SEAT No. :

P2034

[5059] - 640 - A
B.E. (E & TC) (Semester - II)
WIRELESS NETWORKS (Theory)
(2012 Pattern) (Elective - IV(d))

Time : $2\frac{1}{2}$ Hours]   *[Max. Marks : 70*

Instructions to the candidates :-
1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicates full marks.*
4) *Use of Non-Programmable electronic pocket calculator is allowed.*
5) *Assume suitable data, if necessary.*

Q1) a) What is OFDM? Discuss advantages and disadvantages of OFDM for wireless networks. **[7]**

b) Explain in detail different protocols for WiFi. **[7]**

c) With the help of suitable diagram explain in detail 3GPP release 4 network architecture. **[6]**

OR

Q2) a) List in tabular form mobile data supported by 2G and 3G technologies **[6]**

b) Describe with neat diagram basic components of WLAN with their characteristics. **[7]**

c) Explain speech and data services supported by UMTS. **[7]**

Q3) a) Describe downlink and uplink LTE channels. **[9]**

b) What is Handover? With suitable diagram explain X2 Handover mechanism. **[9]**

OR

Q4) a) Explain the function of LTE scheduler. **[9]**

b) Write notes on : **[9]**
   i) Self Organizing Networks (SONs)
   ii) Hetrogeneous Networks (HetNET)

P.T.O.

Q5) a) Give the functions of ASN, ASN - GW, CSN and different interfaces used in WiMAX. **[8]**

b) Explain 802.16m FDD and TDD frame formats. **[8]**

OR

Q6) a) What is meant by Interface mitigation? With suitable diagram explain frequency planning with fractional frequency Reuse (FFR). **[8]**

b) Explain Mesh network for WiMAX technology. **[8]**

Q7) a) What are challenges of VoIP? Explain VoIP protocol layers. **[8]**

b) Explain the process of SIP call establishment and release. **[8]**

OR

Q8) a) With neat diagram describe H.323 network architecture. **[8]**

b) Write short note on SS7 protocol stack. **[8]**

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