



Faculty of Pharmacy

Pharmaceutics I

Final Exam

19/05/2015

..... الاسم رباعي باللغة العربية:

Question No	Marks
Question No	15
Question No	10
Question No	10
Question No	15

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Instructions

- 1- Don't use a pencil or a red pen in your answer
- 2- Be sure that you have an exam with 10 different pages



Q1) PLEASE CHOOSE THE BEST CORRECT ANSWER

- 1) Which of the following is correct about glycerin suppository :
 - a- Its base is polyethylene glycol .
 - b- Glycerin is the active ingredient alone .
 - c- Can be used vaginally .
 - d- Glycerin appears laxative effect .
 - e- Available for adult use only .
- 2) The most common method for preparation of rectal suppositories is :
 - a- Compression .
 - b- Molding.
 - c- Hand rolling .
 - d- a and b.
 - e- All of the above.
- 3) All of the following dosage form can be administered vaginally except :
 - a- Pessaries .
 - b- Inserts.
 - c- Ovules.
 - d- Gel .
 - e- None of the above .
- 4) Miscibility test is used to identify :
 - a- W/O suspension .
 - b- O/W emulsion.
 - c- Solutions.
 - d- W/O emulsion .
 - e- b and d .
- 5) The most common base of suppository used vaginally is :
 - a- Polyethylene glycol .
 - b- Cocoa butter .
 - c- Witepsol.
 - d- Glycerinated gelatin .
 - e- Emulsion type .
- 6) Pastes differ from ointments in :
 - a- Can be used for skin application .
 - b- Using levigating agent in preparation .
 - c- Can be formulated by fusion and incorporation .
 - d- Contain large amount of solid materials .
 - e- All of the above.
- 7) All of the following about aerosol system are correct except :
 - a- Are pressurized dosage forms .
 - b- The internal phase is liquid &/or solid materials.
 - c- Needs propellants to emits its constituents.
 - d- Its particle size determines site of solubility .
 - e- None of the above .
- 8) Which of the following is incorrect about CFC compounds :
 - a- Consider from liquefied gases .
 - b- It is the classical propellants in aerosol .
 - c- Can be liquefy by compression at 70 C (high temperature) .
 - d- Affected negatively on ozone layer concentration .
 - e- None of the above.

Which of the following is incorrect about gas compressed systems(Nitrogen) :

- a- Filled by cold and pressure methods .
- b- Has inert behavior towards other constituents .
- c- Insoluble in the product concentrate .
- d- Odorless and tasteless.
- e- Used rather than liquefied gases to prepare aerosol.

All of the following about liposomes are correct except :

- a- Can carry hydrophilic and hydrophobic drugs .
- b- Can be administered parentally ,topically, and by inhalation .
- c- Its phospholipids are amphipathic in nature .
- d- Has advantage in wide range in size .
- e- If targeted into blood , coated by lipophilic polymer .

All of the following are uses of suspension (dispersion system) except :

- a- Topically .
- b- Orally.
- c- Parenterally.
- d- Inhalation .
- e- None of the above .

Which of the following bases is absorption bases ?

- a- White petrolatum .
- b- Hydrophilic ointment .
- c- Hydrous lanolin.
- d- Anhydrous lanolin .
- e- None of the above .

Which of the following bases is mostly probable for microbial content :

- a- PEG .
- b- Water removable base .
- c- Hard paraffins .
- d- Hydrous Lanolin .
- e- None of the above .

Which of the following dosage form mostly affected by PH of stomach :

- a- Ampoules ..
- b- Suppositories.
- c- Enteric coated tablet
- d- Aerosol .
- e- None of the above .

Which of the following is mostly determined method of preparation of ointments :

- a- Particle size of active ingredients .
- b- Chemical state of base .
- c- Particle size of base.
- d- Physical state of base .
- e- None of the above .

All of the following about anhydrous lanolin are correct except :

- a- Called wool fat .
- b- Consist of fatty alcohol with fatty acid esters of cholesterol.
- c- Form O/w emulsion
- d- wool alcohol represent the emulsifier in it .
- e- Has characterization odour .

17) All of the following dosage form can be administered for ophthalmic except :

- a- Gel .
- b- Ointment.
- c- Solution .
- d- Suspension .
- e- None of the above .

18) The rate of drug movement across the skin layer depends on:

- a- Drug concentration in vehicle .
- b- Its aqueous solubility .
- c- Partition coefficient b/w stratum corneum & product vehicle.
- d- a and c .
- e- All of the above .

19) All of the following requirements are required in ophthalmic ointment bases except :

- a- Non irritating to the eye .
- b- Permit the diffusion of the medicinal substance.
- c- Should have softening point close to body temperature .
- d- Cleared from eye more faster than solution .
- e- Often consist of mixture of Vaseline and mineral oil .

20) All of the following constituents represent the additives in formula of emulsion except :

- a- Density modifier .
- b- Buffers.
- c- Sweeteners agent .
- d- Emulsifier .
- e- Humectant .

21) Which of the following formula used of suppository if intended for treating acute fever :

- a- Hydrophilic drug in hydrophilic base .
- b- Hydrophilic drug in hydrophobic base .
- c- Lipophilic drug in hydrophilic base .
- d- Lipophilic drug in lipophilic base .
- e- None of the above .

22) HLB system is used to classify:

- a- Surfactants .
- b- Preservatives.
- c- Antioxidants.
- d- Humectants .
- e- None of the above .

23) Which one of the following dispersions does not have liquid continuous phase :

- a- Suspension .
- b- Microemulsion.
- c- Foam.
- d- Gel .
- e- None of the above .

24) Enteric coated tablets are more faster in absorption from :

- a- Buccal tablets .
- b- Granules.
- c- Suspension .
- d- Capsules .
- e- Depot injection .

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According to sensitivity of drugs to breakdown, Aspirin is consider as example on :

- a- Very unstable .
- b- Moderately stable .
- c- Stable under all condition .
- d- Stable if handled correctly .
- e- None of the above .

Density factor for calculation in preparation of suppository consider base as standard :

- a- Glycerinated gelatin base .
- b- Cocoa butter base .
- c- Witepsol base .
- d- Miscellaneous base .
- e- Polyethylene glycol base .

Density factor = $B/(A-C+B)$ where C is

- a- Wt of drug per suppository .
- b- Wt of base .
- c- Wt of drug and base of suppository .
- d- Volume of medicated suppository .
- e- None of the above .

Which of the following dosage form can not be administered rectally :

- a- Suppositories .
- b- Ointments .
- c- Enema .
- d- Gel .
- e- None of the above .

Systemic action can be satisfied from dosage form except :

- a- Oral Suspension .
- b- Suppositories .
- c- Capsules .
- d- Ovules .
- e- None of the above .

Which of the following parts is characterized for meterd dose inhaler aerosol :

- a- Stem .
- b- Dip tube .
- c- Actuator .
- d- Auxiliary valve chamber .
- e- None of the above

Which of the following parental dosage has the highest half life :

- a- Ampoules suspension
- b- Irrigation sol.
- c- Implants .
- d- Liposomes .
- e- None of the above .

Which of the following routes of administration is the most rapid of action :

- a- I.M
- b- Rectally .
- c- Inhalation .
- d- S.C
- e- Vaginally

33) The most common base of suppository used vaginally is :

- a- Polyethylene glycol .
- b- Cocoa butter .
- c- Witepsol .
- d- Glycerinated gelatin .
- e- Emulsion type .

34) The most common method for preparation of rectal suppositories is :

- a- Compression .
- b- Molding .
- c- Hand rolling .
- d- a and b .
- e- All of the above .

35) Storage at adverse temperature is consider as one of :

- a- Methods of assessing stability of emulsion .
- b- Tests of confirmation of suspension .
- c- Accelerated of stability tests of emulsion .
- d- All of the above .
- e- None of the above .

Please transferred answer of the above MCQ into the following table

1-	2-	3-	4-	5-	6-	7-	8-	9-
11-	12-	13-	14-	15-	16-	17-	18-	19-
21-	22-	23-	24-	25-	26-	27-	28-	29-
31-	32-	33-	34-	35-				

Q2) TRUE OR FALSE

1. The active ingredients has marked influence on the release of suppository base () .
2. In respiratory absorption , solubility of drugs determine the site of absorption ()
3. In fusion method , heat sensitive substances are addede early during preparation ()
4. Hydrophobic ointment bases can incorporated large quantities of aqueous solution ()
5. Acacia as emulsifying agent needs addition of tragacanth to formula ()
6. Pressurized metered dose inhaler used mostly CFC as propellant ()
7. Vanishing cream contain larger quantity of oil than cold cream ()
8. o/w emulsion is more spreading than vanishing cream ()
9. Gels may forming thixotropic on standing , which can not liquefy on shaken ()
10. The Ophthalmic route of administration can be used for Local action ()
11. Insulin if administered intranasaly ,it will destroyed by enzymes ()
12. Oral swallowed tablet may be local action ()
13. Sublingual tablet excluded first pass effect () .
14. Some drugs has higher bioavilability if subjected to metabolism by liver ()

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n emulsion, the larger glob
Ointments tubes are filled
The stratum corneum is c
The hydrophilic drugs ha

(The quality test of Skin
Rectal creams used usual
Flocculating suspension
Soft paraffin should be me
Cocoa butter must be slow
Drugs absorbed rectally
Diarrhea not influence or
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base transferred a

1-	2-	3-
11-	12-	13-
21-	22-	23-
31-	32-	33-

- Space spray contain more propellant than surface spray ()
- Surface spray is preferred in narrow regions of infection ()
- Internal aerosol inhalation used drugs with particle size larger than topical aerosol ()
- The most occlusive base of ointment is the hydrocarbon base ()
- Miscibility test is used to identify o/w suspension ()
- Liquified gas can serves dual action as propellants and vehicle for product concentrate ()
- Fluorinated hydrocarbons are liquid at room temperature ()
- The vapour phase in foam aerosol being in the middle layer ()
- In three phase aerosol, dip tube not down to the bottom ()
- Urethral suppository mostly formulated from glycerinated gelatin ()
- Creams are used for external application to skin and mucous membrane ()
- Unpleasant taste can be overcome by using water-soluble derivate in formulation of suspension ()
- Solubility of acidic or basic compounds cannot be altered by forming salts ()
- A flocculated system will exhibit a lesser apparent viscosity than its deflocculated ()
- In emulsion, the larger globule of disperse phase, the slower of rate of creaming ()
- Ointments tubes are filled from the cap end. ()
- The stratum corneum is composed of 80% fat ()
- The hydrophilic drugs has the affinity to traverse the layers of cornea ()
- The quality test of Skin ointments includes sterility & metal tests ()
1. Rectal creams used usually for local action ()
5. Flocculating suspension is more probable to resuspended than deflocculating ()
5. Soft paraffin should be melted with cocoa butter suppository if one of its constituents is chloral hydrate ()
7. Cocoa butter must be slowly melted preferably over hot plate. ()
3. Drugs absorbed rectally bypass first pass into general circulation ()
2. Diarrhea not influence on rate and degree of drug absorption. ()
1. Lecithen (a phosphatidyl choline) is used in liposome and ampoules injection formulation ()

Please transferred answer of the above question in the table

1-	2-	3-	4-	5-	6-	7-	8-	9-	10-
11-	12-	13-	14-	15-	16-	17-	18-	19-	20-
21-	22-	23-	24-	25-	26-	27-	28-	29-	30-
31-	32-	33-	34-	35-	36-	37-	38-	39-	40-

Q3/ Please, matching the most suitable sentence in the space

NO	First column	Second column
1-	Nitrous oxide	Used in incorporation method
2-	Hot plate	Important part in valve assembly
3-	Methylcellulose	Compressed gas for aerosol
4-	Vaginal aerosol	Used usually for stabilization of emulsion
5-	Polysaccharides	Called cracking of emulsion
6-	Actuator	Multiple physical form with one chem. form
7-	Foam aerosol	Mostly used to stabilize O/w emulsion
8-	Polyoxyl 40 stearate	Water soluble solid base
9-	Coalescence	Three phase system aerosol
10-	PEG 8000	Miscellaneous bases for suppository
11-	Fattibase	Melts at 30 C to 36 C
12-	Cetrimide	Mainly of stainless steel
13-	Cocoa butter	Is preservative
14-	Nitrogen	One of the oleaginous bases for suppository
15-	Molds of formulation of suppository	Insoluble gas compressed for aerosol
16-	Trichlorofluoromethan	Carbomers
17-	Mortar and pestle	Can cause damage for aerosol container
18-	PEG 400	Used in fusion method
19-	Used mostly in formulation in gel	Mostly are O/W emulsion foam aerosol
20-	Polymorph	Liquid water soluble base

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ANSWER THE FOLLOWING QUESTION

(15MARKS)

(8marks)

Calculate the required HLB for the oil phase of the following formula

(Ingredients).....	(conc.).....	RHLB	For W/O	O/W
Cetyl alcohol.....	15g.....		_____	, 15
White wax	1g.....		4	, 12
Lanolin ,anhydrous	2g.....		8	, 10
Emulsifier.....	q.s			
Glycerin	5g			
Distilled water	ad 100g			

- Firstly determine quantity of emulsifier , and in what proportion should Tween 80 (HLB 15) and Span 80 (4.3) be blended to obtain good emulsion .

Please, clarify what happened if percent of lanolin in formula raised to 45%of the total. And how to solve this problem ?

B- Please, mention in points precautions of preparation of Suppositories (4Marks)

- 1-.....
- 2-.....
- 3-.....
- 4-.....
- 5-.....
- 6-.....
- 7-.....
- 8-.....

C- Numerate 6 uses for Polyethylene glycol

(3marks)

- 1-.....
- 2-.....
- 3-.....
- 4-.....
- 5-.....
- 6-.....

Al-A

Good luck
By Mohammed Hussein Taleb