6th Semester Regular / Back Examination 2018-19
GREEN TECHNOLOGIES
BRANCH : AEIE, AERO, AUTO, BIOMED,
BIOTECH, CHEM, CIVIL, CSE, ECE, EEE, EIE, ELECTRICAL, ENV, ETC, FAT, IEE, IT,
MANUTECH, MECH, METTA, MINERAL, MINING, MME, PE, PLASTIC, PT, TEXTILE
Max Marks : 100
Time : 3 Hours
Q.CODE : F388
Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.
The figures in the right hand margin indicate marks.

Part- I

Q1   **Only Short Answer Type Questions (Answer All-10)**   (2 x 10)

a) How carbon can be captured from the atmosphere?
b) Write the objectives of UNFCCC on Climate Change?
c) Methane appears to have 20-30 times greater potential for earth warming than CO_2. Explain why.
d) How low-cost solar energy helps in earning carbon credits?
e) Define Mckinsey's findings for greenhouse gas reduction.

f) "**Location is important for solar energy production**" Justify the statement.
g) What do you understand by '" Emission from the Cradle to grave" for greening Industries.
h) Draw diagram of aerobic and anaerobic process for biogas.
i) List the factors responsible for total emission from any industry
j) Analyse the statement "Developing attitudes and approaches is a continuous effort, not a one-time job".

Part- II

Q2   **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**   (6 x 8)

a) What is the duration of Kyoto protocol and what is its responsibility for reducing carbon from the atmosphere?
b) Explain how forests play an important role as a source and sink for O_2 and CO_2.

c) What are the adaptive measures taken to reduce the emission of carbon in the following areas :- (a)Coastal areas, (b)Inland Areas & (c)Himalayan Areas
d) How afforestation helps our Indian industries and our farmers to earn `carbon credit`?

    Prepare an outline foe Solar PV Panel of 230 Wp as wee as for Module of 70 Wp operated system to pump up 50m^3 /day of Ground water in 6hour in 4hour from a depth of 19 meters with frictional head 1m extra. Pump Efficiency is 30% and factor of Loss and mismatch is 1.5.
e) ''More forests – less deforestation'', describes this logical approach for carbon reduction.

f) Explain the various discouraging pre-requirements needed for installation of wind turbines.

g) Sketch the schematic diagram and explain the use of solar PV panels to generate electricity for feed –in into city grids.
    Estimate the CO_2 produced per year by a 3-wheeler using CNG and A truck using Diesel oil, Each travelling an average of 100km/day ARAI Factor for 3-wheeler using CNG is 57.71g/Km and truck using Diesel is 166.15 g/Km. Compare both the Case.
h) Describe the advantages of regular use of Bio-fuel.

i) Describe terms "water positive", "carbon positive" and "zero solid waste" w. r. to Green hotel.

j) Differentiate between first and second generation green buildings.
    Differentiate between manufacturing emissions and secondary emissions
k) Write the guidelines of GRIHA rating system developed by TERI?

l) Illustrate and Explain important elements of a carbon capture and sequestration scheme (CCS) OF India.

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   Describe the objectives that covered the missions under NAPCC and examine whether these missions are launched in our country.   **(16)**

Q4   What are the essential steps for control of carbon emission and accumulation in different levels? Explain at Each level.   **(16)**

Q5   Describe Modern technology need to be applied for Green Infrastructure for different Municipal Services.   **(16)**

Q6   Discuss how and where steps need to be taken to improve the Indian economy along with reduction of carbon emissions.   **(16)**