

CBCS SCHEME

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21CD71

Seventh Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025 Robotic Process Automation Design and Development

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain scope and techniques of Automation. (10 Marks)
b. List and explain Downsides of RPA. (10 Marks)

OR

- 2 a. Explain Robotic process automation. List and explain the benefits of RPA. (10 Marks)
b. Explain the following :
i) UiPath studio ii) UiPath Robot iii) UiPath orchestrator iv) The future of automation. (10 Marks)

Module-2

- 3 a. With a neat diagram, explain components of RPA? (10 Marks)
b. List out different types of panels in UiPath studio and explain. (10 Marks)

OR

- 4 a. Explain in detail the steps involved to automate the task of emptying RECYCLE BIN. (10 Marks)
b. Explain UiPath and explain the basic components of UiPath RPA. (10 Marks)

Module-3

- 5 a. List and explain different types of control flow activities. (10 Marks)
b. Explain how to build a data table using data scraping. (10 Marks)

OR

- 6 a. Define Variable. List and explain different types of variable with example. (10 Marks)
b. Explain how to Read an Excel file and create a data table by using data from the Excel file. (10 Marks)

Module-4

- 7 a. Illustrate the Act on controls of mouse and keyboard activities. (10 Marks)
b. Explain OCR and different types of OCR and how to use. (10 Marks)

OR

- 8 a. Illustrate the techniques for waiting for control. (10 Marks)
b. Explain Scenarios of avoiding typical failure points. (10 Marks)

Module-5

- 9 a. List and explain common exceptions that usually face while working on UiPath. (10 Marks)
b. Explain various techniques for debugging. (10 Marks)

OR

- 10 a. What is Exception handling? Demonstrate handling of exceptions with an example. (10 Marks)
b. Briefly explain collecting crash dump. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.

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21CS72

Seventh Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025 Cloud Computing

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With a neat diagram, explain cloud computing and its historical development. (10 Marks)
b. List the characteristics and benefits of cloud computing. (10 Marks)

OR

- 2 a. Explain in brief the services provided by the following cloud service provider:
i) Amazon web service
ii) Microsoft azure
iii) Google AppEngine. (10 Marks)
b. Write a note on challenges in cloud computing. (10 Marks)

Module-2

- 3 a. Define virtualization and explain hardware level virtualization with its advantages. (10 Marks)
b. Discuss the taxonomy of virtualization techniques at different levels. (10 Marks)

OR

- 4 a. What are the characteristics of virtualized environment? (10 Marks)
b. Explain with a neat diagram Type-I and Type-II hypervisor. (10 Marks)

Module-3

- 5 a. Explain the different types of cloud. (10 Marks)
b. What is IaaS? Explain its reference implementation with a neat diagram. (10 Marks)

OR

- 6 a. Explain the economics of the cloud. (10 Marks)
b. What does the acronym SaaS mean? How does it relate to cloud computing? (10 Marks)

Module-4

- 7 a. Analyze the various cloud security risks that organization face when utilizing cloud computing services. (10 Marks)
b. Explain the security risks posed by a management OS. (10 Marks)

OR

- 8 a. Discuss the traditional concept of trust and trust necessary for online activities. (10 Marks)
b. Explain in detail virtual machine security. (10 Marks)

Module-5

- 9 a. Describe Amazon EC2 and its basic features. (10 Marks)
b. Analyze how cloud computing technology can be applied to support remote ECG monitoring. (10 Marks)

OR

- 10 a. What is a bucket? What type of storage does it provide? (10 Marks)
b. Examine the core components of AppEngine. (10 Marks)

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21IS733

Seventh Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025 User Interface Design

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is user interface design? Elaborate its importance and benefits. (10 Marks)
- b. Discuss about the concept of direct manipulation. (05 Marks)
- c. Provide any ten differences between GUI and web design. (05 Marks)

OR

- 2 a. Describe the characteristics of Graphical user interface. (10 Marks)
- b. Bring out the differences between internet and intranet. (05 Marks)
- c. Explain the principles of XEROX STAR. (05 Marks)

Module-2

- 3 a. Discuss about obstacles and pitfalls in design along with five commandments. (10 Marks)
- b. Explain the common usability problems. (05 Marks)
- c. Discuss the method for gaining understanding of users. (05 Marks)

OR

- 4 a. Describe the techniques for determining user requirements using direct methods. (10 Marks)
- b. Provide the guidelines for designing the conceptual model. (05 Marks)
- c. Discuss about the usage of objects and metaphors in design. (05 Marks)

Module-3

- 5 a. With diagrams, illustrate the structures of Menus. (10 Marks)
- b. Describe different functions performed by the menus. (05 Marks)
- c. Discuss about the content of menus. (05 Marks)

OR

- 6 a. List all graphical menus and explain any one in detail. (10 Marks)
- b. Illustrate the concept of formatting of menus. (05 Marks)
- c. Describe any three guidelines in phrasing of menus. (05 Marks)

Module-4

- 7 a. With diagram, illustrate different components of a window. (10 Marks)
- b. Provide various advantages of using windows. (05 Marks)
- c. Explain the characteristics of window. (05 Marks)

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OR

- 8 a. Discuss about different presentation styles of windows. (10 Marks)
b. Provide the guidelines for selecting the device based controls. (05 Marks)
c. Explain the characteristics of touch screen and keyboard. (05 Marks)

Module-5

- 9 a. What are operable controls? Elaborate the usage of command buttons with guidelines. (10 Marks)
b. Discuss about tool tips and progress indicator controls. (05 Marks)
c. Briefly explain Radio Button Control. (05 Marks)

OR

- 10 a. What is the purpose of using prototypes? Explain any two types of prototypes. (10 Marks)
b. Discuss about the concept of cognitive walkthroughs. (05 Marks)
c. Write short notes on Usability testing. (05 Marks)

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21CD744

Seventh Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025 Big Data Analytics

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With a neat diagram, explain the five layers of the big data architecture design. (12 Marks)
b. Explain Grid computing, its features and drawbacks. (08 Marks)

OR

- 2 a. Explain the classification of data and characteristics of Big data. (10 Marks)
b. Illustrate the various phases involved in Big data analytics with a net diagram. (10 Marks)

Module-2

- 3 a. Explain the physical organization of Hadoop. (07 Marks)
b. With a neat diagram, illustrate the YARN based execution model and its functions. (10 Marks)
c. Explain the Oozie jobs. (03 Marks)

OR

- 4 a. Illustrate the Hadoop core components with a neat diagram. (10 Marks)
b. Explain Map Reduce framework. (10 Marks)

Module-3

- 5 a. Explain key-value store with an example. (10 Marks)
b. Discuss the MangoDB query language and the database commands (any five). (10 Marks)

OR

- 6 a. Identify the differences between ACID and schema-less models' BASE properties. (04 Marks)
b. Explain the following for shared-nothing architecture for Big Data tasks along with neat diagrams:
(i) Master Slave distribution model
(ii) Peer-to-peer distribution model (06 Marks)
c. Illustrate the features and components of Cassandra database. (10 Marks)

Module-4

- 7 a. Show the Map Reduce Process using the diagram and explain the succeeding actions by job tracker and task tracker when a client submits a job. (10 Marks)
b. Explain Hive Integration and workflow steps with a neat diagram. (10 Marks)

OR

- 8 a. Illustrate main features and architecture of Hive with neat diagram. (10 Marks)
b. Explain the HiveQL create table with partition and rename a partition commands. (03 Marks)
c. Identify the differences between Pig and MapReduce. (07 Marks)

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Module-5

- 9 a. Explain K-Nearest-Neighbour Regression Analysis. (10 Marks)
b. Write the block diagram of text mining process and explain its phases briefly. (10 Marks)

OR

- 10 a. Discuss Regression Analysis using Linear and Non-linear regression models. (10 Marks)
b. Describe the web content mining and the three phases of web usage mining. (10 Marks)
