

National Institute of Open Schooling
Senior Secondary Course : Computer Science
Lesson 2 : Binary Logic
Worksheet - 2

1. Search engines use binary logic for searching information over the Internet. Use binary logic operators And, Or Not as given below to search information and record your observations.
 - a. “India’s Mars Orbiter Mission”.
 - b. “India’s Mars OrbiterMission “ and “NASA”
 - c. “India’s Mars OrbiterMission “ or “NASA”
2. The following symptoms have been observed in a person:
 - a. Cough
 - b. Fever
 - c. Shivering
 - d. Running Nose

The person needs to see a doctor urgently when input for the following set of variables is 1:

- i. c,d
- ii. b,d
- iii. b,c
- iv. b,c,d
- v. a,c
- vi. a,b,c
- vii. a,b,c,d

- a. Draw a truth table representing the situation when the person needs to urgently contact the doctor.
3. NAND and NOR are called universal gates. Justify your answer with an example.
4. XYZ co has installed a machine to dispense hot water, Cold water and normal water for its employees. Design a truth table for the above. The user can have the chosen type water, if he chooses just one button.(Hint : use 3 inputs, for each input 1 represents button pressed and 0 otherwise).Which combination will result in warm water?
5. Write down the base of Binary, Octal and Hexadecimal. Explain why numbers like base 3, 15 etc., not chosen.
6. Write any two real life application where binary logic is used.
7. Unicode has made it possible for the countries to prepare content in their local language.Briefly describe the relationship between Unicode and ASCII.

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8. From pressing a key to being printed onto the monitor. Prepare a flowchart as to how keys pressed by us are understood by the computer system.
9. Which of the number systems, you think are used to represent memory addresses. Explain.
10. How is ISCII different from Unicode and ASCII?