

**R13**

Code No: 117HN

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year I Semester Examinations, March - 2021**

**SOFT COMPUTING  
(Information Technology)**

**Time: 3 Hours**

**Max. Marks: 75**

**Answer any Five Questions  
All Questions Carry Equal Marks**

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- 1.a) Write about generate and test algorithm.
- b) List the characteristics of artificial intelligence techniques. [7+8]
2. How predicate logic is used to represent knowledge and in question answering? Quote suitable examples. [15]
3. Illustrate Best first search Algorithm with suitable example. [15]
4. Perform analysis of energy function for bidirectional associative memory. [15]
- 5.a) Construct an ART1 network for clustering four input vectors with low vigilance parameter of 0.4 into three clusters. The four input vectors are [0 0 0 1], [0 1 0 1], [0 0 1 1] and [1 0 0 0]. Assume the necessary parameters needed.
- b) Briefly discuss the basic functionality of ART Networks. [7+8]
- 6.a) Differentiate between Cauchy machine and Gaussian machine.
- b) Explain the general structure of full Counter Propagation Net. [7+8]
- 7.a) Discuss fuzzy set application in engineering sector.
- b) List the properties of fuzzy sets. [7+8]
- 8.a) Explain the importance of multi person decision making.
- b) Discuss the functionality of intelligent agent for Internet search. [7+8]

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