BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – M.Tech.(CSE)-AIML-2023
Course Name – Natural Language Processing
Course Code - PEC-MCSM302A
(Semester III)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Select correct full form of NER
   a) Named Entity Recognition
   b) Naming Entity Recognition
   c) Named Entity Recognise
   d) Named Entities Recognition

(ii) Morpheme is classified into
   a) 3
   b) 4
   c) 2
   d) 5

(iii) Extrinsic evaluation represents
   a) It solves a specific task
   b) It works on unseen data
   c) It solves all operations
   d) None of these

(iv) VBD indicates
   a) Past form of verb
   b) Present form of verb
   c) Both of these
   d) None of these

(v) Choose the correct form of TC
   a) Text Classification
   b) Type Classification
   c) Type Characterization
   d) Text Characterization

(vi) For feature extension Machine-based classifier uses
   a) Bag-of-word
   b) Bag-of-sentence
   c) Bag-of-paragraph
   d) Bag-of-story

(vii) Hybrid classification collects the features of
   a) Rule-based and machine-based classifiers
   b) Rule-based and matching-based classifiers
   c) Refine-based and machine-based classifiers
   d) Refine-based and matching-based classifiers

(viii) Choose the correct form of PCFG
   a) Probabilistic Context Free Grammar
   b) Probable Context Free Grammar
   c) Probability Context Free Grammar
   d) Procedure based Context Free Grammar

(ix) In fine-grained sentiment analysis the categorizations are

a) 5 b) 3
c) 2 d) 4

(x) Choose the correct hypernymy from the following

a) Color b) Blue
c) Red d) Yellow

(xi) Thesaurus-based similarity calculates

a) Similarity score b) Number of words
c) Number of paragraphs d) Number of sentence

(xii) Select the correct example of unstructured data

a) Image b) Video
c) audio d) All of these

(xiii) Occurrence of term can be analyzed by

a) t=1 b) t=0
c) t=@ d) None of these

(xiv) Stop-words illustrate

a) Common words can be deleted b) Common words can be considered
c) Common words canbe used for later d) None of these

(xv) FP can be used for getting

a) False positive answer b) False position answer
c) Fault position answer d) None of these

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Describe the two applications of NER (3)
3. Explain two elements of Semantic analysis (3)
4. Represents the application of language model (3)
5. Explain the advantages and disadvantages of transition probability (3)
6. Explain the first step of sentiment analysis (3)

OR

Explain one application of sentiment analysis (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Explain the applications of Viterbi algorithm (5)

8. Tabulate the advantages and disadvantages of NER (5)
9. Explain the purpose of written-bell discounting.Also mention steps of this model (5)
10. Difference between add-one smoothing algorithm and written bell discounting algorithm (5)
11. Differentiate between Opinion Mining vs Sentiment Analysis (5)
12. Discuss the common metrics to evaluste search engines (5)

OR

Illustrate the steps of Ranked retrieval (5)

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