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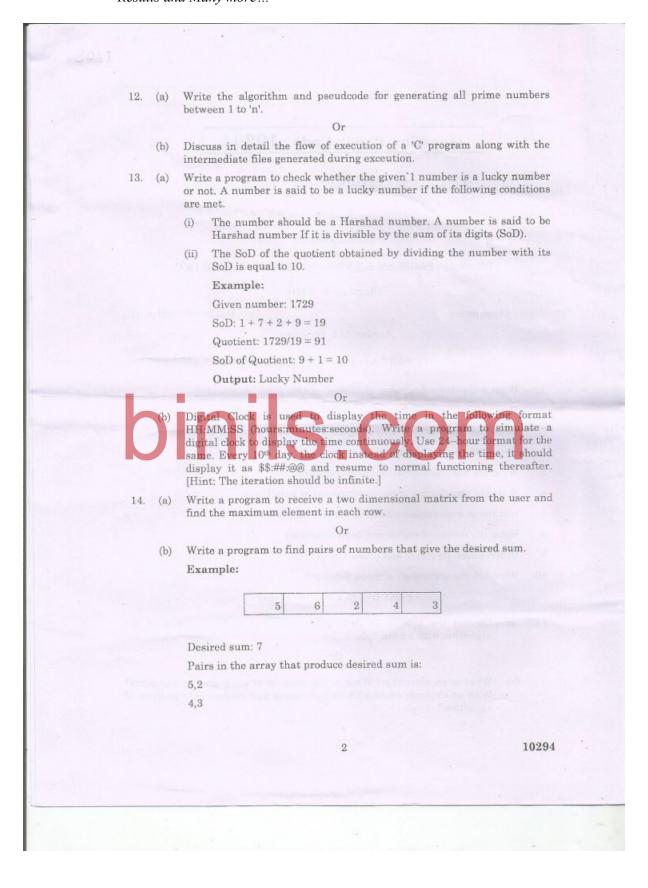
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		Reg. No. ;	
	Quest	tion Paper Code : 10	294
	M.C.A. DEC	GREE EXAMINATIONS, APRIL	/MAY 2023.
		Elective	
		(Bridge Course)	
	BX 4002 — PRO	OBLEM SOLVING AND PROGE	RAMMING IN C
		(Regulations 2021)	
Time	: Three hours	and the second	Maximum: 100 marks
		Answer ALL questions.	
		PART A — (10 × 2 = 20 marks)	
1.	What is top down de	esign?	
		e efficiency of algorithms?	
3.	Draw the flowchart f	for computing the sum of first 'n	nature numbers.
4.	Specify the role of Li	inker and Loader.	
5.	What are the rules for	for defining an identifier?	
6.	State the significance	ce of break statement in switch c	ase.
7.	List the storage class	sses and its scope and lifetime.	
8.	Write the syntax of n	malloc and calloc functions.	
9.	Differentiate structu		
10.	What are the argume	nents of fopen function?	
		PART B — $(5 \times 13 = 65 \text{ marks})$	
11.	(a) Discuss the particular algorithm with	process in finding the compute h an example.	ational complexity of the
		Or	
	(b) What is an alg With an examp algorithm?	gorithm? What is the purpose ouple explain about best, worst an	f analysing an algorithm? d average case analysis of

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15. (a) Write a program to read the file and copy the contents of one file to the other file except for vowels.

Or

(b) Create a structure "Book" consisting of members Title, number of pages, author, price and publisher. display all books that are published by "Wiley".

PART C —  $(1 \times 15 = 15 \text{ marks})$ 

16. (a) The Articraft organization, decided to give 10% discount in their total bill cost to the customer if their name is a Palindrome. Define a function "Palindrome" to check whether the string is a palindrome or not. Define a function "Get\_Details" to get the details of the customer: name, contact number and address, totalcost. Write a program to display the details of customers and the bill amount.

Or

(b) If a number passed recursively to a function is 0, then return 0, and if it's 1, then return one. Otherwise, return 2 multiplied by the current Pell number - 1 + the current Pell number - 2 or: pellNumbercurrent = (2 x pellNumbern - 1) + pellNumbern-2. Write a program to simulate the given scenario. Formula for pell number: P<sub>n</sub> = 2 + P<sub>n-1</sub> + P<sub>n-2</sub> with seeds P<sub>0</sub> = 0 & P<sub>1</sub> = 1.

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