Seat Number

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Sum-19

BP 403-T
Physical Pharmaceutics-II
(724403)

P. Pages : 2

Time :Three Hours **Max. Marks : 75**

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All questions are compulsory.
5. Figures to right indicate full marks.

1. a) Choose the correct answer of following. **10**

i) The zig – zag movement of colloidal particles is called.
   a) Tyndall effect b) Brownian motion
   c) Electrophoresis d) Sedimentation

ii) Ratio of viscosity to the density is known as
   a) Kinematic viscosity b) Reduced viscosity
   c) Thixotropy d) Rheopexy

iii) Rate of sedimentation of dispersed particles due to gravity is given by.
   a) Henry's law b) Stoke's law
   c) Hardy Schulze law d) Newtons law

iv) Suspensions, which are easy to redisperse are called as
   a) De-flocculated b) Flocculated
   c) Bulky suspensions d) Cloudy suspensions

v) An emulsifier is consider to be ideal, if it is soluble in,
   a) Aqueous phase b) Oily phase
   c) Both, a & b d) None of the above

vi) Coulter – counter apparatus is used to determine.
   a) Volume b) Density
   c) Particle size d) Rate of sedimentation

vii) If, rate of reaction is independent of reactant concentration it is known as,
   a) First order reaction b) Second order reaction
   c) Zero order reaction d) Pseudo – order reaction

viii) Substance, which increase rate of reaction is called as,
a) Negative catalyst b) Positive catalyst
c) Catalytic poison d) Pseudo catalyst

ix) High value of zeta potential indicates,
a) Poor stability b) Flocculation
c) Excellent stability d) Sedimentation

x) Rheopexy is the property which is shown by
a) Non – Newtonian system b) Newtonian system
c) Dilute system d) Aqueous systems

b) Answer following questions. **10**
i) Write in short about Faradays Tyndall effect.
ii) Explain Newtons law of Flow.
iii) Differentiate between Flocculated & deflocculated suspensions.
iv) Enlist various methods to determine particle size.
v) Define rate of reaction and first order reaction

2. Solve **any two**. **20**
i) Define colloids, write their pharmaceutical applications, discuss various kinetic properties of colloids.
ii) What are suspensions, write their advantages, also discuss in detail about stability aspects of suspensions with the help of DLVO theory.
iii) Enlist various Bulk properties of powders, discuss in detail about porosity, densities flow properties and packing arrangement of powders.

3. Solve **any seven** **35**
i) Write a note on Electrical properties of colloids.
ii) Explain Non – Newtonian systems in detail
iii) Discuss methods of preparation of suspensions.
iv) Write a note on theories of emulsification.
v) Discuss in detail about sieving method to determine particle size.
vi) Define order of reaction, discuss any method to determine it.
vii) Write a note on accelerated stability testing.
viii) Define Gold No. Discuss in detail about protection & sensitization of colloids with suitable example.
ix) Define thixotropy, discuss methods to determine thixotropy.

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