

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM
IV B. Tech I Semester Advanced Supplementary Examinations March 2025

AI CHATBOTS

(AI&DS,AI&ML,CSE(AI),CSE(DS),CSE(AI&ML) and CSE-(AI&DS))

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I

1. a) Explain the customer centric approach in financial services. [7M]
b) Illustrate the training required for Training chatbots for conversations? [7M]
(OR)

2. a) How to handle and what is the need for personal data in chatbots? [7M]
b) Explain the conversational Chatbot Landscape and its methods. [7M]

UNIT-II

3. a) Explain the concept of conversational flow and its significance in designing user-friendly chatbots. [7M]
b) Compare and contrast the rules-based approach and AI-based approach in chatbot development [7M]
(OR)

4. a) What are the critical considerations in developing chatbots to achieve their intended use case? [7M]
b) Illustrate a use case for a 24x7 insurance agent chatbot and its benefits. [7M]

UNIT-III

5. a) Describe the generic solution architecture for private chatbots and explain its key components. [7M]
b) What are the business considerations in building a chatbot solution. [7M]
(OR)
6. a) Evaluate the advantages and disadvantages of chatbots compared to traditional mobile apps. [7M]
b) Discuss the business benefits of chatbots and the metrics used to measure their success, such as customer satisfaction index, completion rate, and bounce rate. [7M]

UNIT-IV

7. a) Describe an overview of the chatbot architecture and its components, emphasizing the role of NLP and NLU in chatbot interactions [7M]
b) What is natural language understanding. Distinguish between natural language understanding and natural language generation in chatbots. [7M]
(OR)
8. a) Explore popular open-source NLP and NLU tools used in chatbot development. What are the advantages and limitations of each tool? [7M]
b) Define and distinguish between Natural Language Processing (NLP), Natural Language Understanding (NLU), and Natural Language Generation (NLG). Provide examples of applications for each. [7M]

UNIT-V

9. a) Write a short note on Microsoft Bot, RASA, and Google Dialog flow [7M]
b) Explain the process of Integration with Third-Party APIs and Connecting to an Enterprise Data Store [7M]
(OR)
10. a) Illustrate about Microsoft Bot Framework [7M]
b) Explain about RASA, RASA Core, RASA NLU in detail. [7M]
