AR13

CODE: 13EE4025   SET-2

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
IV B.Tech I Semester Supplementary Examinations, Janauary-2018

HIGH VOLTAGE ENGINEERING
(Elective-II)
(Electrical & Electronics Engineering)

Time: 3 Hours   Max Marks: 70

PART-A

ANSWER ALL QUESTIONS   [1 x 10 = 10 M]

1. a) What is the different dielectric material according to their physical nature?
    b) When charge simulation method is effective?
    c) Name the type of collisions occurred in gaseous dielectrics.
    d) Write the various theories that explain breakdown in commercial liquids.
    e) Define treeing in solid dielectric materials
    f) What are the methods of generation High AC voltages
    g) Write the limitations of generating voltmeter.
    h) Define hundred percent flash over voltage?
    i) Write any two methods for testing circuit breakers
    j) Write any application of electrostatic precipitator?

PART-B

Answer one question from each unit   [5x12=60M]

UNIT-I

2. What is boundary element method? How does it differ from charge simulation method?   12M

(OR)

3. Discuss briefly the charge simulation method for solving the field problems and estimating the potential distribution   12M

UNIT-II

4. What is Paschen's Law? How do you account for minimum voltage for Breakdown under given p x d condition?   12M

(OR)

5. a) What is meant by Intrinsic strength? Explain Intrinsic breakdown mechanism in solid dielectrics.   6M

   b) Explain the suspended particle mechanisms of breakdown phenomenon in commercial Liquids.   6M

UNIT-III

6. a) Explain about the cascade connection of transformers for producing high AC Voltages.   6M

   b) With neat sketch, explain about the series capacitor peak voltmeter for the Measurement of peak values of AC voltages.   6M

(OR)

7. a) With a neat sketch explain the working of Van de Graff generator.   6M

   b) Explain about the resistance potential dividers for DC voltage measurements   6M

UNIT-IV

8. Explain the balanced and straight detection methods for locating partial discharges in a solid insulating materials   12M

(OR)

9. Explain the different electrical tests done on isolators and circuit breakers   12M

UNIT-V

10. Explain with neat sketch how the Electrostatic copying is done using high voltages.   12M

(OR)

11. With neat schematic diagram, explain the working principle of Electrostatic separator   12M

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CODE: 13EC4031   **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
IV B.Tech I Semester Supplementary Examinations, Janauary-2018

WIRELESS COMMUNICATION NETWORKS
(ELECTIVE-II)
(Electronics & Communication Engineering)

Time: 3 Hours   **Max Marks: 70**
PART-A
ANSWER ALL QUESTIONS   **[1 x 10 = 10 M]**

1. (a) What is the multiple access technique used in GSM?
   (b) Define inter modulation
   (c) How many number of channels can be simultaneously supported in a FDMA system?
   (d) Define TDMA frame.
   (e) What is the function of PSTN?
   (f) What is a connection oriented service?
   (g) What is the spectrum efficiency for RRMP?
   (h) What are applications of Bluetooth?
   (i) Define MAC.
   (j) Define adhoc networking.

PART-B
Answer one question from each unit   **[5 x 12=60M]**
UNIT-I

2. (a) Explain TDMA frame structure with a neat sketch.   [6M]
   (b) Explain the concept of pure aloha.   [6M]
   (OR)
3. (a) Explain packet switching with its data format.   [6M]
   (b) Explain narrowband microwave LANs   [6M]

UNIT- II

4. (a) What are the link layer characteristics for CDPD?   [6M]
   (b) Explain ss7 protocol architecture.   [6M]
   (OR)
5. (a) Explain Bluetooth usage models with block diagrams.   [6M]
   (b) Explain frequency hopping with respect to Bluetooth.   [6M]

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UNIT III

6. (a) Explain the concept of Mobile IP. [6M]
   (b) Explain mobile IP registration messages with its frame formats. [6M]

(OR)

7. (a) Explain the operation of wireless transaction protocol. [6M]
   (b) Explain WTLS handshake protocol action. [6M]

UNIT IV

8. (a) Explain MAC frame format. [6M]
   (b) What are the access and privacy services related to IEEE 802.11?
   [6M]

(OR)

9. (a) Explain the operation of GPRS. [6M]
   (b) Explain the usage of mobile application protocol. [6M]

UNIT V

10. (a) Explain how an adhoc network works. [6M]
    (b) Why wireless ATMs are preferred over ATMs? [6M]

(OR)

11. (a) Explain how an HYPER LAN works. [6M]
    (b) Explain the concept of WPAN. [6M]

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