

Con. 2941-11.

(REVISED COURSE)

RK-3528

(3 Hours)

[Total Marks : 100]

- N.B. :** (1) Question No. 1 is **compulsory**.  
(2) Attempt any **four** questions out of remaining **six** questions.

- |        |  |    |
|--------|--|----|
| 1. (a) | Compare Error, failure and fault failure.  | 5  |
| (b)    | Explain Test case Design effectiveness.  | 5  |
| (c)    | Explain different views of software quality.   | 5  |
| (d)    | What are the strengths and weaknesses of automated and Manual testing.   | 5  |
| 2. (a) | Write a function for Binary Search. Also draw a data flow graph for the same and show that branch coverage include statement coverage.   | 10 |
| (b)    | Explain Test Execution Strategy in detail.   | 10 |
| 3. (a) | Explain Mutation Testing in detail with example.   | 10 |
| (b)    | Calculate Power of number. Draw CFG for below given routine—<br>Scan F ( " % d % d", & x, & y ) ;<br>if (y < 0)<br>Pow = -y;<br>else<br>Pow = y;<br>2 = 1.0;<br>while (Pow != 0)<br>{<br>Z = Z * x ;<br>Pow = Pow - 1;<br>}<br>if (y < 0)<br>2 = 1.0/Z;<br>print f ("% f", Z); | 10 |
| 4. (a) | What are the differences between software testability and Reliability ? What is more important in software ? Justify your answer.  | 10 |
| (b)    | Explain different metrics used in System Testing.  | 10 |
| 5. (a) | Draw control flow graph for given code and show that branch coverage includes statement coverage.  | 10 |

```

FILE *Fptr1, *Fptr2, *Fptr3; /* These are global variables. */
int openfiles ( ) {
/* This function tries to open files "file1", "file2," and "file3" for read access,
and returns the number of files successfully opened. The file Pointers of
the opened files are put in the global variables. */
inti = 0;
if (
((( Fptr1 = Fopen ("file1", "r")) != NULL) && (i++) & (0)) ||
((( ptr2 = Fopen ("file2", "r")) != NULL) && (i++) && (0)) ||
((( fptr3= fopen ("file3", "r") != NULL) && (i++)));
return (i);
}

```

- (b) Briefly explain McCalls quality factors and quality criteria. 10
6. (a) Explain in detail evaluations & Selection of test automation Tools. 10  
 (b) In a Software test project, the number of unit, integration; and system-level test cases specified are 250, 175 and 235, respectively. The number of test cases added during the unit, integration and system testing phases are 75, 60 and 35, respectively. Calculate the TCDY for unit, integration and system testing phases. 10
7. (a) What are zero day attack ? Discuss it's significance with respect to security Testing . 5  
 (b) Explain Test Design preparedness metrics. 5  
 (c) Explain different types of interface errors. 5  
 (d) What are advantages & disadvantages of acceptance testing ? 5
-