1. In the questions below the sentences have been given in Active/Passive voice. From the given alternatives, choose the one which best expresses the given sentence in Passive/Active voice.

I remember my sister taking me to the museum.
A. I remember I was taken to the museum by my sister.
B. I remember being taken to the museum by my sister.
C. I remember myself being taken to the museum by my sister.
D. I remember taken to the museum by my sister.

2. Who is creating this mess?
A. Who has been created this mess?
B. By whom has this mess been created?
C. By whom this mess is being created?
D. By whom is this mess being created?

3. They greet me cheerfully every morning.
A. Every morning I was greeted cheerfully.
B. I am greeted cheerfully by them every morning.
C. I am being greeted cheerfully by them every morning.
D. Cheerful greeting is done by them every morning to me.

4. You need to clean your shoes properly.
A. Your shoes are needed to clean properly.
B. You are needed to clean your shoes properly.
C. Your shoes need to be cleaned properly.
D. Your shoes are needed by you to clean properly.

5. A child could not have done this mischief.
A. This mischief could not be done by a child.
B. This mischief could not been done by a child.
C. This mischief could not have been done by a child.
D. This mischief a child could not have been done.
6
The following questions, consist of two words each that have a certain relationship to each other, followed by four lettered pairs of words. Select the lettered pair that has the same relationship as the original pair of words.

Horse : Jockey : : Car : ?
( ) A. Mechanic
( ) B. Chauffeur
( ) C. Steering
( ) D. Brake

Explanation: Exp: Horse is driven by a jockey. Similarly, car is driven by a chauffeur.

7
Pongee : Silk : : Shallot : ?
( ) A. Boat
( ) B. Building
( ) C. Ship
( ) D. Stream

8
Drama : Stage : : Tennis : ?
( ) A. Tournament
( ) B. Net
( ) C. Court
( ) D. Racket

Explanation: Explanatino: A drama is performed on a stage. Similarly tennis is played on Court.

9
Tree : Forest : Grass : ?
( ) A. Lawn
( ) B. Field
( ) C. Garden
( ) D. Farm
10
In the following the questions choose the word which best expresses the meaning of the given word.

WARY
( ) A. Sad
( ) B. vigilant
( ) C. Distorted
( ) D. Tired

11
RABBLE
( ) A. Mob
( ) B. Noise
( ) C. Roar
( ) D. Rubbish

12
MAYHEM
( ) A. Jubilation
( ) B. Havoc
( ) C. Excitement
( ) D. Defeat

13
In the following questions choose the word which is the exact OPPOSITE of the given words.

HYPOCRITICAL
( ) A. Gentle
( ) B. Sincere
( ) C. Amiable
( ) D. Dependable

14
FICKLE
( ) A. Courageous
( ) B. Sincere
( ) C. Steadfast
( ) D. Humble
15
Father is aged three times more than his son Ronit. After 8 years, he would be two and a half times of Ronit's age. After further 8 years, how many times would he be of Ronit's age?

( ) A. 2 times
( ) B. 2 (1/2) Times
( ) C. 2(3/4) Times
( ) D. 3 times

Explanation:
Let Ronit's present age be $x$ years. Then, father's present age = $(x + 3x)$ years = 4$x$ years.

\[ \frac{5}{2} (x + 8) = (x + 8) \]

\[ 5x + 40 = 2x + 16 \]

\[ 3x = 24 \]

\[ x = 8. \]

Hence, required ratio = \[ \frac{4(x + 16)}{24} = \frac{48}{24} = 2. \]

16
The average monthly income of P and Q is Rs. 5050. The average monthly income of Q and R is Rs. 6250 and the average monthly income of P and R is Rs. 5200. The monthly income of P is:

( ) A. 3500
( ) B. 4000
( ) C. 4050
( ) D. 5000

Explanation:
Let P, Q and R represent their respective monthly incomes. Then, we have:

\[ P + Q = (5050 \times 2) = 10100 \] .... (i)

\[ Q + R = (6250 \times 2) = 12500 \] .... (ii)

\[ P + R = (5200 \times 2) = 10400 \] .... (iii)

Adding (i), (ii) and (iii), we get: \[ 2(P + Q + R) = 33000 \] or \[ P + Q + R = 16500 \] .... (iv)

Subtracting (ii) from (iv), we get \[ P = 4000. \]

P's monthly income = Rs. 4000.
17
pointing towards a man, a woman said, "His mother is the only daughter of my mother." How is the
woman related to the man?
( ) A. Mother
( ) B. Grandmother
( ) C. Sister
( ) D. Daughter

Explanation: Only daughter of my mother → myself.

Hence, the woman is the mother of the man.

18
If P $ Q means P is the brother of Q; P # Q means P is the mother of Q; P * Q means P is the
daughter of Q in A # B $ C * D, who is the father?
( ) A. D
( ) B. B
( ) C. C
( ) D. Data is inadequate

Explanation: Answer: Option A

Explanation:

A is the mother of B, B is the brother of C and C is the daughter of D. Hence, D is the father.

19
In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price
remains constant, approximately what percentage of the selling price is the profit?
( ) A. 30%
( ) B. 70%
( ) C. 100%
( ) D. 250%
Let C.P. = Rs. 100. Then, Profit = Rs. 320, S.P. = Rs. 420.

New C.P. = 125% of Rs. 100 = Rs. 125

New S.P. = Rs. 420.

Profit = Rs. (420 - 125) = Rs. 295.

\[
\text{Required percentage} = \left( \frac{295}{420} \times 100 \right)\% = \frac{1475}{21}\% = 70\%.
\]

20

A train 360 m long is running at a speed of 45 km/hr. In what time will it pass a bridge 140 m long?

( ) A. 40 sec
( ) B. 42 sec
( ) C. 45 sec
( ) D. 48 sec

Explanation:

\[
\text{Formula for converting from km/hr to m/sec: } x \text{ km/hr} = \left( x \times \frac{5}{18} \right) \text{ m/sec.}
\]

Therefore, Speed = \(\left( 45 \times \frac{5}{18} \right) \text{ m/sec} = \frac{25}{2} \text{ m/sec.}\)

Total distance to be covered = (360 + 140) m = 500 m.

\[
\text{Required time} = \frac{\text{Distance}}{\text{Speed}} = \frac{500 \times 2}{25} \text{ sec} = 40 \text{ sec.}
\]

21

If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more. The actual distance travelled by him is:

( ) A. 50 km
( ) B. 56 km
( ) C. 70 km
( ) D. 80 km
22
Two people on cycle are traveling at 10 miles/hour in opposite direction. When they are at a distance of 50 miles, a housefly then flies to the other at a speed of 16 miles/hour. What is the distance covered by fly?

- A. 133
- B. 122.24
- C. 133.33
- D. 133.34

Explanation:
You can assume that when the fly lands on cyclist 1 they are 50 miles apart. The fly has to travel 50 + x miles at 16 miles/hour and then flies back at 10 miles/hour. So the problem is now simplified as

\( y = 50 + x \) (distance)
\( (50 + x)/16 = x/10 \) (time)

\( 500 + 10x = 16x \)
\( 6x = 500 \)
\( x = 250/3 = 83.33 \)
\( y = 133.33 \)

23
A girl, a boy, and a dog start walking down a road. They start at the same time, from the same point, in the same direction. The boy walks at 5 km/h, the girl at 6 km/h. The dog runs from boy to girl and back again with a constant speed of 10 km/h. The dog does not slow down on the turn. How far does the dog travel in 1 hour?

- A. 10 KM
- B. 7 KM
24
From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done?

( ) A. 564
( ) B. 645
( ) C. 735
( ) D. 756

Explanation:
We may have (3 men and 2 women) or (4 men and 1 woman) or (5 men only).

\[
\text{Required number of ways} = \binom{7}{3} \times \binom{6}{2} + \binom{7}{4} \times \binom{6}{1} + \binom{7}{5} \times \binom{6}{0}
\]

\[
= \frac{7 \times 6 \times 5}{3 \times 2 \times 1} \times \frac{6 \times 5}{2 \times 1} + \frac{7 \times 6 \times 5}{2 \times 1} + \left( \frac{7 \times 6}{1} \right)
\]

\[
= 525 \times \frac{5 \times 6}{3 \times 2} + \frac{7 \times 5}{2 \times 1}
\]

\[
= (525 + 210 + 21)
\]

\[
= 756.
\]
25
Which of the following diagrams indicates the best relation between Women, Mothers and Engineers?

A  
B  
C  
D

( ) A  
( ) B  
( ) C  
( ) D

26
In how many ways can 21 books on English and 19 books on Hindi be placed in a row on a shelf so that two books on Hindi may not be together?

( ) A. 3990  
( ) B. 1540  
( ) C. 1995  
( ) D. 3672

Explanation: In order that two books on Hindi are never together, we must place all these books as under:

X E X E X E X .... X E X

where E - denotes the position of an English book and X that of a Hindi book.

Since there are 21 books on English, the number of places marked X are therefore, 22. Now, 19 places out of 22 can be chosen in

\[
\binom{22}{19} = \frac{22!}{19!3!} = 1540 \text{ ways.}
\]

Hence, the required number of ways = 1540.
27
Here are some words translated from an artificial language.

gorblflur means fan belt
pixngorbl means ceiling fan
arthtusl means tile roof
Which word could mean "ceiling tile"?

( ) A. gorbltusl
( ) B. flurgorbl
( ) C. arthflur
( ) D. pixnarth

Explanation: Gorbl means fan; flur means belt; pixn means ceiling; arth means tile; and tusl means roof.
Therefore, pixnarth is the correct choice.

28
A boat running upstream takes 8 hours 48 minutes to cover a certain distance, while it takes 4 hours to cover the same distance running downstream. What is the ratio between the speed of the boat and speed of the water current respectively?

( ) A. 2 : 1
( ) B. 3 : 2
( ) C. 8 : 3
( ) D. Cannot be determined

Explanation:
Let the man's rate upstream be $x$ km/h and that downstream be $y$ km/h.
Then, distance covered upstream in 8 hrs 48 min = Distance covered downstream in 4 hrs.

$\Rightarrow \left( x \times \frac{48}{5} \right) = (y \times 4)$

$\Rightarrow \frac{44}{5} x = 4y$

$\Rightarrow x = \frac{11}{5} y$

$\Rightarrow y = \frac{11}{5} x$

\[ \text{Required ratio} = \left( \frac{y + x}{2} : \frac{y - x}{2} \right) \]

\[ = \left( \frac{16x}{2} : \frac{6x}{2} \right) \]

\[ = 8 : 3 \]

$= 8 : 3.$
29
Pipes A and B can fill a tank in 5 and 6 hours respectively. Pipe C can empty it in 12 hours. If all the three pipes are opened together, then the tank will be filled in:

( ) A. 1 (13/17) hours
( ) B. 2 (8/11) hours
( ) C. 3 (9/17) hours
( ) D. 4 (1/2) hours

Explanation:

\[
\text{Net part filled in 1 hour} = \frac{1}{5} + \frac{1}{6} - \frac{1}{12} = \frac{17}{60}
\]

\[\text{The tank will be full in} \frac{60}{17} \text{ hours i.e.,} \frac{9}{17} \text{ hours.}\]

30
Predict the output or error(s) for the following:

1. main()

{  

static int var = 5;
printf("%d ",var--);
if(var)
main();
}

( ) A. 1 2 3 4 5
( ) B. 5 4 3 2 1
( ) C. Compiler error
( ) D. 1 2 3 4
31
main()
{
    int c[]={2.8,3.4,4,6.7,5};
    int j,*p=c,*q=c;
    for(j=0;j<5;j++) {
        printf(" %d ",*c);
        ++q; }
    for(j=0;j<5;j++){
        printf(" %d ",*p);
        ++p; }
}

A. 2 2 2 2 2 3 4 6 5
B. 2 8 3 3 3 4 4 7 5
C. 2 8 3 4 4 6 7 5
D. 2 3 4 6 7 8 6 4 3

Explanation: Initially pointer c is assigned to both p and q. In the first loop, since only q is incremented and not c, the value 2 will be printed 5 times. In second loop p itself is incremented. So the values 2 3 4 6 5 will be printed.

32
Which of the following data structures are indexed structures

A) linear arrays
B) linked lists
C) both of above
D) none of above
33
SQL stands for ________
( ) A. Structured Query Language
( ) B. Sequential Query Language
( ) C. Structured Question Language
( ) D. Sequential Question Language

34
The commonly used UNIX commands like date, Is, cat, etc. are stored in
( ) A. /dev directory
( ) B. /bin and /usr/bin directories
( ) C . /unix directory
( ) D. /tmp directory

35
If we declare a variable with which of the following keyword so that its value will be automatically initialized to 0.
( ) A. auto
( ) B. static
( ) C. extern
( ) D. register

36
which of the following is not a data structure
( ) A. stack
( ) B. queue
( ) C. tree
( ) D. none

37
Which of the following command is used to display the directory attributes rather than its contents
( ) A. Is-1-d
( ) B. Is-x
( ) C . Is-1
( ) D. is-F
38
Each time you turn on your computer, it will check on the control file

A. Command.com, io.sys
B. Command.com, date.com, dir.com
C. Command.com, io.sys, msdos.sys
D. Chkdsk.exe

Explanation: command.com, io.sys and msdos.sys are the essential system files of MS-Dos. Loading these files from disk into memory is known as booting. Booting is the process of preparing your computer to work.

39
What is the output of the program given below

```c
main()
{
    signed char i=0;
    for(;i>=0;i++) ;
    printf("%d\n",i);
}
```

A. 128
B. 0
C. -128
D. Compiler error

Explanation: Notice the semicolon at the end of the for loop. The initial value of the i is set to 0.

The inner loop executes to increment the value from 0 to 127 (the positive range of char) and then it rotates to the negative value of -128. The condition in the for loop fails and so comes out of the for loop. It prints the current value of i that is -128
40
Convert the infix to postfix for A(B+C)*(D/E)
( ) A. ABC+DE*/
( ) B. +ABC/*DE
( ) C. ABC+DE/*
( ) D. None of these

41
By default, how many no of tables would be there in a script?
( ) A. One
( ) B. Two
( ) C. Three
( ) D. Four

42
Which one is the first layer of OSI Protocol
( ) A. Presentation Layer
( ) B. Physical Layer
( ) C. Application Layer
( ) D. Datalink Layer

43
What is the output for the program given below

```c
typedef enum errorType{warning, error, exception,}error;
main()
{
    error g1;
    g1=1;
    printf("%d",g1);
}
```

( ) A. Compiler error
( ) B. Declaration mismatch
( ) C. 1
( ) D. None of these

**Explanation:** Compiler error: Multiple declaration for error
Explanation

The name error is used in the two meanings. One means that it is a enumerator constant with value 1. The another use is that it is a type name (due to typedef) for enum errorType. Given a situation the compiler cannot distinguish the meaning of error to know in what sense the error is used:

```cpp
error g1;
g1=error;
// which error it refers in each case?
```

When the compiler can distinguish between usages then it will not issue error (in pure technical terms, names can only be overloaded in different namespaces).

Note: the extra comma in the declaration,

```cpp
enum errorType{warning, error, exception,}
```

is not an error. An extra comma is valid and is provided just for programmer's convenience.

44

Following given which one is odd

( ) A. Inheritance
( ) B. Data abstraction
( ) C. Overloading
( ) D. Multithreading

Explanation: A,B,C are the property of C and JAVA but multithreading is only the property of java
45
One application of a digital multiplexer is to facilitate:

( ) A. code conversion  
( ) B. parity checking  
( ) C. parallel-to-serial data conversion  
( ) D. data generation

46
#define DIM(array, type) sizeof(array)/sizeof(type)

main()
{
    int arr[10];
    printf("The dimension of the array is %d", DIM(arr, int));
}

( ) A. 10  
( ) B. 9  
( ) C. 11  
( ) D. Compiler error

Explanation:
The size of integer array of 10 elements is 10 * sizeof(int). The macro expands to

sizeof(arr)/sizeof(int) => 10 * sizeof(int) / sizeof(int) => 10.

47
When 1100010 is divided by 0101, what will be the decimal remainder

( ) 2  
( ) 3  
( ) 4  
( ) 6
48
Every time attribute A appears, it is matched with the same value of attribute B, but not the same value of attribute C. Therefore, it is true that:

( ) A → B.
( ) A → C.
( ) A → (B,C).
( ) (B,C) → A.

49
Which of the following is correct for a gated D-type flip-flop?

( ) A. The Q output is either SET or RESET as soon as the D input goes HIGH or LOW.
( ) B. The output complement follows the input when enabled.
( ) C. Only one of the inputs can be HIGH at a time.
( ) D. The output toggles if one of the inputs is held HIGH

50
An ODBC, a file that can be shared among database users is called a

( ) A. system data source.
( ) B. file data source.
( ) C. user data source.
( ) D. SQL text file.