

(3 hrs.)

NB:

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 |
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| a.  | Explain the model for software testing.  | 5     |
| b.  | Explain acceptance testing.  | 5     |
| c.  | What are the skills a tester must possess?   | 5     |
| d.  | What is the need for test automation?  | 5     |
| e.  | Differentiate between progressive and regressive testing.  | 5     |
| Q2. | a. A program reads three numbers A, B, and C, with a range [1,100] and prints the largest number. Design test cases for this program using equivalence class testing.  | 10    |
|     | b. Explain components of a test plan.  | 10    |
| Q3. | a. What is mutation testing? Explain advantages of mutation testing. Consider the following code snippet.  | 10    |
|     | <pre> if(a&gt;b)     x=x+y; else     x=y; printf("%d",x);                     </pre>   |       |
|     | Write primary mutants of the given code. Design test cases to check the primary mutants of this code.  |       |
|     | b. Explain McCall's quality factors in detail.   | 10    |
| Q4. | a. Consider following pseudocode.  | 10    |
|     | <ol style="list-style-type: none"> <li>1. sum_of_all_positive_numbers(a,num_of_entries,sum)</li> <li>2. sum=0</li> <li>3. init=1</li> <li>4. while(init &lt;= num_of_entries)</li> <li>5.     if a[init] &gt; 0</li> <li>6.         sum=sum+a[init]</li> <li>7.     endif</li> <li>8.     init=init+1</li> <li>9. endwhile</li> <li>10. end sum_of_all_positive_numbers</li> </ol> |       |

Draw the control flow graph of the given pseudocode. Determine the cyclomatic complexity of the graph. List all the independent paths and design test cases from all the independent paths.

- b. Explain Agile Testing in detail. 10
- Q5 a. Explain ISO9000:2000 in detail. 10
- b. Explain test suite minimization and its benefits. 10
- Q6 a. Explain categorization of test automation tools. 10
- b. Explain the goals of software testing. 10

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