

PROGRAMMING FOR PROBLEM SOLVING (3110003)

Assignment 1

No. Question

- 1 Draw and explain the block diagram of the Computer System.
- 2 Draw a flowchart to find whether a given number is odd or even.
- 3 Write an algorithm to find the area of a circle.
- 4 List out types of software with Examples.
- 5 Difference between Assembler, Compiler, and Interpreter.
- 6 Define the following terms: 1) Operating System 2) Loader 3) Linker 4) Preprocessor.

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Assignment – 2

- | No. | Questions |
|-----|--|
| 1 | Describe print statement provided by the C programming language. |
| 2 | Explain used in C and explain any three with examples. |
| 3 | Describe getch()-with examples. |
| 4 | Consider the following C statements: enum month {JAN=5, FEB, MAR=8, APR, MAY};
printf("%d %d %d", ++FEB, MAR, APR); What would be the output? |
| 5 | Consider the following C statements: int y=-5; printf("%x", y); What would be the output? |
| 6 | Differentiate between x++ and ++x. What would be the effect on output? |
| 7 | For the following C statement, what will be the value of x in hex? x = -2<<2; |
| 8 | If integers sum = 25 and n = 10, what would be the results of avg = sum/n; and avg = (float)sum/n; if avg is float? |

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Assignment 3

No. Question

- 1 Distinguish the data types provided by the C programming language.
- 2 List all operators used in C and explain any three with examples.
- 3 Describe precedence and associativity of operators with examples.
- 4 List any three header files with their usage.
- 5 Explain the ternary (? :) operator in detail. Can a ternary operator be nested (True/False)?
- 6 What do you mean by enumerated data types in C language?
- 7 Write the outputs of the following expressions:
 - i) ``5 % 2 * 2 + 3``
 - ii) ``5 / 2.1 (int) 2.5 + 3``
 - iii) ``(1 > 2) || ((2 < 3) && 5 < 1)`` |

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Assignment 4

No. Question

- 1 Explain the following: Break, Continue.
- 2 Describe general form of if, if else, Nested if, goto.
- 3 Explain nested case statement with an example to read a number between 1 to 7 and print the relative day (Sunday to Saturday).
- 4 Calculate the output for the following code snippets:

Code Snippet 1:

```
#include <stdio.h>

void main() {

    int x = 1;

    if (x+1)

        printf("Output 1");

    else

        printf("Output 2");

}
```

Code Snippet 2:

```
#include <stdio.h>

void main() {

    int x = -1;

    if (-x-1)

        printf("Output 3");

    else
```

```
    printf("Output 4");  
}
```

Code Snippet 3:

```
#include <stdio.h>  
  
void main() {  
    int x = 0;  
    if (x/x)  
        printf("Output 5");  
    else  
        printf("Output 6");  
}
```

Code Snippet 4:

```
#include <stdio.h>  
  
void main() {  
    int x = -2;  
    if (x-1)  
        printf("Output 7");  
    else  
        printf("Output 8");  
}
```