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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATION- October-2019
B.Tech V Semester

COURSE CODE: 10B1WCI515 MAX. MARKS:25
COURSE NAME: Software Testing & Debugging
COURSE CREDITS: 04 MAX. TIME: 1:30 Hours

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. Explain different constrain symbols used in cause effect graph? [3]
2. Consider a situation where in a company employees are paid bonus only if they work more than a year and achieve individually target. Make cause effect graph of this situation. [3]
3. Explain different experience based testing techniques. [4]
4. Define statement coverage, branch coverage, condition Coverage and path coverage in white box testing. [3]
5. Consider the following program in C [5]

```
    int compute(int x, int y) {
1       while (x! = y){
2         if (x>y) then
3               x= x – y;
4         else  y= y – x;
5         }
6       return x;
7       }
```

Make the DD graph of the given program, compute the cyclomatic complexity and list all the independent paths

6. Consider the following program in C [3]

```
1. void main() {
2   char operator;
3.  int firstNumber=8,secondNumber=2;
4.  printf("Enter an operator (+, -, *, /): ");
5.  scanf("%c", &operator);
6.  switch(operator)  {
7.    case '+':
8.       printf("%d + %d = %d",firstNumber, secondNumber, firstNumber+secondNumber);
9.    case '-':
10.      printf("%d - %d = %d",firstNumber, secondNumber, firstNumber-secondNumber);
11.   case '*':
12.      printf("%d * %d = %d",firstNumber, secondNumber, firstNumber*secondNumber);
13.   case '/':
14.      printf("%d / %d = %d",firstNumber, secondNumber, firstNumber/secondNumber);
15.   default:
16.      printf("Error! operator is not correct");   }
17. }
```

For the above program find the test case for approximately 82% of statement coverage. Also find the minimum number of test cases required (with inputs) for achieving 100% statement coverage.

7. Calculate the cyclomatic complexity of the graphs using graph matrix method. [4]