



B.E DEGREE EXAMINATIONS: MAY 2015

(Regulation 2009)

Sixth Semester

ELECTRICAL AND ELECTRONICS ENGINEERING

EEE343: Electrical Safety and Energy Management

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Short circuits protection is used in power system
 - a) Fuse
 - b) Circuit breaker
 - c) Relay
 - d) All the above
2. Sag depends on the
 - a) Length of the span
 - b) weight of the conductor
 - c) Horizontal tension in the conductor
 - d) All the above
3. Clearance between phase to phase LT line for rigid conductor in air
 - a) 400mm
 - b) 400cm
 - c) 800mm
 - d) 800cm
4. The conductor used for equipment earthing
 - a) Bare Conductor
 - b) Insulated conductor
 - c) Transformer
 - d) All the above
5. Special tools are used for
 - a) Live line maintenance
 - b) Without live line maintenance
 - c) Installation
 - d) All the above
6. Good training which helps
 - a) To prevent the accident
 - b) To improve the efficiency of the plant
 - c) Increase the losses
 - d) All the above
7. Foam type fire extinguisher is used for
 - a) Oil fire
 - b) Gas fire
 - c) Acid fire
 - d) All the above

8. Burn injuries are caused due to
- a) Heat
 - b) Fire
 - c) Electricity
 - d) All the above
9. One unit of electricity save is equal to _____ units of electricity generated
- a) 1
 - b) 2
 - c) 3 to 4
 - d) 5
10. Energy audit which helps
- a) To improve the efficiency of energy use
 - b) Measurement of all energy flows
 - c) To find out the wastage of energy
 - d) All the above

PART B (10 x 2 = 20 Marks)

- 11. Who framed the Indian Electricity Rules and in which year this was framed?
- 12. What is meant by conductor configuration and spacing?
- 13. List the safety adapted for domestic applications.
- 14. Define work permit system.
- 15. What is meant by maintenance schedule?
- 16. What are the elements for good training Programme?
- 17. Mention the steps to be taken for prevention of fire.
- 18. Where the foam type and DC type fire extinguishers are used?
- 19. What are the various Principles involved in energy conservation?
- 20. Define the term Energy Management and Audit.

PART C (5 x 14 = 70 Marks)

21. a) Explain the Significance of IE rules and IE acts.

(OR)

- b) Explain the Hazards of electricity.

22. a) With neat sketch and explain the electrical layout for switching devices.

(OR)

- b) (i) Explain the safety documentation system. (7)
- (ii) Describe about tools and test equipments. (7)

23. a) Explain the safety aspects during commissioning

(OR)

b) Describe the steps to be taken during and after electric shock to save a person's life?

24. a) Explain the different classifications of fires and the techniques used to extinguish the fire?

(OR)

b) Explain with neat sketch for fire detection and alarm circuits.

25. a) Explain the various steps involved in Energy auditing.

(OR)

b) (i) List out the objectives of Energy management. (7)

(ii) Briefly explain energy efficient electrical systems. (7)
