

# **Janki Devi Bajaj Government Girls College, Kota**

**MSc- IV (Semester)**

**Monthly Test**

**Paper-1**

**Environmental Chemistry**

**Max Marks : 15**

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## **Very Short Questions (1 Mark Each)**

1. Give major sources of air pollution.
2. What is TSP.
3. Define Air Pollution.
4. What is low Sulphur fuel.
5. What causes acid rain.

## **Short Answer Questions (2.5 Marks Each)**

6. How small sized particulate matter can causes respiratory tract diseases?
7. How NO is so toxic to human beings.

## **Long Answer Questions (5 Marks Each)**

8. Explain general methods of air pollution Control ?

Or

Explain Biodiesel as alternative fuel ?

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MSc Sem IV Chemistry

Monthly Test

Recent Methods of Organic Synthesis

Paper-2

Max Marks : 15

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## Very short questions (1 mark Each) –

1. Define green chemistry.
2. What is waste minimization.
3. Define bio-catalyst.
4. What is super-critical CO<sub>2</sub>.
5. What are nano particles.

## Short questions(2.5 Marks Each) –

6. What are the homogeneous & heterogeneous catalyst ? Explain.
7. Describe Physico-chemical properties & preparation of ionic liquids.

## Long questions (5 Marks Each)-

8. Draw & explain phase diagram of CO<sub>2</sub>.

OR

Explain applications of supercritical CO<sub>2</sub> in dry cleaning.

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MSc Sem IV Chemistry  
Monthly Test  
Chemistry of Natural Products  
Paper-3

Max Marks : 15

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**Very short questions (1 mark Each) –**

1. Define isoprene rule.
2. Give stereochemistry of menthol.
3. Give stereochemistry of  $\beta$  - carotene.
4. Give two examples of natural products.
5. What are carotenoids.

**Short questions(2.5 Marks Each) -**

6. Give one method of synthesis of citral.
7. Give one method of synthesis of Nicotine.

**Long questions (5 Marks Each)-**

8. Explain stereochemistry & synthesis of  $\alpha$  – terpineol.

OR

Explain stereochemistry & synthesis of Quinine.

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MSc Sem IV Chemistry

**Monthly Test  
Medicinal Chemistry  
Paper – 4**

**Max Marks : 15**

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**Very short questions (1 mark Each)**

1. Define pharmaco kinetics.
2. Define dynamics.
3. Define enzyme stimulation.
4. Define inhibition.
5. What is lypophilicity ?

**Short questions(2.5 Marks Each) -**

6. What is the relationship between Free – Wilson & Hansch analysis ?
7. Explain the factors affecting drug metabolism.

**Long questions (5 Marks Each)-**

8. Explain significance of drug metabolism in medicinal chemistry.

OR

Explain theories of drug activity - rate theory & drug occupancy theory.