



School of Computing
First CIA Exam – November 2022
Course Code: CSE106
Course Name: Fundamentals of Computer Science
Duration: 90 minutes Max Marks: 50

PART A

Answer all the questions

10 * 2 = 20 marks

1. Define algorithm and flowchart
2. Write an algorithm to find the second smallest number among three numbers
3. Draw the flowchart for calculating the area and circumference of circle
4. List the rules to name an identifier
5. Identify the Contrast between logical operators and bitwise operators
6. Write a C program to print the memory size of all the basic data type variables
7. Guess the output of the following code snippet

```
void main(){
    int a,b,e; char c,c1='d',c2='a'; float d=156;
    a=c1%c2; b=c1+5; c=c2+6;
    printf("%d\n%d\n%c\n",a,b,c);}

```
8. Construct a main() function which prints the reverse of a given three digit input
[Example: if input=321, then output=123]
9. Write a C program to check the given year is leap year or not
10. Construct a main() function which accepts two integer values as an inputs and print all the arithmetic operations and bitwise operations results

PART – B

Answer any two Questions.

2 * 10 = 20 Marks

11. Write an algorithm and draw the flowchart to calculate the average of 5 subject marks of a student and printing their mark details
12. Write a C program which converts numbers of days to the, year, month, weeks, and days. Draw an appropriate flowchart.

W. a, b, c, d, e

b = a * 2
c = a * 3

d = c * 4

a -> day
b -> month
c -> week
d -> year

13. Write a C program which accepts Employee name, Employee number, and Number of working hours as an inputs. The company will pay weekly salary where 5 working days per week and 8 hours per day. The company needs to pay Rs. 100 per hour. If working hours is more than 40, then every hour beyond 40 needs to be paid Rs. 200 per every extra hour. Print the following outputs after reading the inputs:

- Print Total salary with name if working hours less than 30
- Print Total salary with name, employee number if working hours between 30 to 40
- Print Employee name, Employee Number, Total hours and Total salary, if working hours more than 40 hours

PART – C

Compulsory Question

1 * 10 = 10 Marks

14. Write a C program to demonstrate ATM machine transactions for the people who have the account balance between Rs. 10,000 to Rs. 2,50,000 as minimum and maximum balance only. Any transactions between the given range can be accepted. Any transactions beyond maximum balance and going below minimum balance should be restricted with the warning message as “You are exceeding maximum limit” or “Your account balance will go less than Rs. 10000, so the transaction is failed”. Write an algorithm before proceeding with code

