Note: answer 5 questions only.

Q1: Answer the following question with respect to machine translation:

1. What is the MT and what are its purposes?
2. It is difficult to produce automatically a high quality translation, why?
3. Where it can be possible to produce fully automatic high quality translation, explain?
4. what is the problem in translating the following words from Arabic to English:
   
   نشأ، نكي

5. Give example about the Interlingua translation method.  

10 marks

Q2: A: what is the major problems area in speech recognition?

B: compare between speaker dependent isolated word recognition and speaker independent isolated word recognition.

5 marks

Q3: what is the purpose of the following and where it's found?

1. Text normalization.
2. HMM recognizer.
3. DTW.
4. Lexical analysis.
5. Transition network parser.

10 marks

Q4: A: use the case analysis parser to parse the following sentences:

1. The man drove his car through the woods to his next client.

2. The big man hit the ball.

5 marks

B: write a complete prolog program to parse the above sentences using difference pair idea.

5 marks

Q5: modify the DOCYSYS program such that the program accepts an input string with two keywords and process it.

10 marks

Q6: use direct translation method to translate the following sentence from English to Arabic, your answer must include the dictionary and the necessary rule.

"The good student will pass the exam"

10 marks