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Total Number of Pages : 01

B.Tech
PCE7J004

7th Semester Regular Examination 2019-20

GREEN TECHNOLOGY

BRANCH : CHEM

Max Marks : 100

Time : 3 Hours

Q.CODE : HR105

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)

- Define green technology.
- What do you mean by E- factor?
- What is green engineering?
- What are renewable energy sources? Give two examples.
- What are green catalysts?
- Sustainable development can be achieved by using green Technology. Explain.
- Name two commonly used non aqueous solvents.
- Give two uses of zeolites.
- What is achieved if we design green and safe chemicals?
- Give two major carbon emission sources of concern.

Part- II

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

- Discuss about a reactor.
- What are photo catalysts ? How are they useful to us?
- What is a separator? How is it different from a reactor? What is its use?
- Discuss about principle of mass economy.
- Discuss about microwave methods of development of green chemicals.
- What do you mean by scale up effect? How is it useful?
- Discuss about the use of zeolites as green chemicals.
- Elaborate about India's national action plan on climate change.
- Discuss about the development of wind energy in India.
- Explain process intensification. How is it useful?
- Write a short note on PEG.
- Write a short note on solar photo-voltaic (PV) panels.

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)

Discuss about their principles of green technology and engineering.

Q4 What are super critical fluids? Write in detail about their classification and application. (16)

Q5 Write a detailed note on green catalysts. (16)

Q6 Give a detailed account of bio-conversion of renewables. (16)