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SARDAR PATEL UNIVERSITY
M.Sc. (SEMESTER-I) EXAMINATION
Tuesday, 12th April 2016.

TIME: 10.30 A.M. to 01.30 P.M.

APPLIED AND INDUSTRIAL CHEMISTRY: PS01ECHE02

Note: Figure to the right indicate full marks.

Total marks: 70

Q. 1. Choose the correct answers from the options given below.

[8]

- Unit operation is a _____ process.
(a) Chemical (b) Physical (c) Industrial (d) Biological
- Unit Process is a _____ process.
(a) Chemical (b) Physical (c) Industrial (d) Biological
- Reynolds' experiment is to demonstrate the ____ & ____ type of flow.
(a) Laminar & Turbulent (b) Newtonian & Non-Newtonian (c) Random & Linear (d) None
- Venturi meter is a _____ meter.
(a) Variable head (b) Mano (c) Rota (d) None
- Material having low thermal conductivity is known as _____.
(a) Conduction (b) Heat Insulator (c) Heat Radiator (d) Reflection
- The branch of science which deals with the behavior of the fluids is called as _____.
(a) Fluid mechanics (b) Bio mechanics (c) Electro mechanics (d) None of above
- Lindane is also known as _____.
(a) γ -HCH (b) DDT (c) Alum (d) none of above
- What two vitamins does milk contain? _____.
(a) A and C (b) A and D (c) D and C (d) E and C

Q. 2. Answer the following. [Any seven]

[14]

- Explain the principle and driving force of Filtration.
- Write the difference between drying and evaporation.
- Write the factors affecting the process of evaporation of liquid.
- Draw and label the figure of Venturi meter.
- What is the difference between sulfonation and Sulfation?
- List down the oxidizing agent in unit process.
- Write the application and properties of stainless Steel.
- Explain the composition of ice cream.
- Explain the effect of heat on milk.

- Q. 3. [A] What is Reynolds's experiment? Explain it in detail. [6]
[B] Explain the methods of super saturation and elaborate the mechanism of crystallization. [6]
OR
- [B] (i) Write a note on open pan evaporator. [3]
(ii) Write note on Rotary Dryer. [3]
- Q. 4. [A] Explain the Manufacturing of BHC. [6]
[B] Write a note on batch nitration of benzene by unit process. [6]
OR
- [B] (i) Explain the advantage of batch process compare to continuous process in brief. [3]
(ii) Describe the unit process of p-nitro acetanilide. [3]
- Q. 5. [A] Describe about the raw material of Cement. [6]
[B] Explain the manufacturing process of Glass. [6]
OR
- [B] List down and explain the basic applications on some special glasses. [6]
- Q. 6. [A] Discuss important method which can be used for lead identification. [6]
[B] Explain the process of Pasteurization of milk in detail. [6]
OR
- [B] Write a short note on composition of ghee and Cheese. [6]
