

# **Polytechnic Academy Patna**

## **T & D**

### **Important topics Exam 2022 (Even)**

#### **Unit-01**

1. Purpose of OH txn line. Classify & explain.-4
2. Advantage & disadvantage of ac & dc transmission lines-4
3. Electric supply system & its components-6

#### **Unit-02**

1. Effect of load power factor on regulation & efficiency of txn line-4
2. Nominal-pi method-medium txn line-4
3. Transposition of conductors and its necessity.-4
4. General circuit for medium line and nominal-T method-6
5. Single phase short txn line-6
6. Numerical, power output, sending end power factor, short line-6
7. Numerical-OH 3-phase line, sending end voltage, percent regulation, txn efficiency, short line-6
8. Generalized circuit, nominal-pi method & analysis-6
9. Short notes-Ferranti effect-3, end condenser method-3

#### **Unit-03**

1. EHVAC txn line-need and advantages-4
2. HVDC txn line– advantages and limitations-4
3. Short notes-FACTS-3

#### **Unit-04**

1. Requirements of ideal distribution system-4
2. Radial distribution system-4
3. Types of distribution schemes-4
4. Ac distribution system & its types. Explain-6
5. Numerical-dc distribution

#### **Unit-05**

1. Preference of ACSR conductor for T & D-4
2. Why conductors are not fully stretched?-4
3. Stranded & bundled conductors-4
4. Line supports, types, explain any two-4
5. Corona, adv & disadv-4
6. Types of insulators, explain shackle insulators-4
7. Properties of line supports-4
8. Comparison between pin and suspension insulators-6
9. Sag and span length calculation-6
10. Corona & affecting factors-6

11. String efficiency-6
12. Methods of improving string efficiency-6
13. Underground cables, construction and parts-6
14. Classification of underground cables. single core low tension cable & its parts-6
15. Comparison between underground and OH txn. Merits & demerits-6
16. Short notes-laying of underground cables-3, failure of insulator-3

#### **Unit-06**

1. Factors of site selection of substation-4
2. Pole mounted substation-6
3. 33/11 kv substation diagram. equipment and working-6