1
Direction (1-2) Arrange letters into a meaningful word
O p t c i
1 2 3 4 5
( ) A. 54123
( ) B. 31254
( ) C. 12543
( ) D. 42315

2
g p a r h a r a p
( ) A. 132476985
( ) B. 931247853
( ) C. 234617895
( ) D. 32566987

3
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.
She makes cakes every Sunday.
( ) A. Every Sunday cakes made by her.
( ) B. Cakes are made by her every Sunday.
( ) C. Cakes make her every Sunday.
( ) D. Cakes were made by her every Sunday.

4
She spoke to the official on duty.
( ) A. The official on duty was spoken to by her.
( ) B. The official was spoken to by her on duty.
( ) C. She was spoken to by the official on duty.
( ) D. She was the official to be spoken to on duty.

5
The doctor advised the patient not to eat rice.
( ) A. The patient was advised by the doctor not to eat rice.
( ) B. The patient was advised by the doctor that he should not eat rice.
( ) C. The patient was being advised by the doctor that he should not rice by the doctor.
( ) D. The patient has been advised not to eat rice by the doctor.

6
I cannot accept your offer.
( ) A. Your offer cannot be accepted by me.
( ) B. I cannot be accepted by your offer.
( ) C. The offer cannot be accepted by me.
( ) D. Your offer cannot be accepted.
7
You should open the wine about three hours before you use it.
( ) A. Wine should be opened about three hours before use.
( ) B. Wine should be opened by you three hours before use.
( ) C. Wine should be opened about three hours before you use it.
( ) D. Wine should be opened about three hours before it is used.

8
Pick out the most effective word from the given words to fill in the blank to make the sentence meaningfully complete
The grapes are now ...... enough to be picked
( ) A. ready
( ) B. mature
( ) C. ripe
( ) D. advanced

9
Success in this examination depends ...... hard work alone.
( ) A. At
( ) B. over
( ) C. For
( ) D. on

10
My uncle decided to take ...... and my sister to the market.
( ) A. I
( ) B. mine
( ) C. me
( ) D. myself

11
Directions 11-13: In the following the questions choose the word which best expresses the meaning of the given word.

STRINGENT
( ) A. Dry
( ) B. Strained
( ) C. Rigorous
( ) D. Shrill

12
LAMENT
( ) A. Complain
( ) B. Comment
( ) C. Condone
( ) D. Console
13
RECKLESS
( ) A. Courageous
( ) B. Rash
( ) C. Bold
( ) D. Daring

14
In the following questions choose the word which is the exact OPPOSITE of the given words.

MORTAL
( ) A. Divine
( ) B. Immortal
( ) C. Spiritual
( ) D. Daring

15
QUIESCENT
( ) A. ACTIVE
( ) B. Dormant
( ) C. Weak
( ) D. Unconcerned

16
Aptitude question
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.

17
A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.
( ) A. 2 hours
( ) B. 3 hours
( ) C. 4 hours
( ) D. 5 hours

Explanation: Speed downstream = (13 + 4) km/hr = 17 km/hr.
Time taken to travel 68 km downstream = \( \frac{68}{17} \) = 4 hrs
18
A man can row three-quarters of a kilometre against the stream in 11 minutes and down the stream in 7 minutes. The speed (in km/hr) of the man in still water is:

( ) A. 2
( ) B. 3
( ) C. 4
( ) D. 5

Explanation:

\[
\begin{align*}
\text{Rate upstream} & = \frac{750}{875} \text{ m/sec} = \frac{10}{9} \text{ m/sec.} \\
\text{Rate downstream} & = \frac{750}{450} \text{ m/sec} = \frac{5}{3} \text{ m/sec.} \\
\therefore \text{Rate in still water} & = \frac{1}{2} \left( \frac{10}{9} + \frac{5}{3} \right) \text{ m/sec} \\
& = \frac{25}{18} \text{ m/sec} \\
& = \left( \frac{25 \times 18}{16} \right) \text{ km/hr} \\
& = 5 \text{ km/hr.}
\end{align*}
\]

19
In a class, there are 15 boys and 10 girls. Three students are selected at random. The probability that 1 girl and 2 boys are selected, is:

( ) A. 21/46
( ) B. 25/117
( ) C. 1/50
( ) D. 3/25

Explanation:
20

Two numbers A and B are such that the sum of 5% of A and 4% of B is two-third of the sum of 6% of A and 8% of B. Find the ratio of A : B.

- A. 2 : 3
- B. 1 : 1
- C. 3 : 4
- D. 4 : 3
21
If 20% of a = b, then b% of 20 is the same as:

( ) A. 4% of a
( ) B. 5% of a
( ) C. 20% of a
( ) D. None of these

**Explanation:**

\[
20\% \text{ of } a = b \quad \Rightarrow \quad \frac{20}{100} a = b.
\]

\[
\therefore \ b\% \text{ of } 20 = \left( \frac{b}{100} \times 20 \right) = \left( \frac{20}{100} \times \frac{1}{100} \times 20 \right) = \frac{4}{100} a = 4\% \text{ of } a.
\]
Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?

( ) A. 210
( ) B. 1050
( ) C. 25200
( ) D. 21400

Explanation:

Number of ways of selecting (3 consonants out of 7) and (2 vowels out of 4)

\[ \binom{7}{3} \times \binom{4}{2} = \frac{7 \times 6 \times 5}{3 \times 2 \times 1} \times \frac{4 \times 3}{2 \times 1} = 210. \]

Number of groups, each having 3 consonants and 2 vowels = 210.

Each group contains 5 letters.

Number of ways of arranging 5 letters among themselves

\[ 5! = 5 \times 4 \times 3 \times 2 \times 1 = 120. \]

Required number of ways = (210 \times 120) = 25200.
23
Two pipes A and B can fill a cistern in 37 minutes and 45 minutes respectively. Both pipes are opened. The cistern will be filled in just half an hour, if the B is turned off after:

A. 5 min.  
B. 9 min. 
C. 7 min.  
D. 15 min. 

Explanation:

Let B be turned off after $x$ minutes. Then,

Part filled by (A + B) in $x$ min. + Part filled by A in $(30 - x)$ min. = 1.

\[
\frac{2}{75} + \frac{1}{45} + \frac{2}{75} = 1
\]

\[
\Rightarrow \frac{11x}{225} + \frac{60 - 2x}{75} = 1
\]

\[
\Rightarrow 11x + 180 - 6x = 225.
\]

\[
\Rightarrow x = 9.
\]

24
Which of the following diagrams indicates the best relation between Class, Blackboard and School

A. A  
B. B 
C. C  
D. D

Explanation: Blackboard is in class and class is in the school.
25
A can do a certain work in 12 days. B is 60% more efficient than A. How many days does B alone take to do the same job

( ) A. 6 days
( ) B. 7.5 days
( ) C. 9 days
( ) D. 6.3 days

Explanation: Ratio of time taken by A & B = 160:100 = 8:5

Suppose B alone takes x days to do the job.

Then, 8:5::12:x

=> 8x = 5*12

=> x = 15/2 days.

26. Worker A takes 8 hours to do a job. Worker B takes 10 hours to do the same job. How long it take both A & B, working together but independently, to do the same job

( ) A) 40/9 days
( ) B) 45/11 days
( ) C) 39/7 days
( ) D) 45/9 days

Explanation: A's one hour work = 1/8. B's one hour work = 1/10. (A+B)'s one hour work = 1/8+1/10 = 9/40. Both A & B can finish the work in 40/9 days

27. if A takes x days to do a work then B takes 2x days to do the same work then with in how many days A will alone complete this work

( ) A. 28 days
( ) B. 29 days
( ) C. 30 days
( ) D. 27 days

Explanation: = > 1/x+1/2x = 1/18

=> 3/2x = 1/18

=> x = 27 days.

Hence, A alone can finish the work in 27 days
28
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

29
Here are some words translated from an artificial language. daftafoni means advisement imodafta means misadvise imolokti means misconduct Which word could mean "statement"?

( ) A. kratafoni
( ) B. kratadafta
( ) C. loktifoni
( ) D. daftaimo

Explanation:
Dafta means advise; foni is the same as the suffix "ment"; imo is the same as the prefix mis"; lokti means conduct. Since the only word in the answer choices that hasn't been defined is krata, it is reasonable to assume that krata means state. Therefore, kratafoni is the only choice that could mean statement.

30
Technical Section
Which of the command is used to remove files in Unix

( ) A. erase
( ) B. rm
( ) C. delete
( ) D. dm

31
Which command is used to copy the three files wb, collect and mon into the misc directory, under the same, when you were currently in the programs directory?

( ) A .copy wb collect mon/misc
( ) B .cp wb collect mon ../misc
( ) C. copy wb ../misc collect ../misc mon ../misc
( ) D. tar wb collect mon/misc
32
main()
{
extern int i;
i=20;
printf("%d",sizeof(i));
}

( ) A. Compiler error
( ) B. 20
( ) C. 21
( ) D. Linker error

Explanation: Linker error: undefined symbol '_i'.
Explanation:
extern declaration specifies that the variable i is defined somewhere else. The compiler
passes the external variable to be resolved by the linker. So compiler doesn't find an error.
During linking the linker searches for the definition of i. Since it is not found the linker
flags an error.

33
When n+l has the same value for two or more orbitals, the new electron enters the orbital where
( ) A. n is maximum
( ) B. n is minimum
( ) C. l is maximum
( ) D. l is minimum

34
Pure water does not conduct electricity because it is
( ) A. Almost not ionized
( ) B. Low boiling
( ) C. Neutral
( ) D. Readily decomposed
35 identify two level logic gate
( ) A. NAND
( ) B. XOR
( ) C. INVERTER
( ) D. AND

36 TCP/IP Protocol is -----------
( ) A. connectionless
( ) B. connection oriented
( ) C. Both A & B
( ) D. none

37 #include<stdio.h>
main()
{
struct xx
{
    int x=3;
    char name[]="hello";
};
struct xx *s;
printf("%d",s->x);
printf("%s",s->name);
}

( ) A. Compiler Error
( ) B. hello
( ) C. Hello hello
( ) D. None

Explanation: You should not initialize variables in declaration

38 Using ODL, you can define which of the following
( ) A. Attribute
( ) B. Structure
( ) C. Operation
( ) D. All of the above.
39
When an entity instance must be a member of only one subtype, it is which of the following?
( ) A. Disjoint with total specialization
( ) B. Disjoint with partial specialization
( ) C. Overlap with total specialization
( ) D. Overlap with partial specialization

40
You want subclasses in any package to have access to members of a superclass. Which is the most restrictive access that accomplishes this objective
( ) A. public
( ) B. private
( ) C. protected
( ) D. transient

Explanation: Access modifiers dictate which classes, not which instances, may access features.

Methods and variables are collectively known as members. Method and variable members are given access control in exactly the same way.

private makes a member accessible only from within its own class

protected makes a member accessible only to classes in the same package or subclass of the class

default access is very similar to protected (make sure you spot the difference) default access makes a member accessible only to classes in the same package.

public means that all other classes regardless of the package that they belong to, can access the member (assuming the class itself is visible)

final makes it impossible to extend a class, when applied to a method it prevents a method from being overridden in a subclass, when applied to a variable it makes it impossible to reinitialise a variable once it has been initialised

abstract declares a method that has not been implemented.

transient indicates that a variable is not part of the persistent state of an object.

volatile indicates that a thread must reconcile its working copy of the field with the master copy every time it accesses the variable.

After examining the above it should be obvious that the access modifier that provides the most restrictions for methods to be accessed from the subclasses of the class from another package is C - protected. A is also a contender but C is more restrictive, B would be the answer if the constraint was the "same package" instead of "any package" in other words the subclasses clause in the question eliminates default.
41
Specify the 2 library functions to dynamically allocate memory?
( ) A. malloc() and memalloc()
( ) B. alloc() and memalloc()
( ) C. malloc() and calloc()
( ) D. memalloc() and faralloc()

42
The library function used to reverse a string is
( ) A. strstr()
( ) B. strrev()
( ) C. revstr()
( ) D. strreverse()

Explanation: strrev(s) Reverses all characters in s

Example:
#include <string.h>
#include <stdio.h>

int main(void){ char *str = "India"; printf("Before strrev(): %s\n", str); strrev(str); printf("After strrev(): %s\n", str); return 0;)

Before strrev(): India
After strrev(): aidnI

43
The memory address of the first element of an array is called
( ) A. floor address
( ) B. foundation address
( ) C. first address
( ) D. base address

44
A data structure where elements can be added or removed at either end but not in the middle
( ) A. Linked lists
( ) B. Stacks
( ) C. Queues
( ) D. Deque
45
In Ms-Dos what command you will use to display system date?

A. Date command
B. Ver command
C. Disk command
D. Format command

Explanation: Ver command displays the version number of Dos. There is no command as Disk. Format command prepares a disk to be used with DOS. Thus Date is the command that lets you to display and/or change the system date.

46
If you don’t know the current time, which command will you use to display a.

A. Copy
B. Ver
C. 2(3/4 ) Time
D. Format

Explanation: Time command displays and allows you to change system time. TIME only displays the system time and TIME <time> is used to set new time as system time.

47
Which bitwise operator is suitable for turning on a particular bit in a number?

A. && operator
B. & operator
C. || operator
D. | operator

48
Which command is used to list out all the hidden files along with the other files?

A. Is-l
B. Is-F
C. Is-x
D. Is-a
49

Which of the following diagrams indicates the best relation between Tall men, Black haired people and Indians?

A. [Diagram]
B. [Diagram]
C. [Diagram]
D. [Diagram]

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

Explanation:

50

#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.