

## **BRAINWARE UNIVERSITY**

## Course - BCA

## **Principles of Programming Language (BCA201 / BCAC201)**

(Semester - 2)

Time allotted:3 Hours	Full Marks: 70					
[The figure in the margin indicates full marks. C their own words as	1 0					
Grou	p –A					
(Multiple Choice	Type Questions) $10 \times 1 = 10$					
1. Choose the correct alternative from the fo	. Choose the correct alternative from the following					
(i) In C language, an array is						
<ul> <li>a. a collection of heterogeneous data type.</li> </ul>	b. a collection of homogeneous data type.					
c. a user defined data type.	d. None of these					
(ii) Which one is the correct output? char a[]="language\0/programming"; printf("%d",strlen(a));						
a. 10	b. 9					
c. 8	d. 0					
(iii) Pointer is						
a. a variable containing the address of a variable.	b. a value.					
c. a memory location.	d. None of these.					
(iv) Which of the following is not a valid relat	tional operator?					
a. *	b. ==					
c. >=	d. <=					

(v)	Which header file should be included to use functions gets()?				
	a.	memory.h	b.	string.h	
	c.	stdlib.h	d.	dos.h	
(vi)	ASCII	value of a is			
	a.	65	b.	97	
	c.	32	d.	48	
(vii)	C programs are converted into machine language with the help of				
	a.	an editor.	b.	a compiler and an assembler.	
	c.	an operating system and secondary storage.	d.	None of these	
(viii)	i) Which of the following is an example of exit controlled loop?				
	a.	for	b.	while	
	c.	do-while	d.	None of these	
(ix) Number of bytes required to store a char variable is				ole is	
	a.	8 bytes	b.	1 byte	
	c.	4 bytes	d.	2 bytes	
(x)	Which among the following is ternary conditional operator?			nal operator?	
	a.	<<	b.	++	
	c.	?:	d.	sizeof()	
			Group – E	<b>B</b>	
		(Short Ans	swer Type (	Questions)	$3 \times 5 = 15$
Ansv	ver any <i>th</i>	ree from the following			
2.	Distinguish between entry control loop and exit control loop.			[5]	
3.	What is the utility of break statement in loop? Give an example. How break statement is differ from an exit() statement?				[3+2]
4.	Explain the utility of "File Handling" in C language? Illustrate the different modes of operation in a file with examples.			[2+3]	

5.	5. Write a C program to find the length of a string without using string library function like strlen().			
6.	6. Write a C program to generate a Fibonacci Series up to an user define range.			
		Group – C		
		(Long Answer Type Questions)	$3 \times 15 = 45$	
Ans	wer a	ny three from the following		
7.	(a)	How many types of storage classes does the C language support? Give the features of each storage class with examples.	[2+8]	
	(b)	What is array of pointers? Exemplify it.	[5]	
8.	(a)	Define tail recursion with example.	[5]	
	(b)	What are the differences between recursion and iteration?	[5]	
	(c)	Write a recursive function to find the factorial of a number.	[5]	
9.	(a)	Explain with suitable example, the difference between structure and union in C language.	[5]	
	(b)	Write a C program to compare two files to check whether they are identical or not.	[10]	
10.	(a)	Write down the difference between malloc() and calloc().	[5]	
	(b)	What are the utility of enumerated data types?	[5]	
	(c)	Write a C program to find the largest of n numbers using array.	[5]	
11.	Wri	te short notes on any three of the following:	[3x5]	
	(a)	Macro.		
	(b)	Dynamic memory allocation		
	(c)	Array of structures.		
	(d)	Function prototype.		
	(e)	Increment and decrement operator.		