

**ENGLISH GRAMMAR & V&A TEST**

Grammar score -
V&A score -

Name of V&A Panel
Signature

Name:	College:
Mobile No:	Date of Birth:
E-mail Id:	

For the questions below, please choose the best option to complete the sentence or conversation.

1. When can we meet again?

- When are you free?
- It was two days ago.
- Can you help me?

2. My aunt is going to stay with me.

- How do you do?
- How long for?
- How was it?

3. When do you study?

- at school
- in the evenings
- in the library

4. Would you prefer lemonade or orange juice?

- Have you got anything else?
- If you like.
- Are you sure about that?

3. Let's have dinner now.

- You aren't eating.
- There aren't any.
- Tom isn't here yet

6. The snow was ..... heavily when I left the house.

- dropping
- landing
- falling
- descending

7. I can't find my keys anywhere - I ..... have left them at work.

- can
- must
- ought
- would

8. When a car pulled out in front of her, Jane did well not to ..... control of her bicycle.

- miss
- lose
- fail
- dro

9. According to Richard's ..... the train leaves at 7 o'clock.

- opinion
- advice
- knowledge
- information

10. When you stay in a country for some time you get used to the people's ..... of life

- habit
- custom

- way
- system

11. The builders are ..... good progress with the new house.

- getting
- doing
- making
- taking

12. She is now taking a more positive ..... to her studies and should do well.

- attitude
- behaviour
- manner
- style

13. My father ..... his new car for two weeks now.

- has had
- has
- is having
- had

14. What differences are there ..... the English spoken in the UK and the English spoken in the US?

- among
- between
- beside
- with

15. At 6 p.m. I started to get angry with him because he was late .....

- as usual.
- in general.
- typically.
- usually.

16. .... you get your father's permission, I'll take you skiing next weekend.

- Although
- Provided
- As
- Unless

17. A local company has agreed to ..... the school team with football shirts.

- contribute
- supply
- give
- produce

18. I really enjoy stories that are ..... in the distant future.

- found
- set
- put
- placed

19. That old saucepan will come in ..... when we go camping.

- convenient
- fitting
- handy
- suitable

20. Anyone ..... after the start of the play is not allowed in until the interval.

- arrives
- has arrived
- arriving
- arrived

21. I didn't ..... driving home in the storm so I stayed overnight in a hotel.

- fancy
- desire
- prefer
- want

22. The judge said that those prepared to..... in crime must be ready to suffer the consequences.

- involve
- engage.
- undertake
- enlist

23. Marianne seemed to take ..... at my comments on her work.

- annoyance
- insult
- offence
- indignation

24. You should not have a dog if you are not ..... to look after it.

- prepared
- adapted
- arranged
- decided

25. The farmhouse was so isolated that they had to generate their own electricity .....

- current.
- supply.
- grid.
- power.

26. I \_\_\_\_\_ I pass my driving test.

- expect
- hope

- 
- wait
  - think

27. How \_\_\_\_\_ does it take to get to the railway station from your house?

- long
- much
- often
- far

28. Would you like \_\_\_\_\_ jam on your bread?

- some
- few
- little
- a

29. We moved to this town two years \_\_\_\_\_.

- behind
- last
- passed
- ago

30. Maria gave \_\_\_\_\_ for his birthday.

- a football her little brother
- to her little brother a football
- her little brother a football
- a football for her little brother

Thank You!

..... home in the storm so I stayed overnight in a hotel.

- 5.) Find the wrong number: 6, 12, 20, 30, 42, 54, 72, 90, 110 ?
- a) 20      b) 90      c) 42      d) 54
- 6.) A cistern has two taps attached to it. Tap B can empty the cistern in 45 minutes. But Tap A can fill the cistern in just 30 minutes. Ramesh started both taps unknowingly but realized his mistake after 30 minutes. He immediately closed Tap B. Now after this, in how much minutes will the cistern be filled?
- a) 20      b) 45      c) 30      d) 25      e) 15
- 7.)  $U + V$  means  $U$  is the brother of  $V$ ,  $W - X$  means  $W$  is the father of  $S$ ,  $X \div Y$  means  $X$  is the sister of  $Y$ ,  $Y \times Z$  means  $Z$  is the mother of  $Y$ . Which of the following means that  $N$  is the mother of  $O$ ?
- a)  $L + M \div N - O$       b)  $L - M \times O \div P$       c)  $N \div M \times L \div O$       d)  $M + L \div O \times N$
- 8.) The last day of a century cannot be ?
- a) Tuesday      b) Monday      c) Wednesday      d) Friday
- 9.) Arun went for a movie nine days ago. He goes to watch movies only on Thursdays. What day of the week is today ?
- a) Sunday      b) Wednesday      c) Friday      d) Saturday
- 10.) Three numbers are in the ratio of  $2 : 3 : 4$  and their L.C.M. is 240. Their H.C.F. is ?
- a) 10      b) 40      c) 30      d) 24      e) 20
- 11.) A merchant has 144 kg of sugar, part of which he sells at 3% loss and the rest at 9% profit. He gains 5% on the whole. What is the quantity of sugar sold at 3% loss ?
- a) 44      b) 48      c) 50      d) 56      e) 52
- 12.) Excluding stoppages, the speed of a bus is 54 kmph and including stoppages, it is 45 kmph. For how many minutes does the bus stop per hour ?
- a) 9      b) 12      c) 11      d) 10
- 13.) 6 men and 8 women can complete a work in 10 days. 26 men and 48 women can finish the same work in 2 days. 15 men and 20 women can do the same work in \_\_\_\_\_ days ?
- a) 4.5 days      b) 5.5 days      c) 4 days      d) 6 days

- 29
- 14.) A bag contains 4 black, 5 yellow and 6 green balls. Three balls are drawn at random from the bag. What is the probability that all of them are yellow ?  
a) 1/81      b) 2/91      c) 2/81      d) 1/8
- 15.) A train has a length of 150 metres. It is passing a man who is moving at 2 km/hr in the same direction of the train, in 3 seconds. Find out the speed of the train in km/hr?  
a) 160      b) 152      c) 180      d) 182
- 16.) Rahul bought a car and paid 10% less than the original price. He sold it with 30% profit on the price he had paid. What percentage of profit did he earn on the original price?  
a) 14%      b) 18%      c) 17%      d) 16%      e) 15%
- 17.) Rank of the word RANKING in the dictionary of words formed by the letters of the word RANKING?  
a) 2212      b) 2208      c) 2206      d) 2216
- 18.) Find the wrong number: 34, 105, 424, 2123, 12756 ?  
a) 424      b) 2123      c) 34      d) 12756
- 19.) A software engineer has the capability of thinking 100 lines of code in five minutes and can type 100 lines of code in 10 minutes. He takes a break for five minutes after every ten minutes. How many lines of codes will he complete typing after an hour ?  
a) 220      b) 225      c) 240      d) 245      e) None of these
- 20.) A is the husband of B. E is the daughter of C. A is the father of C. How is B related to E ?  
a) Aunt      b) Cousin      c) Grandmother      d) Mother

## Technical Questions

- 1.) Which of these keywords is used to refer to member of base class from a sub class?  
a) Upper      b) Super      c) This      d) None of these

- 2.) Java uses \_\_\_\_\_ to represent characters?
- ASCII Code
  - Byte Code
  - Unicode
  - None of these
- 3.) Which one is not supported by OOPS?
- Abstraction
  - Global Variables
  - Encapsulation
  - Polymorphism
- 4.) Which of the following is User-Defined data type?
- typedef int Boolean
  - typedef enum {Mon, Fri} Days
  - struct {char name[10], int age}
  - a & b
  - a, b & c
- 5.) The new operator \_\_\_\_\_
- returns a pointer to a variable
  - creates a variable called new
  - tells how much memory is available
  - obtains memory for a new variable
- 6.) Command to run a compiled java program is?
- javac
  - execute
  - java
  - run
- 7.) What is the output of this C Code?
- ```
int main()
{
    float x = 'a';
    printf("%f", x);
    return 0;
}
```
- 97.000000
  - run time error
  - a.000000
  - a
- 8.) Which of these access specifiers can be used for an interface?
- protected
  - private
  - public
  - None of these
  - All of the above
- 9.) Which of the following statements is correct in C++?
- Structure members are private by default
  - Class members are public by default
  - Structure can have function as members
  - Classes can't have data as protected members
- 10.) Static variable declared in a class are also called \_\_\_\_\_?
- instance variable
  - class variable
  - global variable
  - named constant

11.) A class can contain objects of other classes and this phenomenon is called?

- a) Containership
- b) Object Association
- c) Relationship
- d) Encapsulation

12.) What will be the output of the C program?

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
printf("%d", sizeof(void *));
```

```
return 0;
```

```
}
```

- a) run-time error
- b) 4
- c) compile-time error
- d) 1

13.) If a class contains pure virtual function, then it is termed as?

- a) Pure Class
- b) Virtual Class
- c) Sealed Class
- d) Abstract Class

14.) Which of the following manipulator is used for representing octal equivalent of a given decimal number?

- a) oct
- b) tobase(8)
- c) setbase(8)
- d) a and c
- e) all a, b, c

Which of the following is not a casting operator in CPP?

- a) explicit\_cast
- b) reinterpret\_cast
- c) dynamic\_cast
- d) static\_cast

15.) What is output of the program?

```
class increment {
    public static void main(String args[])
    {
        double var1 = 1 + 5;
        double var2 = var1 / 4;
        int var3 = 1 + 5;
        int var4 = var3 / 4;
        System.out.print(var2 + " " + var4);
    }
}
```

- a) 0 1
- b) 1.5 1.0
- c) 1 1
- d) 1.5 1

16.) What is output of the program?

```

class Output {
    public static void main(String args[])
    {
        final int a=10,b=20;
        while(a<b)
        {
            System.out.println("Hello");
        }
        System.out.println("World");
    }
}

```

- 17.) What is the output of the program?
- a) Compile-time error    b) Hello World    c) Run-time error    d) Hello

18.) Abbreviate the term POJO?

- a) Performance Optimize Java Object  
b) Plain Old Java Object  
c) Performance Old Java Object  
d) None of the above

19.) `string* x,y` denotes:-

- a) both x and y are pointer to string types  
b) y is a pointer to a string, x is a string  
c) x is a pointer to a string, y is a string  
d) None of the above

20.) What is the output of the program?

```

#include <iostream>
using namespace std;
int main()
{
    int a = 5, b = 10, c = 15;
    int *arr[ ] = {&a, &b, &c};
    cout << arr[1];
    return 0;
}

```

- a) 15    b) 10    c) 5    d) 1    e) A Random Number

# Database/ DAA/ Data Structure

- 1.) Which of the following can be a multivalued attribute?
- Name
  - Date of Birth
  - Phone Number
  - Father's Name
- 2.) Which of the following statements about normal forms is FALSE?
- BCNF is stricter than 3NF
  - Any relation with two attributes is BCNF
  - Loss less, dependency-preserving decomposition into 3NF is always possible
  - Loss less, dependency-preserving decomposition into BCNF is always possible
- 3.) If we have a tree of  $n$  nodes, how many edges will it have?
- 1
  - $(n*(n-1))/2$
  - $n-1$
  - $(n*(n-1))$
- 4.) Linked list search complexity is?
- $O(\log \log n)$
  - $O(n)$
  - $O(1)$
  - $O(\log n)$
- 5.) If locality is concern, you can use \_\_\_\_\_ to traverse the graph?
- BFS
  - DFS
  - Either BFS or DFS
  - None
- 6.) Functional dependencies are the types of constraints that are based on \_\_\_\_\_
- Superset Key
  - Key Revisited
  - Primary Key
  - None
- 7.) The \_\_\_\_\_ clause is used to list the attributes desired in the result of a query?
- Select
  - Distinct
  - From
  - Where
- 8.) What does stack overflow refer to?
- Accessing item from an undefined stack
  - Index out of bounds exception
  - Adding items to a full stack
  - Removing items from an empty stack
- 9.) Which of the following is used to get back all the transactions back after rollback?
- Commit
  - Rollback
  - Redo
  - Flashback

10.) Finding the location of the element with a given value?

34

- a) Search
- b) Sort
- c) Traversal
- d) None of the above

## English Language Questions

1.) Correct the following sentence :- They **were all shocked** at his failure in the competition

- a) were shocked at all
- b) had all shocked at
- c) had all shocked by
- d) had been all shocked on
- e) No correction required

2.) Make correct formation of sentence by using these words :-

- i) do ii) today iii) you iv) must v) it

- a) iii, iv, i, v, ii
- b) ii, v, iv, i, iii
- c) i, ii, v, iv, iii
- d) v, i, iii, ii, iv

3.) Make correct formation of sentence by using these words :-

- i) left ii) the iii) house iv) he v) suddenly

- a) i, ii, iv, iii, v
- b) ii, i, iii, v, iv
- c) v, i, iii, ii, iv
- d) iv, i, ii, iii, v

4.) One who loves mankind is called?

- a) Optimist
- b) Philanthropist
- c) Optometrist
- d) Truant

5.) A person living permanently in a certain place?

- a) Resident
- b) Native
- c) Domicile
- d) Subject

6.) Mania of stealing articles?

- a) Hypomania
- b) Kleptomania
- c) Logomania
- d) Stelomania

7.) Correct the sentence:- **If the room had been brighter**. I would have been able to read for a while before bed time?

- a) If the room was brighter

- b) If the room are brighter  
 c) Had the room been brighter  
 d) No improvement

8.) Correct the following. The workers are **hell bent at getting** what is due to them

- a) hell bent on getting  
 b) hell bent for getting  
 c) Had the room been brighter  
 d) No improvement

9.) Choose one word meaning for the following sentence :- There are not many men required who are so famous that they are frequently referred to by their short names only?

- a) Initials      b) Signatures      c) Pictures      d) Middle Names

10.) You need not to come unless you want to?

- a) You don't  
 b) You come only when you want to  
 c) You come unless you don't  
 d) No correct required

flukes

| Q No. | Aptitude & Reasoning |       |       | Java, C & C++ |       |       | DAA & DB |
|-------|----------------------|-------|-------|---------------|-------|-------|----------|
|       | Set A                | Set B | Set C | Set A         | Set B | Set C |          |
| 1     | C                    | B     | A 1   | B             | B     | B 1   | C 1      |
| 2     | B                    | A     | D 2   | C             | D     | C 2   | D 2      |
| 3     | B                    | D     | C 3   | B             | B     | D 3   | C 3      |
| 4     | C                    | D     | B 4   | E             | C     | C 4   | B 4      |
| 5     | D                    | C     | C 5   | D             | B     | D 5   | B 5      |
| 6     | A                    | A     | B 6   | C             | E     | B 6   | D 6      |
| 7     | D                    | E     | A 7   | A             | C     | A 7   | A 7      |
| 8     | A                    | C     | D 8   | C             | C     | E 8   | C 8      |
| 9     | D                    | B     | D 9   | C             | A     | C 9   | D 9      |
| 10    | E                    | C     | B 10  | B             | A     | B 10  | A 10     |
| 11    | B                    | E     | D 11  | A             | C     | C 11  | E 11     |
| 12    | D                    | D     | B 12  | B             | B     | C 12  | A 12     |
| 13    | D                    | B     | D 13  | D             | B     | D 13  | D 13     |
| 14    | B                    | E     | B 14  | D             | D     | A 14  | B 14     |
| 15    | D                    | D     | E 15  | A             | C     | D 15  | C 15     |
| 16    | C                    | A     | C 16  | D             | E     | A 16  | B 16     |
| 17    | A                    | B     | A 17  | A             | D     | B 17  | C 17     |
| 18    | B                    | B     | A 18  | B             | A     | A 18  | C 18     |
| 19    | E                    | D     | B 19  | C             | D     | C 19  | A 19     |
| 20    | C                    | B     | D 20  | E             | A     | E 20  | A 20     |

flame

| Q.No. | Aptitude & Reasoning |       |       | Java, C & C++ |       |       | DAA & DB |
|-------|----------------------|-------|-------|---------------|-------|-------|----------|
|       | Set A                | Set B | Set C | Set A         | Set B | Set C |          |
| 1     | C                    | B     | A     | B             | B     | B     | C        |
| 2     | B                    | A     | D     | C             | D     | C     | D        |
| 3     | B                    | D     | C     | B             | B     | D     | C        |
| 4     | C                    | D     | B     | E             | C     | C     | B        |
| 5     | D                    | C     | C     | D             | B     | D     | B        |
| 6     | A                    | A     | B     | C             | E     | B     | D        |
| 7     | D                    | E     | A     | A             | C     | A     | A        |
| 8     | A                    | C     | D     | C             | C     | E     | D        |
| 9     | D                    | B     | D     | C             | A     | C     | D        |
| 10    | E                    | C     | B     | B             | A     | B     | B        |
| 11    | B                    | E     | D     | A             | C     |       | B        |
| 12    | D                    | D     | B     | B             | B     | C     | A        |
| 13    | D                    | B     | D     | D             | B     | D     | D        |
| 14    | B                    | E     | B     | D             | D     | A     | B        |
| 15    | D                    | D     | E     | A             | C     | D     | C        |
| 16    | C                    | A     | C     | D             | E     | A     | B        |
| 17    | A                    | B     | A     | A             | D     | B     | C        |
| 18    | B                    | B     | A     | B             | A     | A     | C        |
| 19    | E                    | D     | B     | C             | D     | C     | A        |
| 20    | C                    | B     | D     | E             | A     | E     | A        |

## Information

|               |  |                |  |
|---------------|--|----------------|--|
| Name          |  | Contact Number |  |
| Date of Birth |  | Today's Date   |  |
| Email         |  |                |  |

Please read these guidelines carefully before you begin:

1. You have total 20 minutes to complete the test.
2. All sections are compulsory & minimum cut-off score is required in each section to clear the test.
3. Each question carries 1 mark. There is negative marking (0.5) for each wrong answer.
4. Write your answer in the right most grayed box.

Reference (for official use only)

Score (for official use only)

| A | B | C | Total |
|---|---|---|-------|
|   |   |   |       |

## Section A - Aptitude

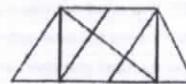
Question #01: What number should come next in a given number series? 12, 36, 18, 54, 27, (....)

- A 90    B 81    C 72    D 108

Question #02: What percentage of numbers from 1 to 70 have 1 or 9 in the unit's digit?

- A 1    B 14    C 20    D 21

Question #03: Find the number of triangles?



- A 8    B 10    C 12    D 14

Question #04: A father said to his son, "At the time of your birth, I was as old as you are at present". If the father's age is 38 years now, the son's age five years back was:

- A 14 years    B 19 years    C 33 years    D 38 years

Question #05: If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more. The actual distance travelled by him is:

- A 50 km    B 56 km    C 70 km    D 80 km

Question #06: If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?

- A Brother    B Sister    C Nephew    D Cannot be determined

Question #07: A, P, R, X, S and Z are sitting in a row. S and Z are in the centre. A and P are at the ends. R is sitting to the left of A. Who is to the right of P?

- A A    B X    C S    D Z

Question #08: Find the missing term: WTR, UQT, SNV, \_\_\_\_\_, OHZ

- A QKW    B PKW    C QKX    D PKX

## Section B - Technical

Question #09: Which of the following statements are correct about an if-else statements in a C-program?

1. Every if-else statement can be replaced by an equivalent statements using ?: operators
2. Nested if-else statements are allowed
3. Multiple statements in an if-block are allowed
4. Multiple statements in an if-else block are allowed

- A 1 and 3    B 2 and 4    C 1, 2 and 3    D 2, 3, 4

Question #10: Which of the following concepts means determining at runtime what method to invoke?

- A Data Hiding    B Dynamic Typing    C Dynamic Loading    D Dynamic Binding

Question #11: We want to round off x (a floating variable) to an int value. The correct way to do is:

- A  $y = \text{int}(x + 0.5)$     B  $y = \text{int}(x + 0.5)$   
C  $y = \text{int}(x) + 0.5$     D  $y = \text{int}((\text{int}(x) + 0.5))$

Question #12: What is the output of this program?

```
int main()
{ int color=2;
  switch(color)
  {
    case 0: printf("Black");
    case 1: printf("Blue");
    case 2: printf("Green");
    case 3: printf("Aqua");
    default: printf("Other");
  }
  return 0;
}
```

- A Green    B GreenAqua    C GreenAquaOther    D None of these

Question #13: How many times would "India" get printed?

```
int main()
{ printf("India");
  main();
  return 0;
}
```

- A Infinite times    B 32767 times  
C Till Stack overflows    D Zero times

Question #14: Point out the error, if any in the for loop.

```
int main()
{ int i=1;
  for(;;)
  { printf("%d\n", i++);
    if(i>10)
      break;
  }
  return 0;
}
```

- A There should be a condition in the for loop    B The two semicolons should be dropped  
C The for loop should be replaced with    D No error  
while loop.

Question #15: What will be the output of the program ?

```
int main()
{ int i;
  char a[] = "\0";
  if(printh("%s", a))
    printf("The string is empty\n");
  else
    printf("The string is not empty\n");
  return 0;
}
```

- A The string is empty    B The string is not empty    C No output    D 0

**INSTRUCTIONS:**

- There is negative marking.  
(+1 for correct answer & -1 for wrong answer for Objectives Questions)
  - Do not write anything on paper.

## Section I (Numeric Aptitude)

8. A sum of money is to be distributed among A, B, C, D in the proportion of 5 : 2 : 4 : 3. If C gets Euro 1000 more than D, what is B's share?

(A) Euro 500 (C) Euro 2000  
 (B) Euro 1500 (D) None of these

9. A, B & C enter into partnership. A invests some money at the beginning. B invests double the money after 6 months. C invests triple the money after 8 months. Find the share of A, B & C out of an annual profit of 33000?

(A) 11000, 11000 and 11000 (D) 13000, 10000 and 10000  
 (B) 10000, 10000 and 13000 (E) None of these  
 (C) 10000, 11000 and 12000

10. There are 23 stations between Delhi and Chennai. How many first class tickets have to be printed, so that a passenger can travel from any station to any other station?

(A) 600 (D) 620  
 (B) 580 (E) 720  
 (C) 640

11. In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?

(A) 30% (C) 100%  
 (B) 70% (D) 250%

12. Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes, and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P, Q and R respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?

(A) 5/11 (C) 7/11  
 (B) 6/11 (D) 8/11

13. A car covers a distance of 715 km at a constant speed. If the speed of the car would have been 10 km/hr more, then it would have taken 2 hours less to cover the same distance. What is the original speed of the car?

(A) 45km/hr (C) 50km/hr  
 (B) 55km/hr (D) 65km/hr

14. A and B take part in 100 m race. A runs at 5 kmph. A gives B a start of 8 m and still beats him by 8 seconds. The speed of B is:

(A) 5.15 kmph (C) 4.25 kmph  
 (B) 4.14 kmph (D) 4.4 kmph

15. The price of 10 chairs is equal to that of 4 tables. The price of 15 chairs and 2 tables together is Rs. 4000. The total price of 12 chairs and 3 tables is:

(A) Rs. 3500 (C) Rs. 3840  
 (B) Rs. 3750 (D) Rs. 3900

## Section II (English)

16. Fill up to blanks picking out from the choices:

We are \_\_\_ to have him \_\_\_ here to make this function a great success

- (A) pleased, over  
(B) sure, come

- (C) wonderful, again  
(D) happy, arrive

17. Fill up to blanks picking out from the choices:

The students do not have ..... to the research materials in the library.

- (A) access

- (B) excess

18. Change the voice of the following:

He is making a film.

- (A) A film is made by him.  
(B) A film had being made by him.

- (C) A film is being made by him.  
(D) A film has being made by him

19. Fill in the blanks correctly:

Wars \_\_\_\_\_ everybody, and their destructive \_\_\_\_\_ last for generations.

- (A) affect, effects

- (B) effect, affects

20. Which of the phrases (A), (B), (C) and (D) from the following sentence contains the error?

Mark (E), if there is no error.

The captain along with his team / are practicing very hard / for the / forth coming matches

- (A) The captain along with his  
team  
(B) are practicing very hard

- (C) for the  
(D) forth coming matches  
(E) No Error

### Section III (Technical - Data Base)

**Directions — (Q. 21 to 27): Choose the correct option.**

21. To create new table, what can we use from the existing table?

- (A) Structure  
(B) Data  
(C) Both  
(D) Nothing

22. to date function is used for:

- (A) Get date in specific format      (C) Both  
(B) Insert date in particular format      (D) None

23. Index is used for:

- (A) To give each row an index value
  - (B) Improve the speed to get records
  - (C) To get sorted data
  - (D) None

24. A table can have:

- (A) Only one index
  - (B) Multiple indexes
  - (C) Maximum indexes equal to no. of columns
  - (D) None

25. Which of the following choices is False?

### A view

- (A) Used to view some data from table
  - (B) Can be used to manipulate data
  - (C) Must contain primary column
  - (D) Can get data from multiple tables

26. Using \_\_\_\_\_, we can change / modify the structure / schema of Table

- (A) Change  
(B) Modify  
(C) Alter table  
(D) Modify table

27. What is the output of the following query?

Select MAX (Salary) From Employee Where Salary NOT IN (Select MAX (Salary) From Employee);

Directions — (Q. 28 to 35): Write SQL Queries to these questions based on the below Table.

54

TABLE

| EMPLOYEE |       |            |        |         |
|----------|-------|------------|--------|---------|
| Emp_ID   | Name  | Manager_ID | Salary | Dept_ID |
| E001     | John  | M001       | 10000  | D01     |
| E002     | Ane   | M002       | 12000  | D02     |
| E003     | Sam   | M001       | 15000  | D03     |
| M001     | Peter | -          | 25000  | D01     |
| M002     | Scot  | -          | 30000  | D02     |
| E004     | Mary  | M002       | 18000  | D02     |

| DEPARTMENT |           |
|------------|-----------|
| Dept_ID    | Dept_Name |
| D01        | NW        |
| D02        | CS        |
| D03        | IT        |
| D04        | EL        |

28. Add Unique Constraint to any of the column in the Employee Table.
29. Get second highest salary from all employees.
30. Change the type of the column "Name" from Char to Varchar.
31. Get Department List except CS, EL.
32. Get Employees whose Name are 3 chars long and start with 'A' OR have middle char as 'a'.
33. Get total number of employees in each department where employees are more than 100.
34. Get name of employee and their respective manager from employee table.
35. Write a query to create / add 'Foreign Key' constraint.

Directions — (Q. 36 to 40): Write SQL Queries to these questions with your own examples

36. How to set default value for a column? Write a query.
37. Write a query to find date after 8 days from current date.
38. Write a query to find and delete duplicate rows from the table.
39. Get date of last Friday in previous month.
40. Write a query to eliminate duplicate records from result.

## Section IV (Technical - Objective)

41. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    const int x=5;
    const int *ptrx;
    ptrx = &x;
    *ptrx = 10;
    printf("%d\n", x);
    return 0;
}
```

(A) 5  
(B) 10

(C) Error  
(D) Garbage value

42. Base class has some virtual method and derived class has a method with the same name. If we initialize the base class pointer with derived object, calling of that virtual method will result in which method being called?

(A) Base method (B) Derived method

43. What does the following declaration signify?

```
int *ptr[100];
```

(A) ptr is a pointer to an array of 100 integer pointers.  
(B) ptr is a array of 100 pointers to integers.

(C) ptr is a array of 100 integer pointers.  
(D) ptr is a array 100 pointers

44. If a variable is a pointer to a structure, then which of the following operator is used to access data members of the structure through the pointer variable?

(A) (B) & (C) \* (D) ->

45. Which of the following statements is correct?

|                                                       |                                                 |
|-------------------------------------------------------|-------------------------------------------------|
| (A) Base class pointer cannot point to derived class  | (C) Pointer to derived class cannot be created. |
| (B) Derived class pointer cannot point to base class. | (D) Pointer to base class cannot be created     |

46. If the two strings are identical, then strcmp() function returns

|        |         |
|--------|---------|
| (A) -1 | (C) 0   |
| (B) 1  | (D) Yes |

SET A

53. Why reference is not same as a pointer?

- (A) A reference can never be null.
- (B) A reference once established cannot be changed.
- (C) Reference doesn't need an explicit dereferencing mechanism.
- (D) All of the above.

54. Which of the following statement is incorrect?

- (A) A default argument is checked for type at the time of declaration and evaluated at the time of call.
- (B) We can provide a default value to a particular argument in the middle of an argument list.
- (C) We cannot provide a default value to a particular argument in the middle of an argument list.
- (D) Default arguments are useful in situations where some arguments always have the same value.

55. What is correct about the static data member of a class?

- (A) A static member function can access only static data members of a class.
- (B) A static data member is shared among all the objects of the class.
- (C) A static data member can be accessed directly from main().
- (D) Both A and B.

56. What will be the output of the program?

```
#include<stdio.h>
```

```
#include<stdarg.h>
```

```
void chrome(int num, ...);  
void chrome1(int num, ...);  
  
int main()  
{  
    chrome(1, "Apple", "Boys", "Cats", "Dogs");  
    chrome1(2, 12, 13, 14);  
    return 0;  
}
```

```
void chrome(int num, ...)  
{  
    char *str; va_start(ptr, num);  
    va_start(ptr, num);  
    str = va_arg(ptr, char *);  
    printf("%s", str);
```

47. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    const char *s = "";
    char str[] = "Chrome";
    s = str;
    while(*s)
        printf("%c", *s++);
    return 0;
}
```

(A) Error

(B) C

(C) Chrome

(D) hrome

48. What does the following declaration signify?

```
void *temp();
```

(A) temp is a pointer to an void type.

(B) temp is a void type pointer variable.

(C) temp is a function that return a void pointer.

(D) temp function returns nothing.

49. Which of the following cannot be declared as virtual?

(A) Constructor

(B) Destructor

(C) Both A and D

(D) Data Members

50. Which of the following statement is correct about the references?

(A) A reference must always be initialized within functions.

(B) A reference must always be initialized.

(C) A reference must always be initialized outside all functions.

(D) Both A and C.

51. Copy constructor must receive its arguments by

(A) Either pass-by-value or pass-by-reference

(B) Only pass-by-address

(C) Only pass-by-value

(D) Only pass by reference

52. Which of the following statements about virtual base classes is correct?

(A) It is used to provide multiple inheritance.

(B) It is used to avoid multiple copies of base class in derived class.

(C) It is used to allow multiple copies of base class in a derived class.

(D) It allows private members of the base class to be inherited in the derived class.

58

```
void chrome1(int num, ...){    va_list ptr;    va_start(ptr, num);    num = va_arg(ptr, int);    printf("%d", num);}
```

- (A) Dogs 12  
(B) Cats 14

- (C) Boys 13  
(D) Apple 12

57. Which of the following is a mechanism of static polymorphism?

- (A) Operator overloading  
(B) Function overloading  
(C) Function Overriding

- (D) All of the above  
(E) A and B

58. The library function used to find the last occurrence of a character in a string is.

- (A) strnstr()  
(B) laststr()

- (C) strrchr()  
(D) strstr()

59. Char txt[20] = "Hello World!\0": How many bytes allocated?

- (A) 11  
(B) 12

- (C) 13  
(D) 20

60. The contents of a file will be lost if it is opened in \_\_\_\_\_

- (A) a + mode  
(B) a - mode

- (C) w + mode  
(D) w - mode

61. Which of the following operators can be overloaded?

- (A) ::  
(B) sizeof()  
(E) \*

- (C) .  
(D) ?:  
(F) None

62. Correct way to declaring Function as Constant?

- (A) Const int show () { }  
(B) Int const show () { }

- (C) int show () const {  
(D) can't make const

63. Virtual inheritance can be used under

- (A) Single inheritance  
(B) Multi level

- (C) Multiple inheritance  
(D) Option (A) & (C)

SET A

64. What is the use of operator `<<` in `cout << "XYZ"` ??

- (A) Reading 'XYZ' from console
- (B) Printing 'XYZ' to console
- (C) Reading 'XYZ' from object

- (D) Storing 'XYZ' in object
- (E) Shifting 'cout' with 'XYZ'

65. How many times "Chrome" gets printed?

```
#include<stdio.h>
int main()
{
    int x;
    for(x=-1; x<=10; x++)
        if(x < 5)
            continue;
        else
            break;
        printf("Chrome");
    } return 0;
```

- (A) Infinite times
- (B) 0 times

- (C) 11 times
- (D) 10 times

**Section V (Technical - Subjective)**

66. WAP to create Circle Class to get its radius and area. (Mandatory to use: Default Constructor, Parameterized Constructor.)

67. WAP to use Early Binding & Late Binding

68. WAP to create String Class with below three functions.

- a) Copy from one string to another
- b) Concatenates
- c) Returns the length

**Note:** (Mandatory: Dynamic Memory Allocation, Take Inputs from User)

69. How to reverse words in a sentence without using library method? Example if given input is "Ram is Great" then your program should return "Great is Ram"

**INSTRUCTIONS:**

- There is negative marking.  
(+1 for correct answer & -1 for wrong answer for Objectives Questions)
- Do not write anything on paper.

**Section I (English)**

1. Fill up to blanks picking out from the choices:

We are \_\_\_ to have him \_\_\_ here to make this function a great success

- (A) pleased, over
- (B) sure, come
- (C) wonderful, again
- (D) happy, arrive

2. Which of the phrases (A), (B), (C) and (D) from the following sentence contains the error?  
Mark (E), if there is no error.

The captain along with his team / are practicing very hard / for the / forth coming matches

- |                                        |                          |
|----------------------------------------|--------------------------|
| (A) The captain along with his<br>team | (C) for the              |
| (B) are practicing very hard           | (D) forth coming matches |
|                                        | (E) No Error             |

3. Fill up to blanks picking out from the choices:

This book is quite similar \_\_\_\_\_

- A. with the "Treasure Island"
- B. of that film we saw at school
- C. to the one I read last week
- D. than a story told by our teacher

4. Change the voice of the following:

After driving professor Kumar to the museum she dropped him at his hotel.

- A. After being driven to the museum, Professor Kumar was dropped at his hotel.
- B. Professor Kumar was being driven dropped at his hotel.

### SET B



## Section II (Numeric Aptitude)

6. A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?

(A)  $10/21$  (B)  $2/7$  (C)  $11/21$  (D)  $5/7$

7. Three numbers leave remainders of 43, 47 and 49 on division by N. The sum of the three numbers leaves a remainder 9 on division by N. What are the values N can take?

(A) 1 (B) 2 (C) 3 (D) 4

8. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

(A) 4 (B) 10 (C) 15 (D) 16

9. Flight 945 passed over Paris at 04:45 and later over Amsterdam at 06:15. The distance between Paris and Amsterdam is 450 miles, what was the average speed of the aircraft?

(A) 450mph (B) 675mph (C) 300mph (D) 525mph

10. Find X's age which equals the number of grand children of a man who has 4 sons and 4 daughters. Each daughter of the man's wife has 3 sons and 4 daughters and each son of the man's wife have 4 sons and 3 daughters.

(A) 40

(B) 56

(C) 64

(D) None of these

11. A hall is 15 m long and 12 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is:

(A) 720

(B) 900

(C) 1200

(D) 1800

12. Three friends split an amount of money. Julie gets 268 dollars, Michael gets 200 dollars and Lilly gets 40 percent. What is the amount?

(A) 780 dollars

(B) 720 dollars

(C) 760 dollars

(D) 820 dollars

13. A sum of money is to be distributed among A, B, C, D in the proportion of 5 : 2 : 4 : 3. If C gets Euro 1000 more than D, what is B's share?

(A) Euro 500

(B) Euro 1500

(C) Euro 2000

(D) None of these

14. A, B & C enter into partnership. A invests some money at the beginning. B invests double the money after 6 months. C invests triple the money after 8 months. Find the share of A, B & C out of an annual profit of 33000?

(A) 11000, 11000 and 11000

(B) 10000, 10000 and 13000

(C) 10000, 11000 and 12000

(D) 13000, 10000 and 10000

(E) None of these

15. There are 23 stations between Delhi and Chennai. How many first class tickets have to be printed, so that a passenger can travel from any station to any other station?

(A) 600

(B) 580

(C) 640

(D) 620

(E) 720

16. In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?

(A) 30%

(B) 70%

(C) 100%

(D) 250%

17. Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes, and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P, Q and R respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?

(A) 5/11

(B) 6/11

(C) 7/11

(D) 8/11

18. A car covers a distance of 715 km at a constant speed. If the speed of the car would have been 10 km/hr more, then it would have taken 2 hours less to cover the same distance. What is the original speed of the car?

## SET B

(A) 45 km/hr  
(C) 55 km/hr

(B) 50 km/hr  
(D) 65 km/hr

17. A and B take part in 100 m race. A runs at 5 kmph. A gives B a start of 8 m and still beats him by 8 seconds. The speed of B is:

(A) 5.15 kmph  
(C) 4.25 kmph

(B) 4.14 kmph  
(D) 4.4 kmph

18. The length of the bridge, which a train 130 metres long and travelling at 45 km/hr can cross in 30 seconds, is:

(A) 200 m  
(C) 25 m

(B) 245 m  
(C) 225 m

### Section III (Technical - Data Base)

Directions — (Q. 21 to 28): Write SQL Queries to these questions based on the below Table

TABLE

| EMPLOYEE |       |            |        |         |
|----------|-------|------------|--------|---------|
| Emp_ID   | Name  | Manager_ID | Salary | Dept_ID |
| E001     | John  | M001       | 10000  | D01     |
| E002     | Ane   | M002       | 12000  | D02     |
| E003     | Sam   | M001       | 15000  | D03     |
| M001     | Peter | -          | 25000  | D01     |
| M002     | Scot  | -          | 30000  | D02     |
| E004     | Mary  | M002       | 18000  | D02     |

| DEPARTMENT |           |
|------------|-----------|
| Dept_ID    | Dept_Name |
| D01        | NW        |
| D02        | CS        |
| D03        | IT        |
| D04        | EL        |

21. Add Unique Constraint to any of the column in the Employee Table.
22. Get second highest salary from all employees.
23. Change the type of the column "Name" from Char to Varchar.
24. Get Department List except CS, EL.
25. Get Employees whose Name are 3 chars long and start with 'A' OR have middle char as a vowel.
26. Get total number of employees in each department where employees are more than 100.
27. Get name of employee and their respective manager from employee table.

28. Write a query to create / add 'Foreign Key' constraint.

**Directions — (Q. 29 to 33): Write SQL Queries to these questions with your own examples**

29. How to set default value for a column? Write a query.

30. Write a query to find date after 8 days from current date.

31. Write a query to find and delete duplicate rows from the table.

32. Get date of last Friday in previous month.

33. Write a query to eliminate duplicate records from result.

**Directions — (Q. 34 to 40): Choose the correct option.**

34. To create new table, what can we use from the existing table?

- (A) Both
- (B) Data

- (C) Structure
- (D) Nothing

35. To-date function is used for:

- (A) Get date in specific format
- (B) Insert date in particular format

- (C) Both
- (D) None

36. Index is used for:

- (A) To give each row an index value
- (B) Improve the speed to get records

- (C) To get sorted data
- (D) None

37. A table can have:

- (A) Only one index
- (B) Multiple indexes

- (C) Maximum Indexes equal to no. of columns
- (D) None

38. Which of the following choices is False?

A view \_\_\_\_\_

- (A) Used to view some data from table
- (B) Can be used to manipulate data

- (C) Must contain primary column
- (D) Can get data from multiple tables

39. Using \_\_\_\_\_, we can change / modify the structure / scheme of Table.

- (A) Change
- (B) Modify

- (C) Alter table
- (D) Modify table

40. What is the output of the following query?

SET B

Select MAX (Salary) From Employee Where Salary NOT IN (Select MAX (Salary) From Employee);

(A) Highest Salary  
(B) Lowest Salary

(C) Second Lowest Salary  
(D) Second Highest Salary

**Section IV (Technical - Objective)**

41. Which of the following statements is correct?

(A) Base class pointer cannot point to derived class  
(B) Derived class pointer cannot point to base class.

(C) Pointer to derived class cannot be created.  
(D) Pointer to base class cannot be created

42. What will be the output of the program?

```
#include<stdio.h>
int main()

    const int x=5;
    const int *ptrx;
    ptrx = &x;
    *ptrx = 10;
    printf("%d\n", x);
    return 0;
}
```

(A) 5  
(B) 10

(C) Error  
(D) Garbage value

43. Base class has some virtual method and derived class has a method with the same name. If we initialize the base class pointer with derived object, calling of that virtual method will result in which method being called?

(A) Base method

(B) Derived method

44. What does the following declaration signify?

```
int *ptr[100];
```

(A) ptr is a pointer to an array of 100 integer pointers.  
(B) ptr is a array of 100 pointers to integers.

(C) ptr is a array of 100 integer pointers.  
(D) ptr is a array 100 pointers

45. If a variable is a pointer to a structure, then which of the following operator is used to access data members of the structure through the pointer variable?

(B) &

(C) \*

(D) -&gt;

13

46. If the two strings are identical, then strcmp() function returns

(A) -1

(C) 0

(B) 1

(D) Yes

47. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    const char *s = "";
    char str[] = "Chrome";
    s = str;
    while(*s)
        printf("%c", *s++);
    return 0;
}
```

(A) Error

(C) Chrome

(B) C

(D) hrome

48. What does the following declaration signify?

**void \*temp();**

(A) temp is a pointer to an void type.

(C) temp is a function that return a void pointer.

(B) temp is a void type pointer variable.

(D) temp function returns nothing.

49. Which of the following statement is correct about the references?

(A) A reference must always be initialized within functions.

(C) A reference must always be initialized outside all functions.

(B) A reference must always be initialized.

(D) Both A and C.

50. Copy constructor must receive its arguments by

(A) Either pass-by-value or pass-by-reference

(C) Only pass-by-value  
(D) Only pass by reference

(B) Only pass-by-address

51. Which of the following cannot be declared as virtual?

(A) Constructor

(C) Both A and D

(B) Destructor

(D) Data Members

52. Which of the following statements about virtual base classes is correct?

SET B

- (A) It is used to provide multiple inheritance.
- (B) It is used to avoid multiple copies of base class in derived class.

53. Why reference is not same as a pointer?

- (A) A reference can never be null.
- (B) A reference once established cannot be changed.

- (C) It is used to allow multiple copies of base class in a derived class.
- (D) It allows private members of the base class to be inherited in the derived class.

54. Which of the following statement is incorrect?

- (A) A default argument is checked for type at the time of declaration and evaluated at the time of call.
- (B) We can provide a default value to a particular argument in the middle of an argument list.

- (C) Reference doesn't need an explicit dereferencing mechanism.
- (D) All of the above.

55. What is correct about the static data member of a class?

- (A) A static member function can access only static data members of a class.
- (B) A static data member is shared among all the objects of the class.

- (C) We cannot provide a default value to a particular argument in the middle of an argument list.
- (D) Default arguments are useful in situations where some arguments always have the same value.

56. What will be the output of the program?

```
#include<stdio.h>
#include<stdarg.h>
```

```
void chrome(int num, ...);
void chrome1(int num, ...);
```

```
int main()
```

```
    chrome(1, "Apple", "Boys", "Cats", "Dogs");
    chrome1(2, 12, 13, 14);
    return 0;
}
```

- (C) A static data member can be accessed directly from main().
- (D) Both A and B.

```
void chrome(int num, ...)
```

```
{
```

```

char *str;
va_list ptr;
va_start(ptr, num);
str = va_arg(ptr, char *);
printf("%s", str);
}

```

```

void chrome1(int num, ...)
{
    va_list ptr;
    va_start(ptr, num);
    num = va_arg(ptr, int);
    printf("%d", num);
}

```

- (A) Dogs 12  
(B) Cats 14

- (C) Boys 13  
(D) Apple 12

57. Which of the following is a mechanism of static polymorphism?

- (A) Operator overloading  
(B) Function overloading  
(C) Function Overriding  
(D) All of the above  
(E) A and B

58. The library function used to find the last occurrence of a character in a string is.

- (A) strnstr()  
(B) laststr()  
(C) strrchr()  
(D) strstr()

59. Char txt[20] = "Hello World!\0": How many bytes allocated?

- (A) 11  
(B) 12  
(C) 13  
(D) 20

60. The contents of a file will be lost if it is opened in\_\_\_\_\_

- (A) a + mode  
(B) a - mode  
(C) w + mode  
(D) w - mode

61. Correct way to declaring Function as Constant?

- (A) Const int show () { }  
(B) Int const show () { }  
(C) int show () const  
(D) can't make const

62. Virtual inheritance can be used under

- (A) Single inheritance  
(B) Multi level  
(C) Multiple inheritance  
(D) Option (A) & (C)

SET B

63. How many times "Chrome" gets printed?

```
#include<stdio.h>
int main()
{
    int x;
    for(x=-1; x<=10; x++)
        if(x < 5)
            continue;
        else
            break;
        printf("Chrome");
    } return 0;
}
```

(A) Infinite times  
(B) 11 times

(C) 0 times  
(D) 10 times

64. What is the use of operator << in cout << "XYZ" ??

(A) Reading 'XYZ' from console  
(B) Printing 'XYZ' to console  
(C) Reading 'XYZ' from object

(D) Storing 'XYZ' in object  
(E) Shifting 'cout' with 'XYZ'

65. Which of the following operators can be overloaded?

(A) ::  
(B) sizeof()  
(E) .\*

(C) .  
(D) ?:  
(F) None

**Section V (Technical - Subjective)**

66. WAP to create Circle Class to get its radius and area. (Mandatory to use: Default Constructor, Parameterized Constructor.)

67. WAP to use Early Binding & Late Binding

68. WAP to create String Class with below three functions.

- a) Copy from one string to another
- b) Concatenates
- c) Returns the length

Note: (Mandatory: Dynamic Memory Allocation, Take inputs from User)

69. How to reverse words in a sentence without using library method? Example if given input is "Ram is Great" then your program should return "Great is Ram".







31 C. B2C3D

D. BCD7

Choose the pair that best represents a similar relationship to the one expressed in the original pair of words below (Q24&Q25)

24. MONK : DEVOTION

- A. maniac : pacifism
- B. explorer : contentment
- C. visionary : complacency
- D. rover : wanderlust
- E. philistine : culture

25. COBBLER : SHOE

- A. jockey : horse
- B. contractor : building
- C. mason : stone
- D. cowboy : boot
- E. potter : paint

26. Each problem consists of three statements. Based on the first two statements, the third statement may be true, false, or uncertain.

Tanya is older than Eric.

Cliff is older than Tanya.

Eric is older than Cliff.

If the first two statements are true, the third statement is

- A. true
- B. false
- C. uncertain

27. If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?

A. Brother

B. Sister



## Section II (English)

11. Fill up to blanks picking out from the choices:  
We are \_\_\_ to have him \_\_\_ here to make this function a great success

(A) pleased, over (C) wonderful, again  
(B) sure, come (D) happy, arrive

12. Fill up to blanks picking out from the choices:  
The students do not have ..... to the research materials in the library.

(A) access (B) excess

13. Change the voice of the following:  
He is making a film.

(A) A film is made by him. (C) A film is being made by him.  
(B) A film had being made by him. (D) A film has being made by him

14. Fill in the blanks correctly:  
Wars \_\_\_\_\_ everybody, and their destructive \_\_\_\_\_ last for generations.

(A) affect, effects (B) effect, affects





### Q: Email validation :

Create a method/function "validateEmail" which will accept a string as a parameter and will return true if the string is having a valid email address. Here are the rules to check validity of an email address

#### Rules

1. Allowed characters are
  - Alphanumeric characters(A-Z+0-9, case insensitive)
  - \_ (underscore)
  - . (dot)
  - @ (Only once in a email address)
2. Email address should only start with any Alphabet or \_ (underscore)!
3. Email Address should end with any Alphabet only!
4. @ should be allowed only once!
5. Two consecutive dots(.) are not allowed!
6. There should be a dot(.) after @ character, but shouldn't be consecutive, like:  
test@.test.com is valid and test@.com is not valid.

#### Example

- Valid: test1@test.com, test1@test.com
- Invalid: test@.com, 1test@test.com, .test@test.com, test@test

Note: Your program should input an email address from user and pass it to the function and show that inputted email address was valid or not!

### Q: Extract first letter from each word of the entered string

input a string containing more than 3 words then from input string extract first letter of each word

#### Example:

Input: My Name is Ram

Output: MNiR



---

**Q: Balanced brackets**

Take an input of string. Which will have N opening brackets [ and with N closing brackets ], in some arbitrary order. Determine whether the generated string is balanced; that is, whether it consists entirely of pairs of opening/closing brackets (in that order), none of which mis-nest.

(empty) OK

[] OK

[][] OK

[][][] OK

]] NOT OK

][] NOT OK

[][][] NOT OK

---

**Q : Reverse words at own place**

Write a function which takes input of a string and reverse every word at its own place and returns the final string

Example

Input: My name is xxx

Output: yM eman si xxx

---



- Question 22 Which of the following is incorrect statement regarding the use of generics and parameterized types in Java?
- Answer a) Generics provide type safety by shifting more type checking responsibilities to the compiler.  
b) Generics and parameterized types eliminate the need for down casts when using Java Collections.  
c) When designing your own collections class (say, a linked list), generics and parameterized types allow you to achieve type safety with just a single class definition as opposed to defining multiple classes.  
d) All of the mentioned
- Question 23 Which of these methods is used to print stack trace?
- Answer a) obtainStackTrace()  
b) printStackTrace()  
c) getStackTrace()  
d) displayStackTrace()
- Question 24 If x is an array of integer, then the value of &x[i] is same as
- (a) &x[i-1] + sizeof (int)  
(b) x + sizeof (int) \* i  
(c) x+i  
(d) none of these
- Question 25 Which of these type parameters is used for a generic class to return and accept a number?
- Answer a) K  
b) N  
c) T  
d) V



- 19  
(d) Feature has two 0's in it, at any position

What is the output of this program?

```
class A {  
    public int i;  
    private int j;  
}  
class B extends A {  
    void display() {  
        super.j = super.i + 1;  
        System.out.println(super.i + " " + super.j);  
    }  
}  
class inheritance {  
    public static void main(String args[]) {  
        B obj = new B();  
        obj.i=1;  
        obj.j=2;  
        obj.display();  
    }  
}
```

Question 13

Answer

- a) 2 2
- b) 3 3
- c) Runtime Error
- d) Compilation Error

What will be output of the following c program?

```
#include<stdio.h>  
int main(){  
    int _ = 5;  
    int _ = 10;  
    int _;  
    _____ = _____ +++;  
    printf("%i %i %i", _____);  
    return 0;  
}
```

Question 14

Answer

- (a) 15 10 5
- (b) 16 10 6
- (c) 15 11 6
- (d) 16 11 6

What will be output of the following c program?

```
#include<stdio.h>  
int main(){  
    int class=150;  
    int public=25;  
    int private=30;  
    class = class >> private - public;  
    printf("%d",class);  
    return 0;  
}
```

Question 15

Answer

- (a) Compile Error
- (b) 4
- (c) 0





- Question 25 Which of the following statements should be used to obtain a remainder after dividing 3.14 by 2.1 ?
- Answer
- (a) `rem = 3.14 % 2.1;`
  - (b) `rem = modf(3.14, 2.1);`
  - (c) `rem = fmod(3.14, 2.1);`
  - (d) Remainder cannot be obtain in floating point division.



- Will this code compile?
- ```
public class FinalHashMap {
    1 private static final Map map = new HashMap();
    2 public static void main(String[] args) {
    3     map.put("param1", "value1");
    4     map.put("param2", "value2");
    5     map=new HashMap();
    }
}
```
- Question 13
- ANSWER
- (a) Yes  
 (b) No, Compilation Error at line 1  
 (c) No, Runtime Error  
 (d) No, Compilation Error at line 5
- Question 14
- Answer
- Which of the following is incorrect statement regarding the use of generics and parameterized types in Java?
- a) Generics provide type safety by shifting more type checking responsibilities to the compiler.  
 b) Generics and parameterized types eliminate the need for down casts when using Java Collections.  
 c) When designing your own collections class (say, a linked list), generics and parameterized types allow you to achieve type safety with just a single class definition as opposed to defining multiple classes.  
 d) All of the mentioned
- Question 15
- Answer
- Which of these methods is used to know when was the URL last modified?
- a) LastModified()  
 b) getLastModified()  
 c) GetLastModified()  
 d) getLastModified()
- Question 16
- Answer
- Which of these keywords is used to refer to member of base class from a sub class?
- a) upper  
 b) super  
 c) this  
 d) None of the mentioned
- Question 17
- Answer
- Which of these methods is used to print stack trace?
- a) obtainStackTrace()  
 b) printStackTrace()  
 c) getStackTrace()  
 d) displayStackTrace()
- Question 18
- Answer
- Which of these exception is thrown by close() and read() methods?
- a) IOException  
 b) FileNotFoundException  
 c) FileException  
 d) FileInputOutputException
- Question 19
- Answer
- Suppose that you would like to create an instance of a new Map that has an iteration order that is the same as the iteration order of an existing instance of a Map. Which concrete implementation of the Map interface should be used for the new instance?
- (a) TreeMap





- c) **BUfferedOutputStream**
- d) **PrintStream**

Question 23 Which of these class is used to create an object whose character sequence is

- Answer
- a) **String()**
  - b) **StringBuffer()**
  - c) Both of the mentioned
  - d) None of the mentioned

What is the output of this program?

- Question 24
- ```
class output {
    public static void main(String args[])
    {
        String a="hello i love java";
        System.out.println(indexof("i")+" "+indexof('o')+" "+lastIndexof("i")+" "+lastIndexof('o'));
    }
}
```
- Answer
- a) 6 4 6 9
  - b) 5 4 5 9
  - c) 7 8 8 9
  - d) 4 3 6 9

Question 25 Why are generics used?

- Answer
- a) Generics make code more fast.
  - b) Generics make code more optimised and readable.
  - c) Generics add stability to your code by making more of your bugs detectable
  - d) Generics add stability to your code by making more of your bugs detectable



|                                                                   |                                                                                                                                                                                                                          |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>4C</p> <p>Q. Explain what is meant by pointer to function.</p> |                                                                                                                                                                                                                          |
| Question 14                                                       | What is meaning of following pointer declaration?<br>int(*ptr())[2];                                                                                                                                                     |
| Answer                                                            | <p>(a) ptr is pointer to function.</p> <p>(b) ptr is array of pointer to function.</p> <p>(c) ptr is pointer to such function which return type is pointer to an array.</p> <p>(d) ptr is pointer array of function.</p> |
| Question 15                                                       | What is the function of an operating system?                                                                                                                                                                             |
| Answer                                                            | <p>(a) Manages the flow of data and instructions</p> <p>(b) Manages computer's resources very efficiently</p> <p>(c) "Takes care of scheduling jobs for execution"</p> <p>(d) All of the above</p>                       |
| Question 16                                                       | What are the types of linkages?                                                                                                                                                                                          |
| Answer                                                            | <p>(a) Internal and External</p> <p>(b) External, Internal and None</p> <p>(c) External and None</p> <p>(d) Internal</p>                                                                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p>What is the output of this program?</p> <pre>class A {     int i;     void display() {         System.out.println(i);     } } class B extends A {     int j;     void display() {         System.out.println(j);     } } class inheritance_demo {     public static void main(String args[])     {         B obj = new B();         obj.i=1;         obj.j=2;         obj.display();     } }</pre> |                                                                 |
| Answer                                                                                                                                                                                                                                                                                                                                                                                                | <p>a) 0</p> <p>b) 1</p> <p>c) 2</p> <p>d) Compilation Error</p> |



What will be the output of program?

Question 7

```
public class Test{
    static int i=5;
    public static void main(String[] args) {
        Test test = null;
        System.out.println("i value is "+test.i);
    }
}
```

- Answer
- (a) 0
  - (b) 5
  - (c) Compilation error
  - (d) NullPointerException

What will output when you compile and run the above code?

Question 8

```
#include<stdio.h>
static struct student{
    int a;
    int b;
    int c;
    int d;
}s1={6,7,8,9},s2={4,3,2,1},s3;
void main(){
    s3=s1+s2; //Invalid expression
    clrscr();
    printf("%d %d %d %d",s3.a,s3.b,s3.c,s3.d);
    getch();
}
```

- Answer
- (a) 6789
  - (b) 4321
  - (c) 10101010
  - (d) Compiler error

What will be output of the following c program?

Question 9

```
#include<stdio.h>
int main(){
    int max-val=100;
    int min-val=10;
    int avg-val;
    avg-val = max-val + min-val / 2;
    printf("%d",avg-val);
    return 0;
}
```

- Answer
- (a) Run Time Error
  - (b) 55
  - (c) 105
  - (d) Compilation error

