

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Question Paper Code:U1904**

Ph.D. COURSE WORK EXAMINATION, NOV 2023

Elective

Computer Science and Engineering

21PCS504- NATURAL LANGUAGE PROCESSING

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) What is NLP? List and explain the application of NLP? CO1- U (20)  
Or  
(b) Briefly explain the various levels of Natural Language Processing? CO1- U (20)
2. (a) Apply the concept of semantic analysis in social media based data for knowledge Discovery. CO2- App (20)  
Or  
(b) Apply the concept of semantic analysis in the real time processes like automated handling of customer grievances for business management. CO2- App (20)
3. (a) Discuss in detail the syntactic & Semantic constraints on Conference. CO1- U (20)  
Or  
(b) Write short notes on: CO1- U (20)
  - (i) Grammars
  - (ii) Case grammars
  - (iii) Symantec grammar
  - (iv) Syntactic grammar
4. (a) Analyze the naive Bayes classifier approach to Word Sense Disambiguation in NLP. CO3-Ana (20)  
Or  
(b) Analyze statistical techniques be used to perform the task of machine translation? If so, explain in brief. CO3-Ana (20)

5. (a) Explain the architecture of an Information Retrieval system with a neat Diagram. CO1- U (20)

Or

(b) Briefly discuss about the Markov Decision Process Architecture with neat Diagram. CO1- U (20)