

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- December 2017

B.Tech VII Semester

COURSE CODE: 14B1WEC733

MAX. MARKS: 35

COURSE NAME: Cognitive Radio Networks

COURSE CREDITS: 03

MAX. TIME: 2 Hrs

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

- Q1. What is UWB cognitive radio? What is the fundamental principle of impulse radio UWB? (4)
- Q2. How cognitive radio requirement of generating negligible interference to licensed users is fulfilled in IR-UWB? (2)
- Q3. In what way you can implement CR with IR-UWB. (3)
- Q4. What are various cognitive-OFDM standards and technologies? (2)
- Q5. Explain SB-OFDM and MB-OFDM technique. What should be the criteria of selection of these techniques with respect to cognitive radio? Explain with an example. (5)
- Q6. What are various challenges of implementing OFDM based CR system? (4)
- Q7. What are various components of CR-OFDM system? Explain. (4)
- Q8. Comment on security aspects of cognitive radio communication system. (3)
- Q9. What are main advantages and drawbacks of traditional layered technology? How cross-layer design is helpful in CR system? (5)
- Q10. Draw and explain the frame structure of IEEE802.22 standard. (3)