

QP CODE 2013511104

Reg. No

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DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – JUNE 2024

Semester: I

351 CP 11 PROBLEM SOLVING USING C

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. a) Explain the various data types in C. (5 Marks)
b) What is constant? Explain the types of constant. (10 Marks)
c) Explain in detail about various operators in C program with examples. (5 Marks)
2. a) Write a C program to check whether the given integer is prime or not. (5 Marks)
b) Describe the three looping statements in C with examples. (10 Marks)
c) Write the concept of declaring and initialization of strings with example. (5 Marks)
3. a) Difference between union and structure with example. (10 Marks)
b) How to pass structures to functions? Explain with an example program. (10 Marks)
4. a) Explain dynamic memory allocation in detail. (10 Marks)
b) What is pointer and write the advantages of pointers. (5 Marks)
c) How we declare and initialize pointer variable and explain with an example? (5 Marks)
5. a) What is a file? Explain the various file operations in C with examples. (10 Marks)
b) Write a C program to copy the content of one file to another file. (10 Marks)
6. a) What is an expression? How to evaluate an expression with example? (10 Marks)
b) Explain in detail about the structure of C program. (10 Marks)
7. a) Describe the general syntax for a function declaration and function definition with an example in C. (10 Marks)
b) What is recursion? Write a recursive program to find the factorial value of an integer. (5 Marks)
c) What is a structure? How structure members are accessed in C? Explain. (5 Marks)