


Name:			
Enrolment No:			
UPES End Semester Examination, May 2023			
Course: Test Automation Program: B.Tech. CSE+DevOps Course Code: CSDV3007		Semester: VI Time : 03 hrs. Max. Marks: 100	
Instructions: Start new questions from new page. For section A question do not write more than 2-3 lines in answer.			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Which one should be performed before and why: 1. Functional Testing 2. Non-Functional Testing	4	CO3
Q 2	Explain what a test case consists in Software Testing conventionally?	4	CO1
Q 3	Write down the target application types of API Testing and GUI Testing.	4	CO4
Q 4	Which granularity level of testing checks the behavior of module cooperation?	4	CO2
Q 5	Which one should be performed before and why: 1. Unit Testing 2. Integrated Testing	4	CO2
SECTION B (4Qx10M= 40 Marks)			
Q 6	Explain what is Scrapy Shell and how it can be used to interactively test and debug Scrapy spiders?	2+8	CO3
Q 7	How does logging module enable effective debugging and error tracking compared to using print statements? Explain with an example. OR Using the unittest module, write test cases for a function that calculates the factorial of a number. Demonstrate how to test for expected outputs and handle exceptions in your test cases.	6+4	CO2

Q 8	Define the principles of testing in software development. What are some common testing methodologies used to ensure software quality?	5+5	CO2
Q 9	<p>Debug the code given below. The function generate_permutations should generate all the permutations of the given list. For example, if input list is [1,2,3] output should be: [[1, 2, 3], [1, 3, 2], [2, 1, 3], [2, 3, 1], [3, 1, 2], [3, 2, 1]]</p> <pre>def generate_permutations(input_list): if len(input_list) == 0: return [] elif len(input_list) == 1: return [input_list] else: permutations = [] for i in range(len(input_list)): m = input_list[i] rem_list = input_list[i+1:] for p in generate_permutations(rem_list): permutations.append([m] + p) return permutations</pre>	10	CO3
SECTION-C (2Qx20M=40 Marks)			
Q 10	<p>Given the following HTML form code:</p> <pre><form> <label for="fname">First name:</label> <input type="text" id="fname" name="fname">

 <label for="lname">Last name:</label> <input type="text" id="lname" name="lname">

 <input type="submit" value="Submit"> </form></pre> <p>Write a Selenium script to do the following:</p> <ol style="list-style-type: none"> 1. Open the browser and navigate to a specified URL where this form is present. 2. Fill the first name and last name fields with the values "John" and "Doe", respectively. 3. Click the submit button to submit the form. 	5*4	CO4

	<p>4. Wait for the page to load and verify that the form submission was successful.</p> <p>Write your Selenium script and assume that the appropriate Selenium drivers have been installed and configured for your browser of choice.</p>		
Q 11	<p>Using an example of a software application, describe the testing activities that would be performed in each phase of the software testing lifecycle. Provide specific examples of test cases that would be created and executed in each phase.</p> <p style="text-align: center;">OR</p> <p>Design a set of comprehensive unit testing guidelines for a software development team. Explain each one with example scenario.</p>	20	CO1