

Duration: 2 hours 30 minutes

Marks: 60

Instructions to the candidates:

1. Attempt all questions
2. Neat diagrams must be drawn wherever necessary
3. Figures to the right indicate marks for each question

- Q1.** Attempt any **two** of the following
- a) What is green chemistry? Add a note on chemistry of the atmosphere. 06
 - b) Explain basic principles of green technology. 06
 - c) Elaborate on the concept of environmentally balanced industrial complexing and industrial ecology. 06
- Q2.** Attempt any **two** of the following
- a) Give an account on catalytic methods in green synthesis. 06
 - b) Elaborate on the concept of safer chemicals. 06
 - c) Explain selection of auxiliary substances. 06
- Q3.** Attempt any **two** of the following
- a) Describe green synthesis of nanoparticles. 06
 - b) State the methods for nanoparticle characterization. 06
 - c) Enlist the various applications of nanotechnology. 06
- Q4.** Attempt any **two** of the following
- a) Give the benefits of biocatalysis using suitable example. 06
 - b) Explain the importance of electric vehicles. 06
 - c) State the principle and working of biofuels. 06
- Q5.** Attempt any **four** of the following
- a) Designing of biodegradable products. 03
 - b) Waste minimization. 03
 - c) Climate change. 03
 - d) Carbon nanotubes 03
 - e) Nanomedicines 03
 - f) Types of PV cells 03
