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

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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**

3. Conducted EMI is generally measured in the unit ....

   (a) $\mu dbV$
   (b) $dbV$
   (c) $\mu dbA$
   (d) $\mu db\Omega$

   **Ans: a**

4. Radiated EMI is generally measured in the unit ....

   (a) $\mu dbV/m$
   (b) $dbA/m$
   (c) $dbV/m$
   (d) $\mu dbA/m$

   **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.

(a) a. differential mode b. common mode
(b) a. common mode b. common mode
(c) a. differential mode b. differential mode
(d) a. common mode b. differential mode

**Ans: a**