Question No: 1 (Marks: 1) - Please choose one
In order to get 256 from the number 2568 we divide this number by 10 and take,
► Its remainder
► The number
► Its quotient
► Its divisor

Question No: 2 (Marks: 1) - Please choose one
The correct syntax of do-while loop is,
► (condition ) while; do { statements; }; 
► { statements; } do-while ();
► while(condition); do { statements; };
► do { statements; } while (condition);

Question No: 3 (Marks: 1) - Please choose one
Which of the following function(s) is/are included in stdlib.h header file?
► double atof(const char *nptr)
► int atoi(const char *nptr)
► char *strcpy ( char *s1, const char *s2)
► 1 and 2 only (Pg 191)

Question No: 4 (Marks: 1) - Please choose one
If the break statement is missed in switch statement then,
► The compiler will give error
► This may cause a logical error (Pg 76)
► No effect on program
► Program stops its execution
Question No: 5  (Marks: 1)  - Please choose one
The data type before a function name represents its,

► Return Type (Pg 499)
► Function data
► Function arguments
► Function name

Question No: 6  (Marks: 1)  - Please choose one
Member function tellg() returns the current location of the ___________ pointer.

►tellptr()
►write()
►seekg()
►get() (Pg 215)

Question No: 7  (Marks: 1)  - Please choose one
What does 5 | 6, evaluate to in decimal where ‘|’ is bitwise OR operator?

►3
►4
►5
►7

5 | 6 =
0 1 0 1
0 1 1 0
--------
0 1 1 1 = 7

Question No: 8  (Marks: 1)  - Please choose one
C is widely known as development language of ______ operating system.

►Linux
►Windows
►Unix (Pg 12)
►Mac OS

Question No: 9  (Marks: 1)  - Please choose one
What will be the result of arithmetic expression 6+27/3*3?

►33
►45
►9
Question No: 10  (Marks: 1) - Please choose one
How many bytes are occupied by declaring following array of characters?

char str[] = “programming”;

► 10
► 11
► 12
► 13

Question No: 11  (Marks: 1) - Please choose one
What will be the correct syntax for initialization of pointer ptr with string "programming"?

► char ptr = ’programming’;
► char *ptr = “programming”;
► char *ptr = ‘programming’;
► *ptr = “programming”;

Question No: 12  (Marks: 1) - Please choose one
What will be the result of expression x%2, if x = 7?

► x = 1
► x = 3
► x = 7
► x = 2

Question No: 13  (Marks: 1) - Please choose one
UNIX has been developed in _______ language.

► JAVA
► B
► C (pg 12)
► FORTRAN

Question No: 14  (Marks: 1) - Please choose one
Declaring structures does not mean that memory is allocated.

► True (Pg 229)
► False

Question No: 15 (Marks: 1) - Please choose one
What will be the value of i and j in the following code segment?

```c
int i, j;
int x[5] = {2, 3, 4, 8, 9};
int *ptr = &x[2];
i = (*ptr)++;
j = *ptr++;
```

- i = 5, j = 5
- i = 5, j = 8
- i = 4, j = 8
- i = 5, j = 9

Question No: 16 (Marks: 1) - Please choose one
When an array element is passed to a function, it is passed by

- reference (Pg 266)
- data type
- value
- data

When we pass ordinary variables to functions, they are passed by value because of the default behavior. But when an array is passed to a function, the default behavior changes and array is passed by reference.

MIDTERM EXAMINATION 2010

Question No: 1 (Marks: 1) - Please choose one
What is the output of the following statement?

```c
int i = 2.5; do { cout i * 2; } while (i > 3 && i < 10);
```

(a) 510
(b) 5
(c) 48
(d) error

Question No: 2 (Marks: 1) - Please choose one
What does !(7) evaluate to in decimal where ! is a NOT operator?

(a) 7
(b) 8
(c) 9
(d) 10
**Question No: 3 ( Marks: 1 ) - Please choose one**
The condition in while loop may contain logical expression but not relational expression.
(a) True
(b) False

**Question No: 4 ( Marks: 1 ) - Please choose one**
Searching is easier when an array is already sorted
(a) True
(b) False

**Question No: 5 ( Marks: 1 ) - Please choose one**
If an array has 100 elements, what is allowable range of subscripts?
(a) 0 - 99
(b) 1 - 99
(c) 0 - 100
(d) 1 - 100

**Question No: 6 ( Marks: 1 ) - Please choose one**
What will be the value of ‘a’ and ‘b’ after executing the following statements?
a = 3;
b = a++;
(a) 3, 4
(b) 4, 4
(c) 3, 3
(d) 4, 3

**Question No: 7 ( Marks: 1 ) - Please choose one**
What will be the correct syntax to initialize all elements of two-dimensional array to value 0?
(a) int arr[2][3] = {0,0} ;
(b) int arr[2][3] = {{0},{0}} ;
(c) int arr[2][3] = {0},{0} ;
(d) int arr[2][3] = {0} ;

**Question No: 8 ( Marks: 1 ) - Please choose one**
Which of the following function returns the size of a string variable?
(a) strlen()
(b) stringlen()
(c) strlen()
(d) strLength()

When applied to a character array, the strlen function returns the length of the string stored there.
not its allocated size.

**Question No: 9 ( Marks: 1 ) - Please choose one**
What will be the range of numbers generated by function rand () % 9?
(a) 0 to 9
(b) 1 to 9
(c) 0 to 8
(d) 1 to 8

**Question No: 11 ( Marks: 1 ) - Please choose one**
Computer can understand only machine language code.
(c) True
(d) False

**Question No: 13 ( Marks: 1 ) - Please choose one**
What does 5 ^ 6 , evaluate to in decimal where ‘^’ is Exclusive OR operator?
(a) True
(b) False

**Detail:-**
It mean
5 = 0101
6 = 0110
5 ^ 6 = 0011
If both input is same then the output is 0 and if different then output is 1

**Question No: 14 ( Marks: 1 ) - Please choose one**
If the file is not properly closed in the program, the program _________.
(a) Terminate normally
(b) Indicate Runtime error
(c) Indicate Compile time error
(d) Crashes

Eventually run out of file handles and/or memory space and crash.)

**Question No: 15 ( Marks: 1 ) - Please choose one**
Which of the following header file include string conversion functions?
(a) string.h
(b) stdlib.h (Pg 190)
(c) ctype.h
(d) sconvert.h
MIDTERM EXAMINATION
2009

Question No: 1 (Marks: 1) - Please choose one
A precise sequence of steps to solve a problem is called
- Statement
- Program
- Utility
- Routine

Question No: 2 (Marks: 1) - Please choose one
The Compiler of C language is written in
- Java Language
- UNIX
- FORTRON Language
- C Language

Question No: 3 (Marks: 1) - Please choose one
Initialization of variable at the time of definition is,
- Must
- Necessary
- Good Programming
- None of the given options

Question No: 4 (Marks: 1) - Please choose one
In if structure the block of statements is executed only,
- When the condition is true

Question No: 6 (Marks: 1) - Please choose one
Dealing with structures and functions passing by reference is the most economical method
- True
- False

Question No: 7 (Marks: 1) - Please choose one
Pointer is a variable which store,
- Data
- Memory Address
- Data Type
- Values

Question No: 8 (Marks: 1) - Please choose one
Preprocessor program perform its function before ______ phase takes place.
- Editing
Question No: 9 ( Marks: 1 ) - Please choose one
Which of the following can not be a variable name?
- area
- _area
- 10area
- area2

Question No: 10 ( Marks: 1 ) - Please choose one
Which looping process is best, when the number of iterations is known?
- for
- while
- do-while
- all looping processes require that the iterations be known

Question No: 11 ( Marks: 1 ) - Please choose one
Which character is inserted at the end of string to indicate the end of string?
- new line
- tab
- null
- carriage return

Question No: 13 ( Marks: 1 ) - Please choose one
Which of the following header file defines the rand() function?
- iostream.h
- conio.h
- stdlib.h
- stdio.h

Question No: 14 ( Marks: 1 ) - Please choose one
Commenting the code _____________________
- Makes a program easy to understand for others.
- Make programs heavy, i.e. more space is needed for executable.
- Makes it difficult to compile
- All of the given options.

Question No: 15 ( Marks: 1 ) - Please choose one
What's wrong with this for loop?
for (int k = 2, k <=12, k++)
- the increment should always be ++k
- the variable must always be the letter i when using a for loop
- there should be a semicolon at the end of the statement
- the commas should be semicolons
Question No: 16 (Marks: 1) - Please choose one
For which array, the size of the array should be one more than the number of elements in an array?
- int
- double
- float
- char

Question No: 1 (Marks: 1) - Please choose one
The function of cin is
- To display message
- **To read data from keyboard**
- To display output on the screen
- To send data to printer

Question No: 2 (Marks: 1) - Please choose one
In C/C++ language the header file which is used to perform useful task and manipulation of character data is
- cplex.h
- ctype.h *(Pg 188)*
- stdio.h
- delay.h

Question No: 3 (Marks: 1) - Please choose one
How many parameter(s) function getline() takes?
- 0
- 1
- 2
- **3**

The member function getline() also takes three parameters: the buffer to fill, one more than the maximum number of characters to get, and the termination character. getline() functions exactly like get() does with these parameters, except getline() throws away the terminating character.

Question No: 4 (Marks: 1) - Please choose one
Word processor is
- Operating system
- **Application software**
- Device driver
Question No: 5 (Marks: 1) - Please choose one
For which values of the integer _value will the following code becomes an infinite loop?

```cpp
int number = 1;
while (true) {
    cout << number;
    if (number == 3) break;
    number += integer_value;
```

► any number other than 1 or 2
► only 0
► only 1
► only 2

Rational:
number += integer_value ..........above line decide the fate of loop so any thing other then zero leads to value of 3 which will quite the loop. Only zero is the value which keeps the loop infinite.

Question No: 6 (Marks: 1) - Please choose one
Each pass through a loop is called a/an
► enumeration
► Iteration
► culmination
► pass through

Question No: 7 (Marks: 1) - Please choose one
A continue statement causes execution to skip to
► the return 0; statement
► the first statement after the loop
► the statements following the continue statement
► the next iteration of the loop

Continue statement is used, when at a certain stage, you don’t want to execute the remaining statements inside your loop and want to go to the start of the loop.

Question No: 8 (Marks: 1) - Please choose one
What is the correct syntax to declare an array of size 10 of int data type?
► int [10] name ;
► name[10] int ;
► int name[10] ;
► int name[] ;

Question No: 9 (Marks: 1) - Please choose one
Consider the following code segment. What will the following code segment display?

```cpp
int main(){
    int age[10] = {0};
    cout << age ;
```
Question No: 11 (Marks: 1) - Please choose one
How many bytes will the pointer `intPtr` of type `int` move in the following statement?
`intPtr += 3;`
* 3 bytes
* 6 bytes
* 12 bytes
* 24 bytes

One int is 4 bytes so 4*3 = 12 bytes movement.

Question No: 12 (Marks: 1) - Please choose one
If there are 2(n+1) elements in an array then what would be the number of iterations required to search a number using binary search algorithm?
* n elements
* (n+1) elements
* 2(n+1) elements
* 2(n+1) elements

Question No: 13 (Marks: 1) - Please choose one
Which of the following operator is used to access the value of variable pointed to by a pointer?
* `*` operator
* `->` operator
* `&&` operator
* `&` operator

Question No: 14 (Marks: 1) - Please choose one
The statement interrupts the flow of control.
* `switch`
* `continue`
* `goto`
* `break`

Question No: 15 (Marks: 1) - Please choose one
Analysis is the __________ step in designing a program
* Last
* Middle
* Post Design
* First

Analysis will be always followed by design and then code.

Question No: 16 (Marks: 1) - Please choose one
Paying attention to detail in designing a program is _________
* Time consuming
In programming, the details matter. This is a very important skill. A good programmer always analyzes the problem statement very carefully and in detail. You should pay attention to all the aspects of the problem.

**MIDTERM EXAMINATION**

**Spring 2009**

**Question No: 1 (Marks: 1)** - Please choose one ______

There are mainly-------------------- types of software

► Two
► Three
► Four
► Five

Software is categorized into two main categories

- System Software
- Application Software

**Question No: 2 (Marks: 1)** - Please choose one____

In C/C++ the #include is called,

► Header file
► Preprocessor Directive (Pg 15)
► Statement
► Function

**Question No: 3 (Marks: 1)** - Please choose one_________

&& is------------------ operator.

► An arithmetic
► Logical
► Relational
► Unary

we use logical operators ( && and || ) for AND and OR respectively with relational operators.

**Question No: 4 (Marks: 1)** - Please choose one____

In flow chart, the symbol used for decision making is,

► Rectangle
► Circle
► Arrow
► Diamond (Pg 51)

http://www.ehow.com/about_5081911_symbols-used-flowchart.html

**Question No: 6 (Marks: 1)** - Please choose one_________

C++ views each file as a sequential stream of________________.

► Bytes
Question No: 7 (Marks: 1) - Please choose one

If the elements of an array are already sorted then the useful search algorithm is,

- Linear search
- **Binary search (Pg 188)**
- Quick search
- Random search

In binary search algorithm, the ‘divide and conquer’ strategy is applied. This applies only to sorted arrays in ascending or descending order.

Question No: 8 (Marks: 1) - Please choose one

The address operator (&) can be used with,

- Statement
- Expression
- **Variable**
- Constant

Question No: 9 (Marks: 1) - Please choose one

When a pointer is incremented, it actually jumps the number of memory addresses

- According to data type (Pg 160)
- 1 byte exactly
- 1 bit exactly
- A pointer variable can not be incremented

Question No: 11 (Marks: 1) - Please choose one

Call by reference mechanism should be used in a program when there is

- (i) and (ii) only
- (i) and (iii) only
- (ii) and (iii) only
- (ii) and (iv) only

Question No: 12 (Marks: 1) - Please choose one

Which of the following is the starting index of an array in C++?

- 0
- 1
- -1
- any number
Question No: 13 (Marks: 1) - Please choose one
The return type of a function that do not return any value must be __________
► int
► void
► double
► float

Question No: 14 (Marks: 1) - Please choose one
Which of the following is an extension of header file?
► .exe
► .txt
► .h
► .c

Question No: 15 (Marks: 1) - Please choose one
We want to access array in random order which approach is better?
► Pointers
► Array index (Pg 176)
► Both pointers and array index are better
► None of the given options.

Question No: 16 (Marks: 1) - Please choose one
When we declare a multidimensional array the compiler store the elements of multidimensional array in the form of,
► Columns
► Rows
► Contiguous memory location (Pg 174)
► Matrix

MIDTERM EXAMINATION 2009

Question No: 1 (Marks: 1) - Please choose one
In C/C++ the string constant is enclosed
► In curly braces
► In small braces
► In single quotes

Question No: 2 (Marks: 1) - Please choose one
The size of int data type is
Question No: 3 ( Marks: 1 ) - Please choose one
In Flow chart process is represented by
► Rectangle (Pg 51)
► Arrow symbol
► Oval
► Circle

Question No: 5 ( Marks: 1 ) - Please choose one
When we are using const keyword with a variable x then initializing it at the time of declaration is,
► Must
► Optional
► Not necessary
► A syntax error

Question No: 6 ( Marks: 1 ) - Please choose one
Which of the following is the correct way to assign an integer value 5 to element of a matrix say 'm' at second row and third column?
► m[2][3] = 5 ;
► m[3][2] = 5 ;
► m[1][2] = 5 ;
► m[2][3] = '5';

Question No: 7 ( Marks: 1 ) - Please choose one
How many total elements must be in two-dimensional array of 3 rows and 2 columns?
► 4
► 5
► 6 (3*2=6)
► 7

Question No: 8 ( Marks: 1 ) - Please choose one
Which of the following is the correct statement for the following declaration?
const int *ptr.

- ptr is a constant pointer
- ptr is constant integer pointer
- ptr is a constant pointer to int
- ptr is a pointer to const int  


Question No: 9 (Marks: 1) - Please choose one

Consider the following code segment. What will be the output of this code segment?
```cpp
int arr[6] = {2, 3, 7, 4, 5, 6} ;
int *ptr1 =&arr[1] ;
int *ptr2 = &arr[4] ;
cout << (ptr2.ptr1) ;
```

- 3
- 9
- 12
- 2

Question No: 10 (Marks: 1) - Please choose one

What will be the correct syntax to assign an array named arr of 5 elements to a pointer ptr?
- *ptr = arr ;
- ptr = arr ;
- *ptr = arr[5] ;
- ptr = arr[5] ;

Question No: 11 (Marks: 1) - Please choose one

C is a/an ______ language

- low level
- object based
- object oriented
- function oriented  (Pg 77)

Question No: 13 (Marks: 1) - Please choose one

The variables having a name, type and size are just like empty boxes.

- False
- True
Question No: 15 ( Marks: 1 ) - Please choose one
Most efficient method of dealing with structure variables is to define the structure globally
► False

Question No: 16 ( Marks: 1 ) - Please choose one
Syntax of union is identical to ______
► Structure (pg 242)
► Class
► Function
► None of the given options

MIDTERM EXAMINATION
2008

Question No: 16 ( Marks: 1 ) - Please choose one
In Program commenting the code liberally is
► Useful.
► Time consuming
► Not necessary

Question :If we want to store a string “abc” in an array str then the size of this array must be at least,
(a) 2
(b) 3
(c) 4
(d) 5

Question :How many bytes will the pointer intPtr of type int move in the following statement?
intPtr += 3 ;

(a) 3 bytes
(b) 6 bytes
(c) 12 bytes
(d) 24 bytes

MIDTERM EXAMINATION
2007

Question :The remainder (%) operator is,
► An arithmetic operator (Pg 258)
► A logical operator
► A relational operator
► A division operator
**Question:** When a call to function statement is encountered,

- The control is transferred to its Prototype
- **The control is transferred to its definition**
- The compiler stops execution of the whole program
- The program hangs

**MIDTERM EXAMINATION**

**2006**

**Question:** The value of \(2 \times 15/3 \times 7 + 3 \times 2\) is

- 146
- 76
- 8
- 70

**Question:** Carefully analyze the following lines of code and choose the correct option.

```plaintext
ch1="a";
ch2='a';
```

- ch1 and ch2 are strings
- ch1 is string and ch2 is character
- ch2 is string and ch1 is character
- ch1 and ch2 are characters

**Question:** The size of a double variable is

- 2 bytes
- 4 bytes
- **8 bytes**
- 10 bytes

The size of an int is: 4 bytes.
The size of a short int is: 2 bytes.
The size of a long int is: 4 bytes.
The size of a char is: 1 bytes.
The size of a float is: 4 bytes.
The size of a double is: 8 bytes.

**Question:** An array is also called

- an array variable
- array declaration
- struct
- **constant pointer**
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