AR13

CODE: 13EE4025 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.Tech I Semester Supplementary Examinations, January-2019

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) Name the methods to calculate electric field stress.
   b) Name any four gases that act as insulators.
   c) State Paschen's law ?
   d) Write the theories proposed to explain breakdown mechanism in solids.
   e) Write the basic principle of electrostatic machines?
   f) What are the advantages of generating voltmeters?
   g) Define creepage distance.
   h) List out the tests done on cables?
   i) Write any four industrial applications of high voltages?
   j) What is pulsed power?

PART-B

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

UNIT-I

2. i) Explain how gases and gaseous mixtures act as insulating media. [12 M]
   ii) Consider few geometrical configurations and write their field enhancement factor.

(OR)

3. Compare the various methods to calculate electric field and write their advantages and disadvantages.

UNIT-II

4. Explain the properties of Composite dielectrics and breakdown mechanism in them. [12 M]

(OR)

5. Explain the breakdown mechanism in liquid dielectrics. [12 M]

UNIT-III

6. (i) Describe the construction and operation of Electrostatic voltmeters.. [6 M]
   (ii) Draw a neat diagram and explain the operation of trigatron. [6 M]

(OR)

7. Explain with a neat diagram, cascaded circuits for producing high AC voltages [12 M]

UNIT-IV

8. Write short notes on [12 M]
   i) Balanced Detection method and ii) straight detection method.

(OR)

9. Explain the various high voltage testing methods of transformers. [12 M]

UNIT-V

10. Explain the principle and operation of electro static precipitator. [12 M]

(OR)

11. i) Write the advantages of pulsed power in various fields of high voltage engineering . ii) Explain the process of Electrostatic coating. [12 M]

AR13

CODE: 13EC4031 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
IV B.Tech I Semester Supplementary Examinations, January-2019

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) Differentiate multiplexing and multiple access.
   (b) What is a packet radio?
   (c) What are spread spectrum LANs?
   (d) Which application uses ss7 protocol?
   (e) What is WLL technology?
   (f) What is tunneling?
   (g) What is the need for 802.11 MAC?
   (h) What is SMS?
   (i) What is HYPERLAN?
   (j) Which application uses MAP?

PART-B

Answer one question from each unit **[5 x 12=60M]**

UNIT-I

2. (a) What is multiple access? Explain major access techniques. [6M]
   (b) Consider GSM, which is TDMA/FDD system that uses 25MHz for the forward link, which is broken into radio channels of 200 KHz. If 8 speech channels are supported on a single radio channel and if no guard band is assumed, find the number of simultaneous users that can be accommodated in GSM. [6M]

(OR)

3. (a) What are the transmission techniques used in infrared LANs? [6M]
   (b) Explain the concept of circuit switching. [6M]

UNIT- II

4. (a) Explain ISDN with the help of a block diagram. [6M]
   (b) Explain cell format of ATM. [6M]

(OR)

5. (a) What are the applications of Bluetooth? [6M]
   (b) Explain the concept of Logical and Link Control Application Protocol. [6M]

AR13

CODE: 13EC4031 **SET-2**

UNIT III

6. (a) Explain the WAP programming model. [6M]
   (b) What are the tags used in WML script? [6M]

(OR)

7. (a) Explain Wireless Datagram Protocol. [6M]
   (b) Explain protocol support for Mobile IP. [6M]

UNIT IV

8. (a) What are the three physical media used in IEEE 802.11 physical layer? [6M]
   (b) Explain the protocol architecture of IEEE 802. [6M]

(OR)

9.(a) Explain the concept of data oriented CDPD. [6M]
   (b) What are the applications of mobile application protocol? [6M]

UNIT V

10.(a) Explain the concept of adhoc networking. [6M]
   (b) What is HYPERLAN? Explain its operation with a neat sketch. [6M]

(OR)

11.(a) Explain how wireless ATM works. [6M]
   (b) Explain how WPAN works. . [6M]

***