

**Mid Semester Examination**  
**Course Name:** Natural Language Processing    **Code:** CS 563

**Full Marks-10**

**Time:** 50 minutes

Make reasonable assumptions as and whenever necessary. You can answer the questions in any sequence. However, answers of all the parts to any particular question should appear together.

**Note:**

*Carefully read the instructions circulated in the group.*

(Q1). (a). Consider the following PoS tags: N (Noun), V (Verb), A (Adjective), O (Others)

*With Wriddhiman Saha gaining support from the cricket fraternity after putting out a WhatsApp chat showing an unnamed journalist using strong-arm tactics to get an interview, the Indian cricket board (BCCI) is thinking of hiring an agency to deal with such cases in its ecosystem.*

(b). Annotate the above sentence with the following named entity tags: Person, Location, Organization, Others

(c). Explain whether the following example “*I saw a man with a telescope*” has only lexical ambiguity or syntactic ambiguity or both. **2+1+1**

(Q2). Why can't Vanilla PCFG resolve all kinds of syntactic ambiguities? Provide at least one example where such PCFG fails to disambiguate, and explain how such kinds of ambiguities can be addressed using additional lexical level information. **1+2**

(Q3). (a). Give an example where NER helps Coreference resolution; and one example where Coreference resolution helps NER. Explain intuitively.

(b). In what way Global contextual information could help for NER? **2+1**

***All the best***