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Paper Code: MEE-202

M.Tech
(SEM II) EVEN SEMESTER EXAMINATION 2015-16
POWER CONVERTER APPLICATIONS

[Time: 3 hrs.]

[Max. Marks: 100]

Note:- (i) Attempt any 5 questions.
(ii) All questions carry equal marks.

- Q 1. (a) Explain the mode of operation of 12- Pulse Line commutated converters. Also compare its performance with a six pulse converter. [10]
- (b) How are Harmonics introduced into the system? And how these can be mitigated using Harmonic Filters? Explain. [10]
- Q 2. (a) Explain the control of HVDC converter. [10]
- (b) Explain the schematic diagram of HVDC Link. Also discuss its types. [10]
- Q 3. Explain in detail the Principle of Shunt Compensation using FACTS devices with its types. [20]
- Q 4. (a) What do you mean by Switched Mode Power Supply? Why it is Preferred over Linear Power supply? [10]
- (b) Explain any two types SMPS converter with its Circuit Diagram. [10]
- Q 5. Write short note on the following:- [10x2= 20]
- (a) ON Line UPS
(b) OFF Line UPS
- Q 6. Explain the following Applications:- [10x2= 20]
- (a) High Frequency Inverters for Induction & Dielectric Heating
(b) High Frequency Fluorescent Lighting
- Q7. (a) What do you mean by Wind & small Hydro Interconnection? Explain in detail. [10]
- (b) Explain the Excitation control of Synchronous Generators. [10]