B.E. Fourth Semester (Electrical Engineering (Electronics & Power) / Power Engineering) (C.B.S.)

Computer Programming Paper- V

KNT/KW/16/7282/7309 P. Pages: 2 Time: Three Hours Max. Marks: 80 Notes: Same answer book must be used for each section. 1. Due credit will be given to neatness and adequate dimensions. 2. Assume suitable data wherever necessary. 3. 4. Illustrate your answers wherever necessary with the help of neat sketches. Use of slide rule, Logarithmic tables, non programmable calculator drawing instruments, Thermodynamic tables for moist air, Psychrometric charts and Refrigeration charts is permitted. All questions are compulsory. Describe various data types available in C. Write a program in C to add the digits of a four digit number. Number is entered by user. b) OR Write a program to determine and print the sum of the following harmonic series for a 7 2. a) given value of n: $1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n}$. The value of 'n' is to be entered through keyboard. Explain the storage classes in C with example. b) 7 What do you understand by an array? How arrays can be initialized in a program? **3.** a) What are the different methods of searching? Explain any one in brief. b) OR Explain how single dimensional arrays can be sorted by using bubble sort method with an 4. a) example. Write a C program for finding sum of two 3 x 3 matrices. Resultant matrix must be 7 b) printed as output by the program. 5. Write a program in C to print details of 10 books using array of structure and structure 6 a) should contain name, price and pages. b) Write a short notes on. i) Nested structures. 2 Pointers in 'C' ii) iii) Pointer as a function argument. OR a) Explain the following file functions and give their syntax. 6 6. fseck () fclose() fopen () ii) iii)

1/1	b)	Write a program that compares two files and return 0 if they are equal and 1 if they are not equal.	7
7.	a)	What is object oriented paradigm. Explain various features of object oriented programming.	6
	b)	What are the elements of object oriented programming? Explain the objects and classes with example. OR	7
8.		Write a short notes on. i) Encapsulation	3
		ii) Polymorphism	3
		iii) Inheritance	4
0)	iv) Data abstraction.	3
9.	a)	Explain various file types in MATLAB with example.	6
	b)	Write a MATLAB program to find the factorial of a number. The number will be entered by the user using keyboard. Program should display number and its factorial as output. OR	7
10.	a)	Explain the following MATLAB statements with their syntax.	6
		i) if-else ii) for loop	
	b)	Write a MATLAB program for evaluating the given function using if-else if structure if 'x' is input through keyboard. $y = x + 10$ for $x < 0$	7
	-1	$y = 0 \qquad \text{for } x = 0$	T
	0	$y = x^2 + 10$ for $x > 0$ The program should display values of x and y as output.	1
11.	a)	Write a program to solve the simultaneous equations using MATLAB programming:	
		1 2 3	7
		$-x_1 + x_2 + 3x_3 = 7$	
		$3x_1 + 2x_2 + x_3 = 4$	
	b)	Write a method for the following in MATLAB.	
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		ii) For writing to a text files.	
		iii) Creating a data matrix x of size m by n matrix. OR	
12.	a)	Write a MATLAB program to plot the curve for $y = \cos(x)$, where x varies from 0 to 2π . The graph should have a title and axis labels.	7
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)<	b)	Write a MATLAB program to read a 3x3 matrix and find and display its - i) Inverse ii) Transpose iii) Determinant.	1

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