Duration: 3 hrs **[Max Marks: 80]**

N.B. : (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

1 Attempt any FOUR **[20]**

a Explain Bottom up Integration Testing with one example

b How to test simple loop in a program?

c Explain Logic Coverage Criteria for Statement Coverage.

d Explain State Table Based testing with example.

e Discuss the features and use of Bugzilla Testing Tool.

2 a Consider the program for calculating the factorial of a number. **[10]**

```
main()
{
int number;
int fact();
1. clrscr();
2. printf("Enter the number whose factorial is to be found out");
3. scanf("%d", &number);
4. if(number <0)
5. printf("Facorial cannot be defi ned for this number);
6. else
7. printf("Factorial is %d", fact(number));
8. }
int fact(int number)
{
int index;
1. int product =1;
2. for(index=1; index<=number; index++)
3. product = product * index;
4. return(product);
5. }
```

(A) Draw the DD graph for the program.
(B) Calculate the individual cyclomatic complexity number for main() and fact() and then, the cyclomatic complexity for the whole program.

b What is Agile testing? Explain challenges in Agile Testing **[10]**

3	a	Explain the process of test suite prioritization with its type in detail with example.	**[10]**
	b	What are the Key elements of Test Management? Explain the structure of testing group.	**[10]**
4	a	What are graph metrics? Explain with an example how to calculate cyclomatic complexity using graph metrics.	**[10]**
	b	Why is automation important in testing? What are the guidelines for selecting testing tools?	**[10]**
5	a	What is Mutation Testing? Explain primary mutant with an example	**[10]**
	b	Classify different types of bugs based on the Software development lifecycle with example	**[10]**
6	a	Explain ISO 9000:2000 standard.	**[10]**
	b	What is performance testing? Why is performance testing important?	**[10]**
