PAPER ID-411730

**Roll No:** [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

**BTECH**
**(SEM I) THEORY EXAMINATION 2021-22**
**AI FOR ENGINEERING**

*Time: 3 Hours*                                           *Total Marks: 100*
**Note:** Attempt all Sections. If you require any missing data, then choose suitably.

## SECTION A

1. **Attempt *all* questions in brief.**                     **2x10 = 20**

| Qno | Questions | Marks | CO |
|---|---|---|---|
| (a) | What do you understand by the term "Intelligence"? | 2 | 1 |
| (b) | What do you understand by the term data in the field of Artificial Intelligence? | 2 | 2 |
| (c) | What is Speech Recognition in the field of Artificial Intelligence?? | 2 | 3 |
| (d) | Define "Neuron" in the field of Artificial Intelligence? | 2 | 4 |
| (e) | What is Object Recognition in the field of Image Processing? | 2 | 5 |
| (f) | Define the term Pixel? | 2 | 1 |
| (g) | Explain the term "Algorithm and its basic Properties? | 2 | 2 |
| (h) | List Any two Real-life applications of Natural Language Processing. | 2 | 3 |
| (i) | List some Applications of Deep Learning in the field of Artificial Intelligence? | 2 | 4 |
| (j) | What is Speech Recognition in Artificial Intelligence? | 2 | 5 |

## SECTION B

2. **Attempt any *three* of the following:**                   **10x3 = 30**

| Qno | Questions | Marks | CO |
|---|---|---|---|
| (a) | Describe the four categories under which AI is classified with examples. | 10 | 1 |
| (b) | Discuss different Stages in Data Processing. | 10 | 2 |
| (c) | What is Natural Language Processing? Discuss with some applications. | 10 | 3 |
| (d) | Explain the Universal Approximation Theorem in detail. | 10 | 4 |
| (e) | What is need and use of the concept of Image and face recognition Learning in the field of Artificial Intelligence? | 10 | 5 |

## SECTION C

3. **Attempt any *one* part of the following:**                  **10x1 = 10**

| Qno | Questions | Marks | CO |
|---|---|---|---|
| (a) | Explain the term Computational Intelligence in brief in the field of Artificial Intelligence | 10 | 1 |
| (b) | Write Short note on Classification of Data. | 10 | 2 |

4. **Attempt any *one* part of the following:**                  **10x1 = 10**

| Qno | Questions | Marks | CO |
|---|---|---|---|
| (a) | Explain the concept of Natural Language Understanding and Natural Language Generation? | 10 | 3 |
| (b) | What is Deep learning the field of Artificial Intelligence? Explain its Application and history in brief. | 10 | 4 |

5. **Attempt any *one* part of the following:**                  **10x1 = 10**

| Qno | Questions | Marks | CO |
|---|---|---|---|
| (a) | What's the Difference Between Robotics and Artificial Intelligence? | 10 | 5 |
| (b) | Write about the Emerging Technologies the field of AI. | 10 | 1 |

6. **Attempt any *one* part of the following:**                  **10x1 = 10**

| Qno | Questions | Marks | CO |
|---|---|---|---|
| (a) | What is Data Clustering? Explain anyone Clustering method in details. | 10 | 2 |
| (b) | Describe the different Components of a Typical Conversational Agent? | 10 | 3 |

7. **Attempt any *one* part of the following:**                  **10x1 = 10**

| Qno | Questions | Marks | CO |
|---|---|---|---|
| (a) | Explain Generative Adversarial Network in brief. | 10 | 4 |
| (b) | What are Robots in the field of Artificial Intelligence? Explain its characteristics. | 10 | 5 |