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**Question Paper Code: 56A01**

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Sixth Semester

Agriculture Engineering

15UAG601- SOLAR AND WIND ENERGY ENGINEERING

(Regulation 2015)

Duration: 1:45 hours

Maximum: 50 Marks

**PART – A (10 X 2 =20 Marks)**  
**ANSWER ANY TEN QUESTIONS**

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|--|---|-----|
| 1. Why is tidal energy not likely to be a potential source of energy?  | U | CO1 |
| 2. Why is it not possible to make use of solar cells to meet all our energy needs?<br>State at least two reasons to support your answer. | R | CO1 |
| 3. How is nuclear energy generated during nuclear fusion?  | U | CO1 |
| 4. What is meant by commercial energy?   | U | CO2 |
| 5. Define Energy Yield ratio?  | U | CO2 |
| 6. State the importance of non-conventional energy source  | U | CO2 |
| 7. State three incentives in Energy Conservation   | U | CO3 |
| 8. List the necessity of energy storage  | U | CO3 |
| 9. What are the types of wind mill?  | U | CO3 |
| 10. What are the adverse effects by geo thermal energy source  | U | CO4 |
| 11. Define solar constant? & solar time?   | U | CO4 |
| 12. What is meant by solar collector? Mention its types?   | R | CO4 |
| 13. What are the zones in solar pond?  | U | CO5 |
| 14. What is the need for solar crop drying?  | U | CO5 |

15. What are the basic components of solar pumping system? **R** **CO5**

ANSWER ANY THREE QUESTIONS

PART - B (3 X 10 =30 Marks)

- |   |   |          |            |
|---|---|----------|------------|
| 1 | How can find the amount of voltage required to generate electrostatic waves in solar panels?  | <b>U</b> | <b>CO1</b> |
| 2 | How are the wastes produced in nuclear power plants different from those produced in thermal power plants? What happens to the waste of a nuclear power plant?  | <b>A</b> | <b>CO2</b> |
| 3 | Define process of nuclear fission. Write the steps involved in generating electricity in a nuclear reactor.   | <b>U</b> | <b>CO3</b> |
| 4 | State the principle of working of ocean thermal energy conversion plant. Explain how the plant works? Write one essential condition for it to operate properly. | <b>U</b> | <b>CO4</b> |
| 5 | Out of two solar cookers, one was covered with a plane glass slab and the other was left open. Which of the two solar cookers will be more efficient and why?   | <b>U</b> | <b>CO5</b> |