

Registration no:

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Total Number of Pages: 02

**B.TECH
PEIT5402**

8th Semester Regular / Back Examination – 2016-17

UBIQUITOUS COMPUTING

BRANCH(S): IT

Time: 3 Hours

Max Marks: 70

Q.CODE: Z230

**Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.**

- Q1 Answer the following questions: (2 x 10)
- a) What is Isotropic Radiator?
 - b) Define Long Term Fading and Short term Fading.
 - c) What is chipping sequence and hopping sequence? Where they are used?
 - d) What is the role of Boarder Gateway and Charging Gateway in GPRS architecture?
 - e) Define MSISDN and MSRN.
 - f) Differentiate between GSM and GPRS.
 - g) Define inclination angle and elevation angle in the context of satellite communication.
 - h) Define DIFS, PIFS.
 - i) Define BSS, ESS.
 - j) Write GSM I and GSM II specifications.
- Q2 a) What is Signal? What are the various signal parameters? What are the various factors that affect signal propagation? (5)
- b) What is Spread Spectrum Technology? What are its advantages? Discuss DSSS and FHSS. (5)
- Q3 a) Describe the functionality of each layer in GPRS Protocol Stack with suitable diagram. (5)
- b) Discuss various traffic channels and control channels used in GSM? (5)
- Q4 a) Define GEO, MEO, LEO, HEO. Explain the architecture of a typical satellite system with suitable diagram. (5)
- b) Compare Globalstar, Iridium and ICO. (5)
- Q5 a) Discuss the IEEE 802.11 MAC packet structure with proper diagram. (5)
- b) Explain the various mechanisms for medium access in IEEE 802.11 MAC Layer. (5)
- Q6 a) Differentiate between SCO Link and ACL Link in Bluetooth. Describe the functionality of core protocols of Bluetooth protocol stack. (5)

- b) What is WAP? Draw the WAP architecture. Explain the various classes of transaction service provided by WTP with suitable diagram. (5)
- Q7 a) Explain with diagram, how a correspondent mobile node on a visit sends and receives IP packet to and from another MN also on a visit at another foreign network. How is encapsulation done in mobile IP? (5)
- b) Define Cell, Sector and Cluster. What is frequency reuse? Explain Co-channel Interference and Adjacent Channel Interference in Cellular communication. (5)
- 8) Write short notes on the following: (2.5 x 4)
- a) VPN
 - b) PCS Architecture
 - c) WLL Architecture
 - d) IMT 2000