

PARUL UNIVERSITY
FACULTY OF AGRICULTURE
B.Tech. (Agriculture/Dairy Technology) Winter 2019 - 20 Examination

Semester: 1
Subject Code: 20103105
Subject Name: Fundamentals of Programming

Date: 03/12/2019
Time: 10:30am to 12:30pm
Total Marks: 50

Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 A) Fill in the blanks (Each of 0.5 Mark)**(05)**

- i) Keyboard is the _____ type of device.

(a) Input	(b) Pointing	(c) Output	(d) Sound
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- ii) scanf () function is used for

(a) Input	(b) Pointing	(c) Output	(d) Sound
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- iii) C programs are converted to machine language with the help of _____

a) editor	b) complier	c) operating system	d) command
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- iv) #include is called _____

a) Preprocessor directive	b) Inclusion directive	c) File inclusion directive	d) None
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- v) The value of EOF is _____.

a) -1	b) 1	c) 0	d) 10
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- vi) The format identifier '%s' is also used for _____ data type?

a) int	b) float	c) character	d) string
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- vii) Break statement is used for _____

a) quit the program	b) quit the current iteration	c) both	d) none
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- viii) An array element are always stored in _____ memory location

a) Sequential	b) Random	c) Sequential and Random	d) None
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- ix) The _____ memory allocation function modifies the previous allocated space

a) Calloc	b) malloc	c) realloc	d) free
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- x) Size of float data types is _____ bytes

a) 1	b) 2	c) 3	d) 4
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B) Multiple Choice Questions (Each of 0.5 Mark)**(10)**

- i) Which one is not a reserve keyword in C Language?

a) auto	b) main	c) case	d) register
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- ii) What should be written in the program to get newline on the screen?

a) printf("\n");	b) echo "\n";	c) printf('\n');	d) printf("\n ");
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- iii) What does the following declaration mean? int (*ptr)[10];
 - a) ptr is array of pointers to 10 integers
 - b) ptr is a pointer to an array of 10 integers
 - c) ptr is an array of 10 integers
 - d) ptr is an pointer to array

- iv) Which of the following statement should be used to obtain a remainder after dividing 3.14 by 2.1 ?
- `rem = 3.14 % 2.1;`
 - `rem = modf(3.14, 2.1);`
 - `rem = fmod(3.14, 2.1);`
 - Remainder cannot be obtain in floating point division.
- v) Which of the following special symbol allowed in a variable name?
- `*` (asterisk)
 - `|` (pipeline)
 - `-` (hyphen)
 - `_` (underscore)
- vi) How will you free the allocated memory ?
- `remove(var-name);`
 - `free(var-name);`
 - `delete(var-name);`
 - `dalloc(var-name);`
- vii) Which of the following is the correct usage of conditional operators used in C?
- `a>b ? c=30 : c=40;`
 - `a>b ? c=30;`
 - `max=(a>b) ? a:b;`
 - `return (a>b)?(a:b)`
- viii) Which of the following are unary operators in C? (1) `!` (2) `sizeof` (3) `~` (4) `&&`
- 1 and 2
 - 1, 2 and 3
 - 3 and 4
 - all of above
- ix) Input/output function prototypes and macros are defined in which header file?
- `conio.h`
 - `stdio.h`
 - `stdlib.h`
 - `dos.h`
- x) What is `stderr` ?
- standard error types
 - standard error streams
 - standard error definition
 - standard error
- xi) The maximum number of dimension an array can have in C is
- 3
 - 4
 - 5
 - Compiler dependent
- xii) The format identifier `'%d'` is also used for _____ data type.
- int
 - float
 - character
 - double
- xiii) Which of the following is a User-defined data type?
- `typedef int Boolean;`
 - `typedef enum {Mon, Tue, Wed, Thu, Fri} Workdays;`
 - `struct {char name[10], int age};`
 - all of the mentioned
- xiv) When double is converted to float, then the value is?
- Truncated
 - Rounded
 - Depends on compiler
 - Depends on standard
- xv) Which is the best way to generate numbers between 0 to 99?
- `rand()-100`
 - `rand()%100`
 - `rand(100)`
 - `srand(100)`
- xvi) What is the return-type of the function `sqrt()`?
- int
 - float
 - double
 - depends on the data type of the parameter
- xvii) Which of the following data types are accepted while declaring bit-fields?
- character
 - float
 - double
 - none
- xviii) Which among the following is NOT a logical or relational operator?
- `!=`
 - `==`
 - `||`
 - `=`
- xix) `stderr` is similar to?
- `stdin`
 - `stdout`
 - both
 - none
- xx) Which of the following function can be used to terminate the main function from another function safely?
- `return(expr);`
 - `exit(expr);`
 - `abort();`
 - both `exit(expr);` and `abort();`

Q.2 A) Define the following (Any five out of seven questions) (05)

(1) What is the correct output of the following code?

```
main()
{ int a=3, b=4, c;
  c = a++;
  b=a+c;
  printf("%d %d", b,c);
}
```

(2) What is the correct output of the following code?

```
main()
{ char m='x', d, e;
  d = m+1;
  e= m-1;
  printf("%c %c", d, e);
}
```

(3) Find output of following code.

```
void main()
{
  int a=9,b=5;
  print("%d",b+5);
  if(a=b);
  printf("both number are same a=%d b=%d",a b );
  getch();
}
```

(4) Define printf()

(5) Define rewind()

(6) Define putchar()

(7) Define Recursion

B) Answer the following (Any five out of seven questions) (05)

(1) Explain the use of pointer in c programming.

(2) Explain fseek() function.

(3) Explain scanf() function with syntax

(4) list the various categories of operator in C.

(5) What is type conversion ?

(6) Define Identifier and its rule.

(7) Explain Switch() function with syntax.

Q.3 Answer the following (Any five out of six questions) (10)

(1) Write a program to find sum of two variables.

(2) Write a program to find factorial of given number using loop.

(3) Write a program which accepts character from keyboard and display its ASCII value.

(4) Write a program to find largest of two numbers using if statement.

(5) Write a program which asks day number and prints day name using switch statement.

(6) Write a program to check number is Armstrong number or not ?

Q.4 Long Questions (Any three out of four questions) (15)

(1) Explain following string manipulation functions with example.
strcmp(), strlen(), strstr()

(2) Differentiate between Structure and Union giving examples.

(3) Differentiate between function call by value and call by reference giving examples of each.

(4) Explain difference between getchar(), getche() and getch() function in detail with example.