**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, November 2022**

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|  | **3BC5119** | Roll No. | Total Printed Pages: 2 |
| **3BC5119** |  |
| BCA III Year V- Semester (Main/Back) End Semester Examination, November 2022  **(AI&PA)** | |
| **BAP05104 : Natural Language Processing** | | | |

# 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-----------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** | **(a)** | List a few differences between AI, Machine Learning, and NLP. | **(6)** | **Create** |
|  |  |  |  |  |
|  | **(b)** | Give example to explain part of speech (POS) tagging. | **(6)** | **Understand** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.2** | **(a)** | List some areas of NLP and explain all with real-life examples. | **(6)** | **Evalute** |
|  |  |  |  |  |
|  | **(b)** | What are the stages in the lifecycle of a natural language processing (NLP) project? | **(6)** | **Apply** |
|  |  |  |  |  |
|  |  | **UNIT-II (CO2)** |  |  |
|  |  |  |  |  |
| **Q.3** | **(a)** | What are some of the common NLP tasks? Order of Difficulty level will discuss? | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | What do you mean by Lemmatization in NLP? Explain with example | **(6)** | **Remember** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
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| **Q.4** | **(a)** | What is the difference between NLP and NLU? | **(6)** | **Analysis** |
|  |  |  |  |  |
|  | **(b)** | List 10 use cases to be solved using NLP techniques? | **(6)** | **Apply** |
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|  |  | **UNIT-III (CO3)** |  |  |
|  |  |  |  |  |
| **Q.5** | **(a)** | What are the steps to follow when building a text classification system? | **(6)** | **Remember** |
|  |  |  |  |  |
|  | **(b)** | Statistical Techniques in Natural Language Processing. Explain this statement with example | **(6)** | **Understand** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.6** | **(a)** | What are some metrics on which NLP models are evaluated? | **(6)** | **Evalutae** |
|  |  |  |  |  |
|  | **(b)** | Explain the pipeline for Information extraction (IE) in NLP? | **(6)** | **Apply** |
|  |  |  |  |  |
|  |  | **UNIT-IV (CO4)** |  |  |
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| **Q.7** | **(a)** | What is meant by data augmentation? What are some of the ways in which data augmentation can be done in NLP projects? | **(6)** | **Analysis** |
|  |  |  |  |  |
|  | **(b)** | What do you mean by Autoencoders? explain with example | **(6)** | **Create** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.8** | **(a)** | What is the meaning of Pragmatic Analysis and N-gram in NLP? | **(6)** | **Apply** |
|  |  |  |  |  |
|  | **(b)** | What is shallow parsing and how is it useful? | **(6)** | **Understand** |
|  |  |  |  |  |
|  |  | **UNIT V (CO5)** |  |  |
|  |  |  |  |  |
| **Q.9** | **(a)** | What are the main approaches to text parsing? What are the some algorithms for text parsing | **(6)** | **Evaluate** |
|  |  |  |  |  |
|  | **(b)** | Text Summarization is a process, explain with examples and type? | **(6)** | **Create** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.10** | **(a)** | Which method is used for multiclass classification? Which model is best for multiclass classification? | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | Is the generative model supervised or unsupervised? What is the difference between the generative and discriminative models? | **(6)** | **Create** |