

R18

Code No: M156AA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, February - 2023

AI APPLICATIONS

(Minor Program in Artificial Intelligence and Machine Learning)

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

- 1.a) Give the applications of Natural Language Processing. [2]
- b) What do you mean by quantum computing? [3]
- c) Give the applications of emotion recognition. [2]
- d) What are the benefits of AI in sales? [3]
- e) What do you mean by robotic process automation? [2]
- f) What are the components of supply chain management? [3]
- g) What are various types of AI hardware? [2]
- h) List the applications of AI in information technology. [3]
- i) Give examples of how AI can solve social problems. [2]
- j) What do you mean by a smart solution? [3]

PART – B

(50 Marks)

- 2.a) Explain how Natural Language Processing works.
 - b) What are the main challenges in Natural Language Processing? [5+5]
- OR**
- 3.a) Explain how quantum AI works.
 - b) What are the possibilities of applying quantum computing in AI? [5+5]
- 4.a) Give a brief outline on emotion recognition using facial expressions.
 - b) What are the challenges and moral problems in emotion recognition? [5+5]
- OR**
5. What AI techniques can be used in smart investing? Explain. [10]
 6. Explain how robotic process automation can be aligned with supply chain. [10]
- OR**
- 7.a) What are the challenges faced by an organization in adopting robotic process automation in supply chain management.
 - b) What technologies are important for successful implementation of robotic process automation in supply chain management? [5+5]

8. What is digital twin technology and how does it work and how to design it? [10]

OR

9. Describe various AI techniques for identifying, preventing and responding to emerging security threats. [10]

10. What do you mean by blockchain technology? Explain how AI and blockchain technologies can be integrated. [10]

OR

11. Explain how artificial intelligence and machine learning technologies can aid in the development of smart cities. [10]

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Used papers 2023