



**COGNIZANT PROFESSIONAL
PLACEMENT MATERIAL**

by -

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PROFESSIONAL MATERIALS ON COGNIZANT

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Quantitative Aptitude

1. Sixty-five percent of a number is 21 less than four fifth of that number. What is the number?

A) 110 B) 120

C) 140 D) 150

Ans: A) 140

Explanation

let the number be x.

Then, $4 \times x / 5 - (65\% \text{ of } x) = 21$

$$4x/5 - 65x/100 = 21$$

$$5x = 2100$$

$$x = 140.$$

2. The average age of a husband and his wife was 23 years at the time of their marriage.

After five years they have a one-year old child. The average age of the family now is:

A) 25 B) 23

C) 19 D) 18

Ans: C) 19

Explanation:

Sum of the present ages of husband, wife and child = $(23 * 2 + 5 * 2) + 1 = 57$ years.

Required average = $(57/3) = 19$ years.

3. Find the greatest number which on dividing 1661 and 2045, leaves a remainder of 10 and 13 respectively

A. 125 B. 127





C. 129 D. 131

Ans: Option B

Explanation:

In this type of question, its obvious we need to calculate the HCF, trick is

HCF of $(1661 - 10)$ and $(2045 - 13)$

HCF $(1651, 2032) = 127$

4. Find the simple interest on Rs. 68,000 at $16 \frac{2}{3}\%$ per annum for 9 months.

A. 9000 B. 9500

C. 8000 D. 8500

Ans: Option D

Explanation:

$P = \text{Rs.} 68000, R = 50/3\% \text{ p.a and } T = 9/12 \text{ years} = 3/4 \text{ years.}$

$S.I. = (P \times R \times T) / 100 = \text{Rs.} (68,000 \times (50/3) \times (3/4) \times (1/100)) = \text{Rs.} 8500$

5. Three number are in the ratio of 3 : 4 : 5 and their L.C.M. is 2400. Their H.C.F. is:

A) 40 B) 80

C) 120 D) 200

Ans: A) 40

Explanation:

Let the numbers be $3x, 4x$ and $5x$.

Then, their L.C.M. = $60x$.

So, $60x = 2400$ or $x = 40$.

The numbers are $(3 \times 40), (4 \times 40)$ and (5×40) .

Hence, required H.C.F. = 40.





6. Dhruv and Naksh drive at the speeds of 36 Kmph and 54 kmph respectively. If Naksh takes 3 hours lesser than what Dhruv takes for the same distance. Then distance is:

- a. 324 km b. 524 km
c. 320 km d. 420 km

Ans: 324 km

Explanation:

Let dhruv takes t hours then naksh takes t-3 hours

Because distance is same in both cases

So $36 * t = 54 (t-3)$

$t=9$

$36 * 9 = 324 \text{ km}$

7. A trapezium with an area of 5100 cm² has the perpendicular distance between the two parallel sides of 60m . if one of the parallel sides be 40m. find the length of the other side.

- a. 130 m b. 110 m c. 120 m d. 145 m

Ans: 130 m

Explanation:

Area of a trapezium = $(1/2) (a+b) h$

8. If HCF of two numbers is 8, which of the following can never be their LCM?

- A) 32 B) 48
C) 60 D) 152

Ans: C) 60

Explanation:

60 is not a multiple of 8





9. The cost price of 10 articles is equal to the selling price of 9 articles. find the profit percent.

- a. $101/9$ % b. $100/9$ % c. $102/9$ % d. $103/9$ %

Ans: $100/9$ %

Explanation:

Let Cost Price be x and selling price be y

Then given that cost price of 10 articles is equal to the selling price of 9 articles

That means $10x=9y$

$$Y = 10x/9$$

$$\text{Profit percent} = ((\text{selling price} - \text{cost price}) / \text{cost price}) * 100 = 100/9 \%$$

10. what is the 2015th no. of problemsolvingproblemsolving.....

- a) g b) p c) n d) o

Ans: n

Explanation:

"problemsolving" it is a 14 letters word

total no=2015th

"g" is repeat= $2015/14=143$ remainder=13

13th words is "n"

11. How many numbers are there in all from 4000 to 4999 (both 4000 and 4999 included) having at least one of their digits repeated?

- a. 356 b. 216 c. 496 d. 504

Ans: 496

Explanation:

Atleast one of their digits repeated = Total numbers – None of the digits repeated





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Logical Reasoning

1) Choose the odd one

A. Marigold

B. Grapes

C. Rose

D. Lotus

Answer – B. Grapes

Explanation: Except grapes all are flowers

Directions (Q. 2 - 4): Below asked questions, two rows of numbers are given. The resultant number in each row is to be worked out separately based on the following rules and the questions below the rows of numbers are to be answered. The operations of numbers progress from the left to the right.

Rules:

(i) If an odd number is followed by another composite odd number, they are to be added.

(ii) If an even number is followed by an odd number they are to be added.

(iii) If an even number is followed by a number which is the perfect square, the even number is to be subtracted from the perfect square.

(iv) If an odd number is followed by a prime odd number, the first number is to be divided by the second number.





(v) If an odd number is followed by an even number the second one is to be subtracted from the first number.

2. I. 15 6 21

II. P 3 27

If 'P' is the resultant of the first row, what will be the resultant of the second row?

A. 27

B. 60

C. 58

D. 82

Answer - B. 60

Explanation:

$$15 - 6 = 9 \text{ [Rule v]}$$

$$9 + 21 = 30 \text{ [Rule i]}$$

$$P = 30$$

$$30 + 3 = 33 \text{ [Rule ii]}$$

$$33 + 27 = 60 \text{ [Rule i]}$$

3.

I. 51 17 35



**II. 14 15 R**

If 'R' is the resultant of the first row, what will be the sum of the resultants of first and second row?

- A. 31
- B. - 3
- C. 29
- D. 3

Answer - C. 29

Explanation: $51 \div 17 = 3$ [Rule iv]

$$3 + 35 = 38 \text{ [Rule i]}$$

$$R = 38 \div 14 + 15 = 29 \text{ [Rule ii]}$$

$$29 - 38 = -9 \text{ [Rule v] ;}$$

$$\text{Sum of the resultants of first and second row} = 38 - 9 = 29$$

4.

I. 12 36 15**II. 18 Q 10**

If 'Q' is the resultant of the first row, what will be the resultant of the second row ?

- A. 85
- B. 101





C. 69

D. None of the above

Answer - D. None of the above

Explanation: $36 - 12 = 24$ [Rule iii]

$24 + 15 = 39$ [Rule ii]

$Q = 39$

$18 + 39 = 57$ [Rule ii]

$57 - 10 = 47$ [Rule v]

Therefore, Answer is none of the above.

5. Thermometer: Temperature:: Barometer:?

A. Strain

B. Force

C. Stress

D. Pressure

Answer - D. Pressure

Explanation:

The thermometer is used to measure to Temperature similarly Barometer is used to measure Pressure





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Verbal Reasoning

Directions for Questions 1-7:

In the following sentences, there may be some errors in the parts which are marked as A, B, C, D. Identify the part which has errors.

1. She was a young girl with a pretty face, (A)/ very well trained in dancing (B)/ and who gave much promise of (C)/ a brilliant career as a film artist. (D)

- a. A b. B c. C d. D

Answer: C

Explanation:

Correction: She was a young girl with a pretty face, very well trained in dancing and she gave much promise of a brilliant career as a film artist. 'Who' must be replaced with 'she'.

2. The University has announced that (A)/ everyone will take the examination now (B)/ will receive their results within (C)/ eight weeks at the latest. (D)

- a. A b. B c. C d. D

Answer: C

Explanation:





Correction: The University has announced that everyone who takes the examination now will receive their results within eight weeks at the latest.

There needs to be a connection between the subject and the verb which is provided by replacing 'will' by 'who'.

3. Everyone who saw the movie ‘Star Wars’ (A)/ is unanimous in their view (B)/ that it is the best science fiction movie (C)/ ever produced. (D)

a. A b. B c. C d. D

Answer: B

Explanation:

The word 'unanimous' itself means sharing the same views or opinions. Thus it is needless to repeat the same point by stating that 'Everyone who saw the movie ‘Star Wars’ is unanimous in their view'. Thus the error is in B.

Correction: Everyone who saw the movie ‘Star Wars’ is unanimous that it is the best science fiction movie ever produced.

4. Though the elephant, because of its size, (A)/ appears to be a rather slow animal, (B)/ it can in fact run faster than (C)/ any other man. (D)

a. A b. B c. C d. D

Answer: D

Explanation:

Correction: Though the elephant, because of its size, appears to be a rather slow animal, it can in fact run faster than any other man can.





It should be evident from the sentence that the ability of an elephant is being compared to the ability of a man.

5. I do not wish to make a formal (A)/ complaint, but I would have been better pleased (B)/if you gave the (C)/award to the person who best deserved it.(D)/

a. A b. B c. C d. D

Answer: C

Explanation:

Change gave to had given because the verb in the previous clause is in the past conditional tense.

6. Raji found it difficult (A)/ to manage single-handedly the three children (B)/ who were always quarrelling (C)/ between themselves. (D)

a. A b. B c. C d. D

Answer: D

Explanation:

Correction: Raji found it difficult to manage single-handedly the three children who were always quarrelling among themselves.

As there are three children, 'among' is the suitable word to use instead of between.





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Automata



raghav gupta
TEST ID: 130012353262323



Automata Fix

🕒 00:00:36

Module Description

Module Name	Number of questions	Total Time
Automata Fix	7	20 Minutes

Please select your preferred programming language to proceed.

- ☒ C
☐ C++
☐ Java

Code-Specific Instructions:

- You need to debug/implement the function that has been provided in the editor.
- Use the function exactly as provided in the problem as any deviation may lead to an unsuccessful compilation of code.
- Do not modify pre-implemented main method.
- You may include the necessary libraries if required.
- The signature function may call other functions defined by you.
- It also may use structure definitions and other pre-processing directives like macros.
- Your functions cannot input anything from STDIN and any output, shall be over STDOUT.

▶ Next





1.

raghav gupta
TEST ID: 130012353262323

Help Submit

Automata Fix

Question 1 out of 7

00:19:46

Problem Test Cases Output

You are required to complete the given code by reusing existing functions. You can click on *Compile & Run* anytime to check the compilation/execution status of the program. You can use *printf* to debug your code. The submitted code 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 complete the code as in given implementation. We do not expect you to modify the approach.

The function *findMinElement(int *arr1, int len1, int *arr2, int len2)* accepts two integer arrays *arr1*, *arr2* of length *len1*, *len2* respectively.

It is supposed to return the smallest element in both the input arrays.

Another function *sortArray(int *arr, int len)* sorts the input array *arr* of length *len* in ascending order and returns it.

Your task is to use *sortArray(int *arr, int len)* function and complete the code in *findMinElement(int *arr1, int len1, int *arr2, int len2)*, so that it passes all test cases.

Save Compile & Run Next Question

Navigate to question

```
1 // You can print the values to stdout for debugging
2 int* sortArray(int *arr, int len)
3 {
4     int i=0,j=0,temp=0,index=0;
5     for(i=0;i<len;i++)
6     {
7         for(j=i+1;j<len;j++)
8         {
9             if(arr[i]>arr[j])
10            {
11                temp = arr[i];
12                arr[i] = arr[j];
13                arr[j] = temp;
14            }
15        }
16    }
17    return arr;
18 }
19
20 int findMinElement(int *arr1, int len1, int *arr2, int len2)
21 {
22     // write your code here
23 }
24
```

2.

raghav gupta
TEST ID: 130012353262323

Help Submit

Automata Fix

Question 2 out of 7

00:19:12

Problem Test Cases Output

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 *printf* to debug your code. The submitted code 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 incorporate any additional library methods.

The function *getArraySum(int *arr, int len)* is supposed to calculate and return the sum of elements of the input array *arr* of length *len* (*len >= 0*).

The function compiles successfully but fails to return the desired result due to logical errors.

Your task is to debug the program to pass all the test cases.

Assumption:

You can assume the sum of the elements of the array *arr* will not overflow the range of its data type.

Save Compile & Run Next Question

Navigate to question

```
1 // You can print the values to stdout for debugging
2 int getArraySum(int *arr, int len){
3     int sum=0,i;
4     for(i=0;i<len;i=i+1){
5         sum = arr[i];
6     }
7     return sum;
8 }
```





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Technical Round Questions

C/C++ Interview Questions:

1. When is a switch statement better than multiple if statements?
2. What is the return type of printf library function?
3. What is dangling pointer?
4. How can we achieve run time polymorphism in C++?
5. Library function which is used to convert string value into int value?
6. How the overriding is different than overloading?
7. Explain diamond problem of inheritance?
8. What is the significance of argc and argv in command line arguments ?
9. Can we call any class member function without using object of the class
10. Give uses of scope resolution operator (::) in C++
11. What is importance of this pointer?
12. Write the statements which are used to swap two variables without using 3rd variable and without using arithmetic operators.
13. Explain the polymorphism?
14. How type conversion is different than type casting ?
15. List the operators which can't be overloaded ?
16. Which operator can replace the if statement in the program?
17. What is the role of abstract class in c++





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HR Interview Questions

Attitude/Flexibility/Adaptability

1. When considering a new job opportunity, what elements—such as job responsibilities, location, and hours of work—are important to you?
2. Tell me about a situation where you had to quickly adjust to a change in your department or team priorities. How did this change affect you?
3. Describe a time you had to meet a scheduled deadline while your work was being interrupted continuously. What was most difficult about this and how did you handle it?
4. Give me an example of a time when you had to balance multiple responsibilities at once. What did you do to keep organized? How did you prioritize your tasks?
5. Tell me about a challenging time you faced with a person from a different background or culture.
6. Interacting with coworkers or customers from different backgrounds or cultures can be challenging at times. Tell me about a challenging time you faced with a person from a different background or culture.
7. What skill do you feel you need to develop the most? Why?
8. Describe some specific tasks or conditions you found frustrating. How did you handle them?
9. Describe the style of management under which you work most effectively. Why do you prefer this style?
10. Tell me about a time you received constructive criticism. What was it? How did it make you feel when you received it? What did you do to improve?
11. Tell me about a time when you were asked to change your schedule unexpectedly. How did you feel about it? How did you handle it?





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