B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

June 2025 Semester End Main Examinations

Programme: B.E.   Semester: VI
Branch: Institutional Elective   Duration: 3 hrs.
Course Code: 23IS6OERPA / 21CC6OE1RD   Max Marks: 100
Course: Robotic Process Automation Design and Development

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

<div style="writing-mode: vertical">Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.</div>

			UNIT - I	*CO*	*PO*	**Marks**
1	a)		Outline the role of each core component of an RPA platform. Justify how these components work together to build, execute, and monitor automation.	*CO1*	*PO1*	**10**
	b)		Detail out on some of the important benefits of Robotic Process Automation (RPA).	*CO1*	*PO1*	**10**
			OR			
2	a)		Differentiate between Automatic recording and Manual recording.	*CO1*	*PO1*	**6**
	b)		How can sectors like banking, healthcare, and manufacturing specifically benefit from implementing RPA solutions? Justify your answer.	*CO1*	*PO1*	**6**
	c)		Elucidate on the various components of the UiPath stack to make the UiPath platform fully operational at an enterprise level.	*CO1*	*PO1*	**8**
			UNIT - II			
3	a)		Use Switch activity to develop a UiPath workflow that takes student names and their marks in 3 subjects as input variables. Calculate the average and decide the grade based on the following rules: • Average ≥ 90: Grade A • Average ≥ 75 and < 90: Grade B • Average ≥ 50 and < 75: Grade C • Average < 50: Fail	*CO2*	*PO3*	**10**
	b)		Highlight the importance of arguments in UiPath. Design a workflow that calculates the factorial of a number. Pass the number as an argument and return the result.	*CO3*	*PO3*	**10**
			OR			
4	a)		Develop a workflow in UiPath where you declare three types of variables – String, Integer, and Boolean. Assign values and display them using Write Line activities.	*CO3*	*PO3*	**10**

		b)	Highlight the purpose of a data table in UiPath. Design a workflow in UiPath to build a data table with the below given data and display the contents in a message box.	*CO3*	*PO3*	**10**

Student Name	USN	Section
AAAA	1111	A
BBBB	2222	B
CCCC	3333	C

UNIT - III

5	a)	With the help of workflow examples, differentiate the working of the following activities in UiPath: i) Element Exists vs Element Scope ii) Wait Element Vanish vs Wait Image Vanish	*CO2*	*PO1*	**10**
	b)	Open any web page (e.g., Google or a sample e-commerce site). Use the UiExplorer to identify both the full and partial selectors for a search bar. Highlight the difference between full and partial selectors and outline the scenarios where each is useful.	*CO2*	*PO2*	**10**

OR

6	a)	With the help of workflow examples, outline the working of the following activities in UiPath: i) Get ancestor ii) Find element iii) System trigger iv) Indicate on screen	*CO2*	*PO1*	**12**
	b)	Automate a task using Basic Recording to open the Calculator app and perform a sequence of arithmetic operations (e.g., $25 + 30 - 10 \times 2$).	*CO2*	*PO3*	**8**

UNIT - IV

7	a)	Illustrate with examples, the following exceptions we usually face while working on UiPath and the ways to handle these exceptions. i) Orbit reference not set to the instant of an object ii) Click Generic error	*CO3*	*PO1*	**10**
	b)	Detail out on the different actions performed on the UiPath workflow when the following debugging techniques are used. Illustrate with an example. i) Slow Step ii) Execution Trail iii) Setting breakpoints iv) Step Out	*CO3*	*PO1*	**10**

OR

8	a)	Design a UiPath workflow where the robot starts automating only when the user presses Ctrl + Shift + N. Upon triggering, the robot should open Notepad and type "Automation triggered successfully". Clearly outline the steps involved.	*CO2*	*PO3*	**10**

				CO	PO	
		b)	Design a workflow in UiPath for monitoring a copying event and blocking it – we have an Excel file from which we want the data to be copied as soon as the user presses the Enter key. Clearly mention the steps.	*CO2*	*PO3*	**10**
			UNIT - V			
	9	a)	Outline how workflow reusability in UiPath enhances automation efficiency. Detail out the two different approaches to achieve reusability in UiPath, with suitable examples.	*CO4*	*PO1*	**10**
		b)	Detail out on the steps to: i) logical components of UiPath Orchestrator ii) deploying a process in Orchestration Server	*CO4*	*PO2*	**10**
			OR			
	10	a)	How do good commenting practices impact collaboration and debugging in UiPath projects? Illustrate with a use case.	*CO4*	*PO2*	**4**
		b)	Explicate the complete process of publishing an automation project from UiPath Studio to Orchestrator.	*CO4*	*PO2*	**10**
		c)	Compare Sequences, Flowcharts, and State Machines in UiPath. When would you choose each of them, and why?	*CO4*	*PO2*	**6**

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