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Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech (Hons) Degree Examination July 2021 (2018 Admission)

Course Code: CS366

Course Name: NATURAL LANGUAGE PROCESSING

Max. Marks: 100 Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks. Marks

1		Differentiate the idea behind semantics and pragmatics with the help of an example	(3)
2		Define transitive, intransitive and passive forms of verbs	(3)
3		Distinguish between a top-down parser and a bottom-up parser.	(3)
4		What is the idea behind feature structure? Explain with an example.	(3)

PART B

Answer any two full questions, each carries 9 marks.

5	a)	What is ontology? Describe the role of word senses on ontology.	(5)
	b)	What is morphology? Explain how words are categorized.	(4)
6	a)	What is mood? Explain the basic moods of a sentence with the help of example.	(4)
	b)	Explain the organisation of natural language understanding systems.	(5)
7		Explain top-down parsing with recursive transition network.	(9)

PART C

Answer all questions, each carries 3 marks.

8		Explain the technique slash and the system GAP using S/NP.	(3)
9		Differentiate between a bigram model and a trigram model.	(3)
10		What are predicates? Distinguish between unary and binary predicates.	(3)
11		What is ambiguity encoding? How ambiguity is resolved using encoding?	(3)

PART D

Answer any two full questions, each carries 9 marks.

12	a)	Explain the operation of a shift reduce parser.	(4)
	b)	Explain briefly the 3 principles used for ambiguity resolution	(5)
13		Discuss in detail semantics and logic form using an intermediate representation and a function.	(9)

14 Describe in detail semantic structure based on model theory concepts. (with the help of example wherever necessary) (9)

PART E

Answer any four full questions, each carries 10 marks.

15 How knowledge can be represented? Express your idea on the issues faced in knowledge representation. (10)

16 a) Explain abduction-based technique which formalise sentence matching. (4)

b) Write notes on discourse structure and reference. (6)

17 a) What are the important components necessary to build a conversational agent? (4)

b) What are scripts? Explain how expectations and inferences are controlled using scripts. (6)

18 Discuss in detail direct machine translation systems. (10)

19 Explain how information retrieval is carried out in text-based systems. (10)

20 Describe briefly text categorization and summarization. (10)

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