TCS Digital Questions with Answers

Verbal Ability

Q1. The prophetic quality of the soothsayers' speeches earned them a great position in the Roman empire.

A. Predictive

B. Preventive

C. Speculative

D. Punitive

Answer: Option A

Q2. The following paragraph contains four sentences, three of which are grammatically incorrect and only

one is correct. Identify the one that is correct.

Products have a limited life, not only from the consumers viewpoint, but also as far as the producer is

concerned. For example, a particular model of a car might last five years before production is stopped and

it's replaced by a completely new model. New inventions and technology has made many products

obsolete. Fashion can be another major influence on the lives of a product.

A. New inventions and technology has made many products obsolete.

B. For example, a particular model of a car might last five years before production is stopped.

C. Fashion can be another major influence on the lives of a product.

D. Products have a limited life, not only from the consumers viewport but also as far as the producer is

concerned.

Answer: Option B

Q3. For the four sentence (1-4) paragraph below, sentences 1 and 4 are given. From P, Q, R and S, select

the appropriate sentences for 2 and 3 respectively.

1. The totalitarian regimes established in the 1920s and 1930s grossly violated human rights in their own territories.

2.

3.

4. This was reflected in the Charter of the UN signed on 26 June 1945.

P. The ideas of elaboration and protection of human rights have been gradually transformed into written laws.

Q. During the II World War, there was massive abuse of human life and property.

R. However, the Charter does not establish any specific mechanism of implementation.

S. It became clear that international instruments were needed to codify and protect human rights.

A. QS

B. PQ

C. QP

D. PR

Answer: Option A

Q4. Sentences of a paragraph are given below with jumbled order . Arrange the sentences in the correct

order to form a meaningful and corrected paragraph.

1. The effort of talking in a foreign language also makes people reflect more on what they are saying, and take rational decisions while speaking.

2. Anyone who lives or works in a non-English speaking country benefits hugely from almost any familiarity with its language.

3. Beyond the individual benefits, 21st century global relations and economics vitally need people who can function fluently abroad.

4. With the global rise of English, may native English speakers question the need for learn a foreign language, but there are several good reasons to do so.

A. 2, 4, 1, 3

B. 2, 1, 3, 4

C. 4, 2, 1, 3

D. 3, 2, 1, 4

Answer: Option C

Q5. To create a truly successful movie, the director, the writer, actors, and the cinematographer must work

together with other people closely.

A. felicitate

B. collaborate

C. corroborate

D. facilitate

Answer: Option B

Q6. Select the most appropriate ANTONYM of the given word.

Compassionate

A. Virulent

B. Peerless

C. Benevolent

D. Ruthless

Answer: Option D

Q7. Read the passage below and answer the question that follows.

Offering children a choice facilitates cooperation and usually avoids a war of the wills. Often at this age

young children oppose what parents impose on them, simply to exert their independence. This

stubbornness isn't necessarily bad. In fact, it’s a sign of individuality. If children are given two choices, such

as bread or wheat flakes for breakfast, everyone gets a choice and eventually a content healthy breakfast

is had. The child can say "No" to one of them, and there isn't a battle about breakfast.

Which of the statements below can be inferred from the passage?

A. Children should eat only bread or wheat flakes for breakfast.

B. Choices to be offered to children should be selected by parents.

C. When children say NO to something, a new choice should be given

D. There are situations where children should have absolutely no say

Answer: Option C

Qs 8 to 10: In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

As the world economy wakes back up, shortages and price spikes are affecting everything from the supply

of Taiwanese chips to the cost of a French breakfast. One kind of bottleneck deserves special attention :

the supply-side problems, such as scarce metals and land constraints, that threaten to ____ the green-

energy boom. Far from being transitory, these bottlenecks risk becoming a recurring feature of the world

economy for years to come because the shift to a ____ energy system is still only in its infancy.

Governments must respond to these market signals, facilitating a huge private-sector investment boom

over the next decade that increases capacity. If they do not, they stand little chance of keeping their

promises to reach the 'net-zero' _____ And there has been a dramatic shift in the attitude of business.

Investors are demanding that firms change tack, spurred by the new reality that clean technologies are

more_____ competitive.

Q8. If they do not, they stand little chances of keeping their promises to reach 'net-zero' _____

A. discharges

B. remissions

C. infections

D. emissions

Answer: Option D

Q9. One kind of bottleneck deserves special attention : the supply-side problems, such as scarce metals

and land constraints, that threaten to ____ the green-energy boom.

A. glow

B. slow

C. blow

D. low

Answer: Option B

Q10. Investors are demanding that firms change tack, spurred by the new reality that clean technologies

are more_____ competitive.

A. cost

B. profit

C. money

D. loss

Answer: Option A

Advanced Quantitative Aptitude

Q1. A and B started a business, where the investment of A was 40% of the total investment. B invested

his sum for 4 months. The profit received by A was 4/7 of the total profit. Find the time period of

investment of A.

A. 6 months

B. 4 months

C. 8 months

D. 12 months

Answer: Option C

Q2. A sum of Rs. 7,500 amounts to Rs. 9,075 at 10% p.a. in a certain time, when the interest is

compounded annually. What is the amount (in Rs) of the same sum at the same rate for 6/5 of the earlier

time?

A. 9,438

B. 9,580

C. 9,412

D. 9680

Answer: Option A

Q3. The average weight of some students in a class is 62 kg. If 8 students of average weight 55 kg leave

the class and 13 students of average weight 65 kg join the class, then the average weight of the remaining

students in the class is 63.9 kg. The number of students in the class, initially was _____.

A. 55

B. 45

C. 40

D. 50

Answer: Option B

Q4. Raj sold his bat at x% profit after giving a discount of x%. The marked price was INR 2,400 more than

the cost price and the selling price was INR 900 more than the cost price. Find the value of 4x.

A. 50

B. 200

C. 40

D. 100

Answer: Option D

Q5. The taxi charges in a city consists of a fixed charge together with the charge for the distance travelled

in kilometres. When a person travels 72 kms, he pays INR 1170. He pays IN 898 for traveling 55 km. What

will he have to pay for traveling 45 km?

A. INR 693

B. INR 738

C. INR 740

D. INR 826

Answer: Option B

Q6. When a number x is divided by 9, the remainder is 6. When the same number is divided by 21,the

remainder is 12. If x lies between 250 and 450, then what is the sum of all possible values of x?

A. 1044

B. 1107

C. 855

D. 666

Answer: Option A

Q7. C can complete the work alone in 60 days. A and B take 40% and 75% more time than C. The work

was started by A and B and C worked with A on every third day. In how many days will the work be

completed?

A. 16 ¼

B. 48 ⅘

C. 48 ¼

D. 16 ⅘

Answer: Option B

Q8. A sum when lent at the rate of 15% p.a. simple interest for x years amounted to INR 17,600. When

the same sum was lent at the rate of 18% p.a. simple interest for (x+2.5) years, it amounted to INR 24,320.

The value of x and the sum (in INR) respectively are:

A. 2.5 and 12,800

B. 2 and 12,500

C. 3.5 and 12,800

D. 2.5 and 12,500

Answer: Option A

Q9. A and B start from the same point and cover equal distances. A travels by car and covers the distance

in 3 hours with a speed of 50 kmph. B travels by a bus which stops for 10 minutes after covering 10 km. In

how much time will the bus reach the destination, if the speed of the bus is 40% less than the car.

A. 7 h 20 min

B. 7 h 30 min

C. 7 h

D. 6 h 40 min

Answer: Option A

Q10. Ramesh can complete a work in 20 days. Mohan is 66.67% as efficient as Ramesh. Mohan and

Ramesh begin to work together. Ramesh leaves after working for some days. The remaining work is

completed by Mohan in 10 days. After how many days does Ramesh leave the work?

A. 10 days

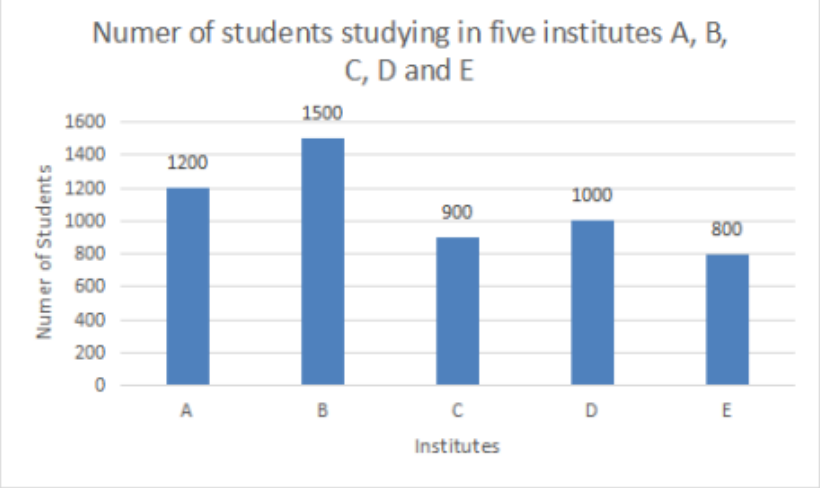
B. 6.5 days

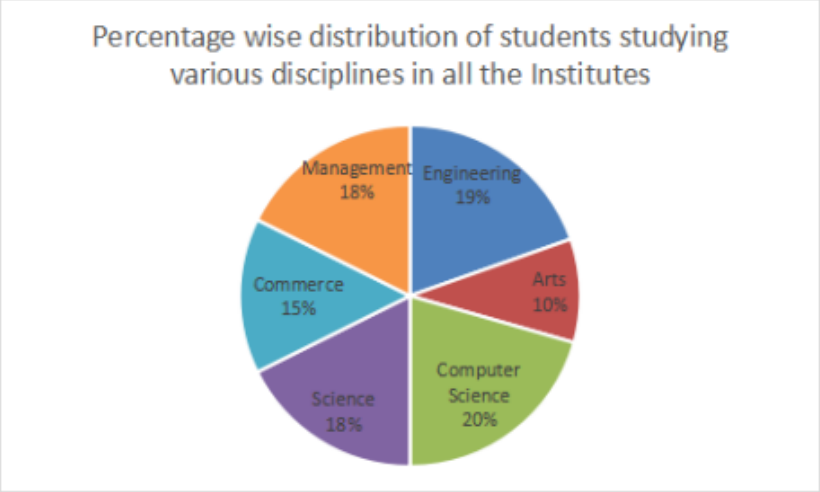
C. 8 days

D. 8.5 days

Answer: Option C

Direction (11-14): Study the given graph, pie chart and table and answer the question





Discipline	Ratio of male to female student
Management	5:3
Engineering	2 : 3
Science	7 : 11

Arts	3 : 2
Computer Science	10 : 11
Commerce	8 : 7

Q11. The total number of female students studying Arts in all the five institutes is what percentage of the

total number of students studying Engineering in institutes A, B and C?

A. 40%

B. 35%

C. 30%

D. 25%

Answer: Option C

Q12. The total number of male students in Computer Science all the five institutes is what percentage is

more than the number of female students studying Engineering in institutes A, C, D and E (correct to one

decimal place)?

A. 14.6%

B. 16.2%

C. 15.4%

D. 13.3%

Answer: Option C

Q13. What is the ratio of the total number of male students studying Management in institutes B and D to

the total number of students studying Engineering in institutes A and E?

A. 4 : 7

B. 8 : 9

C. 3 : 5

D. 5 : 8

Answer: Option B

Q14. The total number of students studying Science in institutes A and D is approximately what

percentage more than the total number of male students studying Commerce in institutes B, C and E?

(correct to one decimal place)

A. 54.7%

B. 35.4%

C. 42.8%

D. 48.6%

Answer: A

Advanced Coding

Q1. Problem statement:

Given two non-negative integers n1 and n2, where n1 <n2. The task is to find the total number of integers

in the range interval [n1, n2] [both inclusive] which have no repeated digits.

For e.g.

Suppose n1 = 11 and n2 = 15.

There is the number 11, which has repeated digits, but 12, 13, 14, and 15 have no repeated digits. So, the

output is 4.

Input	Output
11 -- Value of n1 15 -- Value of n2	4
101 -- Value of n1 200 -- Value of n2	72

Code Solution in Python

```python
def repeated_digit(n):
    a = []
    while n != 0:
        d = n%10
        if d in a:
            return 0
        a.append(d)
        n = n//10
    return 1
def calculate(L,R):
    answer = 0
    for i in range(L,R+1):
        answer = answer + repeated_digit(i)
    return answer
L=int(input())
R=int(input())
print(calculate(L, R))

```

Code Solution in Java

```java
import java.util.*;
class Main
{
static int repeated_digit(int n)
{
    LinkedHashSet<Integer> s = new LinkedHashSet<>();
    while (n != 0)
    {
        int d = n % 10;
        if (s.contains(d))
        {
            return 0;
        }
        s.add(d);
        n = n / 10;
    }
    return 1;
}
static int calculate(int L, int R)
{
    int answer = 0;
    for (int i = L; i < R + 1; ++i)
    {
        answer = answer + repeated_digit(i);
    }
    return answer;
}
public static void main(String[] args)
{
    Scanner sc=new Scanner(System.in);
    int L=sc.nextInt();
    int R=sc.nextInt();
    System.out.println(calculate(L, R));
}
}
```

Code Solution in C

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

void printUnique(int l, int r)
{
    int count = 0;
    for (int i=l ; i<=r ; i++)
    {
        int num = i;
        bool visited[10] = {false};
        while (num)
        {
            if (visited[num % 10])
                break;

            visited[num%10] = true;

            num = num/10;
        }

        if (num == 0)
            count++;
    }
    printf("%d",count);
}

int main()
{
    int l,r;
    scanf("%d%d",&l,&r);
    printUnique(l, r);
    return 0;
}
```

Q2. Problem statement:

Given an array Arr[] of N integers and a positive integer K. The task is to cyclically rotate the array clockwise by K.

Note: Keep the first position of the array unaltered

Example	Input	Output	Explanation
Example 1	5 -- Value of N {10, 20, 30, 40, 50} -- Elements of Arr[] 2 -- Value of K	40 50 10 20 30	Arr[] = {10, 20, 30, 40, 50} and K = 2 (Two cyclical rotations) After 1st rotation = {10, 50, 20, 30, 40} After 2nd rotation = {10, 40, 50, 20, 30}
Example 2	4 -- Value of N {10, 20, 30, 40} -- Elements of Arr[] 1 -- Value of K	40 10 20 30	Arr[] = {10, 20, 30, 40} and K=1 (One cyclical rotation) After 1st rotation = {10, 40, 20, 30}

Constraints

- 1 < N <=100
- -100 <= Arr[i] <=100
- 1 <=K <=100

Input format for testing

- The candidate should write the code to accept the inputs separated by a new line.
- First Input: Accept a single positive integer value for N representing the size of Arr[]
- Second Input: Accept N number of integer values separated by a new line, as elements of Arr[]
- Third input: Accept a single positive integer value for K representing the number of rotations.

Output format for testing

- The output must be N integer numbers separated by a single space character.
- Additional messages in the output will result in the failure of test cases.

Instructions

- The system does not allow any kind of hard-coded input value/ values.
- The written program code by the candidate will be verified against the input which are supplied from the system.

Code Solution in Python

Code Solution in Python

```python
def rightRotateByOne(A):

    last = A[-1]
    for i in reversed(range(len(A) - 1)):
        A[i + 1] = A[i]

    A[0] = last
def rightRotate(A, k):

    for i in range(k):
        rightRotateByOne(A)
n=int(input())
A = []
for i in range(n):
    r=int(input())
    A.append(r)
k = int(input())
rightRotate(A, k)
for i in range(n):
    print(A[i],end=" ")

```

Code Solution in Java

```java
import java.util.*;
public class Main
{
public static void Rotateby(int arr[], int n)
{
      int x = arr[n - 1], i;
    for (i = n - 1; i > 0; i--)
        arr[i] = arr[i - 1];
    arr[0] = x;
}
public static void Rotate(int arr[], int d, int n)
{
    for (int i = 0; i < d; i++)
        Rotateby(arr, n);
}
public static void printArray(int arr[], int n)
{
    for (int i = 0; i < n; i++)
        System.out.printf("%d ",arr[i]);
}
public static void main(String args[])
{
    Scanner sc=new Scanner(System.in);
    int i;
    int n=sc.nextInt();
    int arr[]=new int[n];
    for(i = 0; i < n;i++)
        arr[i]=sc.nextInt();
    int k=sc.nextInt();
    Rotate(arr, k, n);
    printArray(arr, n);
}
}
```

Code Solution C

```c
#include<stdio.h>
void Rotateby(int arr[], int n)
{
      int x = arr[n - 1], i;
    for (i = n - 1; i > 0; i--)
        arr[i] = arr[i - 1];
    arr[0] = x;
}
void Rotate(int arr[], int d, int n)
{
    for (int i = 0; i < d; i++)
        Rotateby(arr, n);
}
void printArray(int arr[], int n)
{
    for (int i = 0; i < n; i++)
        printf("%d ",arr[i]);
}
int main()
{
    int arr[10],i;
    int n,k;
    scanf("%d",&n);
    for(i = 0; i < n;i++)
        scanf("%d",&arr[i]);
    scanf("%d",&k);
    Rotate(arr, k, n);
    printArray(arr, n);
    return 0;
}
```

TCS Digital Questions with Answers

Verbal Ability

Q1. Select the option that gives the most appropriate meaning of the underlined word.

The affordances that social media have in organizational contexts cannot be undetermined.

A. liabilities

B. possibilities

C. qualities

D. features

Answer: Option C

Q2. The following paragraph contains four sentences, three of which are grammatically incorrect and only

one is correct. From the given options, select the sentence that is grammatically correct.

4

When Jamshedji Tata started a trading firm from 1868, few could have predicted that he would one day be

called the Father of Indian Industry. Born in Navsari, Gujarat, Jamshedji moved to Bombay, Now Mumbai, in

the age of fourteen and joined his father's trading firm. Fifteen years later, he branched out on his own and

built a reputation on acquiring and turning around sick mills. Jamshedji also put in place pioneering labour

practices, long before any labour laws came into existence.

A. Born in Navsari, Gujarat, Jamshedji moved to Bombay, now Mumbai, in the age of fourteen and

joined his father's trading firm.

B. Jamshedji also put in place pioneering labour practices, long before any labour laws came in

existence.

C. When Jamshedji Tata started a trading firm from 1868, few could have predicted that he would

one day be called the Father of Indian Industry.

D. Fifteen years later, he branched out on his own and built a reputation on acquiring and turning

around sick mills.

Answer: Option D

Q3. Read the passage below and answer the question that follows.

In the years since the Cold War and collapse of the Soviet Union, the two countries have worked to set

beside their differences, but tension still simmers beneath the surface. Russia was still viewed by many

Americans as remote, mysterious, and even dangerous. Similarly, the Russians harbour both admiration

and contempt for America's economic prowess and superpower status.

Which of the statements below can be inferred from the passage?

A. Russia and America have worked out their differences.

B. Russians hate Americans more than Americans hate Russians.

C. Russia and America do not trust each other.

D. The collapse of the Soviet Union has made the two countries enemies.

Answer: Option C

Q4. The following sentences are jumbled. Please re-arrange them in the right order.

1. If we harness the process, we could naturally modify crops and make them more resistant to the effects of climate change.

2. A recent study shows that lateral gene transfer is widespread in grasses, including many food crops.

3. While we do not fully know how genes move between species, we could benefit from mimicking the transfer between species.

4. The research shows that genes can freely move between grass species regardless of how closely related they are.

A. 2,1,3,4

B. 3,1,4,2

C. 2,4,3,1

D. 3,2,4,1

Answer: Option C

5

Q5. Select the most appropriate ANTONYM of the given word.

Erratic

A. Invariant

B. Concurrent

C. Sporadic

D. Consistent

Answer: Option D

Q6. Select the most appropriate option that best substitutes the underlined word.

Whenever we talk about a school, teachers, students and their parents are described as the most

important group of people who are involved with the organization towards it and have an interest in its

success.

A. placeholders

B. beholders

C. upholders

D. stakeholders

Answer: Option D

Q7: Please read the passage and answer questions that follow.

No Ecosystem more important in mitigating the effects of climate change than tropical rainforest. And

South-East Asia is home to the world's third-biggest patch of it, behind the Amazon and Congo basins.

Even though humans release carbon from these forests through logging, clear-felling for agriculture and

other disruptions, some are so vast and fecund that the growth of the plants within them absorbs even

more from the atmosphere. The Congo basin, for instance, locks up 600m tonnes of carbon a year more

than it releases, according to the World Resources Institute (WRI), an international NGO that is equivalent

to about a third of emissions from all American transport. The Amazon, too, remains a net absorber

(though four years of massive fires and clearing for cattle have brought it to a tipping-point). In contrast,

such is the extent of clearing for plantations in South-East Asia's rainforests, which run from Myanmar to

Indonesia, that over the past 20 years they have turned from a growing carbon sink to a significant source

of emissions—nearly 500m tonnes a year. Indonesia and Malaysia, home to the biggest expanses of

pristine forest, have lost more than a third of it this century. Cambodia, Laos and Myanmar, relative

newcomers to deforestation, are making up for lost time.

Which of the following statements is NOT TRUE as per the passage?

A. Climate changes mitigate the effects of tropical rainforests.

B. Our planet requires more carbon sinks than sources of carbon emission.

C. Emissions from all American countries exceed 500 m tonnes of carbon a year.

D. The world is not against agriculture per se, but against deforestation at large.

Answer: Option C

6

Advanced Quantitative Aptitude

Q1. The average of 19 numbers is 42. The average of the first 6 numbers is 38.5 and that of the last 14

numbers is 45.5. If the sixth number is excluded then what's the average of the remaining

numbers?(Correct to one decimal Place)

A. 41.2

B. 41.6

C. 40.8

D. 40.4

Answer: Option D

Q2. A shopkeeper bought a lamp at Rs.1,200 and the ratio of its cost price and marked price was 3:5. It

was sold after two successive discounts of 30% and 18% and incurred a loss or profit of x%. Find x.

A. 4 ⅔ profit

B. 4 ⅓ loss

C. 4 ⅔ loss

D. 4 ⅓ profit

Answer: Option B

Q3. The numbers 4121, 4973 and 6464 leave the same remainder x in each case when divided by the

greatest number y. the value of (2y-x) is;

A.

B. 432

C. 336

D. 352

Answer: Option D

Q4. A divided money between two sons B and C. The amount received by B after 13 years is equal to the

amount received by C in 15 years at the rate of 4% p.a. compound interest. The difference between their

shares is INR 102. Find the amount in total (in INR).

A. 2702

B. 2602

C. 1352

D. 1250

Answer: Option B

Q5. The number of ways of choosing (x+8) balls out of 36 balls is equal to choosing x balls out of 36 balls.

Find the number of ways of choosing (x+5) balls out of 25 balls.

A. 1,741,00

B. 1,69,900

C. 1,77,100

D. 1,70,000

7

Answer: Option C

Q6. A fraction becomes 2 / 3 if 1 is added to its numerator and 2 is added to its denominator . If 2 is

subtracted from the numerator and 5 is added to its denominator, the fraction becomes 1 / 4, If 3 is added

to the numerator and 1 is subtracted from the denominator, then fraction becomes:

A. 3 / 4

B. 6 / 5

C. 4 / 3

D. 5 / 7

Answer: Option C

Qs 8 to 10: Study the given information and answer the question.

In a company, there are 1,300 employees. The company has give departments: HR, Finance, Marketing,

Administration and Manufacturing. Out of the total female employees in the company, 32% work in the HR

department, 20% in the Finance department and 18% in the Marketing department. The remaining 180

female employees work in the Administration department. There are no female employees in the

Manufacturing department.

Out of the total male employees in the company, 15% work in the HR department, 27% in Marketing, 25%

in Finance, 20% in Administration. The remaining male employees work in the Manufacturing department.

Q8. What is the average number of employees (male and female) who work in the Marketing, Finance and

Administration departments?

A. 312

B. 301

C. 308

D. 304

Answer: Option D

Q9. The total number of male employees working in the HR and Finance departments is what percentage

of the total number of female employees working in the HR, Marketing and Administration departments

(nearest integer)?

A. 60%

B. 54%

C. 56%

D. 58%

Answer: Option D

Q10. If the number of female employees in HR increases by 25%, the number of female employees in the

Finance department increases by 15%, and 48 female employees leave the Administration department,

then what is the total number of female employees in the company will increase by:

A. 18

B. 16

C. 12

8

D. 15

Answer: Option A

Q11. If 17 male employees from the Marketing department are transferred to the Manufacturing

department and 20 female employees from the Administration department are transferred to the HR

department, then the number of employees in the Marketing department is what percentages less than the

number of employees in the Administration department?

A. 8 ⅓%

B. 5 ½ %

C. 6 ⅔ %

D. 6 ¼ %

Answer: Option C

Q12. A certain sum was invested at 20% p.a. for a year such that the interest was compounded half yearly

for the first year and compounded yearly for the next year. If get on the sum was Rs.10,170 then the sum

(in Rs) was:

A. 25,000

B. 24,500

C. 24,000

D. 22,500

Answer: Option D

Q13. Arun borrowed a certain sum at the rate of 8% for the first three years, at the rate of 9 ½% p.a. for

the next 4 years and at the ratio of 15% for the period beyond 7 years. If he pays a total simple interest

Rs.8,015 at the end of 10 ½% years, the sum (in Rs) was:

A. 7,000

B. 7,500

C. 7,200

D. 6,500

Answer: Option A

Q14. 15 men and 20 boys can complete a work in 15 days, 20 men and 35 boys can complete the same

work in 10 days. Determine the efficiency of boys with respect to men.

A. 1.5 : 1

B. 2 : 1

C. 1 : 2

D. 1 : 1.5

Answer: Option C

9

Q15. A and B are coming from opposite directions. A starts at 10 a.m. towards B. B starts at 11 a.m.

towards A. The speed of A and B are 40 km/hr and 50 km/hr, respectively. At what time will they meet

each other, if A and B are 100 km apart?

A. 11.50 a.m.

B. 12.00 p.m.

C. 11.40 a.m.

D. 10.40 a.m.

Answer: Option C

Advanced Coding

Q1. Given an array Arr[] of N integer numbers. The task is to rewrite the array by putting all multiples of 10

at the end of the given array.

Note: The order of the numbers which are not multiples of 10 should remain unaltered, and similarly, the

order of all multiples of 10 should be unaltered.

For e.g.

Suppose N = 9 and Arr[]={10, 12, 5, 40, 30, 7, 50, 9, 10}

You have to push all multiple of 10 at the end of the Arr[]

Hence, the output is 12 5 7 9 10 40 30 50 10.

Input	Output
9 .... Value of N 10 12 5 40 30 7 50 9 10 ... Elements of Arr[]	12 5 7 9 10 40 30 50 10
9 ..... Value of N 100 21 5 6 3 7 11 89 10.... Elements of Arr[]	21 5 6 3 7 11 89 100 10

Constraints:

1 < N < = 100

.100 < = Arr[i] < = 100

Input Format for Testing:

1. First input line: Accept a single positive integer value for N representing the size of Arr[].

2. Second Input line: Accept N number of integer values separated by a new line.

10

Output Format for Testing:

1. The output must be N integer numbers separated by a single space character (See the output format in examples).

2. Additional messages in the output will result in the failure of test cases.

Code Solution in Python

```python
n = int(input())
l = list(map(int,input().split()))
m = []
n = []

for i in l:
  if i%10==0 and i!=0:
    n.append(i)
  else:
    m.append(i)

print(*m+n)
```

Code Solution in Java

```java
import java.util.*;
class Main
{
public static void main (String[] args) {
    Scanner sc=new Scanner (System.in);
    int n=sc.nextInt();
    int arr[]=new int[n];
    int i;
    for(i=0;i<n;i++)
        arr[i]=sc.nextInt();
    for(i=0;i<n;i++)
       if(arr[i]%10!=0)
        System.out.printf("%d ",arr[i]);
    for(i=0;i<n;i++)
       if(arr[i]%10==0)
        System.out.printf("%d ",arr[i]);
    }
}
```

Code Solution in C++

```cpp
#include<iostream>
using namespace std;
int main()
{
    int n;
    cin>>n;
    int arr[n];
    int i;
    for(i=0;i<n;i++)
        cin>>arr[i];
    for(i=0;i<n;i++)
       if(arr[i]%10!=0)
        cout<<arr[i]<<" ";
    for(i=0;i<n;i++)
       if(arr[i]%10==0)
        cout<<arr[i]<<" ";

}
```

Code Solution in C

```c
#include <stdio.h>
int main()
{
    int n,i,a[10];
    scanf("%d",&n);
    for(i = 0; i < n;i++)
    {
      scanf("%d",&a[i]);
    }
    for(i = 0; i < n;i++)
    {
     if(a[i] %10 !=0)
     {
       printf("%d ",a[i]);
     }
    }
    for(i = 0; i < n;i++)
    {
     if(a[i] %10 ==0)
     {
       printf("%d ",a[i]);
     }
    }
    return 0;
}
```

Q2. Given an array Arr[N] of N integers and a positive integer K. The task is to divide the array into two sub-arrays from right after the Kth position and slide the left sub-array of K elements to the end.

Input	Output	Explanation
5 -- Value of N {10, 20, 30, 40, 50} -- Elements of Arr [] 2 -- Value of K	30 40 50 10 20	Arr[] = {10,20,30,40,50} and K=2 (2nd position) Divide array from after 2nd position and add left sub-array {10,20} to the end. So the output is 30 40 50 10 20
4 -- Value of N {10, 20, 30, 40} -- Elements of Arr [] 1 -- Value of K	20 30 40 10	Arr[] = {10, 20, 30, 40} and K=1 (1st position) Divide array from after 1st position and add left sub-array {10} to the end. So the output is 20 30 40 10
4 -- Value of N {10, 20, 30, 40} -- Elements of Arr[] 3 -- Value of K	40 10 20 30	Arr[] = {10, 20, 30, 40} and K=3 (3rd position) Divide array from after 3rd position and add left sub-array {10, 20, 30} to the end. So the output is 40 10 20 30

Constraints

- 1<N<=100
- -100<=Arr[i]<=100
- 1<=K<N

Code Solution in Python

```python
def rightRotateByOne(A):

    last = A[-1]
    for i in reversed(range(len(A) - 1)):
        A[i + 1] = A[i]

    A[0] = last
def rightRotate(A, k):

    for i in range(k):
        rightRotateByOne(A)
n=int(input())
A = []
for i in range(n):
    r=int(input())
    A.append(r)
k = int(input())
rightRotate(A, k)
for i in range(n):
    print(A[i],end=" ")

```

Code Solution in Java

```java
import java.util.*;
public class Main
{
public static void Rotateby(int arr[], int n)
{
      int x = arr[n - 1], i;
    for (i = n - 1; i > 0; i--)
        arr[i] = arr[i - 1];
    arr[0] = x;
}
public static void Rotate(int arr[], int d, int n)
{
    for (int i = 0; i < d; i++)
        Rotateby(arr, n);
}
public static void printArray(int arr[], int n)
{
    for (int i = 0; i < n; i++)
        System.out.printf("%d ",arr[i]);
}
public static void main(String args[])
{
    Scanner sc=new Scanner(System.in);
    int i;
    int n=sc.nextInt();
    int arr[]=new int[n];
    for(i = 0; i < n;i++)
        arr[i]=sc.nextInt();
    int k=sc.nextInt();
    Rotate(arr, k, n);
    printArray(arr, n);
}
}
```

Code Solution in C++

```cpp
#include <bits/stdc++.h>
using namespace std;
void Rotateby(int arr[], int n)
{
      int x = arr[n - 1], i;
    for (i = n - 1; i > 0; i--)
    arr[i] = arr[i - 1];
    arr[0] = x;
}
void Rotate(int arr[], int d, int n)
{
    for (int i = 0; i < d; i++)
        Rotateby(arr, n);
}
void printArray(int arr[], int n)
{
    for (int i = 0; i < n; i++)
        cout << arr[i] << " ";
}
int main()
{
    int arr[10],i;
    int n,k;
    cin>>n;
    for(i = 0; i < n;i++)
    cin>>arr[i];
    cin>>k;
    Rotate(arr, k, n);
    printArray(arr, n);

    return 0;
}
```

TCS Digital Questions with Answers

Verbal Ability

Q1. Select the option that gives the most appropriate meaning of the underlined word.

The kitchen is compact but has everything one needs. .

A. spacious and well designed

B. small and very cramped

C. spacious but disorganised

D. small but well organised

Answer: Option D

Q2. The following paragraph contains four sentences, three of which are grammatically incorrect and only

one is correct. from the given options, select the sentence that is grammatically correct.

4

We are always negotiating not only in business but also in our private lives, from deciding what to watch

on TV to deciding where to go for a vacation. Rarely, peepinsta in fact, was any form of decision reached

without some form of negotiation. Even though we practice this art on a regular basis, it is always useful to

review what we already subconsciously are knowing. There are some good books that provided us with

strategies for negotiating effectively, no matter what situation one finds oneself in.

A. Rarel, in fact, was any form of decision reached without some form of negotiation.

B. There are some good books that provided us with strategies for negotiating effectively, no matter

what situation one finds oneself in.

C. we are always negotiating not only in business, but also in our private lives, from deciding what to

watch on TV to deciding where to go for a vacation.

D. Even though we practise this art on a regular basis, it is always useful to review what we already

subconsciously are knowing.

Answer: Option C

Q3. Select the most appropriate option that can substitute the underlined words in the given sentence.

Naphtha, a cheap fuel extracted from crude oil, is added to petrol to make the quality of petrol poorer.

A. vitiate

B. obliterate

C. adulterate

D. mitigate

Answer: Option C

Q4. Read the passage the below and answer question that follows:

Genealogy is fun. Just as a piece of furniture or a picture takes on much more interest if you know it's

history, so does an individual become more read once the ancestral elements that shaped him are known.

An in-depth family history is a tapestry peepinsta of all those to whom we owe our existence.

Which of the statements below can be inferred from the passage?

A. Genealogical research can bring meaning and life to a person's history.

B. Finding out about our ancestors is more interesting than researching the history of objects.

C. Knowing the genealogy of a person makes the person more real.

D. To know a person well, one must know the family history and the events in his/her life.

Answer: Option A

Q5. Select the most appropriate ANTONYM of the given word

Auspicious

A. Vicious

B. Ominous

C. Felicitous

D. Pompous

Answer: B

5

Q6. For the four sentence(1 to 4) paragraph below, sentences 1 and 4 are given. From P, Q, R and S, select the appropriate sentences for 2 and 3 respectively.

1. Freedom of religion or belief are fundamental and may not be suspended even in states of emergency.

2.

3.

4. The relation of the belief of the individual to the social and political context is a matter of controversy.

P. Conscientious objection to military service is also part of the right to freedom of belief.

Q. This freedom may be threatened by states that encourage an official religion or discourage some religious belief.

R. For conscientious objectors, an alternative form of public service must be offered in place of compulsory military service.

S. The protection is due to both religious believers and non-believers.

A. PQ

B. RQ

C. PR

D. SQ

Answer: Option A

Q7. Read the given passage and answer the questions that follow.

Typically, when an author signs a publishing contract, she or her agent negotiates an advance against royalties. When a book 'has sold for' so many dollars, this amount is the advance and not a flat purchase

price. An advance is often paid in three installments: when the contract is signed, when the manuscript is

accepted by the publisher, and when the book is published. Some publishers may break down these payments even more. Once the book is published, authors make a percentage of sales for each book sold,

which are their ‘ royalties’. However they are essentially earning money they have already been paid. Once

a book has made the author the amount of royalties they were advanced, they begin to earn additional

royalties;this is often called earning out. If the book never makes the advance back, the author does not

have to pay the overage back to the publisher, except in circumstances where they have violated/

terminated the contract.

What does ‘earning out’ become operational?

A. When royalties surpass the advance paid

B. when authors receive a flat price not an advance

C. when authors violate their contract

D. when books get sold in bookstores or online

Answer: Option B

Advanced Quantitative Aptitude

Q1. 25 numbers were recorded and their average was calculated as 50.6. Later it was found that three

numbers 29, 35, and 72 were wrongly taken as 92, 53 and 27 respectively, and one number 58 ws

inadvertently left out from being recorded. What is the correct average of all the numbers?

A. 48.2

B. 48.7

C. 50.5

D. 49.5

Answer: Option D

Q2. A sum of Rs. x was lent at 10% p.a. for 4 years, interest compounded annually. If the difference

between the compound interest for the fourth year and the third year is Rs. 847, then what is the value of

x?

A. 63,000

B. 77,000

C. 70,000

D. 66,000

Answer: Option C

Q3. The value of [(4.8)^\3 - (3.2)^3]/[(4.8)^2 + (3.2)^2] + [[{(8.6 * 49.2) + (25.8)^2}*7.5]/[{(32.35)^2 -

(9.85)^2}*8.6]]

A. 14.6

B. 11.2

C. 9.6

D. 12.2

Answer: Option D

Q4. In Examination, 50% passed in Maths and 75% passed in English and 20% passed in both subjects
.

Find the difference between the number of students who passed only in English to those who passed in

Maths. If 270 students passed in both the subjects.

A. 180

B. 210

C. 150

D. 120

Answer: Option B

Q5. A bag contains z+2 black balls, z+5 red balls and z+8 white balls . The probability of getting a black

ball is ¼, what is the probability of getting three red balls of different colour, when three balls are drawn?

A. 45/119

B. 36/119

C. 27/119

D. 23/119

Answer: Option C

Q6. Rajesh can complete a job in 18 days. Rohit is 50% more skilled than Rajesh. Find the total time taken

to do the same job when they both work together.

A. 7.4 days

B. 7.2 days

C. 7.10 days

D. 7.0 days

Answer: Option B

Q7. A man walks around a square garden of perimeter 8km at a speed of 2 km/h, 3km/h, 4km/h and 5km/h,

on each side of the square garden. Calculate is average speed.

A. 2.912 km/h

B. 3.312 km/h

C. 3.112 km/h

D. 3.212 km/h

Answer: Option C

Q8. An article is sold at 15% profit by giving a discount of 17.2%. The marked price of the article is

Rs.5,000. Determine its cost price.

A. Rs.5,095

B. Rs.36,000

C. Rs.3,600

D. Rs.6,995

Answer: Option C

Q9. Cost of 5 pens and 7 notebooks is Rs 224. If the cost of a pen is increased by Rs 2 and notebook is

reduced by 3 then the cost of 3 pen and 4 notebook is Rs 124. What is the original cost of 4 Pen and 3

notebooks ?

A) 144

B) 121

C) 127

D) 122

Answer: Option B

8

Q10. A and B invested in the ratio 4:5 A left after 9 months and B increased by 20 % and C joined with an

investment of 33.33% of present investment of B. The annual profit was 42000.Find percentage difference

between A and B to that of A.

A) 175%

B) 75%

C) 25%

D) 50%

Answer: Option B

Q11 The amount obtained by Sumit by investing a sum of Rs 10,920 for 3 years at the rate of 10% simple

interest is equal to the amount obtained by Raghav by investing a certain sum in Rs for 5 years at the rate

of 8% per annum SI. What is 85% of the sum invested by Raghav

A) 8519

B) 8619

C) 8591

D) 8692

Answer Option B

Q12. A man walks around a square garden 8km at a speed of 2 kmph. 3kmph, 4 kmph and 5 kmph on each side of the square garden. Calculate avg speed

A) 3.112

B) 2.912

C) 3.312

D) 3.212

Answer : Option D

Direction (Q13 to Q15) There are 800 players in a stadium who are participating in 4 sports A,B,C and D.

The ratio of male to female players is 9:7. The ratio of male players who are participating sport A to male

players in other three sports is 4 :5

12% of male players who are not participating in A are participating in sport D . The remaining male

players are participating in sports B and C in the ratio 5:6

48% of the female players are participating in sports A and 22 female players are participating in sport B.

The remaining female players are participating in sports C and D in the ratio 7:9

Q13. Approximately what percentage of total players participating in sport D is equal to the number of

female players playing sport C?

(correct to one decimal places)

9

A) 59.8

B) 57.6

C) 57.9

D) 58.3

Answer: Option D

Q14. The number of female players participating in sports A and B together is what percentage more than

the number of male players participating in sports B and D together (correct to one decimal)

A) 31.8

B) 46.2

C) 31.2

D) 48.4

Answer: Option B

Q15. The average number of male players participating in sport A, B and C is what percentage less than

the number of female players participating in sports C and D together?

A) 12.5

B) 10

C) 12.0

D) 9.5

Answer : Option A

10

Advanced Coding

Q1. For hiring a car, a travel agency charges R1 rupees per hour for the first N hours and then R2 rupees

per hour. Given the total time of travel in minutes is X. The task is to find the total traveling cost in rupees.

Note: While converting minutes into hours, ceiling value should be considered as the total number of

hours.

For example: If the total travelling time is 90 minutes,

i.e. 1.5 hours, it must be considered as 2 hours.

Input	Output	EXplanation
20 ---Value of R1 4 --- Value of N in hours 40 --- Value of R2 300 --- Value of X in minutes	120	Total travelling hours = 300/60 = 5 hours Rupees 20/hours for first 4 hours = 20 * 4 = 80 rupees Rupees 40/hours in 5th hour = 40 * 1 = 40 rupees Hence, the total travelling cost = 80 + 40 = 120 rupees
30 --- Value of R1 5 --- Value of N in hours. 35 --- Value of R2 500 -- Value of X in minutes	290	Total travelling hours = 500/60 = 8.33, Ceiling value of 8.33 = 9 hours Rupees 30/hours for first 5th hours = 30 * 5 = 150 rupees Rupees 35/hours in 5th hour = 35 * 4 = 140 rupees Hence, the total travelling cost = 150 + 140 = 290 rupees
30--- Value of R1 10--- Value of N in hours 35 ---- Value of R2 5 --- Value of X in minutes	30	Total travelling hours = 3/60 = 0.05, Ceiling value of 0.05 = 1 hour Rupees 30/hour for first 10 hours = 30 * 1 = 30 rupees

Constraints:

1 < R1 < R32< 100

11

1 < = N < = 10

1 < = X < 10000

Code Solution in Python

```python
r1 = int(input())
n = int(input())
r2 = int(input())
k = int(input())
hr = (k+59)//60
if(hr > n):
  focus = n*r1+(hr-n)*r2
else:
  focus = n*r1
print(focus)
```

Code Solution in Java

```java
import java.util.*;
class Main
{
public static void main(String args[])
{
    Scanner sc=new Scanner(System.in);
    int r1=sc.nextInt();
    int n=sc.nextInt();
    int r2=sc.nextInt();
    int k=sc.nextInt();
    int focus,hr;
    hr = (k+59)/60;
    if(hr > n)
        focus = n*r1+(hr-n)*r2;
    else
        focus = n*r1;
    System.out.println(focus);
}
}
```

Code Solution in CPP

```cpp
#include<iostream>
using namespace std;
int main()
{
  int r1,n,r2,k,focus,hr;
  cin>>r1>>n>>r2>>k;
  hr = (k+59)/60;
  if(hr > n)
  {
    focus = n*r1+(hr-n)*r2;
  }
  else
  {
    focus = n*r1;
  }
  cout<<focus;
  return 0;
}
```

Code Solution in C

```c
#include<stdio.h>
int main()
{
  int r1,n,r2,k,focus,hr;
  scanf("%d%d%d%d",&r1,&n,&r2,&k);
  hr = (k+59)/60;
  if(hr > n)
  {
    focus = n*r1+(hr-n)*r2;
  }
  else
  {
    focus = n*r1;
  }
  printf("%d",focus);
  return 0;
}
```

Q2. There is a bag with three types of gemstones: Ruby of type R, Garnet of type g, and Topaz of type T. Write a program to find the total number of possible arrangements to make a series of gemstones where no two gemstones of the same type are adjacent to each other

Input	Output	Explanation
1-Count of R i.e. Ruby 1-Count of G i.e. Garnet 0-Count of T i.e.	2	Arrangements are RG and GR.
1-Count of R i.e. Ruby 1-Count of G i.e .Garnet 1-Count of T i.e. Topaz	6	Arrangements are RGTR, GRTR, RGRT, RTGR, RTRG AND TRGR

Code Solution in CPP

```cpp
#include<bits/stdc++.h>
using namespace std;
int countWays(int p, int q, int r, int last)
{
    if (p<0 || q<0 || r<0)
        return 0;
    if (p==1 && q==0 && r==0 && last==0)
        return 1;
    if (p==0 && q==1 && r==0 && last==1)
        return 1;
    if (p==0 && q==0 && r==1 && last==2)
        return 1;
    if (last==0)
        return countWays(p-1,q,r,1) + countWays(p-1,q,r,2);
    if (last==1)
        return countWays(p,q-1,r,0) + countWays(p,q-1,r,2);
    if (last==2)
        return countWays(p,q,r-1,0) + countWays(p,q,r-1,1);
}

int faceprep(int p, int q, int r)
{
return countWays(p, q, r, 0) +
        countWays(p, q, r, 1) +
        countWays(p, q, r, 2);
}
int main()
{
    int p,q,r;
    cin>>p>>q>>r;
    printf("%d", faceprep(p, q, r));
    return 0;
}
```

Code Solution in C

```c
#include<stdio.h>

int countWays(int p, int q, int r, int last)
{
    if (p<0 || q<0 || r<0)
        return 0;
    if(p == 1 && q == 0 && r== 0 && last == 0)
        return 1;
    if (p==0 && q==1 && r==0 && last==1)
        return 1;
    if (p==0 && q==0 && r==1 && last==2)
        return 1;

    if (last==0)
        return countWays(p-1,q,r,1) + countWays(p-1,q,r,2);
    if (last==1)
        return countWays(p,q-1,r,0) + countWays(p,q-1,r,2);
    if (last==2)
        return countWays(p,q,r-1,0) + countWays(p,q,r-1,1);
}

int faceprep(int p, int q, int r)
{
return countWays(p, q, r, 0) + countWays(p, q, r, 1) + countWays(p, q, r, 2);
}
int main()
{
    int p,q,r;
    scanf("%d%d%d",&p,&q,&r);
    printf("%d", faceprep(p, q, r));
    return 0;
}
```

Code Solution in Python

```
def countWays(p,q,r,last):
  if (p<0 or q<0 or r<0):
    return 0
  if(p == 1 and q == 0 and r== 0 and last == 0):
    return 1
  if (p==0 and q==1 and r==0 and last==1):
    return 1
  if (p==0 and q==0 and r==1 and last==2):
    return 1
  if (last == 0):
    return countWays(p-1,q,r,1) + countWays(p-1,q,r,2)
  if(last == 1):
    return countWays(p,q-1,r,0) + countWays(p,q-1,r,2)
  if(last == 2):
    return countWays(p,q,r-1,0) + countWays(p,q,r-1,1)

def faceprep(p,q,r):
  return countWays(p, q, r, 0) + countWays(p, q, r, 1) + countWays(p, q, r, 2)
p = int(input())
q = int(input())
r = int(input())
print(faceprep(p, q, r))
```