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M	CA 1	1821	.01				
Roll	No.	of ca	ndidate 1873722 M.C.A. 1st Semeste	2022	HOWDHURY CENT SHIMT & TIPS Avery Hatterwa	para, 317	
			INTRODUCTO				
			egulation (w.e.f. 2017 – 1	(8) and N	ew Syllabus (v	v.e.f. 2018 – 19)	
Full Marks – 70						Time - Three hours	
		T	he figures in the margin in	ndicate ful	l marks for the	questions.	
			Answer question No.	1 and any	four from the re	est.	
1.	Choose the Correct option:					$(10 \times 1 = 10)$	
	(i) Which of the following is not a valid C variable name?						
		(a)	int number;	(b)	float rate		
		(c)	int variable_count	(d)	int \$main;		
	(ii)	Wh	at is short int in C program	nming?			
		(a)	The basic data type of C				
		(b)	Qualifier	×			
		(c)	Short is the qualifier and	l int is the	basic data type		
		(d)	All of the mentioned				
(iii) In C language, FILE is of which data type?							
		.(a)	int				
		(b)	char *				
		(c)	struct				
	(d) None of the mentioned						
	(iv) Which of the following is not an operator in C?						
		(a)	K	(b)	sizeof()		
		(c)	~	(d)	None of the me	entioned	

[Turn over

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(v) What will be the output of the following C code?
     #include <stdio.h>
     int main()
          int main = 3;
          printf("%d", main);
          return 0;
          It will cause a compile-time error
     (a)
          It will cause a run-time error
     (b)
         It will run without any error and prints 3
     (d) It will experience infinite looping
(vi) What will be the output of the following C code on a 64 bit machine?
     #include <stdio.h>
     union Sti
          int nu;
          char m;
                                           BINA CHOWDHURY CENTRAL LIBRAGE
                                                     (CHIMT & RIPS)
     };
                                                   Azerk Hatkinswapara,
                                                    Gravahan of $1017
     int main()
     union Sti s;
     printf("%d", sizeof(s));
     return 0;
                                          (b)
                                               5
     (a) 8
                                          (d)
     (c) 9
(vii) What will be the final value of x in the following C code?
     #include <stdio.h>
     void main()
     int x = 5 * 9 / 3 + 9;
                                          (b)
                                               Depends on compiler
          3.75
     (a)
                                          (d)
                                               3
     (c)
          24
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(viii) What will be the output of the following C function?
      #include <stdio.h>
      void reverse(int i);
     int main()
     reverse(1);
     void reverse(int i)
          if (i > 5)
          return;
          printf("%d ", i);
          return reverse((i++, i));
     (a) 12345
                                         (b)
                                               54321
     (c) Infinite execution
                                         (d)
                                               Compilation error
(ix) How many times i value is checked in the following C program?
     #include <stdio.h>
     int main()
                             BINA CHOWDHURY CENTRAL LIBRARY
                                       FAIMT & RIPS)
          int i = 0;
                                     Azere Hatti- wapara,
          while (i < 3)
                                      farwaha: 13.017
          i++;
          printf("In while loop\n");
     (a)
          2
                                         (b)
                                               3
     (c)
         4
                                         (d)
(x) What is the output of this C code?
    #include <stdio.h>
     main()
          if (sizeof(int) > -1)
          printf("True");
          else
          printf("False");
        True
    (a)
                                         (b)
                                               False
         Runtime Error
    (c)
                                         (d)
                                               Compile time Error
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2.	(a)	Write difference between algorithm and flowchart.	(2)
	(b)	Why do we use header files?	(2)
	(c)	What is the purpose of adding comments in a program?	(2)
	(d)	Define Searching? Explain linear search method with an progenample?	gram and (2+3=5)
	(e)	What are the components of the computer systems? Explain we diagram.	vith block (4)
3.	(a)	What do you meant by linking?	(2)
	(b)	Difference between Local and Global variable in C.	(2)
	(c)	What is the difference between '=' and '==' operator?	(3)
	(d)	Distinguish between whiledo and dowhile statement in C.	(4)
	(e)	Mention the various Decisions making statement available in C.	(4)
4.	(a)	What are the types of I/O statements available in 'C'? Give example	es. (2+2=4)
	(b)	What is the difference between scanf() and gets() function?	(4)
	(c)	What is an array? Why is it necessary to give the size of an array declaration?	ray in an (3)
	(d)	What are functions in C? How will define a function in C?	(2+2=4)
5.	(a)	What is a Pointer? How a variable is declared to the pointer? Whuses of Pointers?	at are the 2+2+2=6)
	(b)	Write a C program for factorial using recursion function.	(4)
	(c)	What is dynamic memory allocation? What are the various dynam	ic memory
		allocation functions? BINA CHOWDHURY CEITERAL LIBRARY BINA CHOWDHURY CEITERAL LIBRARY BINA CHOWDHURY CEITERAL LIBRARY	(2+3=5)
6.	(a)	Compare structures and unions.	(3)
	(b)	What are storage classes? What are the storage classes available in	n C?
11			(2+4=6)
	(c)	What is File Pointer? Write a program in C to copy the content another file.	of a file to (2+4=6)
7.	(a)	Write a program in C to sort the elements of an integer array.	(7)
4.4	(b)	i C / 13/m matrices	(8)