



# UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program /Eighth Semester – 2019

Paper: Applied Chemistry (Sp. Theory-II)

Course Code: CHEM-435

Part – I (Compulsory)

Time: 15 Min. Marks: 10

Roll No. in Fig. ....

Roll No. in Words. ....

Signature of Supdt.: .....

**ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.**

**Division of marks is given in front of each question.**

**This Paper will be collected back after expiry of time limit mentioned above.**

**Q.1. Encircle the correct option.**

**(10x1=10)**

- i) \_\_\_\_\_ process involves the addition of phosphoric acid and lime to hot cane juice for clarification.
- Phosphatation
  - Phosphitation
  - Sulphitation
  - Carbonation
- ii) \_\_\_\_\_ is preferably used in confectionary items for sweetness
- Cane sugar
  - Beet Sugar
  - Fructose
  - Glucose
- iii) Which of the following fraction of coal is used a reducing agent in Iron metallurgy.
- Coal tar
  - Coal gas
  - Coke
  - All of these
- iv) Sucrose content can be measured in cane juice by polarimetry because it contains \_\_\_\_\_
- Achiral center(s)
  - Chiral Center(s)
  - Polar carbon atoms
  - Optically active hydrogen atom
- v) Important byproduct(s) of sugar industry are
- Molasses
  - Filter Mud
  - Bagasse
  - All of these
- vi) Which of the following polymer is not an Addition Polymer.
- Terylene
  - Polyester
  - Nylon 6,6
  - All of these

**P.T.O.**

- vii) Water gas is also known as a gas having colour
- a) White
  - b) Red
  - c) Pink
  - d) Blue
- viii) The technique in which the polymer is soluble in a suitable solvent is known as
- a) Suspension polymerization
  - b) Emulsion polymerization
  - c) Bulk Polymerization
  - d) Solution polymer
- ix) Which of the following is the Fabrication technique of polymer processing?
- a) Solution Polymerization
  - b) Injection Moulding
  - c) Bulk Polymerization
  - d) All of these
- x) The Lowest rank of coal is
- a) Anthracite
  - b) Lignite
  - c) Bituminous
  - d) Polyvinyl chloride



**ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED**

**Q.2 Short Questions**

**2x10 = 20**

- i. What do you mean by quenching of coal?
- ii. How crystallization of sugar is carried out?
- iii. Compare Thermro- and Thermosetting polymers. Give examples.
- iv. Give important applications of Molasses and Filter mud.
- v. Compare the Calorific value of LPG and CNG.
- vi. What are Epoxy resins? Give their important applications.
- vii. What are the main applications of polystyrene?
- viii. What do you mean by Coking of Coal? How it is carried out?
- ix. Describe Sulphitation of sugar cane juice.
- x. What are Syndiotactic polymers? Give example.

**Q.3 Extensive Questions**

**6 x 5 = 30**

- a) What is Coordination Polymerization? Explain its mechanism.
- b) Describe Extraction, Collection, Purification and Distribution of Natural gas.
- c) With the help of Flow sheet diagram, explain the manufacturing of raw sugar from sugar cane.
- d) Discuss application of various polymers in daily life.
- e) Give the Chemistry involved in the synthesis of Producer gas.
- f) Explain any two Moulding techniques for fabrication of plastics.