

Tutorial No 1
BTech 1 st year all Branches
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Here are a few of the objectives you try . There are objective question at the end of each chapter in our text book C & Data Structures By Practice .

You will need following resources

Class notes

Text book

The Assignment Questions in italics in our text book are important and have been set in previous examinations.

Be sure you understand the why of the answer not only what of the answer

1. What type of errors are checked during compilation
 - (a) logical errors
 - (b) divide by zero error
 - (c) run - time errors
 - (d)** syntax errors

2. The purpose of main function is
 - (a) to stop program execution
 - (b) to stop algorithm
 - (c) to start algorithm
 - (d)** to start program execution

3. What is the valid identifier in the following
 - (a) 1fdasgf
 - (b) @hgd12
 - (c) fahs%*
 - (d)** q1234

4. What is range of char data value?
 - (a) -64 to 64
 - (b)** -128 to 127
 - (c) 0 to 255
 - (d) -127 to 128

5. The minimum number of temporary variable needed to swap the contents of two variable is

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- (a) 3
- (b) 1
- (c) 0**
- (d) 2

6. What is output of following program ?

```
main( )  
{  
    int x;  
    x= 4 + 2 % 8;  
    printf(“%d”,x);  
}
```

- (a) 6 (b) 4.25 (c) 4 (d) -6

7. When && operator is used with two conditions, conditions need to be satisfied for the expression to be true.

- (a) neither (b) only first (c) any one **(d) both**

8. Bitwise operators cannot be performed on

- (a) float** (b) long int (c) int (d) char

9. In the expression $b=6.6/a+(2*a+(3*c)/a*d)/(2/n)$; which operation will be performed first?

- (a) $2*a$ (b) $2/n$ (c) $3*c$ **(d) $6.6/a$**

10. What is the output of `printf(“%d”,printf(“tim”));`

- (a) garbage (b) results in a syntax error
(c) printf tim and terminates abruptly **(d) tim3**

11. What is output of the following program?

```
main( )  
{int x=15,y;  
    y=(x >5)? 3 : 4;  
    printf(“%d”,y);  
}
```

- (a) 2 (b) 4 **(c) 3** (d) 1

12. Identify the loop construct:

- (a) if-else (b) goto **(c) while** (d) switch-case

13. The index or subscript value for an array of size ‘n’ ranges from

- (a) 1 to n-1 **(b) 0 to n-1** (c) 1 to n (d) 0 to n

14. If we don’t initialize a static array, what will be the elements set to:

- (a) 0** (b) a floating point number
(c) an undetermined value (d) character constant

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15. A string is an array of
(a) integers (b) floating point numbers (c) characters (d) boolean values

16. `int cal sum(int a, int b);`

In the above, `int` at the beginning indicates

(a) name of function (b) both function arguments are integer
(c) return type of function (d) received type of function

17. When a function is recursively called, all automatic variables are
(a) stored in a stack (b) stored in a list (c) stored in queue (d) stored in an array

18. What is wrong with the following program

```
main()
{ char m1[9]= "message1";
  char m2[9]="message2";
  m2=m1;
  printf("msg is %s",m2); }
```

(a) array cannot be initialized as above
(b) array is not a left value and so cannot be assigned to
(c) char array cannot be printed directly using `printf`
(d) program compiles without error, but prints an unpredictable value

19. Which of the following is not a storage class

(a) external (b) automatic (c) register (d) define

20. Which of the following is a correct way of defining a symbolic constant `pie` in C

(a) `# define pie = 22/7`
(b) `#define pie 22/7`
(c) `#define pie= 3.142`
(d) `# Define pie 22/7`

.....
21. Pseudo code is

(a) language independent code (b) refined version of program
(c) outcome of compilation process (d) code developed using the syntax of a specific language

22. In C, comments are placed between

(a) `*...../*` (b) `/*.....*/` (c) `*.....*` (d) `//`

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23. Which of the following is a valid numeric constant

- (a) 65432 (b) 20,000 (c) \$1000 (d) 15 750

24. The size of operator returns the size of an operand

- (a) in float (b) in bits (c) in words **(d) in bytes**

25. Which of the following is the assignment operator in C

- (a) := (b) == **(c) =** (d) !=

26. Which of the following statements will subtract a value of 2 from the variable 'i'?

- (a) i = -2; (b) i-; (c) i+=-2; **(d) i- = 2;**

27. Which is used in 'C' to indicate logical AND

- (a) ^ (b) and **(c) &&** (d) &

28. Which of the following comments about the ++ operator is **not** correct

- (a)** It can be applied to an expression
(b) The operand can come after the operator
(c) The operand can come before the operator
(d) It is unary operator

29. What is the output of the following statement

```
int x,y =2,z,a;  
x=(y*=2)+(z=a=y);  
printf("%d",x);
```

- (a) 7 (b) is syntactically wrong **(c) 8** (d) 6

30. Which of the following statements would read a single character from the keyboard and place the result in a character variable 'ch' defined as: char ch;

- (a) getch(ch); (b) while(!kbhit) **(c) ch = getch();** (d) printf("%c", ch);

31. The keyword 'else' can be used with

- (a) for statement **(b) if statement**
(c) do.. while () statement (d) switch () statement

32. Which of the following statements is false

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- (a) The expression in the condition part of a for statement can be empty
- (b)** The initialization part of a for statement cannot have more than one initialization
- (c) The body of do-while statement can be empty
- (d) The initialization and increment parts of a for statement can be empty

33. Choose the incorrect statements.

- (a)** The array elements need not be of the same storage class
- (b) The number of subscripts determines the dimension of the array
- (c) All the elements of the array should be of the same data type and storage class
- (d) In an array definition, the subscript can be any expression yielding a non-zero integer value

34. An example application for a two dimensional array is

- (a)** a matrix
- (b) an array with 10 elements
- (c) an array with 2 elements
- (d) two integer variable

35. main()

```
{char name[5];  
scanf("%s",name);  
printf("%s", name);  
}
```

if **Program** is the given as input, what will be the o/p of the program;

- (a) Progr
- (b) Runtime error
- (c)** Prog
- (d) program

36. void funct (void)

The above function declaration indicates

- (a) it returns a value and had arguments
- (b) it returns nothing and had arguments
- (c) it returns a value and no arguments
- (d)** it returns nothing and no arguments

37. How many instance auto variable (f) are created in the execution of the following program. if $m = 5$.

```
fact(m)  
{int f = 1;  
if (m == 1) return(1);  
else  
f = m * fact (m-1);
```


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41. Representing various steps in a flow diagram is called as
(a) diagram **(b) flow chart** (c) program (d) paint
42. C is a
(a) Machine language (b) High level language
(c) High level language with some low level features
(d) Low level language
43. What are the smallest individual units in a program
(a) Structures (b) Functions
(c) record **(d) Tokens**
44. Which of the following is an empty data type.
(a) Integer (b) float (c) character **(d) void**
45. Array elements are stored in
(a) Sequential memory locations (b) Scattered memory locations
(c) Direct memory locations (d) Random memory location
46. The operator ++ is called as operator
(a) special increment **(b) increment** (c) double addition((d) decrement
47. Which of the following is not a relational operator
(a) < = **(b) & &** (c) != (d) >
48. main ()
 { int m,y;
 m = 5;
 y = ++m;
 printf("%d %d",m,y);
 } consider the above code and find the output
(a) 5,5 (b) 5,6 **(c) 6,6** (d) 6,5
49. int C;
C=25/2; What is the value of C
(a) 0.5 (b) 12.500000 (c) 12.000000 **(d) 12**
50. Consider scanf("%2d", &n); and the input data is 3142 then will be assigned
(a) error **(b) 31** (c) 42 (d) 31.42

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51. In switch statement

- (a) more than one default allowed
- (b) default case, if used, should be the last case
- (c) default case, if used, can be placed anywhere**
- (d) default case must be present

52. How many while statements are possible in do.... While loop?

- (a) 2
- (b) 3
- (c) any number**
- (d) 1

53. The number of elements in array declaration

- (a) does not require to be specified
- (b) dynamically identifies based on largest index used in program
- (c) assume default size as '0'
- (d) requires to be specified**

54. The following program

```
main( )  
{static int a[ ] = { 7, 8, 9 };  
printf(“%d”, a[2] = 2[a] + a[2]);  
}
```

- (a) results in segmentation violation error
- (b) runtime error
- (c) will compile successfully**
- (d) result is buss error

55. Find the output of the following program

```
main()  
{ char name1 [4] = ‘R’, ‘A’, ‘V’, ‘I’;  
char name2 [5] = ‘R’, ‘A’, ‘V’, ‘I’;  
printf (“%s”, name1);  
printf (“%s”, name 2);  
}
```

- (a) RAVI RAVI
- (b) Garbage value RAVI
- (c) RAVI garbage value
- (d) RAVI garbage value RAVI**

56. The purpose of return statement is

- (a) To return control back to the calling function
- (b) To return control and value to calling function**
- (c) To return void
- (d) To return value to the calling function

57. Which of the following statements is correct when an array is passed to a called function

- (a) function-name (array-name [])
- (b) function-name (array-name , size)**

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- (c) not possible
- (d) function-name (array-name[size])

58. If the character type variable sym is assigned a value 'y' and the string variable str is assigned a value LEARN. What is the value in str after execution of the following statement **strset(str,sym)**

- (a) LEARNY **(b) yyyyyy** (c) Y (d) LEARY

59. The storage area for register variables
(a) cache (b) memory **(c) processor registers** (d) virtual memory

60. Which of the following is the symbol for preprocessor
(a) * **(b) #** (c) <> (d) \$

#####

61. The process of repeating a group of statements in an algorithm is known as
(a) sequence **(b) iteration** (c) flow (d) selection

62. Every executable C program must contain a
(a) printf function (b) scanf, printf and main functions
(c) main function (d) scanf function

63. The individual units of a C program is known as
(a) records **(b) tokens** (c) units (d) program

64. The keyword is used to define enumerated data type
(a) array **(b) enum** (c) typedef (d) struct

65. How many variables of the same type can be initialized at a time with the same value
(a) Three (b) One (c) Two **(d) any number of variables**

66. Integer division results in
(a) rounding (b) underflow (c) overflow **(d) truncation**

67. The operator with lowest priority in the list && , + , | | , < is
(a) + **(b) | |** (c) && (d) <

68. int x=1,y=5;
x=++x + -y;

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what is the value of x

- (a) 8 (b) 7 (c) 5 **(d) 6**

69. Which of the following shows the correct hierarchy of arithmetic operations in C

- (a)** (), / or *, - or + (b) (), &&, *, /, +, -
(c) (), &&, /, *, +, - (d) (), &&, * or / + or -;

70. The statement `printf("%d",7);`

- (a) prints 0 (b) runtime error **(c) prints the value 7** (d) results in syntax error

71. The keyword 'else' can be used with

- (a) for statement **(b) if statement**
(c) switch () statement (d) do.. while () statement

72. Give the output of the following program:

```
#include < stdio.h >
main()
{int l=1;
while (l < 5)
{printf("%d", l);
}}
/* End of Main */
```

- (a) Warning for no return type for main () (b) Print the value of l as 1
(c) Infinite loop (d) Prints the value of l as 11111

73. Array is used to represent the following

- (a) A list of data items of different data type
(b) A list of data items of real data type
(c) A list of data items of same data type
(d) A list of data items of integer data type

74. Dynamic memory allocation in array results in

- (a) allocation of memory at compile time
(b) allocation of memory at file saving time
(c) allocation of memory at runtime
(d) allocation of memory at debugging time

75. `putchar()` and `getchar()` are both

- (a) control statement
(b) type declaration statements
(c) assignment statements
(d) input and output statements

76. How many values a function can return at a time

- (a) only one**

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- (b) 2
- (c) infinite values
- (d) depends on the system

77. Arrays are passed as arguments to a function by

- (a)** reference
- (b) both value and reference
- (c) context
- (d) value

78. The function `strrev()` the actual string in the array

- (a) will not reverse
- (b) may not reverse
- (c)** will reverse
- (d) may reverse

79. Register variable are active

- (a) outside the function
- (b) throughout the program
- (c)** only in the function where it is defined
- (d) surrounding of that function.

80. The function `sqrt()` is part of header file.

- (a)** `math.h`
- (b) `iostream.h`
- (c) `conio.h`
- (d) `stdio.h`

81. The process of removing a bug is known as

- (a)** debugging
- (b) compilation
- (c) executing
- (d) running

82. Every C Program Statement must be terminated with a

- (a) `.`
- (b) `#`
- (c)** `;`
- (d) `!`

83. In the following which one is not a C keyword?

- (a)** choice
- (b) case
- (c) for
- (d) volatile

84. What is the range of unsigned char data type

- (a) 0 to 512
- (b)** 0 to 255
- (c) -128 to 127
- (d) -32, 768 to 32,767

85. C variable cannot start with

- (a) a lower case
- (b) an underscore
- (c)** a number
- (d) an upper case letter

86. Which of the following is allowed in a C arithmetic statement

- (a)** `()`
- (b) `[]`
- (c) `{ }`
- (d) `//`

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87. What is the result of 5 &&2 ?

- (a) 0 (b) 2 **(c) 1** (d) 5

88. ++l is a operator.

- (a) Pre-decrement **(b) Pre-increment** (c) Post increment (d) Post decrement

89. The output of the following program is

```
main( )
{int i=2;
printf(“%d %d %d”,i++,i,++i);
}
```

- (a) 2 2 4 (b) 2 3 3 **(c) 3 3 3** (d) 2 3 4

// note printf statements are executed fro right to left. Hence ++i is first

90. In switch (expression) statement, the expression should evaluate to

- (a) a void **(b) an integer** (c) a character (d) a float

91. What is the output of the following program

```
# includes <stdio.h>
# include <conio.h>
void main()
{int a1[5] ={1};
int b = 0, k = 0;
for (b=0; b<=4; b++)
printf (“%d” , ++ a1[0]);
}
```

- (a) 11111 **(b) 23456** (c) 12345 (d) 12222

92. In a multidimensional array with initialization

- (a) no demension must be omitted
(b) the left most dimension may be omitted
(c) both leftmost and right most may be omitted
(d) the right most dimension may be omitted

93. The statements that prints out the character set from A-Z is, where a is an integer variable

- (a) for(a='a'; a<='z', a++) printf(“%c”; a);
(b) for(a='A'; a<='z', a++) printf(“%c”; a);
(c) for(a='A' a<='Z', a++) printf(“%c”; a);
(d) for(a='A'; a<='z', a++) printf(“%c”; a);

94. The statement used to send back any value to the calling function is

- (a) exit **(b) return** (c) break (d) continue

95. What is the output of

```
main()
{int x, change (int);
```


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(d) compilation

112. The constant '\0' is called as

- (a) full (b) null (c) zero (d) null

113. How many keywords are there in C

- (a) 34 (b) 30 (c) 31 **(d) 32**

114. Size of (double) returns——

- (a) 8** (b) 2 (c) 4 (d) 10

115. The declaration of a variable should be done

- (a) before using it**
(b) after using it
(c) at the time of using
(d) only in the calling program

116. Identify the relational operator in C

- (a) || (b) && (c) ! **(d) <**

117 The symbol for right shift operator is

- (a) - > (b) > (c) <= **(d) >>**

118 What function is appropriate for accepting a string?

- (a) getch () **(b) gets ()** (c) getche () (d) scanf ()

119. Which of the following is not correct

- (a) while loop is executed atleast once**
(b) do . while loop is executed at least once
(c) while loop is executed only if the condition is true
(d) dowhile loop is ececuted only if the condition is true

120. Literal means

- (a) A string constant**
(b) An alphabet
(c) A character
(d) A string

121. 'void' means

- (a) 1 **(b) nothing** (c) something not known (d) 0

122. The parameter passing mechanism for an array is

- (a) Call by value (b) Call by value-result
(c) call by name **(d) Call by reference**

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123 What is the use of the strlen() function

- (a) finds the length of the string (b) string comparison
(c) string concatenation (d) copies one string into another

124 What kind of variable is suitable to count how many times a function is called

- (a) register (b) external (c) auto **(d) static**

124 . What symbol is used to represent input/output operations in a flow chart.

- (a) Rectangles **(b) Parellograms**
(c) circles (d) Rectangle with rounded end

125. A block is enclosed with pair of

- (a) { }** (b) () (c) <> (d) []

126 Which of the following is not a key word of C?

- (a) main**(b) void (c) const (d) sizeof

127 The keyword is used to define a new data type.

- (a) array (b) Structure **(c) typedef** (d) union

128 The purpose of the following fragment

```
B=S+B
```

```
S=B-S;
```

```
B=B-S;
```

Where S,B are two integers is to

- (a) negate the contents of S and B
(b) swap the contents of S and B
(c) transfer the contents of S to B
(d) transfer the contents of B to S

129 main()

```
{ float a;
```

```
int x = 6; y = 4;
```

```
a = x/y;
```

```
print ("%f",a)
```

```
}what is the output
```

- (a) error
(b) 1.5
(c) 0.5
(d) 1.00

130. What is output of following Program?

```
main( )
```

```
{int x=10,y=5,p,q ;
```

```
p= x> 9 ;
```

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```
q= x > 3 && y != 3 ;  
printf( "p=%d q=%d " ,p,q) ;  
}
```

- (a) p =0 q = 0
- (b) p = 0 q = 1
- (c) p = 1 q= 0
- (d) p = 1 q = 1**

131 Hierarchy decides which operator

- (a) consumes more CPU time
- (b) operates on large number
- (c) is used first**
- (d) is most important

132 float c,
c=25/2; What is the value of c

- (a) 12
- (b) 12.000000**
- (c) 12.0
- (d) 12.500000

133. Format specifier for the string is

- (a) %u
- (b) %d
- (c) %c
- (d) %s**

134 The conditional operators “ ? :” is similar to

- (a) nested if
- (b) if-then-else**
- (c) while
- (d) do-while

135 Which of the following statements cannot be used to transfer the control unconditionally to a different statement in a 'C' program

- (a) continue
- (b) for**
- (c) break
- (d) goto

136 An array can have dimension(s).

- (a) single
- (b) multiple**
- (c) three
- (d) double

137 If we don't initialize a static array, what will be the elements set to:

- (a) character constant
- (b) a floating point number
- (c) 0**
- (d) an undetermined value

138 The following function is used to count and return the number of characters in a given string

- (a) strcat()
- (b) strev()
- (c) strcmp()
- (d) strlen()**

139 . main() is

- (a) user defined function**
- (b) friendly function
- (c) library function
- (d) member function

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140 If the value of the formal argument is changed in the called function; the corresponding change in the calling function, if it is call by value

- (a) machine dependent **(b)** does not reflects
(c) unpredictable (d) reflects

141. Consider the following program

```
main()
{ char str[10];
scanf("%s",str); printf("%s",str); }
```

The error in the above program is

- (a) the format control for the string variable is not %s
(b) no error in the program
(c) memory has not been allocated for the variable str
(d) the parameter str to scanf is passed by value, it should be a address

142. Which of the following statement is wrong with respect to a storage class

- (a) if specifies where variable is stored
(b) it specifies the default initial value
(c) it specifies the life of a variable
(d) by default a storage class is static

143. C language has been developed by

- (a) Martin Richards (b) Ken Thompson
(c) Peter Norton **(d)** Dennis Ritchie

144 Which function returns single character

- (a) printf (b) putchar (c) scanf **(d)** getchar

145. Which of the following cannot be used as an identifier.

- (a) alphabet followed by digit **(b)** Keywords
(c) alphabet (d) Library function name

146. Which of the following is a primary data type?

- (a)** int (b) enum (c) array (d) typedef

147 Pick the operators that associates from right to left

- (a) % (b) - **(c)** = (d) +

148 Among the following operators, whose associativity is right to left

- (a) logical operators (b) arithmetic operators
(c) conditional expression (d) bitwise operators

149 int x=1,y=5;

x=++x + -y;

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what is the value of x

- (a) 7 **(b) 6** (c) 8 (d) 5

150. int C;

C=25/2; What is the value of C

- (a) 12**
(b) 12.000000
(c) 0.5
(d) 12.500000

151. switch(ch)

{case 'a': printf("a");

case 'b': printf("b");

default: printf("error");

} if ch is assigned to the character 'a' then the output will be

- (a) a b **(b) a b error** (c) a (d) error

152. The minimum number of times the for loop is executed is

- (a) 1 **(b) 0** (c) cannot be predicted (d) 2

153. What is the difference between the 5's in the below expressions.

int num[5];

num[5]=10;

- (a) Both specify array size
(b) First is array size, second is particular element
(c) First is particular element , second is array size
(d) First is particular element , second is type

154. Under which of the following conditions, the size of the array need not be specified?

- (a) when it is a formal parameter
(b) when it is a declaration
(c) when initialization is a part of definition
(d) when the compiler is smart

155. A character array is terminated internally with

- (a) 0 (b) ; (c) (space) **(d) '\0'**

156. The program execution starts from

- (a) the function which is last defined
(b) the function other than main()
(c) the function which is first defined
(d) main() function

157. When compared to call by value, the call by reference is in execution

- (a) fast**

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- (b) neither slow nor fast
- (c) slow
- (d) equal

158. Automatic variable are active

- (a) outside the function
- (b) only in the function where it is defined**
- (c) surroundings of that function
- (d) throughout the program

Sit and Solve.

In the pipe line

Objective Questions Enhancement (Assignment1 of C & data Strucures of website) 05 Nov e2008

Essay questions Assignement no2 of c & DS web site)6 Nov 2008

All the best

Dr Ramesh Vasappanavara