1. Advantages of a Gas Insulated Substation are
   (a) Reliability, influence to environmental conditions, high EMC& compact
   (b) Reliability, more influence to environmental conditions, high EMC& compact
   (c) **Reliability, less influence to environmental conditions, low EMC& compact**
   (d) Reliability, higher influence to environmental conditions, no EMC& compact
   Answer: c) Reliability, less influence to environmental conditions, low EMC& compact

2. Main purpose of using pre insertion resistor is to
   (a) Limit final charging current
   (b) **Limit initial charging current**
   (c) Limit initial charging voltage
   (d) Limit initial charging current and voltage
   Answer: b) Limit initial charging current

3. Surge arrester plays a major role in control of :
   (a) **Over voltages**
   (b) EHV/UHV voltages
   (c) Oscillatory voltages
   (d) Over Currents
   Answer: a) Over voltages

4. Typical components of a EHV/UHV switchyard
   (a) GOS, Insulators, CBs, CT, PTs, Surge arresters
   (b) **Busbars, Disconnector, CBs, CT, PTs, Surge arresters**
   (c) Busbars, Grounding, alternators, PTs,
   (d) Busbars, Conductors, CBs, CT, Lightning conductors
   Answer: b) Busbars, Disconnector, CBs, CT, PTs, Surge arresters

5. Power frequency magnetic fields originate from
   (a) Power lines, Circuit Breakers, Substations etc.
   (b) Insulators, UG cables, Substations etc.
   (c) Conductors, busbars, cables, Insulators etc.
   (d) **Power lines, UG cables, Substations etc.**
   Answer: d) Power lines, UG cables, Substations etc.
6. Non-Ionizing is ___ and Ionizing EMFs are ___
   (a) High level and high level radiation
   (b) **Low level and high level radiation**
   (c) Low level and low level radiation
   (d) High level and low level radiation
   Answer: b) Low level and high level radiation.

7. Mitigation techniques of Electric fields in case of transmission lines
   (a) Decreasing height of Masts, Conductor management, Compensation
   (b) Increasing height of Masts, Insulation management, Compensation
   (c) Increasing height of Tower, Conductor management, Compensation
   (d) **Increasing height of Masts, Conductor management, Compensation**
   Answer: d) Increasing height of Masts, Conductor management, Compensation

8. Primary requirement of good earthing system in a substation are:
   (a) **Low Impedance of ground, Step/touch potentials be in safe limits**
   (b) High Impedance of ground, Step/touch potentials be in safe limits
   (c) Low Impedance of ground, Step/touch potentials be in high limits
   (d) Low capacitance to ground, Step/touch potentials be in safe limits
   Answer: a) Low Impedance of ground, Step/touch potentials be in safe limits

9. Advantages of using optic fiber with transmission
   (a) Control & detection, EMC/EMI, communication, earthing, cost...
   (b) Measuring & detection, EMC/EMI, communication, earthing,
   (c) Sensing & Interpretation, EMC/EMI, communication, cost
   (d) **Sensing & detection, EMC/EMI, communication, earthing, cost**
   Answer: d) Sensing & detection, EMC/EMI, communication, earthing, cost

10. Issues with OPGW
    (a) **Contamination, Space potential, dry band arcing**
    (b) Contamination, Space potential, flashover
    (c) Contamination, arcing, flashover, step potential
    (d) Pollution, potential difference, wet band arcing, flashover
    Answer: a) Contamination, Space potential, dry band arcing