



**KSIT Bangalore**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**ASSIGNMENT QUESTIONS**

<b>Academic Year</b>	<b>2021/2022</b>		
<b>Batch</b>	<b>2018</b>		
<b>Year/Semester/section</b>	<b>IV/7<sup>th</sup> /A &amp; B</b>		
<b>Subject Code-Title</b>	<b>18CS743-Natural Language Processing</b>		
<b>Name of the Instructor</b>	<b>Swapna</b>	<b>Dept</b>	<b>CSE</b>

<b>Assignment No: 1</b>		<b>Total marks:20</b>		
<b>Date of Issue: 11-11-2021</b>		<b>Date of Submission: 22-11-2021</b>		
<b>Sl.No</b>	<b>Assignment Questions</b>	<b>K Level</b>	<b>CO</b>	<b>Marks</b>
1.	i) List the motivation behind the development of computational models of language ii) Differentiate between rationalist and empiricist approaches to natural Language Processing	K4	<b>CO1</b>	2
2.	i) Briefly discuss the meaning components of knowledge (Ex: Lexical Analysis etc....) ii) What makes natural language processing difficult?	K4	<b>CO1</b>	2
3.	i) What is the role of transformational rules in transformational grammar? Explain with the help of examples? ii) Give the representation of a sentence in d-structure and s-structure in Government Binding	K4	<b>CO1</b>	2
4.	i) What is f-structure in LFG? What inputs to an algorithm create an f-structure. ii) Mention annotated rules in LFG? Find f-structures for the various phrases and the complete sentence, “ I saw Aparna in the market at night”	K4	<b>CO1</b>	2
5.	i) Compare Government Binding and Pannian Binding. Why is PG called syntactic-semantic Theory? ii)What are lexical rules?	K4	<b>CO1</b>	2
6.	ii) Consider the following corpus C3 of three sentence: <s>There is a big garden Children play in a garden They play inside beautiful garden</s> Calculate P(they play in a big garden) assuming a bi-gram model. ii) What are the problems associated with n-gram model? How are these problems handled ?	K4	<b>CO1</b>	2
7.	i) Define finite state automaton that accepts the following language: (aa)*(bb)* ii) Distinguish between non-word and real word error	K4	<b>CO2</b>	2
8.	i) Compute the minimum edit distance between “peaceful” and “peaceful”, “tutor” and “tumour”. ii) Explain Part-Of-Speech tagging, also Explain rule based taggers,	K4	<b>CO2</b>	2

	Stochastic taggers and Brill's taggers.			
9.	Explain Top down and bottom up parser	K4	<b>C02</b>	2
10.	Discuss the disadvantages of the basic top-down parser with the help of an appropriate example.	K4	<b>C02</b>	2

**Signature of Course In charge**

**Signature of HOD ECE**