

Roll No.

Total No. of Pages : 02

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B.Tech. (CE/FT/IT/CSE/ECE/ME/EE) (Sem-6)
NON-CONVENTIONAL ENERGY RESOURCES

Subject Code : BTME615-18

M.Code : 79660

Date of Examination : 09-06-2024

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. Answer briefly :

- (a) What is solar constant?
- (b) What is solar distillation?
- (c) What is anemometer?
- (d) What is pyrolysis?
- (e) What is Betz limit in wind power?
- (f) Explain 'lift' and 'drag' in wind turbines.
- (g) What are the limitations of tidal energy?
- (h) What are main components of a fuel cell?
- (i) What is chemical composition of bio-gas?
- (j) What are the limitations of hydrogen energy?

SECTION-B

2. Explain construction and working of a flat plate collector with the help of diagrams.
3. Explain the process of producing alcohol fuel from biomass.
4. Discuss various applications of solar energy.
5. Explain working of single basin tidal power plant.
6. Explain advantages and limitations of a fuel cell.

SECTION-C

7. Derive an equation to estimate the maximum efficiency of a wind turbine.
8. Discuss various bio-mass conversion technologies.
9. Explain different methods for storage and transportation of hydrogen.

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.