CTS - September 01,02,03 - Test 5

Test Summary

- No. of Sections: 4
- No. of Questions: 69
- Total Duration: 89 min

Section 1 - Quantitative Ability

Section Summary

- No. of Questions: 16
- Duration: 16 min

Additional Instructions:

None

Q1. . Find the number to be multiplied by $(-6)^{-1}$. so as to get $(-8)^{-1}$ as the product?

a) ¾

b) −(3/4)

c) 4/3

d)-(4/3)

Q2. The number of ways in which 8 different flowers can be seated to form a garland so that 4 particular flowers are never separated is:

960

2880

288

576

Q3. A rectangle’s length is four times its breadth. It has an area of 2500 square yards. What is the length of the rectangle?

25 yards

100 yards

625 yards

5 yards

Q4.

The reciprocal of H.C.F and LCM of two number are 1/12 and 1/312 respectively. If one of the number is 24. Find the other number?

a. 126

b. 136

c. 146

d. 156

Q5.

A man can complete a job in 12 days and his wife can complete the same job in 15 days. How long will they take to complete the job if they work together?

a. $6^{2/3}$ days

b. $6^{½}$ days

c. $10^{1/2}$days

d. $10^{2/3}$ days

Q6.

A shopkeeper offers buy one get one free offer on a t shirt marked at rs 2400 If after a sale, the shopkeeper earns a profit of 33.33% then what is the actual price of the T- shirt?

a.900

b. 800

c. 1200

d. 1000

e. 1500

Q7.

Given that the interest is only earned on principal, if an investment of Rs. 1000 amounts to Rs.1440 in 2 years, then what is the rate of interest earned?

a. 20%

b. 22%

c. 21%

d. 11%

e. 44%

Q8.

How many litres of a 90% solution of concentrated acid needs to be mixed with a 75% solution of concentrated acid to get a 30L solution of 78% concentrated acid?

a. 24L

b. 22.5L

c. 6L

d. 17.5L

Q9. A dog takes 3 leaps for every 5 leaps of a hare. If one leap of the dog is equal to 3 leaps of the hare, the ratio of the speed of the dog to that of the hare is

9:1

9:4

9:5

9:7

Q10.

Identify the set of all positive integers

{0,1,2,3,...}

{1,2,3,4,...}

{2,4,6,8,...}

{2,5,7,11,...}

Q11.

In a town of 2,00,000 citizens ,if the population increases at a rate of 4% per annum, then what will be the population of the town in 2 years from now?

a. 2,16,320

b. 3,55,555

c. 1,84,320

d. 2,16,000

Q12.

If LCM and HCF of two numbers are 234 and 13 respectively. Then the smallest factor of the product of the two numbers is

a. 2

b. 3

c. 4

d. 5

Q13.

In a class of 80 students 4/5 of them own cars if 15/16 of them own Alto then how many own alto?

A.64

B.20

C.60

D. Data consistent

Q14.

Mayank is going on a holiday trip.he wants to pack 3 t-shirt from 5 t-shirt he has. in how many ways can he make his choice?

15

10

8

20

Q15.

How many 4 digit numbers can be formed using 1,2,3,4,5,6, and 7 with none of the digits being repeated?

7!

840

4!

48

Q16. Deepak sells 50 shirts at the cost price of 60 shirts. His gain percent is:

15%

10%

25%

20%

Section 2 - Logical Ability

Section Summary

- No. of Questions: 24
- Duration: 35 min

Additional Instructions:

None

Q1. Jerry pointed out to a person and said, “Sarin is your only brother’s brother-in-law’s sister.” How is Sarin related to me?

(a) Sister

(b) Cousin

(c) Aunt

(d) Sister-in-law

Q2. If SOUND is coded as RNTMC, then what is the code for WORK?

A. UNPM

B. VNQJ

C. VMQJ

D. UMPH

Q3. Kapil drives 12 kms towards West and then 3 kms towards South. He then turns East and drives 8 kms. How far is he from his starting point?

A. 4 kms

B. 5 kms

C. 9 kms

D. 10 kms

Q4. There are seven persons i.e. A, B, C, M, K, T and L in a family. Find that K is paternal uncle of T?

I. M is brother of K and is married to L, who is mother of A. A is sister of T.

II. B is brother of A. C is the only son of K.

III. B is the only son of K, who is the brother-in-law of L. C is sister of B

If the data in statement I and II together are sufficient to answer the question, while the data in statement III are not required to answer the question.

If the data in statement I and III together are sufficient to answer the question, while the data in statement II are not required to answer the question.

If the data in statement II and III are sufficient to answer the question, while the data in statement I are not required to answer the question.

If the data in all three statements I, II and III together are necessary to answer the question.

If the data in all the statements, I, II and III even together are not sufficient to answer the question.

Q5. **In the following question @, #, %, * and $ are used according to following meaning**

'P @ Q' means,'P is not smaller than Q'
'P # Q' means,'P is not greater than Q'
'P % Q' means,'P is neither greater nor equal to Q'
'P * Q' means,'P is neither smaller nor greater than Q'
'P $ Q' means,'P is neither smaller nor equal to Q'

Statements
M%R , R#T, T#N
Conclusions
I. N#R
II.N$R
III.N$M

All are true

Either I or II is true

Either I or II and III is true

Either I or III and II is true

None of these

Q6. **DATA SUFFICIENCY**

A software company decides to give its employees - women security fund. The amount of the fund is proportional to the number of females in the employee's family. Pranjal, an employee of the same company, has a family of 4 other members - A, B, C and D. What is the number of females in the family?

Statements:

I) Pranjal is the father of A and B is the only son of A.

II) A has two sisters - C and D

- Statement I alone is sufficient in answering the problem
- Statement II alone is sufficient in answering the problem
- Either of the statement is sufficient in answering the question
- Both the statements even put together are not sufficient in answering the question
- Both statements put together are sufficient in answering problem question

Q7.

3, 7, 13, 21, ____

- a. 36
- b. 33
- c. 41
- d. 31

Q8.

Arrange the words to get meaningful sentence

1. Dough
2. Flour
3. Cake
4. Oven
5. Sell

- A. 14325
- B. 12435
- C. 21435
- D. 21345

Q9.

Fan : Regulator :: Air conditioner :

- A. Remote

B. cable

C. Power

D. Stabilizer

Q10.

How is Mr.Sharma related to Santhosh
Statements:
i. Santhosh's mother has two daughter's
ii. Santhosh's sister is the wife of Mr.Sharma's son

a. Statement 1 alone is sufficient to answering the problem question

b. Statement 2 alone is sufficient to answering the problem question

c. both the statement are put together are sufficient in answering the problem question

d. Both the statements are even put together are not sufficient in answering the problem question

e. Either of the statements taken individually is sufficient in answering the problem question

Q11.

If BLACK is coded as DNCEM, then ORANGE is coded as

a. QTCPIG

b. PSCOHF

c. PSBOHF

d. QTCOIG

Q12.

ODD MAN OUT

A. CABBAGES

B. CARROTS

C. DATES

D. CHERRIES

Q13. Two friends X and Y starting a race X runs 12km East, then 18km South, y runs 2km South and 20km South-East. How far are they from each other now?

a. 0 km

b. 1 km

c. 2 km

d. 6 km

Q14.

Arrange the words to make meaningful sentence

Arrange the words given below in a meaningful sequence.
1. Cut
2. Put on
3. Mark
4. Measure
5. stitch

A. 4, 3, 1, 5, 2

B. 3, 1, 5, 4, 2

C. 2, 4, 3, 1, 5

D. 1, 3, 2, 4, 5

Q15.

D4P : H4L :: P5R :

A. V4N

B. V5S

C. U5M

D. R4N

Q16.

M and N have two children A and B. F is the spouse of B. D is the child of F. P is the son-in-law of N. K is the child of P. Who is the male child of M and N?

A. B

B. D

C. A

D. K

Q17.

Problem question:
Is raju taller than Saroj?
Statements:

I) Rakesh is of the same height as Raju and Saroj
II) Saroj is shorter than Rakesh

a. Statement I alone is sufficient

b. Statement II alone is sufficient

c. Statement I and Statement II put together are sufficient

d. Statement I and Statement II put together are Not sufficient

e. Either of the statements taken individually is sufficient in answering the problem question

Q18. 1. If WORD is coded as 9753,than DOOR is coded as

a. 3579

b. 3559

c. 9357

d. 3775

Q19. **Arrange In Logical Order**
1. Dough
2. Flour
3. Cake
4. Oven
5. Sell

a. 1,2,3,4,5

b. 1,3,2,4,5

c. 1,2,3,5,4,

d. 1,3,5,2,4,

e. 1,2,4,3,5

Q20. If WORD is coded as 9753,than DOOR is coded as

a. 3579

b. 3559

c. 9357

d. 3775

Common Content:

There are 4 questions based on the same puzzle. Answer the questions based on the given Information:
(i) Suman. Vicky. Santosh, Mohan. Alok, Sagar, Shekhar are standing on a wall and all of them are facing west.
(ii) Suman is on the immediate left of Alok.
(iii) Mohan is at an extreme end and has Santosh as his neighbor.
(iv) Alok is standing third from the south end.
(v) Sagar is between Santosh and Shekhar.

Q21.

Which of the following pairs of people are standing at extreme ends

a. Mohan and Vicky

b. Mohan and Suman

c. Vicky and Suman

d. Mohan and Alok

Q22.

Which of the following pairs of people is Shekhar immediately standing in between

a. Suman and Sagar

b. Alok and Sagar

c. Suman and Santosh

d. None

Q23.

Who is standing to the left of Santosh

a. Mohan

b. Sagar

c. Shekhar

d. Vicky

Q24.

Name the person who should change his position with Alok such that he gets the second place from the north end

A. Shekhar

B. Vicky

C. Sagar

D. Santhosh

Section 3 - Verbal Ability

Section Summary

- No. of Questions: 22
- Duration: 18 min

Additional Instructions:

None

Q1.

A) We all know that Shakespeare is/ (B) the better novelist/ (C) than poet.

A. A

B. B

C. C

D. No Error

Q2. New concerns about growing religions tension in northern india were _____this week after atleast fifty people were killed and hundreds were injured or arrested in riots between hindus and muslims.

1) Lessened

2) Invalidated

3) Restrained

4) Dispersed

Q3. All members will have a fixed five year ……

1) Tenet

2) Tenor

3) Tenure

4) Tenement

Q4. EMPLOY(synonym)

a. Ignore

b. Satire

c. Use

d. Busy

Q5. SAVOR(Meaning)

A. Economical

B. Enjoy

C. Grant

D. Smooth

Q6. **ERROR DETECTION**
(A) Sita has a hobby of writing poems, (B) whenever she had been (C) free and in the mood of writing.

(A)

(B)

(C)

(D)

No Error

Q7. **SENTENCE IMPROVEMENT**
Stand up comedians have gained immense popularity ***in the last decades.***

In whole last decade

In the entire last decade

In the last decade

No improvement needed

Q8. **JUMBLED SENTENCES**

S1: He is a famous novelist.

S6: But I doubt he would ever stop writing novels , as he makes tremendous profit of these.

P: I think he would be more successful as a columnist.

Q: I prefer reading his magazines editorials.

R: however I am not fond of his books.

S: All his books have been completely sold out

A. PQRS

B. SQPR

C. PSRQ

D. SRQP

Q9. ENCHANT (antonym).

A. Repel

B. Evoke

C. Bewitch

D. Entice

Q10. HUMOROUS (antonym)

A. Entertaining

B. Witty

C. Comical

D. Depressing

Q11. HUMOROUS (antonym)

1) Entertaining

2) Witty

3) Comical

4) Depressing

Q12. She _____ at a shop.

1) works

2) work

3) working

4) be working

Q13. Dravid played a brilliant series for _____ he was given man of the series award.

A. it

B. that

C. which

D. whom

Q14. EMANATE(synonym)

A. End

B. Culminate

C. Originate

D. Retreat

Q15. The jury _____ to give capital punishment to the convict who was guilty of innumerable brutal crimes.

a) Decides

b) Demand

c) Decide

d) Decided

Q16. PREAMBLE (synonym).

Rules

Law

Rights

Introduction

Q17. **Arrange the fragments A,B,C,D and E in order to form a meaningful sentence.**
A- are judges
B- who think that
C- superflous
D- lawyers are
E- there

A. CABDE

B. CDEBA

C. EABDC

D. DCBEA

Q18. I am sure they _____ for us at the station when we arrive.

A. had waited

B. wait

C. are waiting

D. would be waiting

Common Content:

Read the passage and answer the questions given below

Sixty years ago, on the evening of August 14, 1947, a few hours before Britain's Indian Empire was formally divided into the nation-state
India and Pakistan, Lord Louis Mountbatten and his wife, Edwina, sat down in the viceregal mansion in New Delhi to watch the latest Bob

Hope movie, “My Favorite Brunette.” Large parts of the subcontinent were descending into chaos, as the implications of partitioning the Indian Empire along religious lines became clear to the millions of Hindus, Muslims, and Sikhs caught on the wrong side of the border. In the next few months, some twelve million people would be uprooted and as many as a million murdered. But on that night in mid-August the bloodbath—and the fuller consequences of hasty imperial retreat—still lay in the future, and the Mountbattens probably felt they had earned their evening’s entertainment.

Mountbatten, the last viceroy of India, had arrived in New Delhi in March 1947, charged with an almost impossible task. Irrevocably enfeebled by the Second World War, the British belatedly realized that they had to leave the subcontinent, which had spiralled out of their control through the nineteen-forties. But plans for brisk disengagement ignored messy realities on the ground. Mountbatten had a clear remit to transfer power to the Indians within fifteen months. Leaving India to God, or anarchy, as Mohandas Gandhi, the foremost Indian leader, exhorted, wasn’t a political option, however tempting. Mountbatten had to work hard to figure out how and to whom power was to be transferred.

The dominant political party, the Congress Party, took inspiration from Gandhi in claiming to be a secular organization, representing all four hundred million Indians. But many Muslim politicians saw it as a party of upper-caste Hindus and demanded a separate homeland for their hundred million co-religionists, who were intermingled with non-Muslim populations across the subcontinent’s villages, towns, and cities. Eventually, as in Palestine, the British saw partition along religious lines as the quickest way to the exit.

But sectarian riots in Punjab and Bengal dimmed hopes for a quick and dignified British withdrawal and boded ill for India’s assumption of power. Not surprisingly, there were some notable absences at the Independence Day celebrations in New Delhi on August 15th. Gandhi, denouncing freedom from the imperial rule as a “wooden loaf, ” had remained in Calcutta, trying, with the force of his moral authority, to stop Hindus and Muslims from killing each other. His great rival Mohammed Ali Jinnah, who had fought bitterly for a separate homeland for Indian Muslims, was in Karachi, trying to hold together the precarious nation-state of Pakistan.

Nevertheless, the significance of the occasion was not lost on many. While the Mountbattens were sitting down to their Bob Hope movie, India’s constituent assembly was convening in New Delhi. The moment demanded grandiloquence, and Jawaharlal Nehru, Gandhi’s closest disciple and soon to be India’s first Prime Minister, provided it. “Long years ago, we made a tryst with destiny, ” he said. “At the stroke of the midnight hour, while the world sleeps, India will awaken to life and freedom. A moment comes, which comes but rarely in history when we step out from the old to the new when an age ends, and when the soul of a nation, long suppressed, finds utterance.”

Posterity has enshrined this speech, as Nehru clearly intended. But today his quaint phrase “tryst with destiny” resonates ominously, so enduring has been the political and psychological scars of partition. The souls of the two new nation-states immediately found utterance in brutal enmity. In Punjab, armed vigilante groups, organized along religious lines and incited by local politicians, murdered countless people, abducting and raping thousands of women. Soon, India and Pakistan were fighting a war—the first of three—over the disputed territory of Kashmir. Gandhi, reduced to despair by the seemingly endless cycle of retaliatory mass murders and displacement, was shot dead in January 1948, by a Hindu extremist who believed that the father of the Indian nation was too soft on Muslims. Jinnah, racked with tuberculosis and overwork, died a few months later, his dream of a secular Pakistan apparently buried with him.

Many of the seeds of postcolonial disorder in South Asia were sown much earlier, in two centuries of direct and indirect British rule, but, a book, after the book has demonstrated, nothing in the complex tragedy of partition was inevitable. In “Indian Summer” (Henry Holt; $30), Alex von Tunzelmann pays particular attention to how negotiations were shaped by an interplay of personalities. Von Tunzelmann goes on a bit too much about the Mountbattens’ open marriage and their connections to various British royals, toffs, and fops, but her account, unlike those of some of her fellow British historians, isn’t filtered by nostalgia. She summarizes bluntly the economic record of the British overlords, who, though never as rapacious and destructive as the Belgians in the Congo, damaged agriculture and retarded industrial growth in India through a blind faith in the “invisible hand” that supposedly regulated markets. Von Tunzelmann echoes Edmund Burke’s denunciation of the East India Company when she terms the empire’s corporate forerunner a “beast” whose “the only object was money”; and she reminds readers that, in 1877, the year that Queen Victoria officially became Empress of India, a famine in the south killed five million people even as the Queen’s viceroy remained adamant that famine relief was a misguided policy.

Politically, too, British rule in India was deeply conservative, limiting Indian access to higher education, industry, and the civil service. Writing in the New York Tribune in the mid-nineteenth century, Karl Marx predicted that British colonials would prove to be the “unconscious tool” of a “social revolution” in a subcontinent stagnating under “Oriental despotism.” As it turned out, the British, while restricting an educated middle class, empowered a multitude of petty Oriental despots. (In 1947, there were five hundred and sixty-five of these feudatories, often called maharajas, running states as large as Belgium and as small as Central Park.)

Q19. In the view of author what is the Nehru's phrase 'tryst with destiny' symbolize today?

- a celebration of Indian independence
- An inspirational quote
- A reminder of Gandhi's assassination
- A symbol of ills of the partition

Q20. What does the author imply about the future of Pakistan?

- It becomes a secular country.
- It becomes unsecular.
- It is unprosperous.

It becomes a rogue state.

Q21. Why was Gandhiji assassinated?

Because he was favouring the muslim

His assassin thought he was partial to the muslim

He got killed in the violence after partition

None of these

Q22. The author persists on talking about the ‘bob Hope Movies’ in the article. Why?

1) Because the movie was a classic of 1947

2) He thinks it caused the partition of the sub-continent

3) He uses it to show the apathy of the britishers towards the sub-continent

4) It was Mountbatten’s favourite movie

Section 4 - Automata Fix

Section Summary

- No. of Questions: 7
- Duration: 20 min

Additional Instructions:

None

Q1. The function **matrixsum(int **matrix,int m,int n)** is supposed to return the sum of elements of the input array matrix having m rows and n columns. The logic is provided. But it is not giving the desired output due to a logical error. Find the logical error and fix it.

Program :

```
#include<stdio.h>
#define SIZE 100
int matrixsum(int row,int col)
{
   int sum=0;
   int arr[row][col];
   for(int i=0;i<row;i++){
   for(int j=0;j<col;j++)
   {
       scanf("%d",&arr[i][j]);
   }
   }
   for(int i=0;i<col;i++){
       for(int j=0;j<i;j++){
           sum=sum+arr[i][j];
       }
   }
   return sum;
}
int main()
{
   int m,n;
   scanf("%d %d",&m,&n);
```

```
   printf("%d",matrixsum(m,n));
}
```

Sample Input

```
3 3
1 2 3
4 5 6
7 8 9
```

Sample Output

```
45
```

Time Limit: 2 ms Memory Limit: 256 kb Code Size: 256 kb

Q2. The function **patternPrint(int n)** supposed to print n numberof lines in the following pattern
For n=4 the pattern should be:
1
1 1
1 1 1
1 1 1 1

Complete the function **patternPrint(int n)** to get the desired output

PROGRAM

```
#include<stdio.h>
void patternPrint(int num)
{
// write here
}
int main()
{
   int n;
   scanf("%d",&n);
   patternPrint(n);
}
```

Sample Input

```
5
```

Sample Output

```
1
11
111
1111
```

Time Limit: 2 ms Memory Limit: 256 kb Code Size: 256 kb

Q3. You are required to fix all logical errors in the given code. You can click on
Compile & Run anytime to check the compilation/execution status of the program. You can use System.out.println to debug your code. The submittedcode should be logically/syntactically correct and pass all testcases.
Do not write the main() function as it is not required.
Code Approach: For this question, you will need to correct the given implementation. We do not expect you to modify the approach or incorporateany additional library methods.
The method median(int arr[]) of class Median accepts an integer array arr. It is supposed to calculate and return the median of elements in the input array. However, incomplete code in the method median (int arr[]) works only for odd length arrays.

Note: print the answer with 6 floating points

Sample Input

```
7
1 2 3 4 5 6 7
```

Sample Output

```
4.000000
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q4. The function descendingSort Array(int *arr,int len)accepts an integer array arr of length len(len≥0)as an input and performs an inplace sort operation on it.The functions is expected to return the input array sorted in descending order ,but instead ,it returns the array sorted in ascending order due to a bug in the code.
Int* descendingSortArray(int *arr, int len)

{
Int small,pos,i,j,temp;
for(i=0;i<=len-1;i++)
{

for(j=i;j<=len;j++)
{
temp=0;
if(arr[i]<arr[j])
{
temp=arr[i];
arr[i]=arr[j];
arr[j]=temp;
}
}
}
return arr;
}
Testcasse 1:
Input :
[3,6,4,1,7,9,1,3,12,15],10
Expected return value:
[15,12,9,7,6,4,3,2,1,1]
Testcase 2:
Input:
[3,3,3,3,3,3,3,3,3],9
Expected return value:
[3,3,3,3,3,3,3,3,3]

Sample Input

```
5
1 5 7 4 6
```

Sample Output

```
7 6 5 4 1
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q5. The function **getDay(int date, int month, int year)** of class **Day** accepts the date , month and year input and is supposed to return the day to which it corresponds. The days are mapped to the number num in the following way.
Monday is assigned 1, Tuesday 2, …. And Sunday is 7.
Find the logical error in the **function getDay(int date, int month, int year)** to get the desired output

```
#include<stdio.h>
int getDay(int d, int m, int y)
{
   static int t[] = { 0, 3, 2, 5, 0, 3, 5, 1, 4, 6, 2, 4 };
y -= m < 3;
return ( y + y/4 - y/100 + y/400 + t[m-1] + d) % 12;

}
int main()
{
int date,month,year;
scanf("%d %d %d",&date,&month,&year);
    int day = getDay(date, month, year);
    printf ("%d", day);
    return 0;
}
```

Sample Input

```
29 3 1998
```

Sample Output

```
0
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q6. Print the following pattern using the given snippet . Below is the fibinocci pattern. All the logic to print the pattern has been given . You just complete the **int fib()** function to generate the fibinocci series.

input :

5

output :

1
1 2
3 5 8
13 21 34 55
89 144 233 377 610

```
#include<stdio.h>
int fib()
{
}
int main() {
int i,j,k=1,rows;
scanf("%d,&rows);
for (i=1;i<=rows;i++) {
for (j=1;j<=i;j++) {
printf("%d ",fib(k++));
}
printf("\n");
}
return 0;
}
```

Sample Input

```
5
```

Sample Output

```
1
1 2
3 5 8
13 21 34 55
```

Time Limit: 50 ms Memory Limit: 256 kb Code Size: 256 kb

Q7. Print the spiral of the matrix. Find the logical error in the function/method **printSpiral(int n)** to get the desired output.

```
#include<stdio.h>
#include<string.h>
#include<math.h>
void spiralPattern(int n){
int size=2*n-1;
  int arr[size][size];
  int u=0,l=0,b=size,r=size,val=n;
   while(l<r && u<b){
       for(int i=l;i<r;i++){
           arr[u][i]=val;
       }
       u++;
       for(int i=u;i<b;i++){
           arr[i][r-1]=val;
       }
       r++;
       for(int i=r-1;i>=l;i--){
           arr[b-1][i]=val;
       }
       b++;
       for(int i=b-1;i>=u;i--){
           arr[i][l]=val;
       }
       l++;
       val--;
   }
for(int i=0;i<size;i++){
    for(int j=0;j<size;j++){
        printf("%d ",arr[i][j]);
    }
    printf("\n");
}
```

Sample Input

```
4
```

Sample Output

```
4 4 4 4 4 4 4
4 3 3 3 3 3 4
4 3 2 2 2 3 4
4 3 2 1 2 3 4
```

Time Limit: 2 ms Memory Limit: 256 kb Code Size: 256 kb

Answer Key & Solution

Section 1 - Quantitative Ability

Q1

a) ¾

Solution

No Solution

Q2

288

Solution

No Solution

Q3

100 yards

Solution

No Solution

Q4

d. 156

Solution

No Solution

Q5

a. 6 $^{2/3}$ days

Solution

No Solution

Q6

a.900

Solution

No Solution

Q7

b. 22%

Solution

No Solution

Q8

c. 6L

Solution

No Solution

Q9

9:5

Solution

No Solution

Q10

{1,2,3,4,...}

Solution

No Solution

Q11

a. 2,16,320

Solution

No Solution

Q12

a. 2

Solution

No Solution

Q13

C.60

Solution

No Solution

Q14

10

Solution

No Solution

Q15

840

Solution

No Solution

Q16

20%

Solution

No Solution

Section 2 - Logical Ability

Q1

(d) Sister-in-law

Solution

No Solution

Q2

B. VNQJ

Solution

No Solution

Q3

B. 5 kms

Solution

No Solution

Q4

If the data in statement I and III together are sufficient to answer the question, while the data in statement II are not required to answer the question.

Solution

No Solution

Q5

Either I or II and III is true

Solution

No Solution

Q6

Both the statements even put together are not sufficient in answering the question

Solution

No Solution

Q7

d. 31

Solution

No Solution

Q8

C. 21435

Solution

No Solution

Q9

A. Remote

Solution

No Solution

Q10

b. Statement 2 alone is sufficient to answering the problem question

Solution

No Solution

Q11

a. QTCPIG

Solution

No Solution

Q12

C. DATES

Solution

No Solution

Q13

a. 0 km

Solution

No Solution

Q14

A. 4, 3, 1, 5, 2

Solution

No Solution

Q15

C. U5M

Solution

No Solution

Q16

A. B

Solution

No Solution

Q17

a. Statement I alone is sufficient

Solution

No Solution

Q18 d. 3775

Solution

No Solution

Q19 e. 1,2,4,3,5

Solution

No Solution

Q20 d. 3775

Solution

No Solution

Q21. a. Mohan and Vicky

Solution

No Solution

Q22. b. Alok and Sagar

Solution

No Solution

Q23. b. Sagar

Solution

No Solution

Q24. D. Santhosh

Solution

No Solution

Section 3 - Verbal Ability

Q1 B. B

Solution

No Solution

Q2

4) Dispersed

Solution

No Solution

Q3

3) Tenure

Solution

No Solution

Q4

c. Use

Solution

No Solution

Q5

B. Enjoy

Solution

No Solution

Q6

(B)

Solution

No Solution

Q7

In the last decade

Solution

No Solution

Q8

D. SRQP

Solution

No Solution

Q9

A. Repel

Solution

No Solution

Q10

D. Depressing

Solution

No Solution

Q11

4) Depressing

Solution

No Solution

Q12

1) works

Solution

No Solution

Q13

C. which

Solution

No Solution

Q14

C. Originate

Solution

No Solution

Q15

d) Decided

Solution

No Solution

Q16

Introduction

Solution

No Solution

Q17

C. EABDC

Solution

No Solution

Q18

D. would be waiting

Solution

No Solution

Q19. A symbol of ills of the partition

Solution

No Solution

Q20. It becomes unsecular.

Solution

No Solution

Q21. His assassin thought he was partial to the muslim

Solution

No Solution

Q22. 3) He uses it to show the apathy of the britishers towards the sub-continent

Solution

No Solution

Section 4 - Automata Fix

Q1

Test Case

Input

```
2
1 4
6 8
```

Output

```
10
```

Weightage - 25

Input

```
5 5
1 2 3 67 67
90 87 65 43 21
1 2 3 4 5
```

Output

```
511
```

Weightage - 75

Sample Input

```
3 3
1 2 3
```

Sample Output

```
45
```

```
4 5 6
```

Solution

Header

```
#include<stdio.h>
#define SIZE 100
int matrixsum(int row,int col)
{
```

```
    int sum=0;
    int arr[row][col];
    for(int i=0;i<row;i++){
    for(int j=0;j<col;j++)
    {
        scanf("%d",&arr[i][j]);
    }
    }
    for(int i=0;i<row;i++){
        for(int j=0;j<col;j++){
            sum=sum+arr[i][j];
        }
    }
    return sum;
```

Footer

```
}
int main()
{
    int m,n;
    scanf("%d %d",&m,&n);


    printf("%d",matrixsum(m,n));
}
```

Q2

Test Case

Input

```
6
```

Output

```
1
11
111
1111
```

Weightage - 50

Input

```
20
```

Output

```
1
11
111
1111
```

Weightage - 50

Sample Input

```
5
```

Sample Output

```
1
11
111
1111
```

Solution

Header

```
#include<stdio.h>
void patternPrint(int num)
{
    for(int i=0;i<num;i++){
        for(int j=0;j<=i;j++){
            printf("1");
        }
        printf("\n");
    }
```

Footer

```
}
int main()
{
    int n;
    scanf("%d",&n);
    patternPrint(n);
}
```

Q3

Test Case

Input

```
6
1 2 3 4 5 6
```

Output

```
3.500000
```

Weightage - 25

Input

```
8
1 2 3 4 5 6 7 8
```

Output

```
4.500000
```

Weightage - 25

Input

```
9
1 2 3 4 5 6 7 8 9
```

Output

```
5.000000
```

Weightage - 50

Sample Input

```
7
1 2 3 4 5 6 7
```

Sample Output

```
4.000000
```

Solution

Header

```
#include <stdio.h>
#include<stdlib.h>
float findMedian(int* a, int n)
{
    for(int i=0;i<n;i++){
        for(int j=i+1;j<n;j++){
            if(a[i]>a[j]){
                int temp=a[i];
                a[i]=a[j];
                a[j]=temp;
            }
        }
    }
    if (n % 2 != 0)
    return (float)a[n/2];
    return (float)(a[(n-1)/2] + a[n/2])/2.0;
```

Footer

```
}
int main()
{
    int n;
    scanf("%d",&n);
    int* a;
    a=(int*)malloc(sizeof(int)*n);
    for(int i=0;i<n;i++){
        scanf("%d",&a[i]);
    }
    printf("%f",findMedian(a,n));
    return 0;
}
```

Q4

Test Case

Input

```
6
7 5 9 3 7 8
```

Output

```
9 8 7 7 5 3
```

Weightage - 50

Input

```
10
3 5 7 8 0 1 5 7 8 2
```

Output

```
8 8 7 7 5 5 3 2 1 0
```

Weightage - 50

Sample Input

```
5
1 5 7 4 6
```

Sample Output

```
7 6 5 4 1
```

Solution

Header

```
#include<stdio.h>
int * descendingSortArray(int *arr, int len)
{



int small, pos, i, j, temp;
for(i = 0; i <= len-1 ; i++)
{
    for(j = i; j < len; j++)
    {
         temp = 0;
         if(arr[i] < arr[j])
         {
             temp = arr[i];
             arr[i] = arr[j];
             arr[j] = temp;
         }
    }
}
return arr;
```

Footer

```
}

int main()
{
int index, size;
scanf("%d",&size);
int arr[size];
for(int i=0;i<size;i++){
    scanf("%d",&arr[i]);
}
descendingSortArray(arr, size);
for(index = 0; index < size; index++)
   printf("%d " , arr[index]);
return 0;
}
```

Q5

Test Case

Input

```
23  5  2015
```

Output

```
6
```

Weightage - 25

Input

```
24  8  2019
```

Output

```
6
```

Weightage - 25

Input

```
15  8  2019
```

Output

```
4
```

Weightage - 50

Sample Input

```
29  3  1998
```

Sample Output

```
0
```

Solution

Header

```
#include<stdio.h>
int getDay(int d, int m, int y)
{
    static int t[] = { 0, 3, 2, 5, 0, 3, 5, 1, 4, 6, 2, 4 };
    y -= m < 3;
    return ( y + y/4 - y/100 + y/400 + t[m-1] + d) % 7;
```

Footer

```
}
int main()
{
    int date,month,year;
    scanf("%d %d %d",&date,&month,&year);
    int day = getDay(date, month, year);
    printf ("%d", day);
    return 0;
}
```

Q6

Test Case

Input

```
6
```

Output

```
1
1  2
3  5  8
13  21  34  55
```

Weightage - 25

Input

```
9
```

Output

```
1
1  2
3  5  8
```

Weightage - 50

Input

```
7
```

Output

```
1
1  2
3  5  8
13  21  34  55
```

Weightage - 25

Sample Input

```
5
```

Sample Output

```
1
1  2
3  5  8
13  21  34  55
```

Solution

Header

```
#include<stdio.h>
int fib(int n) {
    if(n<=1)
        return n;
    return(fib(n-1)+fib(n-2));
}
int main() {
    int i,j,k=1,rows;
    scanf("%d",&rows);
    for (i=1;i<=rows;i++) {
        for (j=1;j<=i;j++) {
            printf("%d ",fib(k++));
        }
        printf("\n");
    }
    return 0;
}
```

Footer

```
}
int main() {
    int i,j,k=1,rows;
    scanf("%d",&rows);
    for (i=1;i<=rows;i++) {
        for (j=1;j<=i;j++) {
            printf("%d ",fib(k++));
        }
        printf("\n");
    }
    return 0;
}
```

Q7

Test Case

Input

```
5
```

Output

```
5 5 5 5 5 5 5 5 5
5 4 4 4 4 4 4 4 5
5 4 3 3 3 3 3 4 5
5 4 3 2 2 2 3 4 5
```

Weightage - 50

Input

```
7
```

Output

```
7 7 7 7 7 7 7 7 7 7 7 7 7
7 6 6 6 6 6 6 6 6 6 6 6 7
7 6 5 5 5 5 5 5 5 5 5 6 7
7 6 5 4 4 4 4 4 4 4 5 6 7
```

Weightage - 50

Sample Input

```
4
```

Sample Output

```
4 4 4 4 4 4 4
4 3 3 3 3 3 4
4 3 2 2 2 3 4
4 3 2 1 2 3 4
```

Solution

Header

```
#include<stdio.h>
#include<string.h>
#include<math.h>
void spiralPattern(int n){


int size=2*n-1;
   int arr[size][size];
   int u=0,l=0,b=size,r=size,val=n;
    while(l<r && u<b){
        for(int i=l;i<r;i++){
            arr[u][i]=val;
        }
        u++;
        for(int i=u;i<b;i++){
```

```
            arr[i][r-1]=val;
        }
        r--;
        for(int i=r-1;i>=l;i--){
            arr[b-1][i]=val;
        }
        b--;
        for(int i=b-1;i>=u;i--){
            arr[i][l]=val;
        }
        l++;
        val--;
    }
    for(int i=0;i<size;i++){
        for(int j=0;j<size;j++){
            printf("%d ",arr[i][j]);
        }
        printf("\n");
    }
```

Footer

```
}
int main()
{

  int n;
   scanf("%d",&n);
   spiralPattern(n);
}
```