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B. Tech. 7th Semester (CSE) Professional Elective-V Examination – May, 2023

SOFTWARE TESTING

Paper: PEC-CSE-413-G

Time: Three hours]

[Maximum Marks: 75

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note: Attempt five questions in all, selecting one question from each Section. Question No. 1 is compulsory.All questions carry equal marks.

1. Explain the following:

 $2.5 \times 6 = 15$

- (a) Software System.
- (b) Error and Fault
- (c) Test Suite
- (d) Dynamic testing
- (e) Walkthrough
- (f) Software testing

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SECTION - A

- (a) What are the objectives/goals of software testing? Also discuss the limitations of software testing. 8
 - (b) What are seven fundamental principles of software testing? Narrate with suitable examples.
- Discuss Software Testing Life Cycle (STLC) in details 3. 15 with diagrams and examples.

SECTION - B

- (a) What do you understand by Test Cases? Briefly 4. discuss test case plan components.
 - (b) What is Unit Testing? Why unit testing is 7 required in a software systems? Discuss.
- What do you mean by Integration Testing? What are 5 its different techniques and why it is required in a software system? Elaborate. 15

SECTION - C

- 6. (a) Discuss the content of problem report in details. Write various bug reporting tools.
 - (b) What is bug reproducible? How we make a bug reproducible? Explain. 8
- What do you mean by White Box Testing? Explain different white box testing techniques with suitable 15 examples.

SECTION - D

- (a) What do you mean by testing tools? What are its 8. types ?. Differentiate manual and automated 10 testing tools with suitable cases.
 - (b) Exhaustive testing is not feasible at all for large 5 and complex system. Justfy.
- What is regression testing? What are its types and 9. 15 different available testing techniques?