

DAYANANDA SAGAR COLLEGE OF ENGINEERING
(An Autonomous Institute Affiliated to VTU, Belagavi)
Department of Information Science and Engineering
Assignment questions
on
Turing machines and undecidability(Module :5)

- 1.Explain the structure of Turing Machine along with its formal definition.
- 2.Obtain a Turing machine to accept the language $L=\{0^n1^n \mid n \geq 1\}$
- 3.Obtain a Turing machine to accept the language $L(M)=\{a^n b^n c^n \mid n \geq 1\}$
- 4.Obtain a Turing machine to accept a palindrome consisting of a's and b's of any length
- 5.What is an ID with respect to Turing machine ?
6. Write a short notes on
 - i. Multi tape turing machine
 - ii.Turing machine with stay option
 - iii.Multistack turing machine
 - iv.Halting problem
 - v. Post Correspondence problem
7. Explain the transition pattern in Turing machine .