**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, November 2022**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **4BT7101** | Roll No. | Total Printed Pages: 1 |
| **4BT7101** |  |
| B. Tech. IV Year VII-Semester (Main/Back) End Semester Examination, November 2022  **(AI)** | |
| **BAI07101 : Deep Learning** | | | |

# Time: **3** Hours. Total Marks: **60**

Min. Passing Marks: **21**

*Attempt* ***five*** *questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.*

Use of following supporting material is permitted during examination for this subject.

# **1.--------------------------Nil--------------------** **2.------------------Nil-----------------------**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** |  | The Jaipur airport authority wants to capture behavior of passengers and write an algorithm for Al application in Deep learning. | **(12)** | **create** |
|  |  | **OR** |  |  |
| **Q.2** | **(a)** | Express word Vanishing gradient in deep learning. | **(6)** | **Apply** |
|  |  |  |  |  |
|  | **(b)** | What is an LSTM, Discuss the architecture of long short term memory in deep learning? | **(6)** | **Knowledge** |
|  |  | **UNIT-II (CO2)** |  |  |
| **Q.3** |  | Pathshala college is looking for an engineer for a 12th class student data set number. Students who are part of the Poornima college group explain which approaches are useful for data sets in deep learning. | **(12)** | **Create** |
|  |  | **OR** |  |  |
| **Q.4** | **(a)** | Describe the working of K-means clustering with an example in machine learning | **(6)** | **Knowledge** |
|  |  |  |  |  |
|  | **(b)** | What is the Self-organizing map algorithm in machine learning? | **(6)** | **Apply** |
|  |  | **UNIT-III (CO3)** |  |  |
| **Q.5** | **(a)** | What do you mean by auto-Encoders discuss in details. | **(6)** | **Knowledge** |
|  |  |  |  |  |
|  | **(b)** | What do you mean by auto-Encoders discuss in details | **(6)** | **Analyze** |
|  |  | **OR** |  |  |
| **Q.6** | **(a)** | Explained the applications of auto-Encoder in deep learning with examples. | **(6)** | **Knowledge** |
|  |  |  |  |  |
|  | **(b)** | Discuss briefly tuning and optimizing in Auto- encoder with suitable examples | **(6)** | **Apply** |
|  |  | **UNIT-IV (CO4)** |  |  |
| **Q.7** | **(a)** | Briefly discuss the Energy-based model in Boltzmann Machine with suitable examples. | **(6)** | **Apply** |
|  |  |  |  |  |
|  | **(b)** | What do you mean by the Boltzmann machine in deep learning? Discuss | **(6)** | **Knowledge** |
|  |  | **OR** |  |  |
| **Q.8** | **(a)** | Define with an example contrastive divergence in deep learning? | **(6)** | **Analyze** |
|  |  |  |  |  |
|  | **(b)** | How we implement a deep belief network in the Boltzmann machine. Explained | **(6)** | **Apply** |
|  |  | **UNIT V (CO5)** |  |  |
| **Q.9** | **(a)** | Write down the architecture of Gans? | **(6)** | **Knowledge** |
|  |  |  |  |  |
|  | **(b)** | What are the steps involved in the Gans model? | **(6)** | **Apply** |
|  |  | **OR** |  |  |
| **Q.10** | **(a)** | Discuss. Can Gans be used for image editing? | **(6)** | **Analyze** |
|  |  |  |  |  |
|  | **(b)** | Discuss the advantage of Gans in deep learning? | **(6)** | **Analyze** |