MANIPAL UNIVERSITY
JAIPUR

SCHOOL OF COMPUTING & IT
Department of IT/ CSE/ CCE
III Semester; Second Sessional Examination, Nov. 2016
Course: B.Tech .....

OPEN BOOK EXAMINATION

Subject Code: CS1302 | **Subject Name : Switching Theory & Logic Design**
Max. Marks: 20 | **Duration : 1 Hour**

Instructions:
1. All questions are compulsory
2. Missing data if any can be suitably assumed
3. Each question carries 4 marks
4. Calculator is not allowed

Q.1 Design the adder circuit to perform addition of two 8-bit numbers.

Q.2 Construct a Three-bit by Three-bit binary multiplier.

Q.3 Using block diagram, construct the 4 to 16 line decoder with 2 to 4 line decoders & using the same decoder realize each of the following functions.

$$F_1 = yz' + xz$$

$$F_2 = y'z' + x'y$$

Q.4 Implement the following Boolean function with a multiplexer.

(i) $F = \Sigma (0,2,5,8,10,14)$

(ii) $F = \pi (2,6,11)$

Q.5 Implement SR Flip Flop & find the characteristics equation for the complimented output $Q'(t + 1)$ of SR Flip Flop.