General Instructions :

- This question paper has two sections with a total of 25 questions
- Section A is an aptitude test with 15 questions
- Section B is a Programming test with 10 questions
- Ignore missing things like #include , {, } , etc
- Please do not write anything on the question paper
- It is advised to write the rough work on a separate piece of paper with a pen

Total Time Duration : 90 M

Section A: Aptitude

1) A man walks to a town at 4 kmph, rests there for 45 minutes and rides back at 7 kmph. Find the distance to the town, if the total time spent is 6 hrs 15 min.

2) Seven machines take 7 mins to make 7 identical toys. At the same rate, how many minutes would it take for 100 machines to make 100 toys?

3) Five friends, Betty, Rachel, Stevens, Veronica and Abigail, are sitting in a row facing east. Betty is sitting between Veronica and Stevens. Rachel is second to the left of Stevens. Who is sitting at the south end?

4) A basket contains 3 red 4 blue 5 green toys. If three toys are picked up at random, what is the [illegible] at least one is green?

5) Archie has 4 coins each of different denominations. What is the number of different sum [illegible] form (using one or more coins at a time)?

6) For natural numbers x, y, and z, if $xy + yz = 19$ and $yz + xz = 51$, then the minimum possible [illegible] is

7) Two trucks start from the opposite places on the main road, 150 km apart. The first truck runs [illegible] and takes a right turn and then runs 15 km. It then turns left and then runs for another 25 km and [illegible] the direction to reach the main road. In the meantime, due to a minor breakdown the other truck has [illegible] 35 km along the main road. What would be the distance between the two trucks at this point?

8) A batsman's average for 20 games is 25 runs. His highest score exceeds his lowest score by 40 runs. [illegible] these 2 games are excluded, the average of the remaining 18 games is 24 runs. The highest score of the [illegible] layer is

[illegible] eldest is 24 years older than his son. In two years, his age will be twice the age of his son. The present [illegible] he son is

[illegible] recently 78% of his income. His income increased by 20% and he increased his expenditure by 10% [illegible] centage increase in his savings

Paper Code: ZMDev02

ıeral Instructions : Total Time Duration : 90 Minutes (1.5 hours)

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Section A: Aptitude

1) Two cyclists start together to travel to a certain destination, one at the rate of 4 kmph and the other at the rate of 5 kmph. Find the distance if the former arrives half an hour after the latter.

2) The seating arrangement for six persons is based on the following conditions. Who are the neighbours o Quentin?

a. Preston sits next to Shepherd and Torres.

b. Quentin sits diametrically opposite to Preston.

c. Shortest distance between Shepherd and Rachel equal to the shortest distance between Torres and Ursula.

3) A basket contains 5 red 4 blue 3 green toys. If three toys are picked up at random, what is the proba that at least one is blue?

4) There are seven pairs of blue shoes and five pairs of purple shoes. They are all put into a box and are drawn one at a time. To ensure that at least one pair of blue shoes are taken out, what is the num shoes required to be drawn out?

5) A third of Antony's marks in maths exceeds a half of his marks in English by 30. If he got 240 subjects together, how many marks did he get in English?

6) One evening before sunset, Ramon and Harrison were talking to each other face to face. If H shadow was exactly to the right of Harrison, which direction was Ramon facing?

7) The batting average of runs of a cricket player of 30 games was 96. How many runs mus next games so as to increase his average of runs by 12?

8) 18 years ago, Jhonny was 3 times as old as his son David. Now Jhonny is only twice David. Then the sum of the present ages of Jhonny and David is?

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2) Write the output of the below program:

```
#include<stdio.h>
void main() {
 int p = 5, q = 8;
 int x = (p++) + (++q) + (p--) + (--q);
 int y = (q--) + (--p) + (++q) + (p++);
 printf("%d %d %d %d\n", x, p, y, q);
}
```

3) Write the output of the below program:

```
#include <stdio.h>
int rec(int n) {
 if (n <= 1)
  return 1;
 return n * rec(n - 1);
}
int main() {
 int num = 5;
 int result = rec(num);
 printf("Result: %d\n", result);
 return 0;
}
```

4) What property of the input number does this function check?

```
public boolean x(int number)
{
  return (number & 1) == 0;
}
```

5) If the result is 21, find z.

```
#include <stdio.h>
int main() {
   int x = 5;
   int y = 3;
   int z= 7;
   z = x++ * (--y) + z;
   printf("Result: %d\n", z);
   return 0;
}
```

```
    for(i = 0; i < n; ++i)
        printf("%d ", arr[i]);
}
int main()
{
    int arr[] = {30, 40, 50};
    int size = sizeof(arr) / sizeof(*arr);
    fun(arr, size);
    printArr(arr, size);
    return 0;
}
```

7) What should be the if condition to print "jellyfish"

```
#include <stdio.h>
int main() {
    if(_____) {
        printf("%s","jelly");
    } else {
        printf("%s","fish");
    }
}
```

8) Write the output of the below program:

```
#include <stdio.h>
int main() {
    int var1 = 8;
    int var2 = 9;
    if((var2 = 1) == var1)
        printf("%d", var2);
    else
        printf("%d", ++var2);
```

9) In a college election between two candidates, one candidate got 55% of the total valid votes. 30% of the votes were invalid. If the total votes were 7600, what is the number of valid votes the other candidate got?

10) 4 men and 6 women can complete a work in 8 days, while 3 men and 7 women can complete it in 10 days. In how many days will 10 women complete it?

11) A train is 360 meters long and is running at a speed of 45 km/hour. At what time will it pass a bridge that is 140 meters in length? (answer in seconds)

12) Find the odd one out:

835, 734, 642, 751, 853, 981, 532

13) Speed of Barry in still water is 5 km/hr and the river is running at 3km/hr. The total time taken to go to a place and come back is 10 hours. What is the distance travelled?

14) What will be the next number in the series 182, 181, 183, 179, 187, 171, ...?

15)

I. Tom weighs less than Jackson.

II. Tom weighs more than Pierce

III. Out of these three, Pierce weighs the least.

If the first two statements are true, is the third statement true or false?

Section B: Programming

1) Write the output of the below snippet:

```
nt num = 20;
or (int counter = 0; counter < 5; counter++) {
        switch (counter) {
                case 0:
                        num += 3;
                        break;
                case 2:
                        num -= 5;
                case 4:
                        num *= 2;
                default:
                        num += 1;
                        break;
        }
        printf("%d ", num);
```