

Open elective
TOE21

ARTIFICIAL INTELLIGENCE IN MANUFACTURING

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UNIT I

Artificial Intelligence - Definition - Components - Scope - Application Areas; Knowledge - Based Systems (Expert Systems) - Definition - Justification - Structure – Characterization 8

UNIT II

Knowledge Sources - Expert - Knowledge Acquisition - Knowledge Representation - Knowledge Base - Inference Strategies - Forward and Backward Chaining 8

UNIT III

Expert System Languages - ES Building Tools or Shells; Typical examples of Shells. Expert System software for manufacturing applications in CAD, CAPP, MRP , Adaptive control, 8

UNIT IV

Robotics, Process control, Fault diagnosis, Failure Analysis; Process Selection, GT etc. Linking expert systems to other software such as DBMS, MIS, MDB. 8

UNIT V

Process control and Office automation. Case studies of typical applications in tool selection, Process selection, Part classification, inventory control, Process Planning etc. 8

References

- 1 Artificial Intelligent Hand book, Jhon & Andrew Kusiak.
- 2 Artificial Intelligent, T. Barnold.
- 3 Introduction to Artificial Manufacturing Export system, Dan.W. Patterson