

**TRIBHUVAN UNIVERSITY**  
**FACULTY OF HUMANITIES & SOCIAL SCIENCES**  
**OFFICE OF THE DEAN**  
**2017**

BCA Seventh semester  
Course Title: Artificial Intelligence  
Code No: CACS410  
Semester Vii

Full mark :60  
Pass mark:24  
Time : 3hours

*Candidates are required to answer the question in their own words as far as possible.*

Attempt any SIX questions;

**Group B**

2. what is Turing Test? Mention the characteristics features that an agent should have to pass turning Test. [2+3]
3. How simple reflex agent works? using your own assumptions, design PEAS framework for an English to Nepali Translating Agent. [2+3]
4. what do you mean by alpha beta pruning? Illustrate alpha and beta cutoff using appropriate example. [2+3]
5. define knowledge representation system. How can you represent knowledge using sementic network? illustrate with an example. [1+3+1]
6. what us learning by analogy? How transformational analogy differs from derivational analogy. [1+4]
7. Describe about natural language processing, why pragmatic analysis important in the language processing. [3+2]
8. why export system are important in AI? Describe the architecture of an export system. [1.5+3.5]

## Group C

9. describe feed forward neural network and feedback artificial neural networks. How can you realize AND gate and OR gate using neural network? Demonstrate with appropriate examples by defining suitable weights and activation function. [4+6]

10. what is the use of existential and universal quantifiers in FOPL? How can you convert FOPL statements into CNF form? Construct FOPL for following statements and convert to CNF form;

all students are talent person. every talent person are smart, someone who is not smart is dumb. Ram is dumb but he is talent person.

11. How uniformed search is different from informed search? Describe the working mechanism of breadth first search and iterative deepening search. Support your answer with appropriate state space and search paths resulted

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Notes  
Nepal