



BRAINWARE UNIVERSITY

Term End Examination 2018-19

Programme -- B.Tech.(CSE) / B.Tech.(ECE)

Course Name – Programming for Problem Solving

Course Code – ESC(CSE) 201/ ESC(ECE) 201

(Semester – 2)

Time allotted: 3 Hours

Full Marks: 70

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group –A

(Multiple Choice Type Question)

10 x 1 = 10

1. *Choose the correct alternative from the following*

(i) What is the size of datatype int (32 bit compiler)?

- a. 2 byte
- b. 4 byte
- c. 1 byte
- d. 8 byte

(ii) Which one is bitwise operator?

- a. >
- b. &&
- c. >=
- d. >>

(iii) What is the output of:

```
main(){  
int b=7;  
if (b=6)  
printf("check");  
else  
printf("cross check");  
}
```

- a. check
- b. cross check
- c. compilation error
- d. none of these

(iv) What is the output of this code?

```
main(){  
char name[ ] = "brainware";  
printf("%d",strlen(name));  
}
```

- a. 8
- b. 9
- c. 11
- d. 10

(v) What is the output of this code?

```
main(){  
int x=5,y;  
y = x++ - 2;  
printf("%d%d",x,y);  
}
```

- a. 63
- b. 64
- c. 53
- d. 54

(vi) What is the output of:

```
main(){  
int i=5;  
while(i<7)  
printf("%d ",i++);  
}
```

- a. Infinite loop
- b. 5 6
- c. compilation error
- d. 5 7

(vii) A struct is typically a _____ data structure.

- a. homogeneous
- b. heterogeneous
- c. contiguous
- d. Both (a) and (c)

(viii) What is the output of this code?

```
main(){
char name[ ] = "brainware";
char city[ ]= "barasat";
streat(name,city);
printf("%d",strlen(name));
}
```

- | | |
|-------|-------|
| a. 16 | b. 9 |
| c. 15 | d. 17 |

(ix) The use of r+ mode in file is for

- | | |
|------------------------|------------------|
| a. reading only | b. writing only |
| c. reading and writing | d. none of these |

(x) What is the output of this code?

```
main(){
char ch = 'a';
printf("%d",ch);
}
```

- | | |
|-------|------------------|
| a. 65 | b. a |
| c. 97 | d. none of these |

Group – B

(Short Answer Type Questions)

3 x 5 = 15

Answer any *three* from the following

2. Write the difference between while and do while. [5]
3. Write the difference between auto and static storage class. [5]
4. Write the difference between iteration and recursion with proper example. [5]
5. Write a program in C to find a given number is palindrome or not. [5]

6. Write a C program to print the following pattern : [5]
A B C D
E F G
I J
K

Group – C
(Long Answer Type Questions) 3 x 15 = 45

Answer any *three* from the following

7. (a) What are variable and identifier? [2]
(b) What are the different types of error in C? [3]
(c) Differentiate between compiler and interpreter. [4]
(d) Explain the components of computer system with block diagram. [6]
8. (a) What is a function? [2]
(b) Write a user defined function to find sum of two numbers. [3]
(c) What are actual and formal parameters? [4]
(d) Explain difference between call by value and call by reference with example. [6]
9. (a) What is flowchart? [2]
(b) Compare a character and a string. [3]
(c) Write a C program to find the reverse of a string without using `strrev()` function. [4]
(d) Write the syntax of `strcpy()`, `strcat()` and `strcmp()` with example. [6]
10. (a) What is pointer? [2]
(b) How pointer to an array is different from array of pointers? [3]
(c) Write the difference between an array and structure. [4]
(d) Write a program in C that implements a structure of employee database which can store employee id, name and salary. Take an input for that database and display it. [6]

11. (a) What is structure? [2]
- (b) Why we use pointer in C programing? [3]
- (c) What are the different modes of file operations in C? [4]
- (d) Write a program in C that implements a structure student that would contain student name, roll & marks. [6]
