

Roll No

EC-6005 (2) (CBGS)

B.E. VI Semester

Examination, May 2018

Choice Based Grading System (CBGS)

RFID

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Write down the components of an RFID system. How does it work? Why is RFID better than using bar codes? Explain.
b) Explain all the differentiation features of an RFID systems. Are there any standards for RFID?
2. a) What are the selection criteria for RFID systems? How do I know which frequency is right for my application?
b) Explain the fundamental operating principle of 1-Bit Transponder.
3. a) Explain the physical principles of magnetic phenomena in RFID systems.
b) What is the 'opt-in' approach recommended by the European Commission? Write down the European Licensing Regulations.

4. a) What is a contactless smart card? How do it work? Are 'RFID tags' the same as contactless smart cards? Explain.
b) Explain VDI 4470-Anti-theft systems for goods.
5. a) Explain with the help of suitable example, the anticollision procedure for RFID systems.
b) Describe the process of Mutual Symmetrical Authentication used for data security.
6. a) Explain the coding and modulation techniques used in RFID systems.
b) What are Wireless RFID sensors? Explain the different types of RFID sensors.
7. a) How does an RFID transponder work? Explain the transponder with cryptological functions and sensor functions.
b) How physical variables are measured using microwave transponders? Explain.
8. Write short notes on (any three)
 - a) Readers
 - b) Container Identification
 - c) Zigbee
 - d) HF interface
