



PART – B

(5×16=80 Marks)

11. a) Explain in detail about the protection of transmission lines against over voltage. (16)
- (OR)
- b) i) Explain the theories of charge formation in clouds. (10)
- ii) Derive the mathematical model for lightning discharges. (6)
12. a) Explain in detail about the various mechanisms of breakdown in vacuum. (16)
- (OR)
- b) Explain the various theories of breakdown mechanism of the commercial liquid dielectrics. (16)
13. a) What is Tesla coil ? How is damped high frequency oscillations obtained from a Tesla coil ? (16)
- (OR)
- b) Describe with a neat sketch the working of a Vande Graff generator. What are the factors that limit the maximum voltage obtained ? (16)
14. a) Explain the construction features and operation of generating type voltmeter. (16)
- (OR)
- b) Explain the operation of Electrostatic voltmeter with neat sketch and give its advantages and limitations. (16)
15. a) Explain the direct and synthetic testing of isolators and circuit breakers in detail. (16)
- (OR)
- b) Explain in detail about the insulation coordination. (16)

