

Course No: BIPH 2216
Course Title: Physical Pharmacy (2)
Date: 15/04/2018
No. of Questions: (4)
Time: One hour
Using Calculator (No)

University of Palestine



2nd Exam For 2nd Sem.
2017/2018
Total Grade:

Instructor Name: Nahed Hegazy, PhD
Student No.: _____
Student Name: _____
College Name: Pharmacy
Dep. / Specialist: _____ - _____
Using Dictionary (No)

Question One:

Put True or False and Correct the false answer if any:

1. In the solubilisation of poorly soluble drugs by aqueous surfactant solutions, the solubilisation capacity of an ionic surfactant usually increases with increase of temperature.
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2. Stabilisation of oil in water (o/w) emulsions by surfactants arises because of a reduction of the oil-water interfacial tension.
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3. In Micellisation, if the hydrophilic chain length is increased then the molecule becomes more hydrophilic and the CMC will increase.
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4. An increase of the length of hydrophilic chain of non-ionic surfactant results in a decrease of surface activity but an increase in the length of the hydrocarbon chain increases the surface activity.
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5. In colloidal systems, Van der Waals forces lead to repulsive but electrostatic forces lead to attractive interaction between two particles.
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6. In general, for simple molecules adsorption decreases as the ionisation of the drug is suppressed, the extent of adsorption reaching a maximum when the drug is completely ionised.
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7. The site of solubilisation within the micelle is closely related to the chemical nature of the solubiliser.
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8. In the solubilisation of poorly soluble drugs by aqueous surfactant solutions, non-polar drugs are usually solubilised in the palisade layer of a non-ionic micelle.
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9. Electrolyte addition to solutions of ionic surfactants decreases the CMC and increases the micellar size.

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10. In general, the extent of adsorption of an adsorbent is inversely proportional to its solubility in the solvent from which adsorption occurs.

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Question Two:

What are the differences between;

1. Aggregation and Agglomeration in dispersion systems?

2. Solubilisation and Micellisation?

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Question Three:

Mention the pharmaceutical applications of the followings:

1. Adsorption

2. Micelles

3. Surfactants

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Question Four:

Explain the basic differences between creaming and cracking in pharmaceutical emulsions and mention the causes of creaming and cracking.

End of Questions
Good Luck