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220145B

**4th Sem. / Branch : AGRI. ENGG.**  
**Subject : Solar Technology**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note: Multiple type Questions. All Questions are compulsory. (6x1=6)**

- Q.1 An instrument used for measuring total solar radiataion in called
- a) Hygrometer                      b) Pyranometer  
c) Anemometer                      d) Pyrhelimeter
- Q.2 The output of solar cell is of the order of
- a) 1W                                      b) 5W  
c) 10W                                      d) 20W
- Q.3 In which city in Rajasthan are two 1800 MV solar parks being built.
- a) Jodhpur & Barmer              b) Jaislmer & Bikaner  
c) Jaipur & Bikaner              d) Jaiselmer & Barmer
- Q.4 The material used for making solar cells
- a) Aluminium                      b) Germanium  
c) Silicon                              d) Copper
- Q.5 Efficiency of practical used solar cell is approximately.
- a) 25%                                      b) 15%  
c) 40%                                      d) 60%

- Q.6 The angle at which a PV panel is installed from the horizontal affects its output. The ideal angle from horizontal surface is.
- a)  $10^0$                                       b)  $30^0$  to  $45^0$   
c)  $55^0$                                       d)  $60^0$

### Section-B

**Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)**

- Q.7 The solar cell converts \_\_\_\_\_ energy into \_\_\_\_\_ energy.  
Q.8 Light energy can be converted in to electricity by \_\_\_\_\_.  
Q.9 Power is the rate of doing \_\_\_\_\_.  
Q.10 One Watt is a rate of working of one \_\_\_\_\_.  
Q.11 Solar energy can lead to generate the electricity through \_\_\_\_\_.  
Q.12 Solar cells consist of \_\_\_\_\_ layers.

### Section-C

**Note: Objective type questions. Attempt any eight questions out of ten questions. (8x4=32)**

- Q.13 Write a short note on Photovoltaic cell.  
Q.14 Explain the advantage and disadvantage of photovoltaic cell.  
Q.15 Write a short note on solar power generation system.  
Q.16 Write a short note on thermal collector.  
Q.17 Writes a short note on non-concentrated solar collected.  
Q.18 Describe point focusing solar collector.

- Q.19 Explain the concept of SPV module.  
Q.20 Explain sensible heat storage.  
Q.21 Write the application of SPV module.  
Q.22 Write the application of solar pound.

### Section-D

**Note: Long answer Question. Attempt any two questions out of three Questions. (2x8=16)**

- Q.23 Write the working and principle of solar water pumping.  
Q.24 Explain briefly solar cooking box type and its advantage.  
Q.25 Describes in brief solar water heater forced circulation type.