

Day 1

Reasoning

1) PSBOHF

2)

3)

4) $\begin{array}{cccccc} 4 & 9 & 16 & 25 & 36 & 49 \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} \\ 5 & 7 & 9 & 11 & 13 \end{array}$

5) $XX = 2426$

6) green

7) $\begin{array}{cccccc} 2 & 5 & 11 & 20 & 32 & 47 \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} \\ 3 & 6 & 9 & 12 & 15 \end{array}$

8) $V_1 = 60 \text{ km/h}$ $t_1 = \frac{x}{2} = \frac{x}{120}$

$t_2 = \frac{x/2}{40} = \frac{x}{80}$

Avg speed $= \frac{d}{t} = \frac{d}{t_1 + t_2} = \frac{d}{\frac{x}{120} + \frac{x}{80}}$
 $= 48 \text{ km/h}$

9)

14

MARCH • SATURDAY

aptitude -

$$1) \text{ Initial price} = 60$$

Reduce by 25% / 100

$$\text{Sale price} = 60 - 60 \times \frac{25}{100}$$

$$\text{Sale price} = 60 - 15$$

$$\text{Sale price} = 45$$

$$2) \text{ id} = 15\%$$

$$= 20 \times \frac{15}{100}$$

$$= 3$$

$$\text{Price after discount} = 20 - 3 = 17$$

$$3) \begin{array}{l} 50000 \text{ to } 60000 \\ \text{ie inc. of } 10000 \end{array}$$

15

SUNDAY

$$\text{Percentage inc} = \frac{10000}{50000} \times 100$$

$$20\%$$

~~4) calculate~~

4) let original price be x

$$20,000 = x - \frac{20}{100} \times x$$

$$20,000 = x - 0.2x$$

$$20,000 = 0.8x$$

$$\frac{20,000}{0.8} = x$$

$$x = 25,000$$

5) Inc in population = $20,000 \times \frac{10}{100}$

$$= 2,000$$

Total population of town this year = $20,000 + 2,000$
 $= 22,000$

6) $\frac{80}{100} \times 100 = 80\%$ student score in exam.

$$\% \text{ inc} = 50 - 75$$

$$\text{Inc} = 25\%$$

$$\text{Percentage inc} = \frac{25}{50} \times 100 = 50\%$$

~~4) let original price be x~~

4) let original price be x

$$20,000 = x - \frac{20}{100} \times x$$

$$20,000 = x - 0.2x$$

$$20,000 = 0.8x$$

$$\frac{20,000}{0.8} = x$$

$$x = 25,000$$

5) Inc in population = $20,000 \times \frac{10}{100}$

$$= 2,000$$

Total population of town this year = $20,000 + 2,000$
 $= 22,000$

6) $\frac{80}{100} \times 100 = 80\%$ student score in exam.

$$\% \text{ inc} = 50 - 75$$

$$\text{Inc} = 25 \text{ ₹}$$

$$\text{Percentage inc} = \frac{25}{50} \times 100 = 50\%$$

17

MARCH • TUESDAY

9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M

9 (8) Let amount of item by 100₹

$$\begin{aligned} \text{Price after 30\% discount} &= 100 - \frac{30 \times 100}{100} \\ &= 70₹ \end{aligned}$$

$$\begin{aligned} \text{Price after 10\% more discount} &= 70 - \frac{10 \times 100}{100} \\ &= 60₹ \end{aligned}$$

(8) Let amount be x

$$\text{Price after 30\% discount} = x - \frac{30}{100} x$$

$$x - 0.3x$$

$$= 0.7x$$

$$\text{Let } y = 0.7x$$

Discount price after 10% discount

$$= y - \frac{10}{100} y$$

$$y - 0.1y$$

$$0.9y$$

Now if we let 100₹ be price (initial)

APRIL		2020											
		1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24	25	26
27	28	29	30										
M	T	W	T	F	S	S	M	T	W	T	F	S	S

WEDNESDAY

$$y = 0.7x$$

$$y = 70 \text{ ₹}$$

10 After 10% discount = 63 ₹

$$70 - 63 = 7$$

11 10% Discount overall = 37%



C++ Online Compiler



Dell Vostro 3420 Laptop, Intel Core i5-1135G7, 8GB/ 512GB SSD/ 14.0" FHD WVGA
AG 250 nits/Win 11 + MSO'21/15 Month McAfee/Carbon Black/ 1.48Kgs
₹49,990⁰⁰ ✓prime

Interactive C++ Course

main.cpp

Run

Output

Clear

```
1 // Online C++ compiler to run C++ program online
2 #include<bits/stdc++.h>
3 using namespace std;
4 int main()
5 {
6     int arr[6]={};
7     for(int i=0;i<6;i++)
8     {
9         cin>> arr[i];
10    }
11    for(int k=0;k<6;k++)
12    {
13        cout<< arr[k] << " ";
14    }
15    cout<<endl;
16
17    int i,j;
18    for ( i=0;i<6;i++)
19    {
20        for( j=i+1;j<6;j++)
21        {
22            if(arr[j]<arr[i])
23            {
24                arr[i]=arr[i]+arr[j];
25                arr[j]=arr[i]-arr[j];
26                arr[i]=arr[i]-arr[j];
27            }
28        }
29    }
```

```
/tmp/sdSGevcmgV.o
12 45 6 89 7 4
12 45 6 89 7 4
4 6 7 12 45 89
largest no is= 89
2nd largest no is=45
smallest no is= 4
```



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main.cpp

```
10
17 int i,j;
18 for ( i=0;i<6;i++)
19 {
20     for( j=i+1;j<6;j++)
21     {
22         if(arr[j]<arr[i])
23         {
24             arr[i]=arr[i]+arr[j];
25             arr[j]=arr[i]-arr[j];
26             arr[i]=arr[i]-arr[j];
27         }
28     }
29 }
30 for(int k=0;k<6;k++)
31 {
32     cout<< arr[k] << " ";
33 }
34 cout<<endl;
35 cout<<"largest no is= "<< arr[5];
36 cout<<endl;
37 cout<<"2nd largest no is="<<arr[4];
38 cout<<endl;
39 cout<<"smallest no is= "<<arr[0];
40 return 0;
41 }
42
```

Run

Output

Clear

```
/tmp/sdSGevcmgV.o
12 45 6 89 7 4
12 45 6 89 7 4
4 6 7 12 45 89
largest no is= 89
2nd largest no is=45
smallest no is= 4
```




C++ Online Compiler

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Interactive C++ Course

main.cpp

Run

Output

Clear

```
1 // Online C++ compiler to run C++ program online
2 #include<bits/stdc++.h>
3 using namespace std;
4 int main()
5 {
6     int n,i,j;
7     cout<<"Enter the size of array: ";
8     cin>>n;
9     int arr[10];
10    cout<<"Enter the elements: ";
11    for(i = 0;i < n;i++)
12    {
13        cin>>arr[i];
14    }
15    for(i = 0;i < n-1;i++)
16    {
17        for(j = i+1;j < n;j++)
18        {
19            if(arr[i] == arr[j])
20            {
21                for(int k = j;k < n;k++)
22                {
23                    arr[k] = arr[k+1];
24                }
25                n--;
26                j++;
27            }
28        }
29    }
```

```
/tmp/4fHs1XA49E.o
Enter the size of array: 6
Enter the elements: 1 2 44 5 5 44
After removing the duplicate: 1 2 44 5
```



C++ Online Compiler



Dell Vostro 3425 Laptop, AMD Ryzen 5-5500U/ 8GB/ 512GB/ 14.0" (35.56Cms) FHD
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₹47,990⁰⁰ ✓prime

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main.cpp

```
10 cout<<"Enter the elements: ";
11 for(i = 0;i < n;i++)
12 {
13     cin>>arr[i];
14 }
15 for(i = 0;i < n-1;i++)
16 {
17     for(j = i+1;j < n;j++)
18     {
19         if(arr[i] == arr[j])
20         {
21             for(int k = j;k < n;k++)
22             {
23                 arr[k] = arr[k+1];
24             }
25             n--;
26             j++;
27         }
28     }
29 }
30 cout<<"After removing the duplicate: ";
31 for(i = 0;i < n;i++)
32 {
33     cout<<arr[i]<<" ";
34 }
35 return 0;
36 }
```

Run

Output

Clear

```
/tmp/4fHs1XA49E.o
Enter the size of array: 6
Enter the elements: 1 2 44 5 5 44
After removing the duplicate: 1 2 44 5
```


main.cpp

Run

Output

Clear

```
1 // Online C++ compiler to run C++ program online
2 #include<bits/stdc++.h>
3 using namespace std;
4 int main() {
5     string str;
6     cout<<"enter a any string you want:";
7     cin>>str;
8     cout<<endl;
9     int count=0;
10    int flag=0;
11    // str=toupper(str);
12    for(int i=0;i<str.length();i++ )
13    {
14        if(str[i]== 'A' || str[i]== 'E' || str[i]== 'I' || str[i]== 'O' || str[i]
            == 'U' || str[i]== 'a' || str[i]== 'e' || str[i]== 'i' || str[i]== 'o' || str[i]
            == 'u')
15        {
16            count++;
17        }
18        else
19        {
20            flag++;
21        }
22    }
23    cout<<"total vowel in string is"<<count;
24    cout<<endl;
25    cout<<"total no of consonant in string is"<<flag;
```

```
/tmp/1riVzZHiGQ.o
enter a any string you want:Riddhi
total vowel in string is=2
total no of consonant in string is=4
```

main.cpp



Run

Output

Clear

```
4 int main() {
5     string str;
6     cout<<"enter a any string you want:";
7     cin>>str;
8     cout<<endl;
9     int count=0;
10    int flag=0;
11    // str=toupper(str);
12    for(int i=0;i<str.length();i++ )
13    {
14        if(str[i]== 'A' || str[i]== 'E' || str[i]== 'I' || str[i]== 'O' || str[i]
            == 'U' || str[i]== 'a' || str[i]== 'e' || str[i]== 'i' || str[i]== 'o' || str[i]
            == 'u')
15        {
16            count++;
17        }
18        else
19        {
20            flag++;
21        }
22    }
23    cout<<"total vowel in string is"<<count;
24    cout<<endl;
25    cout<<"total no of consonant in string is"<<flag;
26
27    return 0;
28 }
```

```
/tmp/1riVzZHiGQ.o
enter a any string you want:Riddhi
total vowel in string is=2
total no of consonant in string is=4
```