

Seat No. \_\_\_\_\_

[25]

SARDAR PATEL UNIVERSITY  
M.Sc. (SEMESTER-I) EXAMINATION  
FRIDAY, 28<sup>TH</sup> OCTOBER 2016.  
TIME: 10.00 A.M. to 01.00 P.M.

Total Printed pages: 02

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]

- Fresh water carrying pipeline in chemical industries are colored with \_\_\_\_\_ color.  
(a) Yellow (b) Brown (c) Sea green (d) Red
- Heat sensitive material is distilled by \_\_\_\_\_ distillation.  
(a) Low heat (b) Vacuum (c) Column (d) Heating
- The Venturi effect is the reduction in \_\_\_\_\_ that results when a fluid flows through a constricted section of pipe.  
(a) Fluid pressure (b) Kinetic energy (c) Flow (d) None of above
- Rota meter is a \_\_\_\_\_ meter.  
(a) Variable area (b) Mano (c) Rota (d) None
- Drying involves the removal of solvent at \_\_\_\_\_ the boiling point temperature.  
(a) Above (b) Below (c) Medium (d) None
- In medicinal chemistry, term, "Starting material" is called as \_\_\_\_\_ for drug discovery.  
(a) New Prescribed (b) Lead metal (c) Starting (d) Lead compound
- For the first time, Milk bacteria was observed by \_\_\_\_\_.  
(a) W.H Stanley (b) Louis Pasteur (c) Robert Koch (d) A.V. Leeuwenhoek
- Chemical preservatives do NOT include? \_\_\_\_\_.  
(a) organic acids (b) sulfites (c) alcohol (d) starch

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

[14]

- Explain the principle of orifice and Rota meter.
- Write the difference between Azeotropic distillation and Steam distillation.
- Explain the principle and driving force of Filtration.
- Write the factors affecting the process of Evaporation of liquid.
- How Sulfonation and Sulfation are different in unit process?
- Enlist the Chlorinating agent in unit process.
- Give the application and properties of Stainless Steel.
- Explain the effect of heat on milk.
- Write only the important methods for lead identification.

- Q. 3. [A] Explain the Laminar and Turbulent flow difference by Reynold's experiment. [6]  
[B] Explain the mechanism of crystallization and illustrate the techniques for achieving Super Saturation. [6]

OR

- [B] (i) Write a short note on Rotary drain filter and centrifugal separation (C.F.). [3]

- (ii) Write note on Tray Dryer. [3]

- Q. 4. [A] Explain the manufacturing of Chlorobenzene from Benzene by unit process. [6]  
[B] Write a note on continuous Nitration of Benzene by unit process. [6]

OR

- [B] (i) Explain the unit process of m-dinitrobenzene. [3]

- (ii) Write a note on oxidizing agent. [3]

- Q. 5. [A] Describe the manufacturing of Cement. [6]  
[B] Write a short note on some special Glasses. [6]

OR

- [B] Explain the manufacturing Process of Glass. [6]

- Q. 6. [A] Mention the various approaches that are employed in order to improve desire pharmacological properties of the lead nuclei. [6]  
[B] Explain the process of Pasteurization of milk in detail. [6]

OR

- [B] Write a short note on composition of ghee and ice cream. [6]

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