Sub.Code : 662

NEB-GRADE XII

Operation and Maintenance of MHP Plant & PV System

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Time: 2 hrs. **Full Marks: 50**

Pass Marks: 18 (For partial students only)

Attempt **all** questions.

Group 'A'
(Very short answer questions) 5x2=10

1. Draw the basic layout of a MHP plant.
2. What causes the over speed of a MHP generator ? Explain briefly.
3. Define and explain the following terms in MHP plant.
   a) for bay b) surge tank.
4. Explain the function of AVR in the synchronous generator.
5. Write down the advantages and disadvantages of the thin film technology.

Group 'B'
(Short answer questions) 5x6=30

6. Write down the types of turbine in MHP and explain the working principle of any one types.
7. Explain the impact of shading in PV cell ? How can we mitigate this impact.
8. Explain about the start up and shut down procedure of a MHP plant.
9. Explain the effect of cell temperature and insulation on PV cell characteristics.
10. Differentiate between centralized and master-slare topology of PV system.

Group 'C'
(Long answer question) 10

11. Differentiate between ideal and practical PV cells with their necessary IV and PV curves. Explain the effect of series and parallel resistance on PV cell characteristics.

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