

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**B.Sc. Agriculture (2014 & Onwards)**  
**(Sem.-6)**

**RENEWABLE ENERGY**

**Subject Code : BSAG-608**

**M.Code : 74351**

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

**SECTION-A**

1. **Write short notes on :**

- (a) Renewable source of energy
- (b) Agricultural residue
- (c) Batch type biogas plant
- (d) Equivalence ratio
- (e) Heating value
- (f) Gasifier
- (g) Trans-esterification
- (h) Hydraulic retention time
- (i) Solar constant
- (j) Briquetting

### SECTION-B

2. Discuss the direct and indirect sources of energy.
3. Describe working of a biogas plant (with the help of diagram).
4. Write a short note on throat-less downdraft gasfier.
5. What is an evacuated tube collector and how it works?
6. Discuss natural circulation pressurised solar water heater along with diagram.

### SECTION-C

7. Discuss in detail the different factors that affects the biogas fermentation.
8. What is bio-diesel? What are its advantages? Give at least five reasons that clearly justify its development.
9. What types of sites are suitable for wind energy conversion system? Discuss different criterion for selecting the site for a wind energy conversion system.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**