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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**