Diploma 6th Semester Examination 2020 EE/EEE/504

Subject: Power Electronics (ECE-504) F.M: 80

Time: 3 hours P.M: 26

Answer five in which Question No. 1 is compulsory.

1. Explain the terms: Triggering, Rise time, Commutation & Harmonics.

2. With the help of suitable symbols & V-I characteristics, Explain the various thyristor family components.

3. With the help of two transistor analogy, explain the working of SCR and obtain the formula of Anode current.

4. With the help of suitable waveforms and sketches explain the working of 3-ϕ bridge type controlled rectifier operation for $\alpha = 60°$.

5. With the help of suitable diagram and sketches explain the operation of boost choppers or step up chopper.

6. With the help of diagram explain the operation of 1-ϕ inverter operation. Discuss the waveform and different stages of it.

7. In brief, explain the different types of constant voltage and constant current source inverter.

8. With the help of suitable sketches, explain the operation of HVDC. List the advantages over the conventional transmission system.

End

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