

1999 Paper 8 Question 10

Natural Language Processing

Consider the following dialogue between a user (U) and a natural language processing system (S).

U: There are three ships in the Pacific near the Johnson Islands and four in the Atlantic off Bermuda. The aircraft carrier, *Nimitz*, is in the Pacific with two frigate escorts, *Ulysses* and *Poseidon*. The *Enterprise*, which is a rapid assault ship, is in the Atlantic escorted by the frigate, *Medusah*, and two others.

S: OK

U: How many frigates are at sea?

S: 5

Describe one set of techniques that the system might utilise to support the dialogue.
[8 marks]

What problems and challenges would the dialogue pose for these techniques?
[12 marks]