TE Semv (c scheme) R 2019 "ECS" Nov- Dec 2022

022

per / Subject Code: 32125 / Department Level Optional Course-I: Software Testing & Quality Assurance

(3 hrs.) Maximum Marks = 80

1. Question No. 1 is compulsory and solve any THREE questions from remaining questions
2. Assume suitable data if necessary
3. Draw clean and neat diagrams

Q1. Attempt any four

		Marks
a.	Explain lifecycle of bugs with a neat diagram.	5
b.	Explain the structure of the testing group.	5
c.	Explain the method to perform loop testing in software.	5
d.	Explain the need of test automation.	5
e.	Discuss the challenges related to agile testing.	5

Q2. a. A Program accepts a, b, c as 3 sides of a triangle. The range of a, b, c is [1,100]. Program outputs type of triangle as one of scalene, isosceles, equilateral and not a triangle which is formed by a, b, c. Design test cases using Boundary Value Checking (BVC) and Robustness Testing Method. 10

b. Discuss regression testing. 10

Q3. a. Explain Software Testing Life Cycle in detail. 10

b What is a test plan document? Explain the components of test plan document. 10

Q4 a. Consider a program to calculate the factorial of a number. It consists of main() program and the module fact(). Calculate the individual cyclomatic complexity of main() and fact() and then the cyclomatic complexity of whole program. 10

```
int fact(int);

main()
{
        int number;
1.      clrscr();
2.      printf("Enter the number whose factorial is to be found");
3.      scanf("%d",&number);
4.      if(number <0)
5.              printf("Factorial can't be defined for this numebr");
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.}
```

b. Explain McCall's quality factors in detail. 10

Q5 a. Explain Object-oriented testing. 10

b. Explain acceptance testing in detail. 10

Q6 a. Explain ISO 9000:2000. 10

b. Explain goals of software testing. 10

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