PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech Mid Semester Exam

Semester: 2

Subject Code: 303105151

Subject Name: Computational Thinking for Structured Design-2)

Total Marks: 40

Date: (04/04/2024)

Time: (1hr: 30min)

Mark

Sr. No.

05

Q.1 (A) Attempt all the Questions

1. C Dynamic Memory Allocation can be defined as a procedure in which the size of a data structure (like Array) is changed during the runtime.

    A. malloc() B. calloc() C. realloc() D. free()

2. When a memory pointed by a pointer is de-allocated the pointer becomes a dangling pointer.

    A. dangling pointer B. real pointer C. pointer array D. None

3. The process of importing such files that might be system-defined or user-defined is known as:

    A. file inclusion B. file avoidance C. system file D. user file

4. Syntax to include the header file is:

    A. #include<header_file> B. #includes<anyfilename>

    C. #define<header_file>   D. #include<#define>

5. What keyword is used to create user defined datatypes in C?

    A. enum B. enumeration C. int D. enum int

(B) Fill in the blanks

05

1. "free" method in C is used to dynamically _____ the memory.

2. #include<stdio.h>is _____ file.

3. _____ is a compiler directive that allows you to provide additional information to the compiler.

4. _____ keyword is used to create a structure.

5. _____ pointer refers to a pointer that points to a memory location that has been deallocated or freed.

Q.2 Attempt any four (Short Questions)

12

(1) What is dynamic memory allocation? Explain calloc ( ) and realloc ( ) with the syntax.

(2) What is file inclusion? Explain pre – existing header file and user – defined header file.

(3) What is Enumerators? Explain with syntax and example.

(4) What is Anonymous structure? Explain with syntax and example.

(5) Explain below term.

      1. What is pragma? Define

      2. #if

      3. #else

      4. #define

      5. #undef

Q.3 Attempt any two questions   08

    (1) Explain object – like macros and chain macros with an example.
    (2) What is Union? Explain anonymous union with an example.
    (3) Explain nested structure with syntax and example.

Q.4 (A) Explain array of structure and array within structure with an example.   05
      (B) What is self-referential structure? Explain with an example.   05
                    OR
      (B) What is typedef ? Explain with syntax and example.