**ST.JOSEPH’S COLLEGE OF ENGINEERING&TECHNOLOGY**

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**EE-2402 PROTECTION AND SWITCHGEAR**

**QUESTION BANK**

**UNIT I-INTRODUCTION**

**PART A**

1.What is an importance of protective scheme?

2.List the types of faults.(May2012)

3.What are the causes of faults in power system?(Nov2012)

4. What are the functions of protective relaying?(May2007),(Nov2006)

5.What is meant by switchgear?

6.Define backup protection.

7.What are factors affecting the choice of protection?

8.Write the essential qualities of protective relaying.(May2007),Nov2006

9.What is surge absorber?(Nov2011)

10.Define surge diverter.

11.What is meant by neutral earthing?

12.Define insulation coordination.(Nov2011).

13.What is known as symmetrical Fault?

14. What is known as unsymmetrical Fault?

15.What is meant by protective zone?

16.What is meant by switch gear?(May-2007)

17.List the internal causes of over voltages.(May2012)

18.What is meant by lighting surge?(May2012)

19.Write the applications of klydonograph.(May 1012)

20.Enumerate the significance of back up protection.(Nov2012)

 **PART B**

1.Explain how the transmission lines and substations are protected from direct strokes.(May2012)

2.Explain how fault current is calculated using symmetrical components.

3.What are the basic requirement of protective relaying and explain in detail?

4.Describe the essential qualities of a protective relaying.(Nov2011)(May2012)

5.Explain with neat diagram of different types of earthing made in power system.

6.Explain Arc suppression coil earthing with diagram.

7.Discuss briefly the role of protective relays in modern power system.(Nov2012)(8)

8.What do you understand by zone of protection? Discuss various zones of protection.(Nov2012) (8)

9.With a neat block diagram explain the operating principle of Peterson coil.(Nov12)(12)

10.Discuss the basic ideas of insulation co-ordination in the practical power system.(8)

11.Discuss and compare various methods of neutral earthing.(Nov2011)

12.Briefly discuss the operation of the following

 a). surge absorber b. surge diverter

13.Explain the over voltage protection scheme against travelling waves.(May2012)

 **UNIT-II**

 **PART A**

1. Define protective relay.

2. Give the types of electromagnetic relays.

3. What are the essential qualities of a relay?

4. How the relays are basically classified.

5. What is meant by directional relay? (May 2012)

6. What is differential relay and list the applications of differential relay.

7. What is R-X diagram?

8. Define plug setting multiplier.

9. Define static relay

10.What are the advantages and disadvantages of static relay.(May 2007,dec 2006)

11.Define pickup value and current setting as applied to protective relaying.

13.Give any two application of electromagnetic relay.

14.Draw a block diagram of static relay.

15.What are the advantages of over current relay over electromagnetic relay?

16.Define the terms a)pickup value b) plug setting multiplier. (May 2007)

17.For What purpose distance relay is used?(Dec 2006)

18.Why is under frequency relay required in power system?(May 2012)

19.What is the advantages of directional relay?(May,June 2012)

20.Write the functions of earth fault relay. (Dec 2012)

 **PART B**

1. What are the different types of electromagnetic relays? Discuss their field of applications. (May,June 2012)

2. What are the various types of over current relays? Discuss their area of application. (Dec 2012)

3. Describe the operating principle, constructional features and area of applications of reverse power or directional relay.

4. Describe the construction and principle of operation of an induction type directional over current relay. (Dec 2012)

5. Describe the construction and principle of operation of an induction type

 Non directional over current relay.

6. Explain the working principle of distance relays.

7. Write a detailed note on differential relays.(Dec 2012)

8. Explain with sketches and their R-X diagrams for the following distance relays.(Dec 2012)

 (i) Impedance relay

 (ii) Mho relay

 (iii) Reactance relay

 9.Explain about static relay with neat diagram.

10.Explain the construction working principle of Micro processor based over current relay.(May ,June 2012)