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No. Of Printed Pages: 2

SARDAR PATEL UNIVERSITY

SEMESTER EXAM, M.Sc. INDUSTRIAL CHEMISTRY

SEMESTER -4, PS04CICH03-CHEMICAL TECHNOLOGY-II

04-04-2016, Monday, TIME: 2:30 a.m TO 5:30 p.m

Total Marks: 70

Note: Attempt all questions. Draw neat and labeled diagram where ever necessary. Figures on the right show marks.

Q.1 Answer the following MCQs

(08)

1. _____ form of therapy uses chemical compounds for treatment of diseases.

A. Radiotherapy B. Physiotherapy C. Psychotherapy D. Chemotherapy

2. _____ will promote the cohesiveness in the tablets.

A. Binder B. Filler C. Disintegrant D. Lubricant

3. _____ is the intermediate for phosphatic fertilizer.

A. Ammonia B. Phosphoric acid C. Nitric acid D. None of these

4. _____ is a complex fertilizer

A. SSP B. TSP C. DAP D. Urea

5. _____ is use to determine quality of crude oil.

A. API gravity B. Molecular weight C. Viscosity D. All of these

6. NGLs are obtained from _____

A. Crude oil B. Natural gas C. Oil shales D. Tar sands

7. _____ theory explains bond failure in adhesives.

A. Mechanical interlocking B. Diffusion C. Electrostatic D. Weak boundary layer

8. _____ is an example of thermoset adhesive material.

A. PVA B. Poly styrene C. Poly urethane D. Starch

Q.2. Answer the following short questions (Any 7)

(14)

1. Define preformulation and state its objectives.

2. Enlist various advantages of tablet as a dosage form.

3. What are herbicides and safeners?

4. Discuss various nutrients required for the growth of the plants.

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5. Define petrochemicals. Explain the term refining of crude petroleum.
6. What is synthesis gas? Which methods are employed for its production?
7. Explain the terms: Adhesion and Cohesion
8. Enlist various advantages of adhesive bonding.
9. Enlist various types of joints for adhesive.

Q.3 (a) What are pharmaceuticals? Explain ADME process for pharmaceuticals. (06)

Q.3 (b) Enlist the important excipients along with their functions in solid dosage form-tablet. (06)

OR

Q.3 (b) Discuss the technology of Tableting in detail. (06)

Q.4 (a) Discuss the production technology of urea fertilizer. (06)

Q.4 (b) Explain the technology of Ammonium Phosphate production. (06)

OR

Q.4 (b) Explain the terms: i. Fumigants ii. Rhodenticides iii. Fungicides iv. Systemics (06)

Q.5 (a) Discuss various natural gas treatment processes. (06)

Q.5 (b) Write a note on chemicals based on methane. (06)

OR

Q.5 (b) Write a note on chemicals based on toluene. (06)

Q.6 (a) What are adhesives? Which forces are involved in adhesive bonding? Enlist the requirements for a good adhesive bond. (06)

Q.6 (b) Discuss in brief various theories of adhesion. (06)

OR

Q.6 (b) Write a note on types of stresses found in adhesive joints. (06)

Good Luck