G.R. No.	

DECEMBER 2021 - ENDSEM EXAM
FINAL YEAR B. TECH. (COMPUTER ENGINEERING)
(SEMESTER - I)
COURSE NAME: PROFESSIONAL ELECTIVE V
(NATURAL LANGUAGE PROCESSING)
COURSE CODE: CSUA40182C
(PATTERN 2018)

Time: [1 Hr]   [Max. Marks: 30]

Instructions to candidates:
1) Answer Q.1 OR Q.2, Q.3 OR Q.4, Q.5 OR Q.6.
2) Figures to the right indicate full marks.
3) Use of scientific calculator is allowed
4) Use suitable data where ever required

Q.1 a   Identify correct lexical relations in the following examples.   [4]
         1) Happy, joyful, glad
         2) Happy, sad
         3) world record, a record of conversation
         4) book ticket, bring me a book

Q.1 b   Compare Word Embedding and Bag of Word (BOW) with example   [6]
                                    OR
Q2 a   Identify various applications of Distributional Semantic and explain   [4]
         any one of them in short

Q2 b   Classify relation between word meanings and give example for each.   [6]

Q.3 a   Model Regex for finding phone number and email   [4]
Q.3 b   Suppose you have various photographs (documents) with captions   [6]
         (words). You want to display them in a gallery so you decide to
         categorize the photographs on various themes (topics) based on
         which you will create different sections in your gallery. Assume
         category as k=2 (nature and city). Find out category of sentence "The
         tree is in front of the building and behind a car". Assume suitable
         data wherever required

                                    OR
Q.4 a   Explain the significance of Information Extraction in NLP   [4]
Q.4 b   Consider a case where enough annotated text for information   [6]
         extraction is not available. Choose appropriate information
         extraction method in this case and explain it.

| Q.5 a | Analyze the impact of NLP in Education Sector | [4] |
| Q.5 b | Discuss Sentiment Analysis and its challenges | [6] |

OR

| Q.6 a | Assess the outcome of speech recognition with suitable example | [4] |
| Q.6 b | Semantic web describes the relations among data (i.e., resources) on the Web. Justify. | [6] |