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**Note:**Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Describe the maintenance procedure of grid sub-station in detail.
- Q.4 Describe the various auxiliaries and equipment associated with 33/11KV/400V distribution substation.
- Q.5 Describe the causes and types of cable faults and also explain how will you test faulty cables.
- Q.6 Describe the installation, Commissioning and testing of transformer in detail.
- Q.7 Write short notes on any two
  - a. Isolating Switches.
  - b. Causes of dim and flickering light.
  - c. Fire extinguishers.

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## 6th Sem. / PSE

**Subject: Sub-Station Equipment and Maintenance** 

Time: 3 Hrs. M.M.: 100

## **SECTION-A**

**Note:** Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1 a) What do you mean by grid?
  - b) Define Breakdown maintenance.
  - c) Define Earth resistance.
  - d) Define transformer.
  - e) Define conductor.
  - f) Define Fuse.
  - g) Define Switch
  - h) The distribution sub-stations are created where the sub-transmission voltage/primary distribution voltage is stepped \_\_\_\_\_\_ to supply voltage.

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- i) What is the use of power transformer?
- j) Define cable.
- k) What is Air pollution?
- I) Give one application of Fire extinguisher.
- m) What is the role of earth wire?
- n) What is function of Air circuit Breaker?
- o) Give two precautions while handling the cable.
- p) Give one advantage of underground cable.
- q) Define Short circuit.
- r) Define fault.

## **SECTION-B**

**Note:** Short answer type questions. Attempt any ten parts 10x4=40

- Q.2 i) Explain what do you understand by outdoor substation?
  - ii) How will you measure earth resistance?
  - iii) Explain the breakdown voltage test of oil.

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- iv) Explain the effect of open or loose neutral connection.
- v) What do you understand by LT circuit breaker?
- vi) Explain the basic concept of Indoor substation.
- vii) How will you determine the faults in underground cables?
- viii) Explain the basic idea about inspection of transformer.
- ix) Give the causes of water pollutions.
- x) Give the remedies of sound pollution.
- xi) Explain the needs for cable.
- xii) What are the different types of cable jointing method?
- xiii) Explain the location of faults using meggar.
- xiv) What is the need of arranging of shutdowns personally cancellation of permit and restoration of supply for removal of temporary faults?
- xv) Write a short note on pollutions at power station.

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