### CS/BCA(N)/ODD/SEM-1/BCAN-103/2019-20



### MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Paper Code: BCAN-103

PUID: 01099 (To be mentioned in the main answer script)

#### C PROGRAMMING

Full Marks: 70 Time Allotted: 3 Hours

The figures in the margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable.

# GROUP - A

	•(	Mul	tiple Ch	oice Typ	e Qu	ıesti	ons)			
Cho	ose	the	correct	alternat	ives	for	any	ten	of the	he
								10 ×	1 =	10
			tf() is inc	luded u	nder	whic	h hea	ader i	file?	
,										
,	(c)/	both	n (a) and	(b)	d)	non	e of t	hese		
	Wha	at is	the hig	hest pos	itive	nur	nber	that	can	be
,	stor	red ir	ı 'signed	int' data	type	?				
					b)		'68			
			-		d)	214	17483	3647.		
iii)	Sto	rage	class spe	ecifier of	defa	ult ty	ype is	3		
,		_			b)					
	c)	defa	ault		d)					
iv)	C la	ingua	age uses			for o	code	trans	latio	a.
,	a)									
	c)	ass	embler	•	d)	bot	.h (a)	and	(c).	
	follo i) ii)	Choose following i) The a) ii) Whi store a) c) iii) Store a) c) iv) Clara)	Choose the following:  i) The print a) stdict both ii) What is stored in a) 327 c) 655 iii) Storage a) autoc) defaiv) Clangua a) interpretation of the column interpretation in the column interpretation of the column interpretation in the column in the column interpretation in the column interpretation in	Choose the correct following:  i) The printf() is income a) stdio.h  c) both (a) and ii) What is the high stored in 'signed a) 32767  c) 65536  iii) Storage class special automatic c) default iv) Clanguage uses a) interpreter	Choose the correct alternate following:  i) The printf() is included use a) stdio.h  c) both (a) and (b)  ii) What is the highest possistored in 'signed int' data a) 32767  c) 65536  iii) Storage class specifier of automatic  c) default  iv) Clanguage uses	Choose the correct alternatives following:  i) The printf() is included under  a) stdio.h b)  c) both (a) and (b) d)  ii) What is the highest positive stored in 'signed int' data type a) 32767 b)  c) 65536 d)  iii) Storage class specifier of defarmal automatic b)  c) default d)  iv) C language uses	Choose the correct alternatives for following:  i) The printf() is included under which a) stdio.h b) concept both (a) and (b) d) noncept both (a) and (b) d) and (c) default type concept by concept both (a) automatic d) both d) b) both d) both d) both d) b) both d) b) both d) b) both d) b)	Choose the correct alternatives for any following:  i) The printf() is included under which here a) stdio.h b) conio.h  c) both (a) and (b) d) none of the stored in 'signed int' data type?  a) 32767 b) 32768  c) 65536 d) 2147483  iii) Storage class specifier of default type is a) automatic b) internal c) default d) auto.  iv) Clanguage uses	i) The printf() is included under which header (a) stdio.h b) conio.h c) both (a) and (b) d) none of these (ii) What is the highest positive number that stored in 'signed int' data type? a) 32767 b) 32768 c) 65536 d) 2147483647. iii) Storage class specifier of default type is a) automatic b) internal c) default d) auto. iv) C language uses	Choose the correct alternatives for any ten of the following:  i) The printf() is included under which header file?  a) stdio.h  b) conio.h  c) both (a) and (b) d) none of these.  ii) What is the highest positive number that can stored in 'signed int' data type?  a) 32767  b) 32768  c) 65536  d) 2147483647.  iii) Storage class specifier of default type is  a) automatic  b) internal  c) default  d) auto.  iv) Clanguage uses

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Turn over

```
v)
     # statements are ...... directive.
                           b Compiler
     a)
         Operating System
     c)
         CPU
                                Program.
                            d
    How would you round off a value from 1.66 to 2.0?
vi)
                           | c| Roundup ( 1.66 )
    a)
         Ceil (1.66)
                                Roundto (1.66).
    b)
         Floor (1.66)
                            d)
vii) What is the output of the following program?
    #include<stdio.h>
    main()
    {
    char s1[50], s2[50] = "Hello";
    s1 = s2:
    printf("%s", s1);
    }
                            b) No output
    a)
        Hello
                           d) Runtime error.
   (c) Compile error
viii) Which header statement is missing in the given
    below program to get the desired output?
    #include<stdio.h>
    int main ()
    double x = 1234321;
    double result = sqrt(x);
    printf("The square root of %.21f
                                                 i s
    %.21f\n", x, result);
    return 0;
    }
       #include<defs.h>
   a)
       #include<math.h>
   اكلا
       include<stdlib.h>
   c)
       Above program is absolutely correct to give
   d)
       desired result.
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ix)	acco	ch of the ess value able?	following at addr	opera css	ators storc	can b d in	e uso a po	ed to sinter
	_a)	*		b)	#			
	c)	&&		d)	<b>@</b> .			
x)	The	library	function	•	$\sim$	finds	the	first
			a substrin					
	a)	Yes		b)	strc	hr()		
	c)	strstr()		d)	strn	sct().		
xi)	fpri	itf() comm	and is use	d for			,	
	a)	output in	to file					
	b)	output in	console					
	c)	output in	to file as w	ell as	cons	sole		
	d)	not used	for output	purp	ose.			
xii)	C la	nguage su	pports					
	(a)-	call by va	lue	b)	call	by refe	erenc	е.
	c)	call by na	ıme	d)	non	e of the	ese.	
			GROUP -	- B				
		• .	nswer Typ	_		-		
		Answer a	ny <i>three</i> of	the f	ollow	ing.	3 × 5	= 15
			ween stru				nion	
	•		he purpos		•	•		4 + 1
		C program	to check	a nur	nber	is prin	ne nu	mber
or n		_						
			to reverse	-			_	
			to swap t	wo n	umb	ers wit	hout	using
		iable. ~						
			to find a				-	
the	matri	x below w	rithout usi:	ng an	y au	xiliary	space	
		1 2	4					
		2 2 3	3				•	
		· [7 9	1 ]			,		

6.

## GROUP - C (Long Answer Type Questions)

Answer any three of the following.  $3 \times 15 = 45$ 

- T. Write a program for matrix multiplication.
- 8. a) Write a program to add roll, grade and marks of 3 subjects for 5 students.
  - b) Write down compilation steps of a C program. What is scope of a variable?

    6 + 2
- 9. a) Write a C program to add two 2-dimensional arrays. Please note that the size of the arrays may be inputted by the user. https://www.makaut.com 10
  - b) Write a program to verify if a given character string is palindrome or not. Please note that a palindrome means that the strings and its reverse are identical.
- 10. Write short notes on any three of the following:  $3 \times 5$ 
  - a) Header file
  - b) Function
  - cr if-else
  - dy Increment and decrement operators.
- 11. a) What is the difference between struct and array?
  Provide examples. 4 + 2
  - b) Write a C program to read the records of 10 students maintained in a file in which each record contain the following fields.

Name	Roll Number	Agc	Father's Name	% of marks in last examination