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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2019

Program: MBA (Power Management)
Subject (Course): Wind and Alternative Sources of Energy
Course Code : PIPM 8002
No. of page/s: 2

Semester – III
Max. Marks : 100
Duration : 3 Hrs

Section – A (2 marks * 10 = 20 Marks)

Fill in the blanks with the most suitable word/figure. Correct filling of each blank will fetch 2 marks. (CO1, CO2)

1. Out of the total target of _____ MW installed capacity from solar, wind, biomass and small hydro to be completed by year 2022 in India, _____ MW is the targeted installed capacity from wind.
2. Wind energy is the energy content of air in motion due to _____ heating of earth's surface.
3. For both wind and biomass energy, _____ energy is the input source of energy.
4. Biomass gasification leads to the generation of _____ gas that is a mixture of _____ and _____ .
5. Based on location, wind power projects can be classified as _____ , _____ and _____ wind farm.

Section – B (5 marks * 4 = 20 Marks)

Answer all questions in this section: (CO2)

6. Briefly explain the following:
 - a) Betz Law
 - b) Wind Park Effect
 - c) Biomass Gasification
 - d) Residue to Product Ratio (RPR) of a Crop

Section – C (10 marks * 3 = 30 Marks)

Answer any three questions from this section: (CO2, CO3)

7. Discuss the various options to improve wind power at a particular site.
8. Assuming yourself as a policymaker, discuss policy measures that can help create a market for biogas run vehicles.
9. It has been observed that the wind power industry is going for larger and larger wind turbines. Discuss the reasons for such a trend.
10. Discuss Sweden's waste management practices (including waste to energy practices) that make it a world leader in this area.

Section – D (30 marks * 1 = 30 Marks)

Answer any one question from this section: (CO3, CO4)

11. Most of the offshore wind power projects are located in EU countries. Explain the reasons for such a trend. Also, discuss the status and future prospects of offshore wind power in India.

OR

12. RPO, Feed-in Tariff, Generation Based Incentive, Accelerated Depreciation and other incentives have been used worldwide for creating an initial market for wind power. Explain how these instruments and incentives have created an initial market for wind power in India. Additionally, discuss the role of competitive bidding in making stable wind power market efficient, competitive and transparent.
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