

(45)

SEAT No. _____

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SARDAR PATEL UNIVERSITY
M.Sc. (SEMESTER-I) EXAMINATION

Tuesday, 30th October 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

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

[8]

- Heat flow mechanism through gaseous is known as _____.
(a) Conduction (b) Radiation (c) Convection (d) Reflection
- _____ Material that have very low thermal conductivity value.
(a) Thermal insulator (b) Mechanical insulator
(c) Both (a) and (b) (d) None of these
- _____ is common fundamental constituent of glass.
(a) Silica (b) Lime (c) Gypsum (d) Clinker
- _____ is process of heating the steel to a sufficiently high temperature to soften it.
(a) Annealing (b) Hardening (c) Quenching (d) All of these
- In nitration of Acetanilide, _____ is the major product.
(a) p- nitro acetanilide (b) o- nitro acetanilide
(c) m- nitro acetanilide (d) None of these
- _____ isomer in BHC is active as insecticide.
(a) γ isomer (b) α isomer (c) β isomer (d) None of above
- Size of fat globules is _____ in milk fat.
(a) 2-10 μm (b) 0.2-1.04 μm (c) 0.2-0.1 μm (d) 20-100 μm
- _____ sugar is present in the milk.
(a) Galactose (b) Sucrose (c) Lactose (d) Fructose

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

[14]

- Write the factor affecting of Filtration.
- Write the difference between drying and evaporation.
- Define the term Oxynitration with suitable example.
- What is the difference between sulfonation and Sulfation?
- Write the ideal characteristic of steel.
- Which additive is mixed with cement?
- Explain the effect of heat on milk.
- Write only name of the method use for the identification of lead compound.
- Explain how unit operation is different than unit process.

(1)

(P.T.O)

- Q. 3. [A] What is Reynolds's experiment? Explain it in detail. [6]
[B] Write a note on shell and tube heat exchange with diagram. [6]

OR

- [B] (i) Explain the mechanism of crystallization. [3]
(ii) Explain the mode of heat transfer with suitable example. [3]

- Q. 4. [A] Explain the Manufacturing of BHC by unit process. [6]
[B] Write a note on batch nitration of benzene by unit process. [6]

OR

- [B] (i) Write a note on oxidizing agent. [3]
(ii) Describe the unit process of m-dinitrobenzene. [3]

- Q. 5. [A] Write brief note on mixing of additives to Cement. [6]
[B] List down and explain the basic applications on some special glasses. [6]

OR

- [B] Describe about the raw material of Cement. [6]

- Q. 6. [A] Explain the role of homologation, chain branching and ring chain transformation in designing newer drugs [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]

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