

Wipro Elite NLTH (National Level Talent Hunt) Test Pattern

Sections	Time Duration
Aptitude Test (Logical Ability, Quantitative Ability, Verbal Ability)	60 Minutes
Written Communication Test (Essay writing)	20 Minutes
Online Programming Test (Coding)	60 Minutes

Wipro Elite NLTH Placement Question paper- 1

Aptitude

1) Find the Next Number 2,6,12,20?

- A. 24
- B. 29
- C. 42
- D. 30
- E. None of these

Solution: 30

Explanation: 2, 6, 12, 20 $1 \times 2, 2 \times 3, 3 \times 4, 4 \times 5, (5 \times 6)$ Answer is 30. Product of two consecutive natural numbers

2) The marked price of a radio is 30% more than its cost price. If a discount of 10% is given on the marked price, find the gain percent.

- A. 20%
- B. 17%
- C. 19%
- D. 21%
- E. None of the above

Solution: B

Explanation:

Given

Let Cost Price = 100 Rs

Marked price = 30 % more than Cost Price

= 30 % of C.P + C.P

= $((30 / 100) \times 100) + 100$

= 30 + 100

$$= 130 \text{ Rs}$$

Given Discount = 10 % of marked price

$$= (10 / 100) \times 130$$

$$= 13 \text{ Rs}$$

Selling Price = Marked Price - Discount

$$= 130 - 13$$

3) There are two sections in a question paper each contains five questions. A student has to answer 6 questions. The maximum number of questions that can be answered from any section is 4. How many ways he can attempt the paper?

a) 50

b) 100

c) 120

d) 200

Solution: 200

Explanation: Possible ways in which he can attempt 6 questions are

$${}^5C_4 \times {}^5C_2 = 50$$

$${}^5C_3 \times {}^5C_3 = 100$$

$${}^5C_2 \times {}^5C_4 = 50$$

$$50 + 100 + 50 = 200$$

4) The HCF of two numbers is 24. The number which can be their LCM is

A. 84

B. 128

C. 120

D. 274

Solution: D

Explanation: Let the two numbers be x and y ,

$$\text{HCF} = 24$$

$$\text{LCM} = 1344$$

$$\text{HCF} \times \text{LCM} = x \times y$$

$$24 \times 1344 = xy$$

$$xy = 32256$$

$$(x-y) = 80$$

$$x = 80+y$$

$$(80+y) \times y = 32256$$

$$y^2 + 80y - 32256 = 0$$

$$y^2 + 224y - 144y - 32256 = 0$$

$$y(y+224) - 144(y+224) = 0$$

$$y = 114 \text{ \& } -224$$

$$x = 80+114$$

$$x = 194$$

$$x+y = 194+80 = 274$$

6) A person receives a sum of Rs. 2100 as interest for investing some amount at 10% p.a compounding annually for 2 years. Find the amount invested at the beginning?

A. 9000

B. 10000

C. 9500

D. 10500

Solution: B

Explanation: Given Compound Interest = Rs.2100

Rate of Interest (r) = 10 % p.a

No.of years (n) = 2

To find , amount received at the beginning => principal

$$\text{Compound Interest} = P [1 + (r / 100)^{n-1}]$$

$$\Rightarrow 2100 = P [1 + (10 / 100)^{2-1}]$$

$$\Rightarrow 2100 = P [1 + (1 / 10)^{2-1}]$$

$$\Rightarrow 2100 = P [(11 / 10)^{2-1}]$$

$$\Rightarrow 2100 = P [(121 / 100) - 1]$$

$$\Rightarrow 2100 = P [21 / 100]$$

$$\Rightarrow 2100 \times (100 / 21) = P$$

Principal = Rs. 10000

Amount invested at the beginning = Rs. 10000

7) What is the value of c , If 8 is 4% of a , and 4 is 8% of b . c equals b/a .

A. 12

B. $1/4$

C. 0.155

D. None of these

Solution: B

Explanation:

Let be the 4% of a is $4a/100$.

Since this equals 8, we have $4a/100=8$.

Solving for a yields $a=8 \times (100/4)=200$.

Also, 8% of b equals $8b/100$, and this equals 4.

Hence, we have $(8/100) \times b=4$.

Solving for b yields $b = 50$.

Now, $c=b/a=50/200=1/4$.

8) P, Q and R can do a work in 20, 30 and 60 days respectively. How many days does it need to complete the work if P does the work and he is assisted by Q and R on every third day?

A. 10 days

B. 14 days

C. 15 days

D. 9 days

Solution: C

Amount of work P can do in 1 day = $1/20$

Amount of work Q can do in 1 day = $1/30$

Amount of work R can do in 1 day = $1/60$

P is working alone and every third day Q and R is helping him

Work completed in every three days = $2 \times (1/20) + (1/20 + 1/30 + 1/60) = 1/5$

So work completed in 15 days = $5 \times 1/5 = 1$

That is, the work will be done in 15 days

9) Manu, Manju and Maya can do a work in 90, 30 and 45 days respectively. If they work together, in how many days will they complete work?

- A. 15
- B. 10
- C. 20
- D. 25

Solution: A

Explanation: Manu, Manju and Maya together can do the work = $1/90 + 1/30 + 1/45 = 1+3+2/90 = 1/15$

So, They will complete the work in 15 days.

10) Ravi's salary was reduced by 25%. Percentage increase to be effected to bring the salary to the original level is

- A. 20%
- B. 25%
- C. $33 \frac{1}{3}\%$
- D. 30%

Solution: C

Verbal Ability

Directions 1-5 : Pick out the most effective word from the given words to fill in the blank to make the sentence meaningfully complete

1. While facts are_____and data hard to come by, even scientists occasionally throw side the professional pretense of_____and tear into each other with shameless appeals to authority and arguments that shameless appeals to authority and arguments that are unabashedly ad hominid.

- a. elusive...objectivity
- b. establish...courtesy
- c. demonstrate .. neutrality
- d. ineluctable...cooperation

ANS: (A)

2. While the disease is in_____state it is almost impossible to determine its existence by_____.

- a. a dormant ..postulate
- b. a critical...examination
- c. an acute ...analysis
- d. a latent...observation

ANS: (d)

3. The storehouse was infested..... rats.

- A) by
- B) of
- C)
- D) in

Ans: C

4. Please distribute these sweets.....the children

- A) in
- B) between
- C) amid
- D) among

Ans: D

5. This custom seems to have originatedand East European country

- A) in
- B) from

C) by
D) with
Ans: A

6. Synonym:-Opuluous

A. Popular
B. Respectful
C. Populated(thickly)
D. hard working

Solution: C

7. Read the following passage carefully and answer the questions given below it. Certain words are printed in bold to help you to locate them while answering some of the questions.

The yearly festival was close at hand. The store room was packed with silk fabrics. Gold ornaments, clay bowls full of sweet curd and platefuls of sweetmeats. The orders had been placed with shops well in advance. The mother was sending out gifts to everyone. The eldest son, a government servant, lived with his wife and children in far off lands. The second son had left home at an early age. As a merchant he travelled all over the world. The other sons had split up over petty squabbles, and they now lived in homes of their own. The relatives were spread all across the world. They rarely visited. The youngest son, left in the company of a servant, was soon bored and stood at the door all day long, waiting and watching. His mother, thrilled and excited, loaded the presents on trays and plates, covered them with colourful kerchiefs, and sent them off with maids and servants. The neighbours looked on.

The day came to an end. All the presents had been sent off. The child came back into the house and dejectedly said to his mother, "Maa, you gave a present to everyone, but you didn't give me anything !" His mother laughed, "I have given all the gifts away to everyone, now see what's left for you." She kissed him on the forehead. The child said in a tearful voice, "Don't I get a gift ?" "You'll get it when you go far away."

“But when I am close to you, don’t I get something from your own hands ?” His mother reached out her arms and drew him to her. “This is all I have in my own hands. It is the most precious of all.”

Why did the woman's second son travel?

- A. He was restless by nature
- B. He did not want to stay at home
- C. He was rich and could afford to travel
- D. His job was such that he had to travel
- E. None of these

Solution: D

8. What did the youngest child do while his mother was busy?

- 1. He waited for a chance to steal some sweetmeats.
- 2. He pestered his mother to give him a present.
- 3. He stood at the door with servants.

- A. Only 1
- B. Only 2
- C. Both 1 and 3
- D. Only 3
- E. None of these

Solution: D

9. Although he puts in.....of overtime and takes few holidays, he...cannot support his family.

- A. sufficient, however
- B. lot, besides
- C. much, thus
- D. plenty, still

E. frequency, yet

Solution: D

10. ANTONYM:-EXODUS

- A. Influx
- B. Home-coming
- C. Return
- D. Restoration

Solution: A

Reasoning

1) If "football" is "cricket" , "cricket" is "basketball" , "basketball" is "volleyball" , "volleyball" is "khokho" and "khokho" is cricket, which is not a ball game?

- A. cricket
- B. football
- C. khokho
- D. basketball

Answer: A

2) Which of the following is a recursive set of production

- A. $S \rightarrow a|A, A \rightarrow S$
- B. $S \rightarrow a|A, A \rightarrow b$
- C. $S \rightarrow aA, A \rightarrow S$
- D. None of these

Solution: C

3) 3 Which term of the series 5, 10, 20, 40,..... is 1280?

- A. 10th
- B. 9th
- C. 8th
- D. None of these

Solution: B

Explanation: Ann ,Ben ,Charlie ,David ,Elle ,Feynman ,Gyle and Harry are sitting in a row facing North.

- (i) Ann is fourth to the right of Elle
- (ii) Harry is fourth left of David
- (iii) Charlie and Feynman , which are not at the ends are neighbours of Ben and Elle respectively.
- (iv) Harry is immediate left of of Ann and Ann is the neighbour of Ben.

4) In following question, a number series is given with one term missing. Choose the correct alternative that will same pattern and fill in the blank spaces.: 0.5, 1.5, 4.5, 13.5,

- A. 45.5
- B. 39.5
- C. 30.5
- D. 40.5

Solution: D

5) The 'M' state government has decided hence forth to award the road construction contracts through open tenders only. Courses of action:

- I. The 'M' state will not be able to get the work done swiftly as it will have to go through tender and other procedures.
- II. Hence forth the quality of roads constructed may be far better.

- A. If only I follows
- B. If only II follows

- C. If either I or II follows
- D. If neither I nor II follows
- E. If both I and II follow

Solution: D

6) Find the next term in this series – 2,3,6,18,108,?

- A. 54
- B. 1002
- C. 216
- D. 1944

Solution: D

7) In a certain language, RIPPLE is written as 785514. What is the code of PILLER in that language?

- A. 561147
- B. 561174
- C. 581174
- D. 581147

Solution: D

8) Pointing to a girl in the photograph, Amar said, “Her mother’s brother is the only son of my mother’s father.” How is the girl’s mother related to Amar?

- A. Mother
- B. Sister
- C. Aunt
- D. Grandmother
- E. None of these

Solution: E

9) The product of 4 consecutive even numbers is always divisible by:

- A. 600
- B. 768
- C. 864
- D. 384

Solution: D

To solve this question, we need to know two facts.

Fact 1: The product of 4 consecutive numbers is always divisible by 4!.

Fact 2: Since, we have 4 even numbers, we have an additional 2 available with each number.

Now, using both the facts, we can say that the product of 4 consecutive even numbers is always

divisible by,

$$=(24) \times 4! = (24) \times 4!$$

$$=16 \times 24 = 16 \times 24$$

$$=384$$

10) If the sum of 4 times a number A and 3 times a number B is equal to the sum of number B and seven times the number A, then what is the value of A:B?

- A. 2:3
- B. 3:2
- C. 4:3
- D. 3:4

Solution: A

Wipro Elite NLTH Placement Question paper- 2

Aptitude

1. The cost price of an article is Rs. 480. If it is to be sold at a profit of 6.25 percent, what would its selling price be?

- A. Rs. 510
- B. Rs. 530
- C. Rs. 503
- D. Rs. 519
- E. None of these

Answer (A)

Explanation

The selling price of the article is, $\text{Selling price} = \text{Cost Price} + \text{Selling price} * (\text{Percent Profit}/100)$

$$\text{Selling Price} = 480 + (6.25/100)*480 = 510$$

Hence, the correct option is option A.

2. The profit earned after selling an article for Rs 996 is the same as the loss incurred after selling the article for Rs 894. What is the cost price of the article ?

- A. Rs 935
- B. Rs 905
- C. Rs 945
- D. Rs 975
- E. None of these

Answer (C)

Explanation

Let the CP be the Cost Price and SP be Selling Price.

$$\text{Profit} = \text{SP} - \text{CP} = 996 - \text{CP}$$

$$\text{Loss} = \text{CP} - \text{SP} = \text{CP} - 894$$

Now as Profit = Loss

$$2*CP = 1890$$

$$\text{CP} = 945$$

Hence, the cost price is 945.

3. The ages of Nishi and Vinnee are in the ratio of 6:5 After 9 years the ratio of their ages

will be 9:8 What is the difference in their ages?

- a) 9 years
- b) 7 years
- c) 5 years
- d) 3 years
- e) None of these

Answer (D)

Explanation

Let the ages of Nishi and Vinnee be x and y .

Now, as per given conditions,

$$(x/y) = (6/5) \text{ i.e } 5x=6y$$

after 9 years,

$$(x+9)/(y+9) = 9/8 \text{ i.e } 8x-9y=9$$

After solving we get $x = 18$ and $y = 15$.

Differences in the ages = $18-15=3$

Hence, option D is correct.

4. Find out the wrong number in the given series

9050, 5675, 3478, 2147, 1418, 1077, 950

- a) 3478
- b) 1418
- c) 5673
- d) 2147
- e) 1077

Answer (E)

Explanation

$$9070 - 15^3 = 5675, 5675 - 13^3 = 3478, 3478 - 11^3 = 2147, 2147 - 9^3 = 1418,$$

$$1418 - 7^3 = 1075 \neq 1077, 1075 - 5^3 = 950$$

5. Profit earned by the organisation is distributed among officers and clerks in the ratio of 5:3 If the number of officers is 45 and the number of clerks is 80 and the amount received by each officer is rs 25,000 what was the total amount of profit earned?

- A. Rs. 22 lakh
- B. Rs. 18.25 lakh
- C. Rs. 18 lakh
- D. Rs. 23.25 lakh
- E. None of these

Answer (C)

Explanation

The total amount distributed among officers = $45 \times 25000 = 11,25,000$

If the total amount is x , then this amount is $(5/8)x = 11,25,000$

Hence, $x = 18,00,000$

5. Which of the following statements is not true?

- (A) Acquisition of 'life-skills' is part of maturation
- (B) Acquisition of 'life-skills' is part of social process
- (C) 'Life-skills' are directly moulded
- (D) 'Life-skills' are learnt

6. A student wants to share his problem with his teacher and visits the teacher for the same at his home. In such a situation, the teacher should—

- (A) Suggest to him to escape from his home
- (B) Contact the student's parents and provide help
- (C) Extend reasonable help and boost his morale
- (D) Warn him to never visit his home

Answer: C

7. If a student alleges against you for showing favouritism in evaluation of scripts, how would you deal with him?

- (A) Reject his allegations
- (B) Adopt punitive measure
- (C) Make efforts to reveal his position
- (D) Show his answer book and few more

Answer: D

8. The major responsibility with which school personnel have been entrusted is that of—

- (A) Adjusting social demands to the needs of the child

- (B) Adjusting the child to conform to the demands of society
- (C) Changing human nature to conform to social expectations
- (D) Preparing the child to change the society

Answer: B

9. In order to develop a good rapport with students, a teacher should (select the most important activity)—

- (A) Love his students
- (B) Be friendly with all
- (C) Pay individual attention
- (D) Communicate well

Answer: C

10. The best reason because of which a teacher can command respect from his students is if—

- (A) He follows innovative practices in the class
- (B) He dictates notes to the class
- (C) He reads and explains the text-book
- (D) He does not give home assignment

Answer: A

English

Directions (Questions.1-3): Choose the word/group of words which is MOST SIMILAR in meaning to the word/group of words printed in bold as used in the passage.

- 1). Clamored
 - a) Acclaimed
 - b) Applauded
 - c) Cried
 - d) Refused
 - e) Decided
- 2). Stimulate

- a) Increase
 - b) Goad
 - c) Project
 - d) Exhilarate
 - e) Weaken
- 3). Spur
- a) Hindrance
 - b) Trigger
 - c) Curb
 - d) Impede
 - e) Prohibit

Directions (Question. 4 to 5): Choose the word/group of words which is MOST OPPOSITE in meaning of the word/group of words printed in bold as used in the passage.

- 4). Viable
- a) Practicable
 - b) Reasonable
 - c) Feasible
 - d) Impossible
 - e) Workable
- 5). Sluggish
- a) Indolent
 - b) Alert
 - c) Lifeless
 - d) Slack
 - e) Slow

Directions (Questions.6-10): Read each sentence to find out whether there is any grammatical or idiomatic error in it. If any error is present choose that particular option as answer. If there is 'NO error', the answer is 'e'. (Ignore errors of punctuation, if any.)

- 6).
- a) The CBI has filed a petition in NIA court
 - b) Here seeking its permission to interrogate
 - c) A Sri Lankan national held for

d) Allegedly spying for Pakistan

e) No error

7).

a) The government apprised the court

b) About instituting another committee

c) That would review and draft amendments

d) To the five key laws over environment, forest, wildlife, air and water

e) No error

8).

a) In the absence of a legal guarantee of safety and privacy

b) The court should not ask for sources

c) To be revealed, especially when the cases at stake

d) Involve powerful people in politics and business

e) No error

9).

a) Government plan to link the universal health assurance scheme

b) For providing medical treatment

c) To all citizens with Aadhar number

d) To check ghost beneficiaries

e) No error

10).

a) The supreme Court has ruled that

b) Citizens have no fundamental right

c) To carry out business in potable liquor and the state

d) Has the power to prohibit such trade

e) No error

Answers:

1). c) 2). b) 3). b) 4). d) 5). b) 6). a) 7). b) 8). e) 9). a) 10). c)

Reasoning

1. What Should Come In The Place Of (?) In The Given Series? Ace, Fgh, ?, Pon

(A) Kkk

- (B) Jki
- (C) Hjhh
- (D) Ikl

Ans. (A)

2. Typist : Typewriter : : Writer : ?

- (A) Script
- (B) Pen
- (C) Paper
- (D) Book

Ans. (B)

3. Paint: Artist : : Wood: ?

- (A) Furniture
- (B) Forest
- (C) Fire
- (D) Carpenter

Ans. (D)

4. Acme : Mace :: Alga: ?

- (A) Glaa
- (B) Gaal
- (C) Laga
- (D) Gala

Ans. (D)

5. Eighty : Gieyth : : Output:?

- (A) Utoptu
- (B) Uotupt
- (C) Tuoutp
- (D) Tuotup

Ans. (D)

6. 'medicine' Is Related To 'patient' In The Same Way As 'education' Is Related To—

- (A) Teacher
 - (B) School
 - (C) Student
 - (D) Tuition
- Ans. (C)

7. Fill In The Missing Letter In The Following Series—S, V, Y, B, ?

- (A) C
- (B) D
- (C) E
- (D) G

Ans. (C)

8. What Should Come In The Place Of Question Mark In The Following Series? 3, 8, 6, 14, ?, 20

- (A) 11
- (B) 10
- (C) 8
- (D) 9

Ans. (D)

9. Select The Correct Option In Place Of The Question Mark. Aop, Cqr, Est, Guv, ?

- (A) Iyz
- (B) Hwx
- (C) Iwx
- (D) Jwx

Ans. (C)

10. What Should Come In The Place Of Question Mark In The Following Series? 1, 4, 9, 25, 36, ?

- (A) 48
- (C) 52
- (B) 49 - Ans. (B)
- (D) 56

Wipro Elite NLTH Placement Question paper- Coding

1) Print the below pattern (half diamond using numbers)

Input:

3 4

Output

:

3
44
555
6666
555
44
3

Input :

4 4

Output

:

4
55
666
7777
666
55
4

Program

:

```
#include
```

```
int
```

```
main()
```

```
{
```

```
    int i,j,s,N,count=0;
```

```
    scanf("%d%d",&s,&N);
```

```
    for(i=s;count<4;count+
```

```
    +)
```

```
    {
```

```

        for(j=0;j<count+1;j+
            +) printf("%d",i);
        printf("\n"
            ); i=i+1;
    }
    for(i=s+N-2;count>0;count--)

{
    for(j=0;j<count-
        1;j++)
        printf("%d",i);
    printf("\n"
        ); i=i-1;
}
return 0;
}

```

2) Print the following pattern (half diamond using numbers)

Input :

3

Output

: 1

2*2

3*3*3

3*3*3

2*2

1

Input :

4

Output

: 1

2*2

3*3*3

4*4*4*4

4*4*4*4

3*3*3

2*2

1

Program

:

#include

int

main()

{

int i,j,k,N,count=0;


```

scanf("%d",&N
);
for(i=1;i<=N;i+
+)
{
    k=1;
    for(j=0;j<i;j++)
    {
        printf("%d",i
); if(k<i)
        {
            printf("*")
            ; k=k+1;
        }
    }
    printf("\n");
}
for(i=N;i>0;i-)
{
    k=1;
    for(j=0;j<i;j++)
    {
        printf("%d",i
); if(k<i)
        {
            printf("*")
            ; k=k+1;
        }
    }
    printf("\n");
}
return 0;
}

```

3) Print the below pattern.

Input
: 4

Output:

```
1
2*3
4*5*6
7*8*9*10
7*8*9*10
4*5*6
2*3
1
```

Program:

```
#include
int main()
{
    int i,j,count=1,n;
    printf("Enter a
    number\n");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        for(j=1;j<=i;j++)
        {
            if(j<i)
                printf("%d*",count++);
            else
                printf("%d",count++);
        }    printf("\n");
    }
    count=count-
    n;
    for(i=n;i>=1;i
    -)
    {    for(j=1;j<=i;j++)
```

```
{  
    if(j<i)  
        printf("%d*",count++);  
    else  
        printf("%d",count++);  
}  
count=(count+1)-  
2*i; printf("\n");
```

```
    return 0;
}
```

4) Print the following pattern.

Input:

3 4

Output:

```
3
44
555
6666
6666
555
44
3
```

Program:

```
#include<stdio.h>
int main()
{
    int i,j,s,N,count=0;
    scanf("%d%d",&s,&N);
    for(i=s;count<4;count++)
    {
        for(j=0;j<count+1;j++)
            printf("%d",i);
        printf("\n");
        i=i+1;
    }
    for(i=s+N-2;count>0;count--)
    {
```

```

        for(j=0;j<count-
            1;j++)
            printf("%d",i);
        printf("\n"
        ); i=i-1;

    return 0;
}

```

5) Print the below pattern.

Input:

5

Output:

1

3*2

4*5*6

10*9*8*7

11*12*13*14*15

Program:

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

```
> int main()
```

```
{
```

```
    int
```

```
    i,j,k,l=1,N,d,r,count=0;
```

```
    scanf("%d",&N);
```

```
    for(i=1;i<=N;i++)
```

```
    {
```

```
        k=1;
```

```
        d=i%2
```

```
        ; r=l+i-
```

```
        1;
```

```
        for(j=0;j<i;j++)
```

```
        {
```

```
if(d==0
```

```
    )
```

```
    {
```

```
p      tf("%d",r); r--;
r      if(k<i)
i      {
n      printf("*")
        ; k=k+1;
```

```

        }

        l++;
        continue;
    }
    printf("%d",l
); l++;
    if(k<i)
    {
        printf("**")
        ; k=k+1;
    }
}
printf("\n");
}
return 0;
}

```

6) Print the below pattern.

Input:

4

Output:

1*2*3*4*17*18*19*

20

— -5*6*7*14*15*16

— — — -8*9*12*13

— — — — — -10*11

Program:

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

```
> void
```

```
pattern(int); int
```

```
main()
```

```
{
```

```
    int n;
```

```
    scanf("%d",
```

```
    &n);
```

```
    pattern(n);
```

```

        return 0;
    }
    void pattern(int n)

    {
        int i, j, k, s, a = 1, b = n * n +
        1; for (i = n; i >= 1; i--) {
            for (s = 0; s < n - i; s++)
                printf("–
                "); for (j = 0; j < i;
                j++)
                    printf("%d*",
                    a++); for (k = 0; k < i –
                    1; k++)
                        printf("%d*", b++);
                    printf("%d\n", b);
                    without * b -= 2*(i – 1);
                }
    }
}

```

7) Prim's Algorithm

```

// A C / C++ program for Prim's Minimum
// Spanning Tree (MST) algorithm. The program is
// for adjacency matrix representation of the graph
#include <stdio.h>
#include <limits.h>
#include <stdbool.h>
// Number of vertices in the
graph #define V 5

// A utility function to find the vertex with
// minimum key value, from the set of vertices
// not yet included in MST
int minKey(int key[], bool mstSet[])
{
    // Initialize min value

```



```
int min = INT_MAX, min_index;
```

```
for (int v = 0; v < V; v++)
```

```
if (mstSet[v] == false && key[v] <  
min) min = key[v], min_index = v;
```

```
return min_index;
```

```
}
```

```
// A utility function to print the  
// constructed MST stored in parent[]  
int printMST(int parent[], int n, int graph[V][V])  
{  
    printf("Edge  
    \tWeight\n"); for (int i =  
    1; i < V; i++)  
    printf("%d - %d \t%d \n", parent[i], i, graph[i][parent[i]]);  
}
```

```
// Function to construct and print MST for  
// a graph represented using adjacency  
// matrix representation  
void primMST(int graph[V][V])  
{  
    // Array to store constructed  
    MST int parent[V];  
    // Key values used to pick minimum weight edge in  
    cut int key[V];  
    // To represent set of vertices not yet included in  
    MST bool mstSet[V];  
    // https://www.freshersnow.com/placement-papers-download/
```

```
// Initialize all keys as  
// INFINITE for (int i = 0; i < V;  
// i++)  
key[i] = INT_MAX, mstSet[i] = false;
```

```
// Always include first 1st vertex in MST.  
// Make key 0 so that this vertex is picked as first  
// vertex. key[0] = 0;  
parent[0] = -1; // First node is always root of MST
```

```
// The MST will have V vertices  
for (int count = 0; count < V-1; count++)
```

```

{
// Pick the minimum key vertex from the

// set of vertices not yet included in
MST int u = minKey(key, mstSet);

// Add the picked vertex to the MST Set
mstSet[u] = true;

// Update key value and parent index of
// the adjacent vertices of the picked vertex.
// Consider only those vertices which are not
// yet included in MST
for (int v = 0; v < V;
v++)

// graph[u][v] is non zero only for adjacent vertices of m
// mstSet[v] is false for vertices not yet included in MST
// Update the key only if graph[u][v] is smaller than key[v]
if (graph[u][v] && mstSet[v] == false && graph[u][v] < key[v])
parent[v] = u, key[v] = graph[u][v];
}

// print the constructed
MST printMST(parent, V,
graph);
}
// driver program to test above
function int main()
{
/* Let us create the following
graph 2 3

(0)--(1)--(2)
| /\ |
6| 8/\5 |7
| /\ |
(3)------(4)

```

9 */

int graph[V][V] = {{0, 2, 0, 6, 0},

```
{2, 0, 3, 8, 5},  
{0, 3, 0, 0, 7},
```

```
{6, 8, 0, 0, 9},  
{0, 5, 7, 9, 0}};
```

```
// Print the
```

```
solution
```

```
primMST(graph);
```

```
return 0;
```

```
}
```

Output:

Edge

Weight 0 -

1 2

1 - 2 3

0 - 3 6

1 - 4 5

8) Print the below pattern.

Input:

3

Output:

3 3 3

3 1 3

3 2 3

3 3 3

Program:

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

```
> int main()
```

```
{
```

```
    int i, j, n, c=1;
```

```
    scanf("%d", &n);
```

```
for(i=1; i<=n+1;  
i++)
```

```

{
    for(j=1; j<=n; j++)
    {

        if(i!=1 && j==n-1)
        {
            printf("%d ", c);
            c++;
        }
        else
            printf("%d ", n);
        }
        printf("\n");
    }
    return 0;
}

```

9) Program to find the average of n (n < 10) numbers using arrays

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

```

int main()
{
    int marks[10], i, n, sum = 0,
    average; printf("Enter n: ");
    scanf("%d",
    &n); for(i=0;
    i<n; ++i)
    {
        printf("Enter number%d:
        ",i+1); scanf("%d",
        &marks[i]);
        sum += marks[i];
    }
    average = sum/n;
    printf("Average = %d",
    average); return 0;
}

```

Enter n: 5

Enter number1: 45

Enter number2: 35
Enter number3: 38
Enter number4: 31
Enter number5: 49

Average = 39

10) Operations On Linked List

```
#include<stdio.h>
#include<stdlib.h>
struct node
{
int data;
struct node *next;
};
void display(struct node* head)
{
struct node *temp = head;
printf("\n\nList elements are - \n");
while(temp != NULL)
{
printf("%d --->",temp->data); temp = temp->next;
}
}
void insertAtMiddle(struct node *head, int position, int value)
{ struct node *temp = head;
struct node *newNode;
newNode = malloc(sizeof(struct node)); newNode->data = value;
int i;
for(i=2; inext != NULL) { temp = temp->next;
}
}
```



```
newNode->next = temp-  
>next; temp->next =  
newNode;  
}  
void insertAtFront(struct node** headRef, int value)  
{ struct node* head = *headRef;  
struct node *newNode;
```

```

newNode = malloc(sizeof(struct
node)); newNode->data = value;
newNode->next =
head; head =
newNode;
*headRef = head;
}
void insertAtEnd(struct node* head, int value){
struct node *newNode;
newNode = malloc(sizeof(struct
node)); newNode->data = value;
newNode->next = NULL;
struct node *temp =
head; while(temp->next
!= NULL){ temp = temp-
>next;
}
temp->next = newNode;
}
void deleteFromFront(struct node** headRef){
struct node* head = *headRef;
head = head->next;
*headRef = head;
}
void deleteFromEnd(struct node* head){
struct node* temp = head;
while(temp->next-
>next!=NULL){ temp = temp-
>next;
}
temp->next = NULL;
}
void deleteFromMiddle(struct node* head, int
position){ struct node* temp = head;
int i;
for(i=2; inext !=
NULL) { temp =

```

```
temp->next;  
}  
}  
temp->next = temp->next->next;
```

```

}
int main() {
/* Initialize nodes
*/ struct node
*head;

struct node *one =
NULL; struct node *two
= NULL; struct node
*three = NULL;
/* Allocate memory */
one = malloc(sizeof(struct node));
two = malloc(sizeof(struct node));
three = malloc(sizeof(struct
node));
/* Assign data values
*/ one->data = 1;
two->data = 2;
three->data = 3;
/* Connect nodes
*/ one->next =
two; two->next =
three; three->next
= NULL;
/* Save address of first node in head
*/ head = one;
display(head); // 1 --->2 --->3 --->
insertAtFront(&head, 4);
display(head); // 4 --->1 --->2 --->3 -
--> deleteFromFront(&head);
display(head); // 1 --->2 --->3 --->
insertAtEnd(head, 5);
display(head); // 1 --->2 --->3 --->5 --->
deleteFromEnd(head);
display(head); // 1 --->2 --->3 --
-> int position = 3;
insertAtMiddle(head,
position,10);

```

```
display(head); // 1 --->2 --->10 --->3 --->
deleteFromMiddle(head, position);
display(head); // 1 --->2 --->3 --->
}
```

Output:

List elements

are - 1 --->2 ---

>3 --->

List elements are -

4 --->1 --->2 --->3 --->

List elements

are - 1 --->2 ---

>3 --->

List elements are -

1 --->2 --->3 --->5 --->

List elements

are - 1 --->2 ---

>3 --->

List elements are -

1 --->2 --->10 --->3 --->

List elements

are - 1 --->2 ---

>3 --->

HCL placement papers previously asked questions HCL aptitude reasoning technical questions

HCL placement paper

1. Which of the following involves context switch,

- (a) system call
- (b) privileged instruction
- (c) floating point exception
- (d) all the above
- (e) none of the above

Ans: (a)

2. In OST, terminal emulation is done in

- (a) sessions layer
- (b) application layer
- (c) presentation layer
- (d) transport layer

Ans: (b)

3. For 1 MB memory, the number of address lines required,

- (a) 11
- (b) 16
- (c) 22
- (d) 24

Ans. (b)

4. Semaphore is used for

- (a) synchronization
- (b) dead-lock avoidance
- (c) box
- (d) none

Ans. (a)

5. Which holds true for the following statement

```
class c: public A, public B
```

- a) 2 member in class A, B should not have same name
- b) 2 member in class A, C should not have same name
- c) both
- d) none

Ans. (a)

6. Preprocessor.. does not do which one of the following

- (a) macro
- (b) conditional compilation
- (c) in type checking
- (d) including load file

Ans. (c)

7. Piggy backing is a technique for

- a) Flow control
- b) Sequence
- c) Acknowledgement
- d) retransmission

Ans. (c)

8. Given the following statement

```
enum day = { jan = 1 , feb=4, april, may }
```

What is the value of may?

- (a) 4
- (b) 5
- (c) 6
- (d) 11
- (e) None of the above

Ans (e)

9. Find the output for the following C program

```
i=20,k=0;
```

```
for(j=1;j<9 && Y++!=10 && Y++>10)
```

```
{printf("%d", Y);  
else  
printf("%d", Y);  
}
```

Ans. 13

12. Find the output for the following C program

$f = (x > y) ? x : y$

- a) f points to max of x and y
- b) f points to min of x and y
- c) error

Ans. (a)

13. What is the sizeof(long int)

- (a) 4 bytes
- (b) 2 bytes
- (c) compiler dependent
- (d) 8 bytes

14. $a=2, b=3, c=6$

Find the value of $c/(a+b)-(a+b)/c$

Ans : 0.3

15.. What does the hex number E78 in radix 7.

- (a) 12455
- (b) 14153
- (c) 14256
- (d) 13541
- (e) 131112

Ans. (d)

16.. 10 : 4 seconds :: ? : 6 minutes

Ans. 900

Questions 17 - 21 are to be answered on the following data

A causes B or C, but not both

F occurs only if B occurs

D occurs if B or C occurs

E occurs only if C occurs

J occurs only if E or F occurs

D causes G,H or both

H occurs if E occurs

G occurs if F occurs

17. If A occurs which of the following must occurs

I. F and G

II. E and H

III. D

(a) I only

(b) II only

(c) III only

(d) I,II, & III

(e) I & II (or) II & III but not both

Ans. (e)

18. If B occurs which must occur

(a) D

(b) D and G

(c) G and H

(d) F and G

(e) J

Ans. (a)

19. If J occurs which must have occurred

(a) E

(b) either B or C

(c) both E & F

(d) B

(e) both B & C

Ans. (b)

20. Which may occurs as a result of cause not mentioned

I. D

II. A

III. F

(a) I only

(b) II only

(c) I & II

(d) II & III

(e) I,II & III

Ans. (c)

21. E occurs which one cannot occurs

(a) A

(b) F

(c) D

(d) C

(e) J

Ans. (b)

22.A man fixed an appointment to meet the manager, Manager asked him to come two days after the day before the day after tomorrow. Today is Friday. When will the manager expect him? (repeated from previous papers)

Ans: Monday

23.A man said he spent $\frac{1}{6}$ of his as a child, $\frac{1}{12}$ as salesman in a liquor shop, $\frac{1}{7}$ and 5 years as a politician and a good husband respectively. At that time Jim was born. Jim was elected as Alderman four years back. when he was half of his age. What is his age? (repeated from previous papers)

Ans: 84 years

24.Jack,Doug and Ann, 3 children had a running race while returning from school.Mom asked who won the race. Then Jack replied" I wont tell you I will give u clue, When Ann takes 28 steps Doug takes 24 steps, meantime

I take 21 steps. Jack explained that his 6 steps equals Droug's 7 steps and Ann's 8 steps. Who won the race?

Ans: Doug

25. Every day a cyclist meets a car at the station. The road is straight and both are traveling in the same direction. The cyclist travels with a speed of 12 mph. One day the cyclist comes late by 20 min. and meets the car 5 miles before the Station. What is the speed of the car?

Ans: 60 mph

26. A lady goes for shopping. She bought some shoestrings. 4 times the number of shoestrings, she bought pins and 8 times, handkerchiefs. She paid each item with their count as each piece's cost. She totally spent Rs. 3.24. How many handkerchiefs did she buy?

27. Complete the series :

a) 3,6,13,26,33,66,___

b) 364,361,19,16,4,1,____(" " ")

Ans : a) 63

b) 1

28. Lucia is a wonderful grandmother. Her age is between 50 and 70. Each of her sons have as many sons as they have brothers. Their combined number gives Lucia's age. What is the age?

Ans: 64

29. There are two towers A and B. Their heights are 200ft and 150ft respectively and the foot of the towers are 250ft apart. Two birds on top of each tower fly down with the same speed and meet at the same instant on the ground to pick a grain. What is the distance between the foot of tower A and the grain?

Ans: 90ft

30. Grass in lawn grows equally thick and in a uniform rate. It takes 40 days for 40 cows and 60 days for 30 cows to eat the whole of the grass. How many days does it take for 20 cows to do the same?

Ans: 120

TECHNICAL

31. What is the output of the following problem ?

```
#define INC(X) X++
```

```
main()
```

```
{
```

```
int X=4;
printf("%d",INC(X++));
}
```

- a)4 b)5 c)6 d)compilation error e) runtime error

Ans : d

32. what can be said of the following

```
struct Node {
char *word;
int count;
struct Node left;
struct Node right;
}
```

- a) Incorrect definition
b) structures cannot refer to other structure
c) Structures can refer to themselves. Hence the statement is OK
d) Structures can refer to maximum of one other structure

Ans :c)

33. What is the output of the following program

```
main()
{
int a=10;
int b=6;
if(a=3)
b++;
printf("%d %d\n",a,b++);
}
```

- a) 10,6 b)10,7 c) 3,6 d) 3,7 e) none

Ans : a

34. What can be said of the following program?

```
main()
{
```

```
enum Months {JAN =1,FEB,MAR,APR};
Months X = JAN;
if(X==1)
{
printf("Jan is the first month");
}
}
```

- a) Does not print anything
- b) Prints : Jan is the first month
- c) Generates compilation error
- d) Results in runtime error

Ans: b

35. What is the output of the following program?

```
main()
{
char *src = "Hello World";
char dst[100];
strcpy(src,dst);
printf("%s",dst);
}strcpy(char *dst,char *src)
{while(*src) *dst++ = *src++;
}
```

) "Hello World" b)"Hello" c)"World" d) NULL e) unidentified

Ans: d) NULL

.

36 .What is the output of the following program?

```
main()
{
int l=6;
switch(l)
{ default : l+=2;
case 4: l=4;
case 5: l++;
break;
```

```

}
printf("%d",l);
}
a)8          b)6          c)5          d)4          e)none

```

Ans : a) 8

37.What is the output of the following program?

```

main()
{
int x=20;
int y=10;
swap(x,y);
printf("%d %d",y,x+2);
}

swap(int x,int y)
{
int temp;
temp =x;
x=y;
y=temp;
}

```

a)10,20 b) 20,12 c) 22,10 d)10,22 e)none

Ans:b

38. Which of the following about the following two declaration is true

i) int *F()
ii) int (*F)()

- a) Both are identical
- b) The first is a correct declaration and the second is wrong
- c) The first declaration is a function returning a pointer to an integer and the second is a pointer to function returning int
- d) Both are different ways of declaring pointer to a function

Ans : c)

39. What are the values printed by the following program?

```
#define dprint(expr) printf( #expr "=%d\n",expr)
main()
{
int x=7;
int y=3;
dprintf(x/y);
}
```

a) #2 = 2 b) expr=2 c) x/y=2 d) none

Ans: c)x/y=2

40. Which of the following is true of the following program

```
main()
{
char *c;
int *p;
c =(char *)malloc(100);
ip=(int *)c;
free(ip);
}
```

41. output of the following.

```
main()
{
int i;
char *p;
i=0X89;
p=(char *)i;
p++;
printf("%x\n",p);
}
```

Ans:0X8A

42. which of the following is not a ANSI C language keyword?

Ans: Function.

43. When an array is passed as parameter to a function, which of the following statement is correct choice:

- a) The function can change values in the original array
- b) In C parameters are passed by value. The function cannot change the original value in the array
- c) It results in compilation error when the function tries to access the elements in the array
- d) Results in a run time error when the function tries to access the elements in the array

Ans: a)

44. The type of the controlling expression of a switch statement cannot be of the type

- a) int b) char c) short d) float e) none

Ans : d

Questions 41-45

Six knights - P, Q, R, S, T and U - assemble for a long journey in two travelling parties. For security, each travelling party consists of at least two knights. The two parties travel by separate routes, northern and southern. After one month, the routes of the northern and southern groups converge for a brief time and at that point the knights can, if they wish, rearrange their travelling parties before continuing, again in two parties along separate northern and southern routes. Throughout the entire trip, the composition of travelling parties must be in accord with the following conditions P and R are deadly enemies and, although they may meet briefly, can never travel together. P must travel in the same party with S. Q can't travel by the southern route. U can't change.

41. If one of the two parties of knights consists of P and U and two other knights and travels by the southern route, the other members of this party besides P and U must be

- a) Q and S
- b) Q and T
- c) R and S
- d) R and T
- e) S and T

Ans: e

42. If each of the two parties of knights consists of exactly three members, which of the following is not a possible travelling party and route?

- a) P, S, U by the northern route
- b) P, S, T by the northern route
- c) P, S, T by the southern route
- d) P, S, U by the southern route

e) Q,R,T by the southern route

Ans: b

43.If one of the two parties of knights consists of U and two other knights and travels by the northern route, the other memnbers of this party besides U must be

a) P and S

b) P and T

c) Q and R

d) Q and T

e) R and T

Ans: c

44. If each of the two parties of knights consists of exactly three members of different parties, and R travels by the northern route,then T must travel by the

a) southern route with P and S

b) southern route with Q and R

c) southern route with R and U

d) northern route with Q and R

e) northern route with R and U

Ans: a

45. if, when the two parties of knights encounter one another after a month, exactly one knight changes from one travelling party to the other traveling party, that knight must be

a) P

b) Q

c) R

d) S

e) T

Ans: e

46. How many of the integers between 25 and 45 are even ?

(A)21

(B)20

(C)11

(D)10

(E)9

Ans:d

46. If taxi fares were Rs 1.00 for the first $\frac{1}{5}$ mile and Rs 0.20 for each $\frac{1}{5}$ miles thereafter. The taxi fare for a 3-mile ride was

(A)Rs 1.56 (B)Rs 2.40 (C)RS 3.00 (D)Rs 3.80 (E)Rs 4.20

Ans :d

47. A computer routine was developed to generate two numbers (x,y) the first being a random number between 0 and 100 inclusive, and the second being less than or equal to the square root of the first. Each of the followin pair satisfies the routine EXCEPT

(A) (99.10) (B) (85.9) C) (50.7) (D) (1.1) (E) (1.0)

Ans: A

48. A warehouse had a square floor with area 10,000 sq.meters. A rectangular addition was built along one entire side of the warehouse that increased the floor by one-half as much as the original floor. How many meters did the addition extend beyond the original buildings ?

(A)10 (B)20 (C)50 (D)200 (E)500

Ans: c

49. A digital wristwatch was set accurately at 8.30 a.m and then lost 2 seconds every 5 minutes. What time was indicated on the watch at 6.30 p.m of the same day if the watch operated continuously that time ?

(A)5:56 (B)5:58 (C)6.00 (D)6.23 (E)6.26

Ans :E

50 .A 5 litre jug contains 4 litres of a salt water solution that is 15 percent salt. If 1.5 litres of the solution spills out of the jug, and the jug is then filled to capacity with water, approximately what percent of the resulting solution in the jug is salt?

(A)7.5% (B)9.5% (C)10.5% (D)12% (E)15%

51.A merchant sells an item at a 20 percent discount. but still makes a gross profit of 20 percent of the cost.What percent of cost would be gross profit on the item have been if it had been sold without the discount?

(A)20% (B)40% (C)50% (D)60% (E)66.6%

Ans :c

52. A millionaire bought a job lot of hats 1/4 of which were brown. The millionaire sold 2/3 of the hats including 4/5 of the brown hats. What fraction of the unsold hats were brown.

(A)1/60 (B)1/15 (C)3/20 (D)3/5 (E)3/4

Ans :c

53. How many integers n greater than and less than 100 are there such that, if the digits of n are reversed, the resulting integer is $n+9$?

- (A) 5 (B) 6 (C) 7 (D) 8 (E) 9

Ans :D

54. An investor purchased a share of stock at a certain price. If the stock increased in price Rs 0.25 per share and the total increase for the x shares was Rs 12.50, how many shares of stock had been purchased ?

- (A) 25 (B) 50 (C) 75 (D) 100 (E) 125

Ans :B

55. At a special sale, 5 tickets can be purchased for the price of 3 tickets. If 5 tickets are purchased at the sale, the amount saved will be what percent of the original price of the 5 tickets?

- (A) 20% (B) 33.3% (C) 40% (D) 60% (E) 66.6%

Ans :c

56. Working independently, Tina can do a certain job in 12 hours. Working independently, Ann can do the same job in 9 hours. If Tina works independently at the job for 8 hours and then Ann works independently, how many hours will it take Ann to complete the remainder of the job?

- (A) $2/3$ (B) $3/4$ (C) 1 (D) 2 (E) 3

Ans :E

57. A decorator bought a bolt of d m number of red chips in any one stack ?

- (A) 7 (B) 6 (C) 5 (D) 4 (E) 3

Ans :C

58.

```
main()
```

```
{
```

```
int i;
```

```
clrscr();
```

```
printf("%d", &i)+1;
```

```
scanf("%d", i)-1;
```

```
}
```

a. Runtime error.

- b. Runtime error. Access violation.
- c. Compile error. Illegal syntax
- d. None of the above

Ans: d,

59.

```
main(int argc, char *argv[])  
{  
(main && argc) ? main(argc-1, NULL) : return 0;  
}
```

- a. Runtime error.
- b. Compile error. Illegal syntax
- c. Gets into Infinite loop
- d. None of the above

Ans: b

60.

```
main()  
{  
int i;  
float *pf;  
pf = (float *)&i;  
*pf = 100.00;  
printf("\n %d", i);  
}
```

- a. Runtime error.
- b. 100
- c. Some Integer not 100
- d. None of the above

Ans: d

Dell Placement Questions

Note : Answer all Questions in Section I, I and III maximum correct attempts in this section will be qualified

Section I : Programming

Answer any 5 of the following

1. Write a program that ask for user input from 5 to 9 then calculate the average
2. Implement strcat {} function with out using string function and optimize the function for speed and space
3. Write a function to reverse a linked list
4. Write a recursive function to get the factorial of a given number only if it is prime
- 5 Write a C++ programme without using any loop {if,for,while etc}to print number form 1 to 1-- and 100 to 1
6. Write a programme to Exchange two number without using a temporary variable
- 7 Write a function to find if the given number is a power of 2
8. Write a function in 2 different ways that will return $f\{7\} = 4$ and $f(4) = 7$
9. Write a function to remove duplicates in array
10. convert integer number in binary without loops

Section II -Oops

1. What are the main features of OOPS ? Explain them briefly
2. What is a virtual function ? Explain with an example?

3. What is the difference between overloading and overriding?
4. In inheritance explain the public private protected modifiers behaviours on data members.
- 5 What is a factory method, give reference to any example class

Section III : analytical

- 1..If you have a 5 liter and a 3 liter measuring can, how would you measure exactly 4 liters of liquid?
- 2 Suppose you had 8 billiard balls, and one of them was slightly heavier, but the only way to tell was by putting it on a scale against another. What's the fewest number of times you'd have to use the scale to find the heavier ball?
- 3 a magical pond has one lotus flower in it begin with. At the end of every day the number of flowers doubles. It takes 30 days to fill the complete pond.. How many days will it take to fill half the pond with lotus flowers?
- 4 In an analog clock how many days each day do both the hour hand and minute hands overlap?
5. There is a room with a door {closed} and three light bulbs. Outside the room there are three switches connected to the bulbs. You may manipulate the switches as you wish, but once you open the door you cant change them. Identify each switch with its bulb

Technical Interview Questions:

1. What is composition and aggregation?
- 2 What is the difference between pointers and references? why?
3. What is the order of calling of constructors and destructors in class hierarchy? Explain
4. What is RITI?
5. difference between array, vector,list and dequeue?

6. Explain "Passing by value", "passing by pointer" and "passing by reference"?
7. what is the difference between thread and a process and are they used?
8. What is the difference between heap and stack memory? when are they used?
9. Implement an algorithm to sort an array?
10. Explain pre-order, post-order and in-order binary tree traversal?
11. What is the difference between `char a [] = "string";` and `char *p = "string";`?
12. What is the difference between union and struct?
13. Explain compiling and linking in brief?
14. What is a DLL? Explain a few advantages of using DLL's.
15. What is an interrupt?
16. What is the difference between UDP and TCP protocols?
17. Explain in brief Client Server technology?
18. How will you get the no. of instances created for a class from within the class?
19. What are RAM and ROM also explain difference between them?
20. What is the difference between HTTP GET and HTTP Post? Explain
21. What is the difference between heap and stack memory ?

Aptitude paper

1. Jayant gets 3 marks for each right sum and loses 2 marks for each wrong sum. He attempts 30 sums and obtains 40 marks. The number of sums attempted correctly is

- (1) 25
- (2) 20
- (3) 26
- (4) 27

2. Complete the following number series:

7. 1, 1, 3, 9, 5, 25, 7, 49, __, 81

- (1) 7
- (2) 9
- (3) 8
- (4) 10

3. 8, 5, 11, 23, 41, 64, __

- (1) 89
- (2) 95
- (3) 101
- (4) 105

Directions (4-6): Study the information given below to answer these questions.

Mark your answer as:

- (i) If both A and R are correct but R does not explain A.
- (ii) If both A and R are correct and R explains A.
- (iii) If A is correct but R is wrong.
- (iv) If A wrong but R is correct.

4. Assertion (A): A saltwater fish drinks sea water where a fresh water fish never drinks water.

Reason (R): A saltwater fish is hyper tonic to its environment while a freshwater fish is hypotonic to its environment.

5. Assertion (A): The territory of India is larger than the territories of the States taken together.

Reason (R): India is a Union of States.

6. Assertion (A): Alcohol rather than mercury is used in a thermometer to measure a temperature of 60°C.

Reason (R): Alcohol has a lower freezing point than mercury.

Directions (7-11): In the following questions, the first and the last parts of the sentence are numbered 1 and 6. The rest of the sentence is split into four parts named P, Q, R and S. These four parts are not given in their proper order. Read the parts, arrange them properly and find out which of the five combinations given below is appropriate, and mark it as your answer.

7.

- 1. The latest move
- P. women is being opposed
- Q. to reserve one-third of
- R. tooth and nail by
- S. the electoral seats for
- 6. some political parties.

1) SPQR

- 2) QSPR
- 3) SRPQ
- 4) PRQS
- 5) SPRQ

8.

- 1. One of the most pernicious
- P. ancient scriptures is that
- Q. of the system of caste hierarchy,
- R. and reactionary feudal survivals
- S. sanctified by some
- 6. exploitation and oppression.

- 1) PQRS
- 2) SRQP
- 3) PRQS
- 4) QSPR
- 5) RSPQ

9.

- 1. Experience as well as
- P. tells us that any attempt
- Q. at a forced equalisation of income
- R. modern economic theory
- S. and wealth destroys the incentives
- 6. that encourage efficiency.

- 1) RPQS
- 2) SPRQ
- 3) PSQR
- 4) QRPS
- 5) PQRS

10.

- 1. The chances of electoral success
- P. for liberals would certainly improve
- Q. under the banner of
- R. a liberal party with its
- S. if they could fight
- 6. own electoral symbol.

- 1) SQRP
- 2) RPSQ
- 3) PSQR
- 4) RQPS
- 5) QRSP

11.

- 1. The author has pointed an
- P. of the community who
- Q. accusing finger at the Muslim intelligentsia
- R. maintain a stoic silence over the
- S. and the dominant members
- 6. bizarre happenings in Kashmir.

- 1) QSPR
- 2) RPSQ
- 3) SQRP
- 4) PQRS
- 5) SRQP

12. Malnourishment of Indian children is mostly due to traditional taboos _____ with certain vital foods, and not due to their _____.

- 1) containing, unavailability
- 2) embraced, locality
- 3) associated, scarcity
- 4) raised, nutrition
- 5) inserted, quality

12. During his mandate, the secretary-general will face the _____ challenge of _____ a global agreement on climate change.

- 1) grave, drawing
- 2) pressing, forging
- 3) massive, framing
- 4) umpteen, sentencing
- 5) detrimental, inking

13. The key for today's UN is not to _____ more goals, but to _____ those that have been set before.

- 1) bargain, offload
- 2) address, justify
- 3) superseded, avail
- 4) amen, respond
- 5) create, implement

14. The price of sugar increases by 20%, by what % should a housewife reduce the consumption of sugar so that expenditure on sugar can be same as before ?

- (A) 15%
- (B) 16.66%
- (C) 12%
- (D) 9%

15. A man spends half of his salary on household expenses, $\frac{1}{4}$ th for rent, $\frac{1}{5}$ th for travel expenses, the man deposits the rest in a bank. If his monthly deposits in the bank amount 50, what is his monthly salary ?

- (A) Rs.500
- (B) Rs.1500
- (C) Rs.1000
- (D) Rs. 900

16. What is the output of the program

```
void main()
{
    int i,j,k,n=5;
    clrscr();
    for(i=5;i>0;i--)
    {
        j=1
        k=n&j;
        k==0?printf("0"):printf("1");
    }
    getch();
}
```

- A. 00011
- B. 11110
- c. 11001
- D. 11100

Ans: B. 11110

17. What is the output of the program

```
void main()
{
    struct a
    {
        int i;
        char *st1;
    };
    typedef struct a ST;
    ST *str1;
    str1=(ST*)malloc(100);
    str1->i=100;
    strcpy(str1->st1,"Welcome to Oracle");
    printf(" %d%s\n",str1->i,str1->st1);
    getch();
}
```

- A. core dump
- B. will not compile
- C. 100,Welcome to Oracle
- D. None of these

Ans: C

18. Find the approximate value of the following equation. 6.23% of $258.43 - ? + 3.11\%$ of $127 = 13.87$

- 1) 2
- 2) 4
- 3) 8
- 4) 6
- 5) 10

19. A train overtakes 2 persons walking at 3 km/hr and 5 km/hr respectively in the same direction and completely passes them in 8 seconds and 10 seconds respectively. Find the speed of the train.

- 1) 15 km/hr
- 2) 13 km/hr
- 3) 10 km/hr
- 4) 10 km/hr
- 5) None of these

20. The ratio between the radius and height of a cone is 3:4. What is the curved surface area of the cone?

- 1) $15\pi \text{ m}^2$
- 2) $12\pi \text{ m}^2$
- 3) $9\pi \text{ m}^2$
- 4) Data inadequate
- 5) None of these

AMAZON Previous Years Questions

1. Two tables emp (empid, name, deptid, sal) and dept (deptid, deptname) are there. Write a query which displays empname, corresponding dept name and also display those employee names that do not belong to any dept.

2. Write prefix and post fix notation for
 $(a+b)*c-(d+e)^{(f-g)}$

3. Write program to swap 2 variables without using extra memory.

4. Find the output for the following C program fn f(x)

```
{  
if(x<=0)  
return;  
else f(x-1)+x;  
}
```

5. Find the output for the following C program main()

```
{  
    intx=2,y=6,z=6;  
    x=y=z;  
    printf("%d",x)  
}
```

6. Copy a file from one host "amazon.chennai" to another host "amazon.bbsr"

7. You want to find out the value of the last element of an array. You write the following code. What will happen when you compile and run it.?

```
public class MyAr  
{  
    public static void main(String argv[])  
    {  
        int[] i = new int[5];  
        System.out.println (i[5]);  
    }
```

}

- 1) An error at compile time
- 2) An error at run time
- 3) The value 0 will be output
- 4) The string "null" will be output.

8. Find the second largest element in an array with minimum no of comparisons and give the minimum no of comparisons needed on an array of size N to do the same.

9. Write a program to remove duplicates from a sorted array.

10. In C, if you pass an array as an argument to a function, what actually gets passed?

- A. Value of elements in array
- B. First element of the array
- C. Base address of the array
- D. Address of the last element of array

Ans-C

11. What will be the output of the program?

```
#include<studio.h>
int main()
{
    void fun( int, int[]);
    int arr[] = {1, 2, 3, 4};
    int i;
    fun (4, arr);
    for (i=0; i<4; i++)
        printf("%d,", arr[i]);
    return 0;
}
void fun(int n, int arr[])
{
    int *p=0;
    int i=0;
    while(i++ < n)
```

```

        p = &arr[i];
    *p=0;
}

```

- A. 2, 3, 4, 5
- B. 1, 2, 3, 4
- C. 0, 1, 2, 3
- D. 3, 2, 1 0

Ans-B

12. What will be the output of the program if the array begins 1200 in memory?

```

#include<stdio.h>
int main()
{
    Int arr[]={2, 3, 4, 1, 6};
    printf("%u, %u, %u\n", arr, &arr[0], &arr);
    return 0;
}

```

- A. 1200, 1202, 1204
- B. 1200, 1200, 1200
- C. 1200, 1204, 1208
- D. 1200, 1202, 1200

Ans-B

13. Which of the following statements are correct about an array?

- 1: The array `int num [26];` can store 26 elements.
 - 2: The expression `num [1]` designates the very first element in the array.
 - 3: It is necessary to initialize the array at the time of declaration.
 - 4: The declaration `num [SIZE]` is allowed if `SIZE` is a macro.
- A. 1
 - B. 1,4
 - C. 2,3
 - D. 2,4

Ans-B

14. Which of the following function is used to find the first occurrence of a given string in another string?

- A. strchr()
- B. strrchr()
- C. strstr()
- D. strnset()

Ans-C

15. Which of the following function is correct that finds the length of a string?

A. –

```
int xstrlen(char *s)
{
    int length=0;
    while(*s!='\0')
    {        length++; s++; }
}
```

B –

```
int xsrrlen(char s)
{
    int length=0;
    while(*s!='\0')
    length++; s++;
    return (length);
}
```

C-

```
int xstrlen(char *s)
{
    int length=0;
```

```

while(*s!='\0')
length++
return (length);
}

```

Ans-A

16. What will be the output of the program in 16-bit platform (Turbo C under DOS)?

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

```
Int main()
```

```
{
    Printf("%d, %d, %d", sizeof(3.0f), sizeof('3')), sizeof(3.0);
    Return 0;
}
```

- A. 8, 1, 4
- B. 4, 2, 8
- C. 4, 2, 4
- D. 10, 3, 4

Ans-B

17. Which of the following statements are correct ?

- 1: A string is a collection of characters terminated by '\0'.
- 2: The format specifier %s is used to print a string.
- 3: The length of the string can be obtained by strlen().
- 4: The pointer CANNOT work on string.

- A. A, B
- B. A, B, C
- C. B, D
- D. C, D

Ans-B

18. Point out the error in the program?

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

```
int main()
```

```
{
struct emp
```



```

{
char name[20];
float sal;
    };
    struct emp e[10];
    int i;
for(i=0; i<=9; i++)
    scanf("%s %f" e[i].name, &e[i].sal);
return 0;
}

```

- A. Error: invalid structure member
- B. Error: Floating point formats not linked
- C. No error
- D. None of above

Ans-B

19. What is the similarity between a structure, union and enumeration?

- A. All of them let you define new values
- B. All of them let you define new data types
- C. All of them let you define new pointers
- D. All of them let you define new structures

Ans-B

20. What will be the output of the program ?

```

#include<stdio.h>
int main()
{
    enum days {MON=-1, TUE, WED=6, THU, FRI, SAT};
    printf("%d, %d, %d, %d, %d, %d\n", MON, TUE, WED, THU, FRI, SAT);
    return 0;
}

```

- A. -1, 0, 1, 2, 3, 4
- B. -1, 2, 6, 3, 4, 5
- C. -1, 0, 6, 2, 3, 4
- D. -1, 0, 6, 7, 8, 9

Ans-D

21. What will be the output of the program ?

```
#include<stdio.h>

struct course
{
    int courseno;
    char coursename[25];
};

int main()
{
    struct course c[] = { {102, "Java"},
                           { 103, "PHP"},
                           {104, "DotNet"}    };

    printf("%d", c[1].courseno);
    printf("%s\n", (*(c+2)).coursename);
    return 0;
}
```

- A. 103 Dotnet
- B. 102 Java
- C. 103 PHP
- D. 104 DotNet

Ans-A

22. In which stage the following code

```
#include<stdio.h>

gets replaced by the contents of the file stdio.h
```

- A. During editing
- B. During linking
- C. During execution
- D. During preprocessing

Ans-D

23. Point out the error in the program

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

```
int main()
```

```
{
```

```
    int I;
```

```
    #if A
```

```
        printf("Enter any number:");
```

```
        scanf("%d", &i);
```

```
    #elif B
```

```
        printf(" The number is odd");
```

```
    return 0;
```

```
}
```

- A. Error: unexpected end of file because there is no matching #endif
- B. The number is odd
- C. Garbage values
- D. None of above

Ans-A

24. What are the different types of real data type in C?

- A. float, double
- B. short int, double, long int
- C. float, double, long double
- D. double, long int, float

Ans-C

25. Which statement will you add in the following program to work it correctly?

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

```
Int main()
```

```
{
```

```
    printf("%f\n", lof(36.0));
```

```
    return 0;
```

```
}
```

- A. #include<conio.h>
- B. #include<math.h>
- C. #include<stdlib.h>

D. `#include<dos.h>`

Ans-B

26. What do the following declaration signify?

`int *ptr[30];`

- A. ptr is a pointer to an array of 30 integer pointers.
- B. ptr is a array of 30 pointers to integers.
- C. ptr is a array of 30 integer pointers.
- D. ptr is a array 30 pointers.

Ans-B