Enrollment No......................................

Faculty of Science / Engineering
End Sem Examination May-2024
CA3EG11 Wireless & Mobile Computing

Programme: BCA / BCA-MCA (Integrated)   Branch/Specialisation: Computer Application

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1   i.   CDMA stands for: **1**
      (a) Code-Division Multiple Access
      (b) Carrier Division Multiple Access
      (c) Compact Digital Multiplex Arrangement
      (d) None of these

   ii.   Fading due to shadowing is   **1**
      (a) Fading due to large obstructions
      (b) Large coherence time of the channel as compared to the delay constraints
      (c) Small coherence time of the channel as compared to the delay constraints
      (d) Fading due to large obstructions and Large coherence time of the channel as compared to the delay constraints

   iii.   Which one is not the service of GSM?   **1**
      (a) Bearer services   (b) Tele services
      (c) Supplementary services   (d) Video services

   iv.   SMS is-   **1**
      (a) Short Message Service   (b) Secure Message Service
      (c) Short Message System   (d) Short Memory Service

   v.   The IEEE 802.11 standard focuses on the _____ layers of the OSI model.   **1**
      (a) Last   (b) Bottom two

      (c) Bottom three   (d) All of these

vi. What is ISM band? **1**

(a) Industrial, Scientific and Medical

(b) Indian Scientific and Medical

(c) International Scientific and Medical

(d) International Scientific Model

vii. Which of the following is false with respect to TCP? **1**

(a) Connection-oriented   (b) Process-to-process

(c) Transport layer protocol   (d) Unreliable

viii. What is RFC? **1**

(a) Request for Connect   (b) Request for Comments

(c) Request for Collect   (d) Request for Connection

ix. A proxy firewall filters at _____. **1**

(a) Physical layer   (b) Data link layer

(c) Network layer   (d) Application layer

x. What is IDS? **1**

(a) Internet Detection System

(b) Intrusion Detection System

(c) Information Detection System

(d) Information Define System

Q.2 i. Why cell site shape is hexagonal? **2**

ii. What is the concept of frequency reuse? Explain with example. **3**

iii. Explain the block diagram of basic digital communication system. Explain each block in detail. **5**

OR iv. What do you mean by multiple access technique? Explain any two multiple access techniques. **5**

Q.3 i. What are the basic blocks of GSM architecture? **2**

ii. Explain different types of GSM channels in detail. **8**

OR iii. Explain the protocol architecture of GPRS. **8**

Q.4 i. Give any three differences between HIPERLAN 1 and HIPER-LAN2. **3**

ii. Write down comparison between IEEE 802.11 a, 802.11 b and 802.11 g. **7**

OR iii. Discuss the different Bluetooth-user scenarios. **7**

Q.5 Attempt any two:

i. Differentiate between Indirect TCP, snooping TCP and mobile TCP. **5**

ii. Discuss the characteristics and performance issues of mobile IP and DHCP. **5**

iii. Explain wireless sensor network and mobile ad hoc network with a suitable example. **5**

Q.6 Attempt any two:

i. Write the short note on intrusion detection system. **5**

ii. What is virus, thread and warms? **5**

iii. Explain firewall with its types. **5**

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Marking Scheme
Wireless & Mobile Computing (T) - CA3EG11 (T)

Q.1 i)   a) Code-Division Multiple Access   1
     ii)   a) Fading due to large obstructions   1
     iii)   d) Video services   1
     iv)   a) Short message service   1
     v)   b) Bottom two   1
     vi)   a) Industrial, Scientific and Medical   1
     vii)   d) Unreliable   1
     viii) b) Request for Comments   1
     ix)   d) Application layer   1
     x)   b) Intrusion detection system   1

Q.2 i.   2 marks   2
     ii.   2+1 theory, diagram   3
     iii.   2+3   5
OR   iv.   1+2+2   5

Q.3 i.   2 marks   2
     ii.   Each type 2 marks   8
OR   iii.   4+4 theory, diagram   8

Q.4 i.   Each 1 marks   3
     ii.   Each 1 marks   7
OR   iii.   3+2+2   7

Q.5 i.   2+2+1   5
     ii.   3+2   5
OR   iii.   3+2   5

Q.6
     i.   Theory 5 marks   5
     ii.   2+2+1   5
     iii.   2+3   5

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