

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATION- October-2019

B.Tech V Semester

MAX. MARKS:25

COURSE CODE: 10B1WCI515

COURSE NAME: Software Testing & Debugging

MAX. TIME: 1:30 Hours

COURSE CREDITS: 04

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]

```

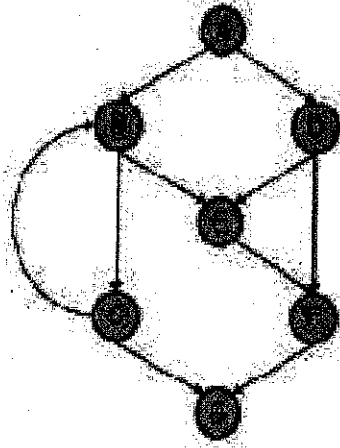
1. void main() {
2   char operator;
3   int firstNumber=8,secondNumber=2;
4   printf("Enter an operator (+, -, *, /): ");
5   scanf("%c", &operator);
6   switch(operator) {
7       case '+':
8           printf("%d + %d = %d",firstNumber, secondNumber, firstNumber+secondNumber);
9       case '-':
10          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]



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