PAPER ID-421377

Roll No:

B TECH
(SEM II) THEORY EXAMINATION 2021-22
AI FOR ENGINEERING

Time: 3 Hours   *Total Marks: 100*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1.   **Attempt *all* questions in brief.**

Q no.	Question	Marks	CO
a.	Define Artificial Intelligence and discuss its role.	2	1
b.	Explain the different domains of AI.	2	1
c.	Define data and its importance.	2	2
d.	Identify the challenges faced by speech recognition system.	2	2
e.	How NLP can be beneficial in real life situation?	2	3
f.	What are the limitations of machine translation?	2	3
g.	Explain how deep learning is different from machine learning.	2	4
h.	What is the meaning of learning in artificial neural network?	2	4
i.	What is the difference between speech recognition and voice recognition?	2	5
j.	Define computer vision.	2	5

SECTION B

2.   **Attempt any *three* of the following:**

Q no.	Question	Marks	CO
a.	How artificial intelligence systems are different from traditional system?	10	1
b.	Discuss the importance of Data Visualization. List out various tools for Data Visualizations in detail.	10	2
c.	Compare regression, classification and clustering with example.	10	3
d.	Explain the working of Convolutional Neural Network.	10	4
e.	Describe the working of face recognition.	10	5

SECTION C

3.   **Attempt any *one* part of the following:**

Q no.	Question	Marks	CO
a.	There are few ethical concerns related to AI. Discuss them is detail.	10	1
b.	Explain various skills required to become an AI Engineer.	10	1

4.   **Attempt any *one* part of the following:**

Q no.	Question	Marks	CO
a.	Explain step by step working of speech recognition system.	10	2
b.	What are the different stages of Data Processing?	10	2

5.   **Attempt any *one* part of the following:**

Q no.	Question	Marks	CO
a.	Draw a neat and clean diagram to represent the working of Chatbot. Differentiate between Chatbot and Virtual Assistant.	10	3
b.	Explain Natural Language Understanding and Natural Language Generation.	10	3

6.   **Attempt any *one* part of the following:**

Q no.	Question	Marks	CO
a.	Compare biological and artificial neural network. What is Universal Approximation Theorem?	10	4
b.	Explain the working of Generative Adversarial Network.	10	4

7.   **Attempt any *one* part of the following:**

Q no.	Question	Marks	CO
a.	Explain the difference between Robotics and Artificial Intelligence.	10	5
b.	How Image Recognition and Object Identification are used in Tesla, an autonomous Car?	10	5