

**Gujarat Technological University**  
**Integrated MCA**  
**Semester-II Practical Examination**

**Subject Code: 4420602**

**Subject: Advance C Programming**

Q1	Write C program for following task	30
A.	Create a user define data type called Date containing three data members day, month and year.	05
B.	Write a function to read and print a date in given format.	10
C.	Write a function to check whether the given date is valid or not.	10
D.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q2	Write C program for following task	30
A.	Write a user define function to check whether the given string is palindrome or not.	10
B.	Write a function to read n string values from user and store them in an array. The array should be created dynamically.	10
C.	Write a function to print all palindrome words in a file.	05
D.	Implement above functionality in main function with proper indentation, comments and naming conventions.	10
Q3	Write C program for following task	30
A.	Write user define functions to read and print 2-D array in matrix format .The array should be created dynamically.	10
B.	Write a function to add and multiply two matrices.	15
C.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q4	Write C program for following task	30
A.	Create a user define data type called Rational containing two data members numerator and denominator.	05
B.	Write a function to read and print a rational number in proper format e.g. 2/3.	05
C.	Write a function to add, subtract and multiply two rational numbers.	15
D.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q5	Write C program for following task	30
A.	Write a user define function to check whether the given number is Armstrong or not.(Hint : If sum of cube of individual digit of a given number is same as the number then it is called Armstrong number e.g. 153=13+53+33)	10
B.	Write a function to print all the Armstrong numbers between 1 and 1000 in given file. The file name should be given from command line.	15
C.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05

Q7	Write C program for following task	30
A.	Write a user define function to calculate Electricity bill for given number of units. For first 100 units the rate would be Rs 1/unit, for next 100 units Rs. 2/unit and remaining units Rs. 5/unit.	15
B.	Create a structure having data member customer name, address and no of unit .Store records of five customer and print the respective bill in five different files.	10
C.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q8	Write C program for following task	30
A.	Create a user define data type called Time containing three data members hour, minute and second.	05
B.	Write a function to read and print a Time in given format (i.e. 12 hr or 24 hr format).	15
C.	Write a function to check whether the given time is valid or not.	05
D.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q9	Write C program for following task	30
A.	Create a structure called Player having data member pid , pname ,gametype and score. If game type is football the score should store as integer(goals) and if it is cricket then score should be stored as float(average runs).	05
B.	Write two functions to read and print the record of five players.	10
C.	Write a function to print Top scorer in both the games in specified file. The file name should be given from command line.	10
D.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q10	Write C program for following task	30
A.	Write a user define function to convert a given name into capital format. (Hint If given string is sachin ramesh tendulkar the output should be SACHIN RAMESH TENDULKAR.	10
B.	Write a function to read n names from user and store them in an array. The array should be created dynamically.	05
C.	Write a function to print all the names of array in initial capital format in specified file using above mentioned function.	10
D.	Implement above functionality in main function with proper indentation, comments and naming conventions.	10
Q11	Write C program for following task	30
A.	Write a program to create copy command of DOS using command line arguments which can copy the content of source file into destination file.(E.g. c:>copy abc.txt xyz.txt) .	15
B.	Write a function to reverse the content of destination file.	10
C.	Implement above functionality in main function with proper indentation, comments and naming conventions	05
Q12	Write C program for following task	30
A.	Write a user define function to sort the array.	10
B.	Write a function to sort two files containing integer data.	05

C.	Write a function to merge above two files using merge sort.	10
D.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q13	Write C program for following task	30
A.	Create a user define data type called Complex containing two data members real and imaginary.	05
B.	Write a function to read and print a complex number in proper format e.g. 2+3i or 5-3i	10
C.	Write a function to add and subtract two complex numbers.	10
D.	Implement above functionality in main function with proper indentation, comments and naming conventions	05
Q14	Write C program for following task	30
A.	Create a singly linked list using structure having data and *next as members and implement following functionality	05
B.	1)AddAtLast() 2) AddAtBegning () 3) Delete()	20
C.	Implement above functionality in main function with proper indentation, comments and naming conventions	05
Q15	Write C program for following task	30
A.	Create a doubly linked list using structure having data and *next as members and implement following functionality	05
B.	1)AddAtLast() 2) AddAtBegning () 3) Delete()	20
C.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q16	Write C program for following task	30
A.	Create a Stack using array and implement following functionality	05
B.	1) Push 2)Pop 3)Peep	10
C.	Write a function to convert infix expression in to postfix expression.	10
D.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q17	Write C program for following task	30
A.	Create a Circular Queue using array and implement following functionality	05
B.	1)AddElement() 2) RemoveElement() 3) DiplayQueue()	20
C.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05
Q18	Write C program for following task	30
A.	Create a Priority Queue using array and implement following functionality	05
B.	1)AddElement() 2) RemoveElement() 3) DiplayQueue()	20
C.	Implement above functionality in main function with proper indentation, comments and naming conventions.	05