

This question paper contains 1 printed page|

X—45—2019

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) (Regular) EXAMINATION

OCTOBER/NOVEMBER, 2019

(CBCS Pattern)

PHYSICS

Paper XIII

(Solar Energy)

(Tuesday, 3-12-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) All questions are compulsory.

(ii) Illustrate your answers with suitable labelled diagrams, wherever necessary.

1. What are solar photovoltaic cells ? Describe the grid connected solar photovoltaic system. 15

Or

(a) Discuss on extra-terrestrial radiations. 8

(b) Describe the spectral distribution. 7

2. Explain in detail the principle, manufacturing and structure of silicon solar cell. 15

Or

(a) Discuss on flat plate solar collectors. 8

(b) State and explain Wein's law and Stephen's law. 7

3. Attempt any *two* of the following : 10

(a) Describe solar water heating system

(b) Write a short note on energy balance equation and efficiency

(c) Discuss on energy generation in the sun

(d) Describe the block diagram of photovoltaic system.

X—45—2019

1