

Time: 45 Minutes

- All questions carry equal weightage.
- Steps to arrive at the answer are necessary.
- Mention the question number properly in your answer sheet.

Section A: Puzzles

1. You're standing on the surface of the earth. You walk one mile south, one mile west, and one mile north. You end up exactly where you started. Where are you?
2. A group of friends went on a holiday to a hill station. It rained for 13 days. But when it rained in the morning, the afternoon was lovely. And when it rained in the afternoon, the day was preceded by clear morning. Altogether there were 11 very nice mornings and 12 very nice afternoons. How many days did their holiday last?
3. Find the value of Jupiter.
mercury= 177
Venus=2510
Earth=3515
Mars=4416
Saturn=6636
Jupiter=?
4. A factory was cutting rolls of cloth into 1 meter lengths, from a 200 meter roll. How long (in minutes) would it take for the machine to cut the roll if each cut took 4 secs?
5. Find a number less than 100 that is increased by one-fifth of its value when its digits are reversed.

Section B: Logical Reasoning [MCQ Type]

6. In a certain language, LEGEND is coded as MDHDOC. What is the code for ROCKSTAR?

- a) SNDJTSBQ b) NSDJTSBQ c) SNDTJSQB d) SDNJTSBQ

7. There are five gears connected in a row, the first one is connected to the second one, the second one is connected to the third one, and so on.

How much faster would the last gear be if the second gear was twice the size of the first gear, and all the other gears were the same size as the first gear?

- a. Same speed as first gear
b. Same speed as second gear
c. Same Speed as third gear
d. Same Speed as fourth gear

8. In a certain code, $P + R$ means P is the son of R; $P - R$ means P is the wife of R and $P \times R$ means P is the father of R.

If $A + B - Q \times S$, then which of the following is true?

- a. A is the grandson of S
b. S is the uncle of A
c. A is the brother of S
d. A is the sister of S

9. There are five rods K, L, M, N and O. The weight of O is twice L. The weight of L is equal to the weights of K and M together. The weight of M is twice the weight of K. The weight of N is three times the weight of M. If the weight of N is 90 kg, what will be the weight of O?

- a. 120 kg
b. 60 kg
c. 105 kg
d. 90 kg

10. In a village live two kinds of people: those who always lie and those who always tell the truth. Everybody knows each other in the village and therefore knows whether a particular villager is a liar or a truth-teller. Roaming around the village we meet a group of four villagers. We ask to each one of them: "How many liars are in this group?" and we get these answers: "0", "1", "2", "3". How many liars are in that group?

- a. 0
- b. 4
- c. 3
- d. 1

Section C: C Programming [MCQ Type]

11. what is the output of the program .

```
#include<stdio.h>
int main()
{
    int i=3, *j, k;
    j = &i;
    printf("%d\n", i**j*i+*j);
    return 0;
}
```

Compilation error
Segmentation fault

12. What is output of below program?

```
int main()
{
    int i;
    for(i=0; i<5; ++i)
    {
        i++;
        printf("Hello");
    }
    return 0;
}
```

- (a) Hello is printed 5 times
- (b) Compilation Error
- (c) Hello is printed 2 times
- (d) Hello is printed 3 times

13. what will be the output of the following conditional loop:

```
int main()
{
    int a,b;
    for (a=1; a<=5; a++) {
        for (b=1; b<=a; b++)
            printf("%d",b);
        printf(",");
    }
}
```

- a. 1,12,123,1234,12345,
- b. 12345, 1234, 123, 12, 1,
- c. 12345,
- d. 1,2,3,4,5,

14. What will be the output of the following C code?

```
#include <stdio.h>
int main()
{
    int x = -2;
    x = x >> 1;
    printf("%d\n", x);
}
```

- a) 1
- b) -1
- c) $2^{31} - 1$ considering int to be 4 bytes
- d) Either -1 or 1

15. Continue statement used for

- a. To continue to the next line of code
- b. To stop the current iteration and begin the next iteration from the beginning
- c. To handle run time error
- d. None of above

Section D: C programming [Subjective Type]

16. What will be the outcome of the following conditional statement if the value of variable s is 10.

$s \geq 10 \ \&\& \ s < 25 \ \&\& \ s! = 12$

17. What will be the output of the program ?

```
#include <stdio.h>
void main ()
{
    if(0)
        printf("1\n");
    else if(-20)
        printf("+20\n");
    else
        printf("-20\n");
}
```

19					
20					
Section A		Section B		Section C	Section D

18. what is the Output of the program?

```
int main()
{
    int a = 256;
    unsigned char *ptr;
    ptr = (unsigned char *)&a;
    printf("%d", *ptr);
    return 0;
}
```

19. What will be the output of the program?

```
#define sqrt(a) a*a
int main()
{
    int p = 5;
    printf("%d", sqrt(p * p));
    return 0;
}
```

20. What will be the output of the program ?

```
#include<stdio.h>
int main()
{
    int i=4, j=8;
    printf("%d, %d, %d\n", i|j&j|i, i|j&&j|i, i^j);
    return 0;
}
```