JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION- FEBRUARY 2019
B.Tech VIII Semester

COURSE CODE: 14B1WEC733   MAX. MARKS: 15

COURSE NAME: Cognitive Radio Networks

COURSE CREDITS: 03   MAX. TIME: 1 hr.

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1. (a) What is the need of Cognitive Radio technology? Differentiate between Software Defined Radio and Cognitive Radio.   (2)

(b) Brief about the limitations of existing fixed spectrum allocation scheme.   (3)

Q2. (a) What do you understand by spectrum underlay access scheme? What are the existing technologies employing this method of spectrum access.   (1)

(b) What is the need of spectrum sensing in cognitive radio? Explain different spectrum sensing techniques with its advantages and drawbacks.   (4)

Q3. (a) Why interference temperature limit is defined at the receiver of communication system? Explain about interference temperature models.   (2)

(b) What are the challenging issues in the spectrum mobility function of cognitive radio technology? How to deal with these challenges?   (2)

(c) Write a short note on following: (1)

     (i) IEEE 802.22.

     (ii) Effect of hidden node problem on cognitive radio communication.