# 12. (a) CTS Test 12

**Test Summary**

- No. of Sections: 4
- No. of Questions: 82
- Total Duration: 105 min

## Section 1 - Quantitative aptitude

**Section Summary**

- No. of Questions: 25
- Duration: 25 min

**Additional Instructions:**

None

Q1. A. A boat travels 300 metres upstream in 15 mins.
B. its speed downstream is 8/5 times its speed upstream.
Which of the following options provides the correct relationship between speed ofcurrent and speed of the boat?

- Speed of the current = 12/10 times the speed of the boat
- Speed of the current = 3/13 times the speed of the boat
- . Speed of the current = 12/10 times the speed of the boat
- Speed of the current = 9/13 times the speed of the boat

Q2. A shopkeeper offers ?Buy 1,Get 1 free? offer on a t-shirt marked at Rs.2,400.If affer a sale,the shopkeeper earns a profit of 33.33%,then what is the actual price of the t-shirt?

- 900
- 800
- 1000
- 1200
- 1500

Q3. In an election, the winning candidate won by 15% votes. If a total of 5000 votes were cast of which only 86% were eligible, then how many votes did the winning candidate get?

- 2000
- 2300

4000

4300

1800

Q4. Number ?1? is a

prime number

composite

positive

both a and c

Q5. Two number lcm 2970 and hcf 30respectively. prime factors of product of two numbers is

2,3,5,11

2,3,7,11

2,4,5,11

2,3,7,11

Q6. WHAT IS THE VALUE OF THE EXPRESSION 5*(2+16)/2-4*(2+2)+1/4 OF 16?

25

26

27

28

Q7. The product of two numbers is 2208 and their L.C.M is 552.What is their H.C.F?

1

4

24

Data inconsistent

Q8. .find the largest two digit number that divides 673 and 865,leaving remainder 1 in each

91

93

96

98

Q9. The permutation and combination of abcd taken 3 at a time are respectively

2,12

4,24

3,36

8,48

Q10. No of 4 digit number that can be formed from 1,2,3,4,5,6,7 is ?

940

840

740

720

Q11. what is value of 625 in base 8 ?

1151

1161

1171

1101

Q12. The difference of two numbers is 1365. On dividing the larger number by the smaller, we get 6 as quotient and 15 as reminder. What is the smaller number ?

270

160

400

200

Q13. Product of two number is 5502,their LCM is 552. Find the HCF?

9

8

7

6

Q14. Varun is guessing which of the two hands holds a coin. What is the probability that varun guesses correctly three times in a row.

1/6

1/3

1/2

1/8

Q15. Jagdish(J) can build a wall in 10 days .Narender(N) can build the same wall in 12 days While Sunith(S) takes 15 days to do the same job .whom should be employed to finish the job in 6 days?

J&N

J&S

S&N

NONE

Q16. A television manufacturing company has decided to increase the sale to beat the econamic slowdown.It decides to reduce the prize of television sets by 25% as a result of which the sales increased by 20%.what is the efect on total revenue of the company?

Decreased by 20 percent

Increased by 20 percent

Decreased by 10 percent

Increased by 10percent

Q17. Suparna needs to brows through 75 pages of a novel before she gives her review to the class . She has 2.5 hours before the lecture . What should be her reading speed in pages /hour?

16

30

20

22

Q18. Sandeep has cubic wooden blocks of height 8 inches .pankaj has the blocks of height 12 inches,how many of each would each of them need to build an equal height and structure?

4

8

12

24

Q19. If p varies directly as the square of q and inversely as the square root of r,which of the following would be true if k represents the constant of variation

P(q)^2=sqrt(k)

K=r^2*p*q^-2

p sqrt(k) (q)^2=1/sqrt(r)

sqrt(p)=1/k(q)^2

Q20. Parul is one fifth the age her mother was 15 yrs ago and paruls brother is three fifth the age his mother was 10 yrs ago.if the sum of parul and her brothers age is 31,then how old his paruls mother

50

40

35

60

Q21. A can finish a job in 12 hrs and B in 14 hrs A and B work alternatively,starting with A.if A earns Rs.50 per hr.how much does A earn through this job?

400

250

300

350

Q22. Sunil drove his car in the northern direction for some distance .he then turned left and drive for 11km.he again turned left and drove for 30km.he found himself 10km west of his starting point.initially how far did he drive his car in a northern direction?

10km

20km

30km

15km

Q23. Find the value of x if 8^2x - 8^-5 = 8^7

1

0

-1

None of these

Q24. If log2 (3) = 1.585, then log2 (18) =

4.17

4

2

Inadequate data

Q25. A vendor purchases binder clips at 12 for Rs.60.How many clips should he sell for Rs.60 to earn a profit of 20%?

5

6

8

10

## Section 2 - Reasoning ability

**Section Summary**

- No. of Questions: 25
- Duration: 25 min

**Additional Instructions:**
None

Q1. 79,64,26,15,__

9

6

10

8

Q2. Excessive amount of mercury in drinking water, associated with certain types of industrial pollution has been shown in cause hobsons disease usually high incidence of hobsons disease

mercury in drinking water is actually perfectly safe

mercury in drinking water must have source other than industrial pollution

hobson disease must have causes other than mercury in drinking water

both option 1 and 2

both option 3 and 2

Q3. Problem question: What is the amount of cement exported from china? Statements: (I) China?s export to America is 65,000 to and this is 8% of the total cement exports (II) China?s total export tonnage of cement is 15% of the total of 1 million tones.

statement I alone is sufficient to answering the problem question.

statement II alone is sufficient to answering the problem question.

Both statements put together are sufficient in answering the problem question.

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

Either of the statement is sufficient in answering the problem question.

Q4. 46 : 64 :: 82 : ?

100

104

48

42

Q5. If 1022834 represents VACCINE, which word is represented by 4820548?

ECHELON

ECLIPSE

ESCAPES

ESTIMATE

Q6. Symbols -, #, / and ? mean the following : A ? B means A plus B A # B means A multiplied with B A / B means A is greater than or equal to B A ? B means A is less than B Using these symbols and taking the given statements as true, find out that which of the given conclusions is/are definetly true. Statements: (V # X ) / ( V ? x ), X ? Y and Z / Y Conclusions: (i) X ? Z (ii) (V ? X ) ? ( V # X)

Only I is true

Only II is true

Both are correct

None of these

Q7. There are 4 question based on the some puzzle. Answer the question based on the given information
A,S,O,D,F,T are the members of a family of 3men and 3 women, among whom where are two married couples. We also know
O is the son of S
T is the daughter of A

f is the grandson of A
d is the mother of a girl and a boy
s is not the father of O
all the relationship mentioned above are between these six persons only T?s grandmother is?

- d
- f?s father
- A
- S

Q8. Symbols -, +, * and / mean the following : A ? B means A is equal to B A + B means A is more than twice of B A * B means A is 70 percent of B A / B means A is less than B Using these symbols and taking the given statements as true, find out that which of the given conclusions is/are definetly true. Statements: X + Y , Z * Y and Z - A Conclusions: (i) Z / X (ii) A / X

- Only I is true
- Only II is true
- Both are correct
- None of these

Q9. P3M : N4J :: R3P :

- Q3N
- P3N
- Q4N
- P4N

Q10. Based on the given passage find out which of the statement can be inferred from the passage. European cars have traditionally been smaller and more fuel-efficient than their giant American cousins, but current policy explicitly stresses eco-friendliness. For example, recent British legislation has linked taxation to CO2 emissions with the lowest tax rate of 15 percent on the list price reserved for cars emitting less than 165 gms/km and rising by one percent for each 5 gm increase in CO2 levels.

- The British are unconcerned about the environment and rules have to be imposed upon them for maintenance of a clean environment
- The lesser the list price of a car, the greater is its fuel efficiency and so lesser the tax on it.
- The more fuel efficient a vehicle is, the more eco-friendly it will be.

Fuel efficiency does not necessarily correlate with eco-friendliness

Q11. Pointing to a man in a photograph, another man said, ? He is the father of my daughter?s son?. How is the man in the photograph related to the man?

Brother

Son-in-law

Father

Son

Q12. There are 4 question based on the some puzzle. Answer the question based on the given information A,S,O,D,F,T are the members of a family of 3men and 3 women, among whom where are two married couples. We also know 1)O is the son of S 2)T is the daughter of A 3)f is the grandson of A 4)d is the mother of a girl and a boy 5)s is not the father of O. 6)all the relationship mentioned above are between these six persons only .a?s wife is

d

t

s

none of these

Q13. Based on the given passage find out which of the statement can be inferred from the passage. A recent communication noted that India?s foreign minister told officials in U.K that New Delhi intends to maintain and extend her open policy to the west. The minister also said that India would continue with her programme of political and economic changes despite a recent campaign against western ideas and foreign aid

Although internal changes in India may not follow western ideas, foreign trade with West shall continue.

India would make amends to reconcile with the western ideas by following an open door policy.

India?s internal policies are not dependent on her foreign relations.

India would continue her open door policy with other western countries despite her issues with U.K

Q14. There are 4 question based on the some puzzle. Answer the question based on the given information A,S,O,D,F,T are the members of a family of 3men and 3 women, among whom where are two married couples. We also know 1)O is the son of S 2)T is the daughter of A 3)f is the grandson of A 4)d is the mother of a girl and a boy 5)s is not the father of O. o?s father is

f

d?s father

s

a

Q15. There are 4 question based on the some puzzle. Answer the question based on the given information A,S,O,D,F,T are the members of a family of 3men and 3 women, among whom where are two married couples. We also know 1)O is the son of S 2)T is the daughter of A 3)f is the grandson of A 4)d is the mother of a girl and a boy 5)s is not the father of O. 6)all the relationship mentioned above are between these six persons only d?s husband

o

f

A

none of these

Q16. given signs signify something and on that basis, assume the given statement to be true and find which of two conclusion are a1 and 2 are definitely true a+b means A is greeter than equal to B a-b means A is greater than B a=b means a is not equal to B. a*b means A is less than B. a/b means A is equal to b question statement s=t,t/u,u-v conclusion 1.t+v 2.u-v

only conclusion 1 is true

only conclusion 2 is true

neither conclusion 1 nor 2 is true

both conclusion 1 and 2 are true

Q17. choose the answer option that arranges the given set of words in the given set of words in the mos meaningful order.the words when put in order should make a logical sense according to size, quality,occurrence of event,value,appearance,nature,process 1)counter 2)enjoy c)ticket d)money e) travel

1,3,4,2,5

3,1,4,5,2

1,4,3,5,2

3,1,4,2,5

Q18. In a certain code language SKILLFUL is writen as LTMJGMMV how is STATED writen in that code

TUCUFD

UTUCEF

UTUBEF

TUBUFE

Q19. four working ladies A,B,C,&D are sitting around a table 1.A sits opposite to the cook 2.B sits on the right side of the beautician 3.teacher is on the left side of accountant 4.D sits opposite to C 5.C is to the right of the accountant who is sitting to the left of beautician

cook

accountant

teacher

None of these

Q20. select the odd one out 1) BAD 2) FEH 3) POS 4) TSV

BAD

FEH

POS

TSV

Q21. four working ladies A,B,C,&D are sitting around a table 1.A sits opposite to the cook 2.B sits on the right side of the beautician 3.teacher is on the left side of accountant 4.D sits opposite to C 5.C is to the right of the accountant what is occupations ofA and B?

Accountant and beautician

Accountant and cook

Accountant and teacher

teacher and cook

Q22. How old is Giya? Statements: I)Giya's age is three times Amil's age plus Bob's age. II)Bob was of Amil's age fifteen years ago.

statement I alone is sufficient to answering the problem question.

statement II alone is sufficient to answering the problem question.

Both statements put together are sufficient in answering the problem question.

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

Either of the statement is sufficient in answering the problem question.

Q23. rajeswar walked 2 km towards north then turned right and walk 3.km then again turned right and walk 3.5km . he turned left and walk 1.5km.finally than how far and in which direction is from starting point?

3km east

4.5 km west

5 km east

3km west

Q24. Two friends X and Y starting a race X runs 12km east,then 18km south,y runs 2km south and 20 km south east how far they from each other now?

0

1

2

6

Q25. odd man out 1) bbc mn 2) dde op 3) ggf qp 4) mmn wx

bbc mn

dde op

ggf qp

mmn wx

## Section 3 - Verbal Ability

**Section Summary**

- No. of Questions: 25
- Duration: 25 min

**Additional Instructions:**

None

Q1. Meaning of the word : Concise

a) Verbiage

b) Compact

c) Correct

d) Short

Q2. Meaning of the word : Faux Pas

a) Blunder

b) Problem

c) Worry

d) Examine

Q3. INFER

A. Deadly

B. Deduce

C. Interfere

D. Envious

Q4. _____ being poor, Kaveri still dresses more appropriately than most of her group mates.

a) Despite

b) Although

c) Since

d) However

Q5. Choose the proper sequence
P: in keeping with my mood
Q: a soft summer evening
R: as I walked sedately

S: in the direction of the new house

a) SRPQ

b) QRPS

c) QPRS

d) SQPR

Q6. Universal (Opposite)

a) Earthly

b) Ethereal

c) Cosmic

d) Local

Q7. In the question each passage consists of six sentences. The first and the sixth sentences are given in the beginning. The remaining are jumbled up and assigned labels : P,Q,R & S. 1st : Rajeev and his friends went for river rafting. 6th : Later they all came to know that he is aqua phobic. P : Rajeev forced him to have some medicine. Q: They tried persuading him to join them for rafting, but he had severe stomach ache. R: Which he refused adamantly S:Among all his friends, Kunal backed out at the last moment.

PSQR

b) QPRS

c) RQSP

d) SQPR

Q8. Semblance (Opposite)

A. Resemblance

B. Pretense

C. Appearance

D. Aura

E. Dissimilarity

Q9. Opposite of the word : Benediction

a) Antidote

b) Intonation

c) Endowment

d) Anathema

Q10. He_____the position of group leader because of his effective leadership skills.

A. Got

B. Get

C. Gotten

D. Getting

Q11. 1. Water 2. Kneading 3. Flour 4. Baking 5. Wheat

A. 5,3,1,4,2

B. 5,1,3,2,4

C. 5,3,1,2,4

D. 5,1,3,4,2

Q12. The appropriate atmospheric conditions made it feasible for the astronomers to see the stars and they could even distinguish the sizes

A. And even distinguish the sizes

B. And they were even distinguishing the sizes

C. And he could even distinguish the sizes

D. And even distinguishing the sizes

Q13. We need more effective leaders and therefore we need to groom _____ leaders

Enhanced

Good

Better

Best

Q14. Did you _____ cereal for breakfast?

A. Had

B. Have

C. Ate

D. Eaten

Q15. PETTY(opposie)

A.liberal

B.Moderate

C.lite

D.magnaminous

Q16. VENT

A. Opening

B. Stodgy

C. End

D. Past tense of Go

Q17. IGNITE(opposite)

A. Extinguish

B. Wet

C. Soak

D. Drench

Q18. AGITATE(opposite)

A. Soothe

B. Refresh

C. Disturb

D. Suppress

Q19. All the faculty members except Hod _____ to the new curriculum proposed by Prof. Bhasin

A. agrees

B. agreeed

C. proceed

D. satisfied

Q20. He finished his novel _____. I was getting ready _____ office.

Because,for

while,for

while,for

while,for

Q21. The hiring trip to hills of shivpuri _____ the entire group exhausted.

A. cancelled

B. failed

C. left

D. remains

Q22. odd man out

A. fair

B. lair

C. hair

D. pair

Q23. She has _____ in chennai, since she was 8.

A. been living

B. live

C. lives

D. lived

Q24. Many employees feel that the economic situation should not be a _____ to the performance management system of any organization.

A. Deterrent

B. Encouragement

C. Problem

D. Symptom

Q25. Choose an option for the following statement according to your view. There is no right or wrong answer. Provide your first reaction. Do not spend too much time on any question. Q. Friends borrow various things from me.

A. Very inaccurate

B. Somewhat inaccurate

C. Neither inaccurate nor accurate

D. Somewhat accurate

E. Very accurate

## Section 4 - Automata Fix

**Section Summary**

- No. of Questions: 7
- Duration: 30 min

**Additional Instructions:**

None

Q1. complete the main function to get the desired output

```
#include<stdio.h>
int main(void)
{
// code here
}
```

**Sample Input**

**Sample Output**

| | |
|---|---|
| | This is a "buggy" program |

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

Q2. Print "**yes**" if the given number is a prime number else "**No**". Complete logic is provided in the function **isprime(int num)** , Find the logical error and fix it

```
int isprime(int num)
{
 int i;
 int isprime = 1;
 for(i = 1; i <= num; i++)
 {
      if(num % i == 0)
      {
            isprime = 0;
               break;
      }
  }
  return isprime;
}
int main()
int n;
scanf("%d",&n);
if(isprime(n)){
printf("Yes");
}
else{
printf("No");
}

}
```

**Sample Input**

**Sample Output**

| | |
|---|---|
| 13 | Yes |

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

Q3. The snippet below is supposed to find the maximum of three integers and return maximum of the three integers.
Complete the function **max(num1,num2,num3) ,** to get the desired output

```
#include<stdio.h>
int max(num1,num2,num3){
// code here
}
int main()
{
int num1, num2, num3;
scanf("%d %d %d", &num1,&num2,&num3);
printf("%d",max(num1,num2,num3));
}
```

**Sample Input**

```
3 8 5
```

**Sample Output**

```
8
```

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

Q4. Write the remaining piece of code to find the nth fibinocci series . Find the logical error in the function fib(int n) and fix it

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

**Sample Input**

```
6
```

**Sample Output**

```
8
```

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

Q5. Given two integers **A** and **B**. The task is to count how many numbers in the interval **[ A, B ]** have an odd number of divisors. Complete logic is provided in the function **OddDivCount(int a,int b) ,** find the logical error and fix it

**Examples:**

**Input : A = 1, B = 10**
**Output : 3**

**Input : A = 5, B = 15**
**Output : 1**

```
#include<stdio.h>
int OddDivCount(int a, int b)
{
     int res = 0;
for (int i = a; i <= b; ++i) {
int divCount = 0;
for (int j = 1; j <= b; ++j) {
if (i % j == 0) {
++divCount;
}
}
if (divCount % 2) {
++res;
}
}
return res;
}
int main()
{
    int a, b;
printf("%d",OddDivCount(a,b));
    return 0;
}
```

**Sample Input**

```
10 20
```

**Sample Output**

```
1
```

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

Q6. swap all the odd bits into even bits and vice versa. **swapBits(unsigned int x){}** function has a logical error , find and fix it

```
#include <stdio.h>
unsigned int swapBits(unsigned int x)
{
unsigned int even_bits = x & 0xAAAAAAAA;
unsigned int odd_bits = x & 0x55555555;
even_bits <<= 1;
odd_bits <<= 1;
return (even_bits | odd_bits);
}
int main()
{
    unsigned int x;
scanf("%u",&x);
    printf("%u ", swapBits(x));
    return 0;
}
```

**Sample Input**

23

**Sample Output**

43

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

Q7. The function getarraysum(int * arr,int len)is supported to calculation
and return the sum of elements of the input array arr of length len(len>0) complete the function **getarraysum(int *arr, int len)** to get the desired output

```
int getarraysum(int *arr,int len)
{

}
```

**Sample Input**

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

**Sample Output**

15

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

# Answer Key & Solution

## Section 1 - Quantitative aptitude

Q1

Speed of the current = 3/13 times the speed of the boat

**Solution**

Nil

Q2

900

**Solution**

Q3

2300

**Solution**

Q4

positive

**Solution**

Q5

2,3,7,11

**Solution**

Q6

25

**Solution**

Q7

4

**Solution**

Q8

96

**Solution**

Q9

4,24

**Solution**

Q10

840

**Solution**

NIL

Q11

1161

**Solution**

NIL

Q12

270

**Solution**

NIL

Q13

9

**Solution**

NIL

Q14

1/8

**Solution**

NIL

Q15

J&S

**Solution**

NIL

Q16

Decreased by 10 percent

**Solution**

let cp be 100, when price decreased by 10% then sp=90. now sales increased by 20%, ie, 90+20%of90=108.

Q17

30

**Solution**

speed=distance/time; S=75/2.5;S=30

Q18

4

**Solution**

Q19

p sqrt(k) (q)^2=1/sqrt(r)

**Solution**

Q20

50

**Solution**

Q21

350

**Solution**

350

Q22

30km

**Solution**

30km

Q23

1

**Solution**

8^7 + 8^-5 = 8^2; 8^2x = 8^2; 2x=2; x=1

Q24

4

**Solution**

Nil

Q25

10

**Solution**

## Section 2 - Reasoning ability

Q1

9

**Solution**

NIL

Q2

both option 3 and 2

**Solution**

NIL

Q3

statement II alone is sufficient to answering the problem question.

**Solution**

-

Q4

100

**Solution**

-

Q5

ESCAPES

**Solution**

-

Q6

None of these

**Solution**

-

Q7

d

**Solution**

NIL

Q8

None of these

**Solution**

-

Q9

P4N

**Solution**

-

Q10 The more fuel efficient a vehicle is, the more eco-friendly it will be.

**Solution**

-

Q11 Son-in-law

**Solution**

-

Q12 s

**Solution**

NIL

Q13 India would continue her open door policy with other western countries despite her issues with U.K

**Solution**

-

Q14 a

**Solution**

NIL

Q15 none of these

**Solution**

NIL

Q16

only conclusion 1 is true

**Solution**

NIL

Q17

3,1,4,5,2

**Solution**

NIL

Q18

UTUBEF

**Solution**

-

Q19

accountant

**Solution**

-

Q20

POS

**Solution**

-

Q21

Accountant and cook

**Solution**

-

Q22

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

**Solution**

-

Q23

5 km east

**Solution**

-

Q24

0

**Solution**

-

Q25

ggf qp

**Solution**

-

## Section 3 - Verbal Ability

Q1

d) Short

**Solution**

NIL

Q2

a) Blunder

**Solution**

NIL

Q3

B. Deduce

**Solution**

NIL

Q4

a) Despite

**Solution**

no

Q5

c) QPRS

**Solution**

NIL

Q6

d) Local

**Solution**

NIL

Q7

d) SQPR

**Solution**

no

Q8

E. Dissimilarity

**Solution**

-

Q9

d) Anathema

**Solution**

NIL

Q10

A. Got

**Solution**

-

Q11

C. 5,3,1,2,4

**Solution**

-

Q12

A. And even distinguish the sizes

**Solution**

-

Q13

Good

**Solution**

Not Needed

Q14

B. Have

**Solution**

-

Q15

D.magnaminous

**Solution**

-

Q16

A. Opening

**Solution**

-

Q17

A. Extinguish

**Solution**

-

Q18

A. Soothe

**Solution**

-

Q19

B. agreeed

**Solution**

-

Q20

while,for

while,for

**Solution**

-

Q21

C. left

**Solution**

-

Q22

B. lair

**Solution**

-

Q23

A. been living

**Solution**

-

Q24

A. Deterrent

**Solution**

-

Q25

D. Somewhat accurate

**Solution**

-

## Section 4 - Automata Fix

Q1

**Test Case**

| Input | Output |
| --- | --- |
| | This is a "buggy" program |

**Weightage - 100**

**Sample Input**

**Sample Output**

| | |
| --- | --- |
| | This is a "buggy" program |

**Solution**

**Header**

```
#include<stdio.h>
int main(void)
{
```

```
#include<stdio.h>
int main(void)
{
printf("This is a \"buggy\" program\n");
    return 0;
}
```

**Footer**

```
}
```

Q2

**Test Case**

| Input | Output |
| --- | --- |
| 22 | No |

**Weightage - 25**

| Input | Output |
| --- | --- |
| 11 | Yes |

**Weightage - 25**

| Input | Output |
| --- | --- |
| 123 | No |

**Weightage - 25**

| Input | Output |
| --- | --- |
| 131 | Yes |

**Weightage - 25**

| Sample Input | Sample Output |
| --- | --- |
| 13 | Yes |

**Solution**

**Header**

```
#include<stdio.h>
int isprime(int num)
{


  int i;
  int isprime = 1;
  for(i = 2;  i <= num / 2; i++)
  {
          if(num % i == 0)
          {
                      isprime = 0;
                           break;
          }
   }
   return isprime;
```

**Footer**

```
}
 int main()
 {
     int n;
     scanf("%d",&n);
     if(isprime(n)){
         printf("Yes");
     }
     else{
         printf("No");
     }
 }
```

Q3

**Test Case**

**Input**

```
54  53  50
```

**Output**

```
54
```

**Weightage - 25**

**Input**

```
65  25  23
```

**Output**

```
65
```

**Weightage - 25**

**Input**

```
56  67  45
```

**Output**

```
67
```

**Weightage - 25**

**Input**

```
10  5  34
```

**Output**

```
34
```

**Weightage - 25**

**Sample Input**

```
3  8  5
```

**Sample Output**

```
8
```

**Solution**

**Header**

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

```
#include<stdio.h>
int main()
{
  int num1, num2, num3;
  scanf("%d %d %d", &num1,&num2,&num3);
```

```
#include<stdio.h>
int main()
{
  int num1, num2, num3;
  scanf("%d %d %d", &num1,&num2,&num3);
  if ((num1 > num2) && (num1 > num3))
  {
              printf("%d", num1);
  }
  else if((num2>num3) && (num2>num1))
  {
              printf("%d", num2);
  }
  else
  {
              printf("%d", num3);
  }
  return 0;
}
```

**Footer**

```
}
```

Q4

**Test Case**

| Input | Output |
| --- | --- |
| 10 | 55 |

**Weightage - 40**

| Input | Output |
| --- | --- |
| 18 | 2584 |

**Weightage - 60**

**Sample Input**

| Sample Input | Sample Output |
| --- | --- |
| 6 | 8 |

**Solution**

**Header**

```
#include <stdio.h>
int fib(int n)
{




    if (n <= 1)
        return n;
    return fib(n - 1) + fib(n - 2);
```

**Footer**

```
}

int main()
{
    int n;
    scanf("%d",&n);
    printf("%d", fib(n));
    getchar();
    return 0;
}
```

Q5

**Test Case**

| Input | Output |
| --- | --- |
| 20 50 | 3 |

**Weightage - 50**

| Input | Output |
| --- | --- |
| 33 77 | 3 |

**Weightage - 50**

| Sample Input | Sample Output |
| --- | --- |
| 10 20 | 1 |

**Solution**

**Header**

```
#include<stdio.h>
int OddDivCount(int a, int b)
{
```

```
int OddDivCount(int a, int b)
{
    int res = 0;
    for (int i = a; i <= b; ++i) {
        int divCount = 0;
        for (int j = 1; j <= i; ++j) {
            if (i % j == 0) {
                ++divCount;
            }
        }
        if (divCount % 2) {
            ++res;
        }
    }
    return res;
}
int main()
{
    int a, b;
    scanf("%d%d",&a,&b);
    printf("%d",OddDivCount(a,b));
    return 0;
}
```

**Footer**

```
}
int main()
{
    int a, b;
    printf("%d",OddDivCount(a,b));
    return 0;
}
```

Q6

**Test Case**

| Input | Output |
| --- | --- |
| 46 | 29 |

**Weightage - 50**

| Input | Output |
| --- | --- |
| 15648 | 15888 |

**Weightage - 50**

| Sample Input | Sample Output |
| --- | --- |
| 23 | 43 |

**Solution**

**Header**

```
#include <stdio.h>
unsigned int swapBits(unsigned int x)
{



    unsigned int even_bits = x & 0xAAAAAAAA;
    unsigned int odd_bits = x & 0x55555555;
    even_bits >>= 1;
    odd_bits <<= 1;
    return (even_bits | odd_bits);
```

**Footer**

```
}
int main()
{
    unsigned int x;
    scanf("%u",&x);
    printf("%u ", swapBits(x));
    return 0;
}
```

Q7

**Test Case**

**Input**

```
10
14  1  5  8  7  8  9  74  5  65
```

**Output**

```
196
```

**Weightage - 100**

**Sample Input**

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

**Sample Output**

```
15
```

**Solution**

**Header**

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



#include<stdio.h>
int getarraysum(int *arr,int len)
{
    int sum = 0, i;
    for( i=0;i<len;i=i+1)
    {
        sum += arr[i];
    }
```

```
    return sum;
}

// Driver Program

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

**Footer**

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