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SEAT No. _____

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SARDAR PATEL UNIVERSITY

M.Sc. (Semester-I) External Examination

Monday, 25th November 2019

PS01ECHE23-APPLIED AND INDUSTRIAL CHEMISTRY

Time: 10:00 a.m. to 01:00 p.m.

Total Marks : 70

Note: Right hand figure indicate marks.

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

[08]

- (1) Unit Operation is a _____ process.
 (a) Physical (b) Chemical (c) Industrial (d) Biological
- (2) Crystallization operation is possible due to _____ of liquid.
 (a) Saturation (b) Temperature (c) Super Saturation (d) Pressure
- (3) In nitration of Acetanilide _____ is the major product.
 (a) m-nitro acetanilide (b) p-nitro acetanilide
 (c) o-nitro acetanilide (d) None of above
- (4) Lindane is also known as
 (a) DDT (b) Gamma HCH (c) Alum (d) None of above
- (5) In which type of glass only one pot is used in pot furnace during melting process?
 (a) Opal glass (b) Optical glass
 (c) Sodium silicate glass (d) Calcium silicate glass
- (6) Portland Cement is made up by heating _____ with small quantities of other materials in Kiln.
 (a) Stones (b) Calcium Carbonate (c) Metals (d) All of above
- (7) A biologically inactive compound that can be metabolized in the body to produce a drug is.....
 (a) Prodrug (b) Soft drug (c) Agonist (d) Antagonist
- (8) In medicinal chemistry term "starting material" is called as.....for drug discovery.
 (a) Lead compound (b) Lead metal
 (c) New prescribe (d) Starting

Q.2 Answer ANY SEVEN from the following:

[14]

- (1) Write a note on thermal insulator.
- (2) Explain the factors affecting the process of evaporation of liquid.
- (3) What is the difference between sulfonation and sulfation?
- (4) Explain the synthesis of Phthalic anhydride.
- (5) Write a note on raw material of cement.
- (6) Write a short note on mixing additives to cement.
- (7) Explain the effect of heat on milk.
- (8) Write a short note on oxidizing agents.
- (9) Give the difference between drying and evaporation.

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(P.T-0)

- Q.3 (A) Explain the mode of heat transfer with suitable examples. [06]
(B) Write a note on rotary dryer. [06]

OR

- (B) What is Reynold's experiment? Explain it in detail. [06]

- Q.4 (A) Explain the synthesis of Nitro benzene by Batch process. [06]
(B) Explain the synthesis of benzene sulfonic acid. [06]

OR

- (B) Explain the synthesis of Chloro benzene by unit process. [06]

- Q.5 (A) Explain the manufacturing process of cement. [06]
(B) Write a brief note on special glasses. [06]

OR

- (B) Explain melting and shaping process for glass manufacturing. [06]

- Q.6 (A) Write a note on pasteurization of milk. [06]
(B) Discuss important method which can be used for lead identification. [06]

OR

- (B) Write a note on composition of ice cream, cheese and ghee. [06]

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(2)