



**NATIONAL INSTITUTE OF SOLAR ENERGY**  
(An autonomous Institute of Ministry of New & Renewable Energy)

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No.8/7/2015/NISE(R/Propos) /Vol.I

Dated the, 8<sup>th</sup> June, 2016

**SYLLABUS**  
**FOR APPLICANTS FOR ON LINE/CBT EXAMINATION**  
**FOR THE POST OF**  
**ASSISTANT DIRECTOR (SCIENTIST 'B')**

**(A) Solar Specific**

**1. (Solar Photovoltaic)(SPV)**

- i. Solar Cells Homo, Hetero, SIS, MIS junctions I-V Curves.
- ii. SPV systems and components – PV modules and technologies.
- iii. Applications of SPV and Testing.
- iv. Electronic and Power Electronics.
- v. Elements of Mechanics.
- vi. Optics.
- vii. Physics of Semiconductor devices, their fabrication, characterization technology and instrumentation.
- viii. Components and BOS of, Off Grid and Grid tied systems, their design, components and system testing.

**2. (Solar Thermal) (ST)**

- i. ST Applications, ST Systems, Components; and
- ii. CSP Technology, Principles, Performance and Evaluations
- iii. Heat and Thermodynamics
- iv. Dynamics and Statics.
- v. Components of Solar Thermal technologies, design and performance evaluations.

**(B) Solar Radiation & General**

Solar Radiation, Its Techniques and related instrumentation.

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