

NPTEL Online Certification Course <Design of Power Electronics converter> <Assignment Number 7>: Detailed Solution **Indian Institute of Technology Guwahati**



- 1. The main reason/s for EMI in power electronic converter is/are:
 - (a) High power levels
 - (b) Switched voltages
 - (c) Switched currents
 - (d) Long cables

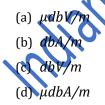
Ans: b, c

2. Which of the following could be a way to reduce EMI in power electronic converters:

- (a) EMI filters
- (b) Soft switching
- (c) Proper layout design of PCB
- (d) Shielded cables
- Ans: a, b, c, d
- echni 3. Conducted EMI is generally measured in the unit
 - (a) *μdbV*
 - (b) *dbV*
 - (c) μdbA
 - (d) *μdb*Ω

Ans: a

4. Radiated EMI is generally measured in the unit



Ans: a

5. LISN is used in the measurement of EMI.

Ans: conducted

6. LISN the noise present in DUT (device under test) and power supply of the EMI screen room, so that the two does not affect each other.

Ans: filters

- 7. Common mode choke reduces the ... currents and does not affect the ... currents.
 - (a) a. common mode b. common mode
 - (b) a. common mode b. differential mode
 - (c) a. differential mode b. common mode
 - (d) a. differential mode b. differential mode

Ans: b

8. X capacitors are used to filter ... noise and Y capacitors are used to filter ... noise with the filter ... noise and Y capacitors are used to filter ... noise with the filter ... noise and Y capacitors are used to filter ... noise with the filter ... noise and Y capacitors are used to filter ... noise with the filter ... noise and Y capacitors are used to filter ... noise with the filter ... noise and Y capacitors are used to filter ... noise with the filter ... noise and Y capacitors are used to filter ... noise with the filter ... noise and Y capacitors are used to filter ... noise ... filter ... noise and Y capacitors are used to filter ... noise ... filter ... noise ... filter ... filter