CLASS: **M.TECH**   **SEMESTER : III**
BRANCH: **ECE**   **SESSION : MO/19**

SUBJECT: EC605 COGNITIVE RADIO COMMUNICATION AND NETWORKS

TIME: **3 HOURS**   **FULL MARKS: 50**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. **Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)	Explain various functions of software defined radio.	[5]
Q.1(b)	Explain the architecture of software defined radio system.	[5]
Q.2(a)	Explain how cognitive radio improves spectrum utilization.	[5]
Q.2(b)	Discuss various components of cognitive radio system.	[5]
Q.3(a)	Explain the concept of spectrum opportunity detection.	[5]
Q.3(b)	Explain how cyclostationary feature detection is used.	[5]
Q.4(a)	With the help of a block diagram explain the spectrum management framework in CR networks.	[5]
Q.4(b)	Explain the concepts of spectrum sharing and spectrum mobility.	[5]
Q.5(a)	Discuss the significance of CRN for 5G.	[5]
Q.5(b)	Discuss CRN architecture.	[5]