

14. Explain the working principle of switch statement with example? 6

Part C (Answer any 1 question(s). Each carries 14 marks)

15. (a) Write a C program that accepts a positive integer and prints out the sum of the digits of this number. 7

(b) Write a C program to find average marks obtained by a class of 50 students in a test. 7

16. (a) Explain the Types of computer network? 7

(b) Explain Von Neumann Model with a neat diagram? 7

Part A (Answer any 6 questions. Each carries 3 marks)

1. What is register? Why it is known as working memory of CPU? 2

2. What is the difference between ASCII and EBCDIC codes? 2

3. Convert the binary number 10101101 to Gray code and explain the steps involved. 2

4. Write any 6 boolean laws. 2

5. What are the different header files used in C language? 2

6. What is the difference between assignment and equality operators? 2

7. Write the rules of making identifiers. 2

8. Differentiate between 'break', 'continue', 'return' statements. 2

Part B (Answer any 4 questions. Each carries 6 marks)

9. OS is a resource manager. Justify the statement. 6

10. Explain the concept of 2's complement representation and its role in signed arithmetic. 6

11. Draw the logic circuit for the Boolean expression $AB + \bar{A}B$ using basic gates. 6

12. Explain precedence and associativity. 6

13. Define an operator in C. What are increment and decrement operators? Predict the output of the following code. Justify your answer.

```
int x = 4, y, z;  
y = --x;  
z = x--;  
printf("%d\t%d\t%d", x, y, z);
```