possible. Hence only parameters can be different.

20. **2019 in Binary is------------------------------**
    a) 0000011111100010  b) 0000001111110011
    c) 0000001111110010  d) 0000011111100011  **Ans.d**

21. **An array contains the following letters, Color = {E,L,E,C,T,I,O,N} The value of the variable, E=3. Color [E] points to which value?**
    a) E  b) C  c) T  d) 1  **Ans. b**

22. **How to access the overridden method of base class from the derived class?**
    a) Using arrow operator                  b) Using dot operator
    c) Using scope resolution operator        d) Can't be accessed once overridden      **Ans.b**

23. **11100010 has a decimal value of--------------------------**
    a) 252          b) 225          c) 226          d) 220          **Ans. c**

24. **When two variables is logically compared, the logic gate that tests the equivalence is------**
    a) XNOR          b) XOR          c) AND          d) NOR          **Ans.a**

25. **Which of the following is not a malware?**
    a) Virus          b) Worm          c) Bug          d) Trojan horse      **Ans.c**
    ✎**Explanation:** Bug is the logical error of a program. Virous, worm and Trojan horse are malicious program.

26. **Dark data represents --------------------**
    a) Unused data     b)Harmful data      c) Highlighted data     d)Important data  **Ans. a**

27. **Source code is a(an) ----------------**
    a) Program                    b) List of commands
    c) Source of variables        d) Explanation of the algorithm      **Ans. a**

28. **Which of the following defines the addressing capabilities of the networking?**
    a) OSL          b) NAT          c) TCP          d) UDP          **Ans.b**
    ✎**Explanation:**Network address translation (NAT) is a method of remapping one IP address space into another by modifying network address information in the IP header of packets while they are in transit across a traffic routing device.

29. **How many layers are there in the software part of networking framework?**
    a) Three          b) Sever          c) Four          d) Five          **Ans. b**
    ✎**Explanation:**
    **Software layer**: Application, Presentation, Session, Transport and Network.
    **Hardware layer:** Datalink and physical.
    **Host layer:** Application, Presentation, Session, Transport.
    **Media layer:** Network, Datalink and physical.

30. **AR refers to which of the following environment --**
    a) Artificial Reality                    b) Augmented Report
    c) Artificial Report                     d) Augmented Reality          **Ans.d**
    ✎**Explanation:** Augmented reality (AR) is an interactive experience of a real-world environment where the objects that reside in the real-world are **augmented** by computer-generated perceptual information, sometimes across multiple sensory modalities, including visual, auditory, haptic, somatosensory, and olfactory

31. **Memory management scheme by which a computer stores and retrieves data from secondary storage for use in main memory is ------**
    a)Paging          b)Scheduling          c)Batch processin     d)Virtual storage      **Ans.a**

32. **A single communication system that transfers and connects the data between major components inside a computer is------------**
    a) Address Bus       b)Data Bus          c) System Bus          d) Control Bus      **Ans. b**

33. **A primary key must also be --------------**
    a) Foreign key       b) Unique          c) Identical          d) Case sensitive      **Ans. B**

34. **USB stands for** -----------------------------------------
    a) Universal Serial Bus          b)Universal Series Bus
    c) Universal Serial Bits          c)Universal Series Bits    **Ans.a**

35. **Which of the following is the smallest size in the list?**
    a) Zettabyte     b) Gigabyte     c) Petabyte     d) Terabyte    **Ans.b**

36. **Int C=10; System.out.println(C--); gives a output of ----**
    a)10     b) 11     c) 9     d) 8    **Ans.a**

37. **What represents a row in a relational database?**
    a) variable     b)tuple     c) entity     d)field    **Ans. b**

38. **All of the following are considered gaming engine except** --------------
    a)Hex Editor     b)Unity     c)HTML 5     d)Adobe Flash    **Ans.c**

39. **All of the following logical connectives are included in SQL except----**
    a)And     b) or     c) nor     d) not    **Ans.c**

40. **The full form of "Wi-fi" is---------------**
    a)Wireless Internet   b)Wireless-Fidelity    c)Wireless Field    d)Wireless Fiction    **Ans.b**

# Combined Bank
## (AME)- MCQ Test-30-11-2018

1. **A host machine is unable to communicate with google server. Which command is the most appropriate to run at host machine to determine which intermediary device is responsible for this failure?**
    a) telnet 192.168.1.1          b) ping 192.168.1.1
    c) tracert 192.168.1.1          d) ftp 192.168.1.1    **Ans. c**
    ✎**Explanation:** Traceroute is a command which can show you the path a packet of information takes from your computer to one you specify. It will list all the routers it passes through until it reaches its destination, or fails to and is discarded. In addition to this, it will tell you how long each 'hop' from router to router takes.

2. **Which one is modern lightweight message exchange format?**
    a) JSON     b)MX     c) HTML     d) XML    **Ans.a**

3. **A shared lock allows which of the following type of transaction to occur?**
    a)Delete     b) Insert     c) Read     d) Update    **Ans. c**
    ✎**Explanation:** When resource is locked you can only read this data but you can't update or modify data.

4. **Which is not a feature of object oriented programming?**
    a)inheritance     b) recursion     c) encapsulation     d) abstraction    **Ans. b**

5. **Which of the following protocols uses both TCP and UDP ports?**
    a)SMTP     b) Telnet     c) FTP     d) DNS    **Ans.d**
    ✎**Explanation:** DNS uses TCP for zone exchanges between servers and UDP when a client is trying to resolve a hostname to an IP address.

6. **To divide a class C network into a maximum of 14 subnets- each capable of having up to 14 hosts. The subnet mask used should be ------------**
    a)255.255.255.240   b) 255.255.255.192   c)255.255.255.78   d) 255.255.255.0    **Ans. a**

7. **The result of a SQL SELECT statement is a --------------------**
   a)Report      b) form      c) file      d) table      **Ans. d**

✍**Explanation:**The SQL SELECT statement returns a result set of records from one or more tables. A SELECT statement retrieves zero or more rows from one or more database tables or database views. In most applications, SELECT is the most commonly used data query language (DQL) command.

8. **Email is a protocol of following layer-----------**
   a)Physical layer      b) Data Link Layer      c) Application layer      d) TCP layer      **Ans. c**

9. **Which protocol is used for secure web browsing?**
   a)WWW      b) RSA      c) ftp      d)https      **Ans. d**

10. **Which software is mostly used for virtualization?**
    a)VMWare      b) Oracle DBMS      c) Windows XP      d) Linux      **Ans. a**

✍**Explanation:** VMware, Inc. is a subsidiary of Dell Technologies that provides cloud computing and platform virtualization software and services. It was one of the first commercially successful companies to virtualize the x86 architecture.

11. **To remove the duplicate rows from the result of an SQL Select statement, the ------- qualifier specified include.**
    a)Only      b) distinct      c) Unique      d) Single      **Ans. b**

12. **The complexity of Bubble sort algorithm is ---------------**
    a) $O(n)$      b) $O(\log n)$      c) $O(n^2)$      d) $O(n\log n)$      **Ans.c**

13. **Which control statement can be executed at least once?**
    a) While      b)for      c) do-while      d) All of the above   **Ans. c**

✍**Explanation::** A loop will only execute while its condition is true. Since a for loop and a while loop both check the condition before the body is executed they will never execute if the condition is false. Because of that a do while loop will always execute at least once.

14. **The operation of processing each element in the list is known as------------**
    a)Sorting      b)Merging      c) Inserting      d) Traversal      **Ans. d**

15. **Which of the following data structure are index structures?**
    a)Linear array      b) link list      c) both a and b      d) none      **Ans. a**

16. **The term push and pop related to -----------------**
    a)Array      b) list      c) stack      d) all of this      **Ans. c**

17. **--------is a statement that is executed automatically by the system.**
    a)Trigger constraint      b) assertion      c) durability      d) integrity      **Ans. a**

18. **What does a COMMIT statement do to a CURSOR-----------**
    a)Open the cursor    b) Fetch the cursor    c) Close the cursor    d) None of this    **Ans. d**

✍**Explanation:** The COMMIT statement makes permanent any changes made to the database during the current transaction.

19. **Which data structure is used for indexing?**
    a)Binary tree      b) B+ tree      c) Stack      d) Link List      **Ans. b**

20. **Trojan can be introduced through?**
    a)Internet browsing    b) Database accessing    c) emails    d) troubleshooting    **Ans. c**

✍**Explanation:**Mostly Trojans are introduced via email attachments. These emails are disguised in a way that they look authentic. Once the user downloads the attached file and runs it, the file starts corrupting the system. A Trojan can also come as a payload with freeware and shareware available on the Internet.

21. **How many layer internet protocol suites?**
    a)7      b) 5      c) 3      d) 4      **Ans. d**

22. **The step by step instruction that solved a problem are called-------**
    a)An algorithm      b) A list      c) A plan      d) None of the above      **Ans. a**

23. **An acronym for Conference/Committee on Data Systems Languages is?**
    a) Collute      b)CCD      c) CODASYL      d) DASD      **Ans. c**

**Explanation::** CODASYL, the Conference/Committee on Data Systems Languages, was a consortium formed in 1959 to guide the development of a standard programming language that could be used on many computers. This effort led to the development of the programming language COBOL and other technical standards.

24. **According to Boolean algebra the value of (A+AB).(B+AB) is ---**
    a)A      b) B      c) AB      d) 1      **Ans.c**

**Explanation:** (A+AB).(B+AB)=A(1+B).B(1+A)=**AB**; because 1+A=1

25. **Which of the following correctly shows the hierarchy of algorithm operation in C?**
    a) / +*-      b) *-/+      c) +-/*      d) /*+-      **Ans. d**

**Explanation:** The hierarchy of operations is as follows are Parentheses, Exponents, Multiply or Divide, Addition or Subtraction.

26. **Consider the following code**
    ```
    #include<stdio.h>
    int main(int argc,char *argv[]){
    return 0;}
    ```

27. **What is the maximum length of character array argv in the above code?**
    a)0      b) 1      c) Undefined      d) -1      **Ans.c**

**Explanation:** argv is an array of pointers to char (i.e. array of strings). The length of this array is stored in argv argument.The length of argv is 6.

28. **Which is the value of "d" after this line of code has been executed?**
    ```
    double d=Math.round(2.5+Math.random());
    ```
    a)2      b) 2.5      c) 3      d) 4      **Ans. c**

**Explanation:** The Math.random() method returns a number greater than or equal to 0 and less than 1 . Since we can then be sure that the sum of that number and 2.5 will be greater than or equal to 2.5 and less than 3.5, we can be sure that Math.round() will round that number to 3. So Option c is the answer.

29. **Which O/S is recommended for real time system?**
    a)Windows      b) Unix      c) Oracle      d) C/OS      **Ans. a**

**Explanation:** Some real time OS are RTLinux, VxWorks,Windows CE

30. **According to Boolean algebra the value of (A+AB).(B+AB) is**
    a)A      b) B      c) AB      d) 1      **Ans. c**

31. **Which one of the following is an example redundancy?**
    a)Data center      b) Aero plane      c) Motor Car      d) None of this      **Ans. a**

32. **Compared to CISC, RISC processors (at the same clock are)---------**
    a)Faster      b) slower      c) similar      d) undefined      **Ans. a**

**Explanation:**
CISC has the capacity to perform multi-step operations or addressing modes within one instruction set. It is the CPU design where one instruction works several low-level acts. For instance, memory storage, loading from memory, and an arithmetic operation. Reduced

instruction set computing is a Central Processing Unit design strategy based on the vision that basic instruction set gives a great performance when combined with a microprocessor architecture which has the capacity to perform the instructions by using some microprocessor cycles per instruction.

33. **Which one of the following is not a type of Web search engine?**
    a)Computer-created   b) Human -organized      c) Hybrid          d) Portal          **Ans.b**
❧**Explanation:** Search engines are classified into the following three categories based on how it works.
    (a)Crawler based search engines          (b)Human powered directories
    (c)Hybrid search engines                 (d) Other special search engines

34. **Where can javaScript code be placed in an html page?**
    a)<head>            b) <body>             c) both a and b         d) none            **Ans. c**

35. **What is the value of variable x after the following statement is executed in javaScript ?**
    **var x2="3"+ "4"?**
    a)34               b) 7                   c) 0                    d) undefine        **Ans. a**
❧**Explanation:**

```
<html>
<body>
<h2>JavaScript Variables</h2>
<p>In this example, x, y, and z are variables.</p>
<p id="demo"></p>
<script>
var x = 5;
var y = 6;
var x2="3"+"4";
document.getElementById("demo").innerHTML =
"The value of z is: " + x2;
</script>
</body>
</html>
```

36. **In java , which operator is used to create an object?**
    a)Class            b) scanf               c) print                d) None            **Ans.**
❧**Explanation:** new is akey to create object
    ClassName objectName=new ClassName();

37. **Distributed Queue Dual Bus is a standard for ----------**
    a)MAN              b) LAN                 c) WAN                  d) Wireless LAN**Ans. a,b**
❧**Explanation:** Answer is LAN and MAN

38. **Which of the following produce an answer that is closest in value to a double, d,   while not being greater than d?**
    a) (int.Math.min(d))   b) (int.Math.max(d))  c) (int.Math.abs(d))  d) (int.Math.floor(d))
    **Ans.d**
❧**Explanation:**
    Option A and B are wrong because both the min() and max() methods require 2 arguments whereas here they are passed only one parameter.
    Option C is wrong because it could return a value greater than d (if d was negative).

Option D is the correct answer, it is syntactically correct and will consistently return a value less than d.

39. **Which one is a universal logic gate?**
    a)NAND          b) AND          c) OR          d) NOT          **Ans. a**
    ✍**Explanation:**Two universal gate is NAND and NOR

40. **Domain name to IP address mapping is done by ….**
    a)Web server     b) Database server     c) DNS server     d) Proxy Server     **Ans. c**

41. **How many 1's will be there in the binary representation of the following expression (assume 16 bit number ) 12+64+128+256+1024**
    a)10          b) 8          c) 6          d)9

# Combined 3 Bank
*(Assistant Programmer) - MCQ Test-16-11-2018*

1. **If for a squre matrix A, $A^2$=A then such a matrix known as?**
   a) Idempotent matrix  b) Orthogonal Matrix    c) Null Matrix       d) Identity matrix  **Ans. a**

   ✍**Explanation:** In linear algebra, an idempotent matrix is a matrix which, when multiplied by itself, yields itself.That is, the matrix M is idempotent if and only if MM = M. For this product MM to be defined, M must necessarily be a square matrix.

2. **The time complexity of binary search is --------------------**
   a) constant          b) quadratic          c) exponent          d) logarithmic          **Ans. d**

   ✍**Explanation:** Time complexity of Binary search algorithm is O(log n)

3. **How many bit string of length 4 bit possible such that they contain 2 ones and 2 zeros?**
   a) 4          b) 2          c) 5          d) 6          **Ans. d**
   ✍**Explanation:**$\frac{4!}{2!}$=6

4. **If A has 4 elements and B has 8 elements then the minimum and maximum number of elements is AUB respectively?**
   a) 4,8          b) 8,12          c) 4,12          d)6,12          **Ans. b**

5. **In the given AP series find the number of items 5,8,11,14,17,20,.......,50**
   a) 11          b) 13          c) 15          d) 16          **Ans. d**

6. **For some base r, the digits which are allowed in its representation are?**
   a) Digit from 1 to r b) Digit from 0 to r-1   c) Digit from 1 to r-1  d) Digit from 0 to r**Ans. b**