

[30]

SARDAR PATEL UNIVERSITY
M.Sc. (SEMESTER-I) EXAMINATIONTuesday, 17th April 2018.

TIME: 10.00 A.M. to 01.00 P.M.

APPLIED AND INDUSTRIAL CHEMISTRY: PS01ECHE23

Note:- Figure to the right indicate full marks.

Total marks: 70

[8]

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

1. Unit operation is a _____ process.
(a) Chemical (b) Physical (c) Industrial (d) Biological
2. Unit Process is a _____ process.
(a) Chemical (b) Physical (c) Industrial (d) Biological
3. Reynolds' experiment is to demonstrate the _____ & _____ type of flow.
(a) Laminar & Turbulent (b) Newtonian & Non-Newtonian
(c) Random & Linear (d) None
4. Venturi meter is a _____ meter.
(a) Variable head (b) Mano (c) Rota (d) None
5. Material having low thermal conductivity is known as _____.
(a) Conduction (b) Heat Insulator (c) Heat Radiator (d) Reflection
6. 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
7. Lindane is also known as _____.
(a) γ -HCH (b) DDT (c) Alum (d) none of above
8. What two vitamins does milk contain? _____.
(a) A and C (b) A and D (c) D and C (d) E and C

[14]

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

- (1) Explain the principle and driving force of crystallization operation.
- (2) Factors affecting the process of evaporation of liquid.
- (3) Explain the difference between sulfonation and Sulfation?
- (4) Draw and label the figure of Venture meter.
- (5) Explain the characteristics of filter medium.
- (6) Explain effect of heat on milk.
- (7) Draw and label the figure of Rota meter.
- (8) Describe the unit process of P-nitro acetanilide.
- (9) Write the application and properties of Steel.

(PTO)

Q. 3. [A] Write the principle of distillation and explain any one type of distillation. [6]

[B] What is Reynolds's experiment? Explain it in detail. [6]

OR

[B] Write a short note on centrifugal separation (C.F.) and explain the Industrial significant of "Thermal Insulators" [6]

Q. 4. [A] Explain the manufacturing of BHC by unit process. [6]

[B] Rotary kilns for making cement clinker for wet process and for dry process. [6]

OR

[B] (i) Explain the advantage of continuous process compare batch to process in brief. [3]

(ii) Describe unit process of p-nitro acetanilide. [3]

Q. 5. [A] Explain the manufacturing of glass. [6]

[B] Write a note on cement additives. [6]

OR

[B] Explain the manufacturing of cement. [6]

Q. 6. [A] Mention various approaches that are employed in order to improve desire pharmacological properties of the lead nuclei. [6]

[B] Discuss important method which can be used for lead identification. [6]

OR

[B] How homologation chain branching and ring chain transformation helps in designing newer drug? [6]

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