1 Powders 2018 - 29

A powder containing a substance with specific weight has been prepared in a pharmacy. Name this substance:
+Basic bismuth nitrate
Talcum
Sugar
Sodium bicarbonate
Bolus alba

A powder with a hard to disintegrate substance has been made in a pharmacy. Specify this substance:
+ Camphor
A. Sodium chlorides
Talcum
Sugar
Osarsolum (Acetarsol)

1. A pharmacist prepares powders with a substance hard to comminute. What substance should be comminuted with a volatile liquid?
+A. Camphor
B. Magnesium oxide
C. Zinc sulfate
D. Copper sulfate
E. Glucose

2. A pharmacy prepares drugs by individual prescriptions. How often should the floors be mopped down in the prescription department?
+A. Once in a shift
B. Once in a week
C. Onceevery10days
D. Onceevery5days
E. Onceevery3days

3. Schedule of sanitation actions in pharmacies is regulated by the relevant regulatory acts. Cleaning day at a pharmacy must be scheduled for atleast1time:
+A. In a month
B. In aweek
C. In 3days
D. In 10days
E. In 5days

4. A pharmacy prepares atropine sulfate trituration. What adjuvant should be used to prepare this trituration?

+A. Lactose
B. Saccharose
C. Glucose
D. Starch
E. Talcum

5. A pharmacy received a prescription for external use powder containing a substance difficult to pulverize. What liquid can be used by a pharmacist to disperse this substance?
+ Ethyl alcohol
Purified water
Water for injections
Dimethyl sulfoxide
Isopropyl alcohol

6. Apharmacy received prescriptions for compound powders containing colouring agent. Which of powder components given below is a colouring agent?
+ Ethacridine lactate (Rivanol)
Camphor
Sulfanilamide
Bismuth nitrate
Silver proteinate (Protargol)

7. A schedule of sanitation actions in pharmacies is regulated by the relevant normative documents. Cleaning day at a pharmacy must be scheduled for at least 1 time:
+ In a month
In a week
In 3 days
In 10 days
In 5 days

8. A patient has been administered powders containing menthol. What is the best way to achieve the required extent of menthol comminution?
+To triturate it with alcohol or ether
To triturate it with glycerine or chloroform
To triturate it with purified water
To triturate it with other components of the formulation
To triturate it thoroughly with sugar

9. A pharmacy received the following prescription: 0,0002 g of scopolamine hydrobromide per 1 powder. How much of 1:100 trituration is required for the preparation of 10 powders?
+0,2
0,04
4,0
0,4

2,0

10. Powders make up an important group among the extemporal medicinal preparations. Which of the following components can be incorporated into a powder without being preliminarily ground?
+Basic Bismuth nitrate
Ascorbic acid
Camphor
Xeroform
Calcium gluconate

11. A pharmaceutist is preparing powders according to the following formulation:
Rp.: Scopolamini hydrobromidi 0,0003
Ephedrini hydrochlorodi 0,05
Sachari 0,15
M.f. pulvis D.t.d. № 10 S. 1 powder thrice a day.
Calculate the mass of 1 powder providing that the trituration (1:100) is used:
+0,20
0,15
0,23
0,17
0,203

12. A pharmacy received a prescription for a topical powder including a substance that is hard to disperse. Which of the listed fluids may be used for dispersing the substance?
+Diethyl ether
Purified water
Water for injections
Dimexid
Isopropyl alcohol

13. A pharmaceutist is preparing powders by the way of triturating one of the components with ethyl alcohol. Such technology of preparation is typical for the following substance:
+Streptocid
Starch
Talc
Zinc oxide
Bolus alba

14. Calculate the quantity of dried belladonna extract (1:2) required for preparing the following drug formulation:
Extracti Belladonnae 0,015
Magnesii oxydi 0,5 Natrii hydrocarbonatis 0,2
Misce ut fiat pulvis Da tales doses №10 Signa. 1 powder thrice a day.
+0,3
0,15
0,4
0,6

0,015

15. This substance is of blue colour but unlike the colouring substances it doesn't leave any stain. The powders prepared out of it are made according to the general rules.What substance is it?
+Copper sulfate
Ethacridine lactate
Riboflavin
Acrichine
Furacilin

16. A pharmaceutist made 10 powders containing atropine sulfate at a rate of 0,00005 pro dose. What trituration did he use?
+1:100
1:10
1:1000
1:50
1:20

17. A pharmacy produces compounded drugs. What kinds of internal control of drugs production are required?
+Written, organoleptic, sell control
Written, interrogatory, sell control
Written, qualitative and quantitative analysis
Written, physics and chemical
Written and sell control

18. A pharmaceutist prepared powders including extract of belladonna in the amount of 0,015 per dose. For ten doses he had to take the following amount of dry extract:
+0,3 g
0,15 g
1,5 g
0,03 g
0,015 g

19. A pharmacy received a prescription for powders with doctor's instruction to dispense powders in gelatin capsules. Which of the following substances is included in the composition of these powders?
+Ethacridine lactate
Magnesium oxide
Streptocide
Diphenhydramine
Glucose

20. A pharmacy received a prescription: *Rp.: Dibazoli 0,05 Papaverini hydrochloridi 0,15 Sacchari 2,5 M. fiat pulv. Divide in partes aequales №10*. Specify the weight of a single powder dose:
+0,27

2,7
0,25
0,26
0,30

21. Powders that quickly enter into a reaction in presence of water and emit carbon dioxide relate to the following group:
+Effervescent powder
Soluble powder
Powders for oral use
Nasal powders
Powders for external use

22. Specify the type of capsules which are used for dispensing camphor powders:
+ Parchment
Cellophane
Paraffin
Waxed
Common paper

23. A pharmaceutist prepares trituration of atropine sulfate. What adjuvant should be used for this purpose?
+Lactose
Saccharose
Glucose
Starch
Talc

24. Pharmacies prepare triturations of toxic and superpotent substances. They can be prepared in a following ratio:
+1:10 and 1:100
1:10 only
1:1000
1:500
1:100 only

25. A pharmaceutist prepares powders with papaverine hydrochloride. What hand scales should be used for weighing out 0,05 g of substance?
+BP 1,0
BP 5,0
BP 20,0
BP 10,0
BP 2,0

26. A pharmaceutist prepared some powders whose composition includes camphor. What capsules are required for their packaging?
+Parchment
Paper

Waxed
Paraffin
Cellophane

27. During production of powders in a pharmacy physiochemical properties of certain ingredients should be taken into consideration. What pharmaceutical substance can be incorporated into the powder mass without additional grinding?
+Starch
Camphor
Menthol
Salicylic acid
Streptocid

2 LMF homogenous 2018 – 17
A pharmacist has prepared a liquid mixture. What component was added last into the vial?
+Tincture of valerian
Simple syrup
Purified water
20% sodium bromide solution
Potassium bromide

Choose the solvent necessary to prepare concentrated solution of sodium bicarbonate in a pharmacy:
+Purified water
Ethanol
Peach-kernel oil
Vaseline
Chloroform

A pharmaceutical company produces Lugol's iodine solution. By type of solvent this solution belongs to the following group:
+Glycerine solutions
+Water solutions
Oil solutions
Alcohol solutions
Chloroform solutions

28. A pharmacist has prepared a solution of menthol oil. Specify the dissolution temperature of the active substance:
+ 40-50oC
60-70oC
30-40oC
70-80oC
20-30oC

29. Which of the liquids given below should be measured by volume in making liquid dosage forms?
+20% solution of sodium bromide
Vaseline oil
Diethyl ether
Eucalyptus oil
Glycerine

30. Concentrated solutions CAN NOT be used in mixture making if:
+ Aromatic water is solvent
Purified water is solvent
Mixture contains a potent agent
Mixture contains syrups
Mixture contains tinctures

31. To make a liquid №2 by Demyanovych prescription hydrochloric acid should be taken in the following concentration:
+ 24,8 – 25,2%
0,83%
98%
30%
10%

32. What technology should be chosen by a pharmacist to make a liquid dosage form, if it contains calcium gluconate?
+ Dissolve it in hot solvent or heat it up to full dissolution
First grind it to powder when it is dry or with small amount of solvent added
Dissolve in water free of redox subsatances
Add equal amount of sodium chloride
Dissolve in alkaline medium

33. A pharmacy received a prescription for 3% alcohol solution of boric acid. What concentration of ethyl alcohol is required for preparing the drug form?
+70%
60%
40%
90%
96%

34. A pharmaceutist prepares internal drops with the following formulation: 5 ml of adoniside, 10 ml of valerian and lily-of the-valley tincture each, 0,1 g of menthol, 2,0 g of potassium bromide. It will be efficient to dissolve potassium bromide in the following substance:
+In the adoniside

In the lily-of-the-valley tincture
In the valerian tincture
In the mixture of tinctures
Potassium bromide should be added into the selling vial last of all

35. A pharmaceutist prepared solution of ethacrydine lactate. What is the peculiarity of this substance dissolving?
+Dissolving in hot water
Dissolving in freshly distilled water
Dissolving in cold water
Grinding in a mortar with water
Dissolving in potassium iodide solution

36. A pharmaceutist has to prepare a medication by the following formulation:
Rp.: Natrii hydrocarbonatis 2,0
Natrii benzoatis 1,5
Liquoris Ammonii anisatis 4 ml
Aquae Mentae 100ml
M.D.S. 1 tablespoon 3 times a day.
Specify the component that is added in the first place:
+Mint water
Sugar syrup
Liquoris Ammonii anisatis
Sodium hydrogen carbonate
Sodium benzoate

37. A pharmacy received a formula for an alcohol solution of methylene blue with unspecified alcohol concentration. In this case, a pharmacutist must use ethyl alcohol of the following concentration:
+60%
90%
70%
96%
40%

38. Liquid dosage forms are prepared with concentrated solutions of pharmaceutical substances or under consideration of volume increase factor during substance dissolution when the following substance is used as a solvent:
+Treated water
Aromatic water
Glycerol
Ethanol (ethyl alcohol)
Polyethylene glycol-400

39. A pharmaceutist has to prepare 10% alcohol solution of iodine. What is the required concentration of ethanol for this purpose?
+95%
96%

40%
70%
60%

40. A pharmaceutist prepared the 2% aqueous solution by dissolving the drug substance triturated in a mortar. What substance is this technology typical for?
+Potassium permanganate
Calcium gluconate
Osarsolum
Boric acid
Potassium bromide

41. It is required to prepare furacilin solution (1:5000). What is the dissolution peculiarity of furacilin?
+It dissolves in the boiling water purified in the presence of sodium chloride
It dissolves in the cold purified water
It dissolves in a minimal amount of ethyl alcohol
It dissolves in the purified water after the trituration
It dissolves in the filtered purified water

3 LMF heterogenous 2018 – 44
A pharmacy prepares a drug that contains a high-molecular compound with unlimited swelling ability. Name this material:
+Pepsin
Gelatine
Methylcellulose
Protargol
Starch

A pharmacy has received a prescription for colloid solution. Name this solution:
+Collargol solution
5% glucose solution
Burow's solution
Sodium chloride solution
Nonaqueous solution

A pharmacist has made a drug by the prescription:
Rp.: Sol. Protargoli 0,3 1,0
D.S. For irrigation.
Specify the optimal technology of preparation:
+ Grind protargol in the mortar with glycerine, add water
Dissolve glycerine in -the water, add protargol
Dissolve protargol in the water, add glycerine
Measure out protargol into the vial, dissolve it in the water, add glycerine
Measure out subsequently glycerine, **.** water, and protargol into the vial

To prepare a suspension a medicinal substance should be triturated with a small amount of liquid. Specify the optimal amount of liquid for trituration of 10 g of zinc oxide according to

the Deriagi n’s rule:
+ 5
0,5 ml
1 ml
10 ml
2 ml

A pharmacist prepares a chamomile flowers infusion. Specify the proportion of raw material to infusion:
+1:10
1:50
1:30
1:400
1:20

Infuser apparatus is used by a pharmacy to prepare:
+Infusions and decoctions
Suspensions
Emulsions
Ointments
Infusion solutions

42. Specify the medicinal substance with pronounced hydrophobic properties:
+A. Sulfur
B. Basic bismuth nitrate
C. Zinc oxide
D. Sodium bromide
E. Magnesium oxide

43. Suspension workshop introduces production of new drugs. Specify the optimal approach to suspension production:
+A. Grinding in a liquid medium
B. Drop method
C. Repercolation
D. Percolation
E. Maceration

44. A pharmacist has used condensation method to prepare a suspension. Select the substances that make up the precipitate:
+A. Calcium chloride with sodium hydrocarbonate
B. Caffeine and sodium benzoate with zinc oxide
C. Sodium bromide with camphor
D. Potassium bromide with sodium benzoate
E. Magnesium sulfate with potassium iodide

45. To prepare a suspension a medicinal substance should be triturated with a small amount of liquid. Specify the optimal amount of liquid for trituration of 10g of zinc oxide according to the Deryagin’s rule:

+A. 5 ml
B. 10 ml
C. 2 ml
D. 1 ml
E. 0,5 ml

46. Specify the amount of raw herbal material necessary to make a dosage form according to the following prescription: Take 200 ml of motherwort herb solution. Dispense. Prescribed dosage is 1 table spoon 3 times a day.
+ 20,0
10,0
1,0
5,0
4,0

47. To increase hydrophobic suspension stability a stabilizer is added. Name this stabilizer.
+ Polysorbate 80 (Tween 80)
Sodium chloride
Dimethyl sulfoxide
Glucose
Vaseline oil

48. What ratio is used in making hawthorn tincture?
+ 1:10
1:2
1:5
1:20
1:1000

49. A pharmacist has made an althaea root tincture.What proportion of raw herbal material to extractant was chosen by the pharmacist to make this tincture?
+ 1:20
1:10
1:30
1:100
1:400

50. A pharmacy received a prescription for tincture. What raw herbal material can be used to make this dosage form?
+ Valerian rootstock
Rhubarb roots
Oak bark
Arrow-wood bark

Buckthorn bark

51. A pharmaceutist made a tincture of Adonis herds peculiarity of its preparation is that the active substances are derived in:
+In the neutral medium
In the alkalescent medium
In the alkaline medium
In the subacid medium
In the acid medium

52. Stability of suspensions can be enhanced by substances which increase the viscosity of the dispersion medium. Specify the substance that exhibits such properties:
+Glycerol
Purified water
Ethanol
Dimexid
Ether

53. Suspensions as heterogenous systems can be characterized by kinetic and sedimentary instability. What substance is used for increasing suspension stability with hydrophobic substances?
+Gelatose
Sodium chloride
Boric acid
Sodium sulphate
Glucose

54. How much water should be taken in order to prepare 200 ml of aqueous extract of motherwort (water absorption coefficient = 2 ml/g)?
+240 ml
220 ml
200 ml
160 ml
210 ml

55. A pharmaceutist made a tincture of althaea root. What is the proportion of herbal crude drug and extractant?
+1:20
1:10
1:30
1:100
1:400

56. A pharmaceutist prepared an oil emulsion containing zinc oxide. Specify the rational method of substance incorporation:
+Suspension-type icorporation into the prepared emulsion
Dissolution in oil
Grinding with water for dilution of the primary emulsion

Dissolution in water for preparation of the primary emulsion
Dissolution in the finished emulsion

57. A doctor prescribed a patient 100 ml of tincture made out of 0,25 of Herba Thermopsidis. How much dried concentrated extract of Herba Thermopsidis should be weighed by a pharmaceutist?
+0,25 g
0,5 g
0,3 g
0,2 g
0,1 g

58. While preparing decoctions in volume from 1000 to 3000 ml time of processing in boiling water bath should be:
+40 minutes
25 minutes
30 minutes
45 minutes
15 minutes

59. A pharmacy got the following recipe: *Rp.: Mucilaginis Amyli 50,0 Da. Signa. For the enema purposes.* How much starch and distilled water did the pharmaceutist use in order to make this preparation?
+1,0 g of starch; 49 ml of distilled water
1,0 g of starch; 50 ml of distilled water
2,0 g of starch; 48 ml of distilled water
5,0 g of starch; 45 ml of distilled water
10,0 g of starch; 40 ml of distilled water

60. A pharmaceutics brews an aqueous extract out of medicinal raw material in the tightly closed infusion vessel for 15 minutes and stirs it without opening the lid. Such technology of infusion preparation is typical for the following medicinal raw material:
+Mint leaves
Bilberry leaves
Senna leaves
Manzanita leaves
Cowberry leaves

61. A patient acquired mint leaves at a pharmacy. What recommendations regarding infusion of this herbal raw material must be given by the pharmaceutist?
+The infusion is to be prepared in a tightly closed vessel
The infusion is to be prepared on an open fire
The infusion is to be prepared at room temperature
The extract is to be immediately filtered after infusing
The extract is to be artificially cooled 15 minutes after infusing

62. A doctor prescribed his patient an emulsion of olive oil which includes anesthesin. To incorporate anesthesin into the emulsion it must be dissolved:

+In oil before preparing the emulsion
In the finished emulsion
In the purified water
In the primary emulsion
In the alcohol, and then added to the primary emulsion

63. A pharmaceutist prepared 150 ml of *Adonis vernalis* infusion using dry extract concentrate [1:1] that had to be weighed in the amount of:
+5,0
7,5
10,0
15,0
22,5

64. A pharmaceutist has prepared an emulsion. Specify the way of incorporation of the fat-soluble substances:
+They are dissolved in oil
They are dissolved in purified water
They are incorporated in undissolved form
They are added to the finished emulsion
They are added to the emulsifier

65. A pharmaceutist has to prepare an oil emulsion with menthol. Specify the appropriate way of the active substance incorporation:
+Dissolution in oil
Dispersion with the addition of ready emulsion
Dissolution in water intended for diluting the primary emulsion
Dissolution in the ready emulsion by heating
Incorporation into the ready primary emulsion

66. A patient purchased peppermint leaveseaves at a pharmacy. What recommendations on infusing this herbal raw material must be given by the pharmaceutist?
+The infusion is to be prepared in a tightly closed vessel
The infusion is to be prepared on an open fire
The infusion is to be prepared at room temperature
The extract is to be immediately filtered after infusing
The extract is to be artificially cooled 15 minutes after infusing

67. It is required to prepare a decoction of bearberry leaves. Specify the ratio of raw materials to the extractant if not indicated in the formulation:
+1:10
1:20
1:30
1:5
1:400

68. 5% solution of methylcellulose is used as a stabilizer for preparing a suspension of the following drug substance:

+Terpine hydrate
Magnesium oxide
Starch
Bismuth nitrate basic
Zinc oxide

69. A pharmacy compounds suspensions. What substance can be used for preparing a suspension without adding the stabilizer?
+Magnesium oxide
Camphor
Sulfur
Menthol
Phenyl salicylate

70. A pharmaceutist prepares 3000 mL of valerian root infusion for a hospital department. The given amount of extract should be infused in a water bath for:
+25 minutes
45 minutes
15 minutes
10 minutes
30 minutes

71. A pharmaceutist has prepared a solution of menthol oil. Specify the dissolution temperature of the active substance:
+40-50*oC*
60-70*oC*
30-40*oC*
70-80*oC*
20-30*oC*

72. A pharmaceutist prepares an infusion at a ratio of 1:30.What herbal raw material will be used?
+Lily of the valley grass
Marshmallow root
Sage leaves
Oak bark
Shoots of Marsh Labrador tea

73. A pharmaceutist prepared a suspension. It must contain the following amount of fluid in order to comply with Deriagin's rule:
+0,4-0,6 millilitre for 1,0 substance
1-0,8 millilitre of 1,0 substance
1,5-0,7 millilitre for 1,0 substance
0,9-2 millilitres for 1,0 substance
0,1-1,0 millilitre for 1,0 substance

74. A pharmaceutist has prepared a suspension with a hydrophobic substance. What stabilizer is required for its preparation?

+5% solution of methyl cellulose
Sodium thiosulfate
Glucose
Sodium chloride
Polyethylene oxide

75. A pharmaceutist has to prepare an aqueous extract of medicinal plants. What can be used as a substitute of plant material in the drug preparation?
+Standardized extract concentrate
Tincture
Liquid extract
Thick extract
Aromatic water

76. A pharmaceutist prepared 100,0 g of oil emulsion using 5% solution of methylcellulose as an emulsifier. Specify the required amount of oil and emulsifier for the drug preparation:
+10,0 g, 20,0 g
20,0 g, 30,0 g
10,0 g, 10,0 g
10,0 g, 30,0 g
20,0 g, 10,0 g

77. While preparing marshmallow root extract, a pharmaceutist mistakenly used the water of improper temperature for this extract, and the end product came up turbid. What is the required water temperature for the extraction of this herbal material?
+Room temperature
40oC
100oC
60oC
80oC

78. The method of suspension preparation depends on the properties of its components. Specify the substances having hydrophobic properties:
+Camphor, menthol
Sodium bicarbonate, sodium sulfate
Boric acid, calcium carbonate
Zinc oxide, talc
White clay, bentonite

79. A pharmacy prepared a solution of macromolecular substance with limited swelling capacity. What solution was labelled "warm up before use"?
+Gelatin
Trypsin
Pepsin
Methyl cellulose
Pancreatin

A pharmacist has prepared a drug by the prescription:
Rp.: Streptocidi
Dermatoli ana 1,0
Lanolini
Vaselini ana 5,0
M.D.S.: Apply to the affected skin.
Specify the type of the disperse system:
+Suspension ointment
Solution ointment
Extraction ointment
Hydrophilic ointment
E. Combined ointment

A patient needs the pharmacy to prepare him a camphor ointment. What concentration of camphor should be in the ointment according to the regulatory documents?
+10%
5%
1%
20%
15%

A pharmacist has made a topical solution with lipophilic vehicle. Specify the substance that produces such a type of solution:
+Menthol
Starch
Dermatol (bismuth subgallate)
Sulfur
Novocaine hydrochloride

Polyethylene oxide base belongs to the following group:
+Hydrophilic
Emulsion
Amphiphilic
Hydrophobic
Fat

A pharmacist has made a topical solution with lipophilic vehicle. Specify the substance that produces such a type of solution:
+Menthol
Starch
Dermatol (bismuth subgallate)
Sulfur
Novocaine hydrochloride

80. A pharmaceutical enterprise produces ointments. What base is used for production of sulfur ointment simple?
A. Emulsion

B. Vaseline
C. Base ”For ophthalmic ointments”
D. Lanolin
E. Polyethylene glycol

81. When preparing dermatological ointments the following substance should be introduced by suspending:
A. Xeroform
B. Camphor
C. Menthol
D. Protargol (silver proteinate)
E. Ephedrine hydrochloride

82. A pharmacist has made polyethylene oxide-based suppositories with Streptocid. Specify the approach to introducing the active ingredient in to the vehicle:
A. Dissolution in the molten vehicle
B. Emulsification and blending with the vehicle
C. Trituration with small amount of water
D. Suspending in the vehicle
E. Blending with vaseline oil

83. A pharmacist prepares cocoa butter-based round vaginal suppositories with less than 5% of citric acid. Specify the most rational approach to introduction of the active ingredient into the vehicle:
A. Dissolve in minimal quantity of purified water
B. Dissolve in Dimexid (Di- methylsulfoxide)
C. Dissolve in molten cocoa butter
D. Dissolve in vaseline oil
E. Dissolve in alcohol

81. Suppositories are prepared by various methods such as rolling, pouring, pressing. What base is used in the pouring method?
A. Butyrolum
B. Paraffin
C. Cocoa butter
D. Vaseline
E. Coriander oil

85. A pharmacy received a prescription for vaseline-lanoline based eye ointment. What proportion of vaseline to lanoline should be chosen by a pharmacist to make the ointment base?
+ 9:1
1:1

5:1
8:2
7:3

86. In course of preparation of suppositories by the pumping method the suppository mass became viscous and fluid after the incorporation of chloral hydrate into the cocoa butter. What substance should be added to the suppository mass in order to restore its density and plasticity?
+Wax
Glycerine
Purified water
Dimexid
Starch

87. A pharmaceutist has to prepare suppositories with a glycerine gelatin base by the molding method. What is the ratio of gelatin, water and glycerine required for the base?
+1:2:5
2:2:4
1:3:4
2:1:5
3:2:3

88. A pharmacy technologist received an ointment formulation: *Rp.: Unguentum Resorcini 1,5% - 10,0 Da. Signa. To be applied on the affected skin areas.* The pharmaceutist incorporated dry medical substance into the ointment by the following way:
+Trituration with a few drops of Vaseline oil
Trituration with a few drops of ethyl alcohol
Trituration with a few drops of water
Adding to the fused vaseline
Trituration with a part of vaseline

89. A pharmaceutist made a medicinal preparation according to the following formulation: *Rp.: Chloroformii Olei Helianthi Methylii salicylatis ana 10,0 M.D.S. For infriction.* Specify the kind of disperse system:
+Liniment - solution
Liniment - combined
Liniment - emulsion
Liniment suspension
Liniment – extractional

90. A pharmaceutist has prepared an ointment intended for application on the open wound surface. Such kind of ointment should meet the following additional requirement:
+Sterility
Isotonicity
Isoviscosity
Isoionicity
Prolonged action

91. Lipophilic bases for suppositories include:

+Mixtures of hydrogenatedd fats
Polyethylene oxide base
Gelatin-glycerol base
Collagen base
Glycerol soap base

92. A pharmaceutist is preparing vaginal suppositories by method of pouring. Which hydrophilic base can he use for this purpose?
+Polyethylene oxide
Cocoa butter
Vitepsol
Hard fat
Butyrol

93. The patient has been prescribed Linimentum Rosentali. It is composed of:
+Paraffin, alcohol, chloroform, iodine
Castor oil, calcium chloride, alcohol
Chloroform, methyl salicylate, turpentine
Iodine, potassium chloride, glycerin
Sunflower oil, ammonia, oleic acid

94. A pharmaceutist prepares a suspension ointment. What substance is soluble in water, but should be incorporated into the dermatological ointments as a suspension?
+Resorcinol
Zinc oxide
Sulfacyl sodium
Furacilin
Potassium iodide

95. A pharmacy has to prepare a soft drug based on the gel made from inorganic substances.Which of these highmolecular compounds can be used for preparing such a base?
+Bentonites
Cellulose ethers
Starch
Polyethylene oxides
Collagen

96. Spesify the type of the following liniment: *Ol. Helianthi 7,4 Sol. Ammonii caustici 25 ml Ac. Oleinici 0,1 M.f. linimentum D.S. To be rubbed in.*
+Liniment, emulsion o/w
Combined liniment
Liniment-solution
Liniment-suspension
Liniment, emulsion w/o

97. A pharmaceutist prepared suppository mass with novocaine and cocoa butter, but it turned out to be crumbling. What substance to be added to form a plastic mass:
+Anhydrous lanolin

Hydrous lanolin
Paraffin
Vaseline
Wax

98. A pharmaceutist is preparing vaginal suppositories by method of pouring. Which hydrophilic base can he use for this purpose?
+Polyethylene oxide
Cocoa butter
Vitepsol
Hard fat
Butyrol

99. A pharmaceutist has prepared a suspension ointment. Specify the substance used for this type of ointments:
+Zinc oxide
Protargolum
Menthol
Ichthyol
Potassium iodide

100. It is required to prepare 50 g of zinc ointment for a patient. What amount of zinc and vaseline must be weighed out by a pharmaceutist?
+5,0 and 45,0 g
10,0 and 40,0 g
2,5 and 40,0 g
1,0 and 49,0 g
0,5 and 49,5 g

101. A pharmacy received the following formulation: *Rp.: Xeroformii Picis Liquidae Betulae ana 3,0 Olei Ricini 100,0 M.D.S. For wound anointing.* Specify the dosage form:
+Liniment
Hydrophilic ointment
Paste
Combined ointment
Solution

102. A pharmaceutist prepared an ointment by the following formulation: *Rp.: Tannini 0,2 Lanolini 3,0 Vaselini 10,0 M. ut f. ung. D.S. To anoint the affected skin areas.* What method of tannin incorporation was used?
+Water dissolution, emulsification with anhydrous lanolin
Trituration with liquid petrolate in a mortar by Deryagin rule
Dissolution in molten vaseline
Trituration with an alcohol in a mortar, blending with the base
Dissolution in liquid petrolate

103. Pharmaceutical plants produce ointments on various bases. Specify the ointment base having the most pronounced osmotic properties:

+Polyethylene oxide
Silicon
Vaseline, lanolin
Methyl cellulose
Hydrogenated fat

104. Oil liniments are produced with fatty oils used as a base. What kind of oil should be used by a pharmacist if it was not specified in the formulation?
+Sunflower oil
Petrolatum
Cod-liver oil
Sesame oil
Eucalyptus oil

105. Which of the following vaginal dosage forms relate to the officinal formula, that is, are prepared in a pharmacy?
+Pessaries
Vaginal tablets
Vaginal capsules
Vaginal foams
Vaginal tablets for preparing solutions and suspensions

106. A pharmaceutist has prepared vaginal suppositories. Specify the form of these suppositories:
+Marbles
Torpedo
Cylinder
Cone
Sticks

107. A pharmaceutist is preparing rectal suppositories based on cocoa butter and containing dimedrol with mass concentartion less than 5%. For rational incorporation of dimedrol into the base it should be solved:
+In the minimum amount of treated water
In olive oil
In the melted cocoa butter
In vaseline oil
In alcohol

108. A pharmaceutist is preparing fat based suppositories by method of pouring. What base is to be used for this purpose?
+Butirol
Vaseline (petrolatum)
Cocoa butter
Wax
Spermaceti

109. A pharmaceutist prepared a surface action ointment. What ointment base was used?

+Vaseline (petrolatum)
Lanoline
Kutumova's basis
Gelatin-glycerol base
Polyethylene oxide basis

110. A pharmaceutist prepared the massage cream of the following composition: Beeswax 12,0 Almond oil 68,5 Spermaceti 12,0 Anhydrous lanolin 7,5 Essential oil of lavender 3 drops. Specify the cream type:
+Oily
Non-oily
Emulsion
Suspension
Combined

111. What is the function of anhydrous lanolin in the suppository mass used for suppositories prepared by hand rolling?
+Plasticizer
Solvent
Preservative
Solubilizer
Emollient

112. A pharmacy prepares ointments with extracts. What is the way to incorporate the dry and thick extracts into the ointments?
+To triturate them first with alcohol-water-glycerol [1:6:3] mixture
To incorporate them directly into the molten ointment base
To dissolve them in water first
To disperse them with a liquid which is compatible with the base
To disperse them with ethanol

113. A pharmacy received a prescription for an oil liniment including streptocidum. What is the type of disperse system of this preparation?
+Suspension
Emulsion
Solution
Alloy
Combined

114. A pharmaceutics prepares an ointment on a hydrophobic base. What substance does he use in order to reduce the melting point of the base?
+Vaseline oil
Glycerol
PEG-40
Dimexide
Ethanol

115. A pharmaceutist prepared a drug by the prescription: Rp.: Streptocidi Dermatoli ana 1,0 Lanolini Vaselini ana 5,0 M.D.S.: Apply to the affected skin. Specify the type of the disperse system:
+Suspension ointment
Solution ointment
Hydrophilic ointment
Combined ointment
Extraction ointment

116. A patient has been prescribed handrolled rectal suppositories with 0,1 g of aminophylline. What is the amount of base required for each suppository, provided that the suppository weight is not specified in the formulation?
+2,9 g
3,9 g
2,4 g
1,9 g
1,4 g

117. A pharmaceutist prepared a lipophilic ointment of suspension type. What substance is used for preparing this kind of ointments?
+Xeroform
Protargolum
Menthol
Tannin
Herbal extracts

118. When preparing dermatological ointments the following substance should be introduced by suspending:
A. Xeroform
B. Camphor
C. Menthol
D. Protargol (silver proteinate)
E. Ephedrine hydrochloride

5 Aseptic 2018 - 38
A pharmacist has made an injection solution that contains a salt produced by reaction of a strong base with a weak acid. Specify the necessary stabilizer:
+ Sodium hydrochloride (Sodium hydroxide)
Sodium sulfate
Hydrochloric acid
Cysteine
Ascorbic acid

50 ml of injection solution has been made in a pharmacy. Specify the process of solution sterilization:
+120°C - 8 minutes
110°C -15 minutes
180°C - 30 minutes

160°C -15 minutes
140°C -12 minutes

Weibel's liquid is necessary to stabilize the solution of a certain substance. Name this substance:
+Glucose
Novocaine
Potassium chloride
Sodium chloride
Magnesium sulfate

If vehicle is not specified, an eye ointment should be prepared with the following sterile vehicle:
+10 parts of anhydrous lanolin - 90 parts ***of vaseline*** For Eye Ointments
Vaseline For Eye Ointments
30 parts of lanolin - 70 parts of vaseline
Lanolin: vaseline -1:1
40 parts of anhydrous lanolin - 60 parts of vaseline **For Eye Ointments**

A pharmacy prepares 10% sodium chloride injection solution. What sterilization would be optimal in this case?
+Autoclave chamber with high-pressure saturated steam
Sterile filtration through membrane
Irradiation sterilization
Dry-heat sterilization
Gas sterilization

119. A pharmacist has dissolved a medicinal substance in sterile purified water to make an eye ointment. Specify this medicinal substance:
A. Pilocarpine hydrochloride
B. Xeroform
C. Menthol
D. Basic bismuth nitrate
E. Purified sulfur

120. A pharmacist needs to prepare 10,0g of eye ointment vehicle. What amounts of lanolin and vaseline should be taken?
A. 1,0g of anhydrous lanolin and 9,0 g of vaseline
B. 1,0g of anhydrous lanolin and 29,0 g of vaseline
C. 12,0g of anhydrous lanolin and 18,0gofvaseline
D. 27,0g of anhydrous lanolin and 3,0 g of vaseline
E. 10,0g of anhydrous lanolin and 20,0 g of vaseline

121. To prepare eye drops with antibiotic a dispensing chemist has been using flowing steam sterilization under 100oC for 30minutes.What antibiotic allows for such sterilization?
A. Levomycetin (Chloramphenicol)
B. Sodium benzylpenicillin
C. Streptomycin sulfate

D. Biomycin
E. Erythromycin

122. A pharmacist has made an injection solution with 0,1M of sodium hydroxide solution as a stabilizer. What substance requires such stabilizer?
A. Caffeine and sodium benzoate
B. Dibazol (Bendazol)
C. Sodium hydrocarbonate
D. Sodium chloride
E. Glucose

123. A pharmacy makes infusion solutions. Specify the solution that restores water-salt metabolism.
+ Ringer-Locke’s solution
Polyglucinum
Neohaemodesum
Hydrolysine
Dextran

124. Prior to making a sodium chloride isotonic solution a pharmacist baked the powder in a dry heat box. What substances are removed by this operation?
+ Pyrogenic substances
Redox substances
Sulfates
Chlorides
Moisture

125. What stage is the last in making injection solutions?
+ Labeling
Sterilization
Filtering
Qualitative control
Quantitative control

126. A pharmacist should make 200 ml of 3%sodium bicarbonate solution for injections.What are the specifics of making this solution?
+ Vial should be filled to 2/3 of its volume; sterilization at 120 0C for 12 minutes
No sterilization
Dissolve by heating; sterilization at 120 0C for 12 minutes
Use stabilizing agent
Use water free of redox substances

127. Hexamethylenetetramine solution sterility is achieved by:
+Filtering through bacterial filters
Preserving agents
Gas diffusion sterilization
Tyndallization method of sterilization
Pressure steam sterilization

128. A pharmacist made eye drops of pilocarpine hydrochloride and adrenaline hydrochloride solution. A peculiarity of the incorporation of the adrenaline hydrochloride solution is that it is added:
+After sterilization, aseptic
After dissolving of solids
To the half dose of solvent
In the first place
After isotoning

129. A pharmaceutist prepared eyedrops with boric acid. What sterilization method was applied?
+Sterilization by saturation vapor pressure
Tyndallization
Sterilization by dry heat
Sterilization by gases
By high-frequency current

130. Eyedrops are prepared with an ointment base which is an alloy of vaseline and lanolin. Specify the method of its sterilization:
+Dry heat
Ethylene oxide
Flowing steam
Pasteurization
Tyndallization

131. A pharmaceutist prepares several different solutions with antibiotics under aseptic conditions. He can sterilize the solution of the following substance:
+Chloramphenicol
Benzylpenicillin-sodium
Neomycin sulphate
Benzylpenicillin-potassium
Polymyxin sulphate

132. To prepare eye drops with antibiotic a dispensing chemist has been using flowing steam sterilization under 100oC for 30minutes.What antibiotic allows for such sterilization?
A. Levomycetin (Chloramphenicol)
B. Sodium benzylpenicillin
C. Streptomycin sulfate

D. Biomycin
E. Erythromycin

133. A pharmaceutist needs to sterilize 250 ml of glucose solution for injections. How many minutes should the solution undergo sterilization in the autoclave under the temperature of 120° C?
+12
8
15
25
30

134. An edema can be relieved by means of hypertonic solutions. What phenomenon takes place in the blood cells after injection of such solution?
+Plasmolysis
Hydrolysis
Hemolysis
Lipolysis
Electrolysis

135. 100 ml of 0,9% sodium chloride solution were prepared according to the doctor's prescription. What sterilization schedule is required for this solution?
+120*oC* - 8 minutes
120*oC* - 12 minutes
120*oC* - 15 minutes
180*oC* - 30 minutes
100*oC* - 15 minutes

136. Ophthalmic drops are produced on the base of concentrated riboflavin solution (1:5000). How much solution should be taken if the formulation says "0,001 of riboflavin"?
+5 ml
2 ml
3 ml
4 ml
1 ml

137. Dispersion degree of drug substances is of great importance for the preparation of ophtalmic ointments. What drug substance should be thoroughly triturated with sterile vaseline oil before incorporating it into the pharmacopoeiarecommended ointment base?
+Mercuric oxide yellow
Resorcin
Pilocarpine hydrochloride
Zinc sulfate
Ethyl morphine hydrochloride

138. A pharmaceutist is preparing an ointment under aseptic conditions on the sterile ointment base - composition of vaseline and lanoline with the ratio 6:4. The drug substance is

incorporated by suspension type. Such technology of ointment preparation is typical for the following substance:
+Benzylpenicillin sodium
Sodium chloride
Thiamine chloride
Pilocarpine hydrochloride
Sodium sulfate

139. A pharmaceutist has to sterilize 400 ml of calcium gluconate solution for injections.Specify the time of autoclave sterilization of the solution at 120*oC*:
+12 minutes
20 minutes
15 minutes
10 minutes
30 minutes

140. Injection solutions of salts derived from weak acids and strong bases require stabilization. What stabilizers are used for these solutions?
+0,1 M sodium hydroxide solution
0,1 M acid chloride solution
Trilon B
Ascorbic acid
Buthylhydroxytoluene

141. A pharmacy produces some injection solutions that have to be apyrogenic.Solution of the following substance can be depyrogenized by method of adsorption with activated carbon?
+Glucose
Atropine sulfate
Papaverine hydrochloride
Scopolamine hydrobromide
Platyphyllini hydrotartras

142. A pharmacy received an order for 2500ml of isotonic sodium chloride solution. How much sodium chloride and water for injections should be taken to prepare this dosage form?
+22,5 g of sodium chloride and 2500 ml of water for injections
50,0 g of sodium chloride and 2450 ml of water for injections
25,0 g of sodium chloride and 2500 ml of water for injections
30,0 g of sodium chloride and 2500 ml of water for injections
100,0 g of sodium chloride and 2400 ml of water for injections

143. A pharmacy received a prescription for preparation of dermatological ointment with benzylpenicillin. Specify the type of ointment that necessary to prepare:
+Suspension ointment
Liquid ointment
Hydrophilic ointment
Alloy ointment
Combined

144. A pharmacy got an order for eye drops containing 1% solution of pilocarpine hydrochloride. What substance was used in order to ensure isotonicity?
+Sodium chloride
Boric acid
Glucose
Sodium nitrate

145. Specify the base for the preparation of antibiotic ointments:
+6 parts of vaseline + 4 part of lanolin
8 parts of vaseline + 2 part of lanolin
5 parts of vaseline + 5 part of lanolin
7 parts of vaseline + 3 part of lanolin
5 parts of vaseline + 1 part of lanolin

146. Specify the indicator which measures the total contribution of various solutes to the osmotic pressure of the solution:
+Osmolality
Isohydricity
Isotonicity
Isoviscosity
Apyrogenicity

147. Pharmacies prepare injectable solutions. Which solution is prepared without any stabilizer?
+Sodium bicarbonate solution
Sodium thiosulfate solution
Solution of caffeine sodium benzoate
Glucose solution
Novocaine solution

148. A pharmaceutist prepared eye drops containing silver nitrate. What substance must be taken to ensure isotonicity?
+Sodium nitrate
Sodium chloride
Boric acid
Glucose
Sodium sulfate

149. A pharmaceutist prepares a solution for injections that must be stabilized with 0,1M of hydrochloric acid solution. What solution is to be prepared?
+Novocaine
Calcium chloride
Potassium chloride
Hexamethylenetetramine
Sodium benzoate

150. A pharmaceutist prepared an injectable solution of novocaine. What stabilizer had been used?

+Hydrochloric acid solution
Sodium bicarbonate solution
Stabilizator ofWeibel
Sodium sulfite solution
Sodium thiosulfate solution

151. A pharmacy received a formulation for eye drops containing 1% solution of pilocarpine hydrochloride. What substance should be used to ensure that the resultant solution is isotonic?
+Sodium chloride
Boric acid
Glucose
Sodium nitrate
Sodium sulfate

152. Sterilization methods applied for the preparation of drugs under aseptic conditions can be differentiated into physical, mechanical, and chemical ones. Specify the chemical method of sterilization:
+Addition of preservatives
Dry heat sterilization
Radiation sterilization
Pressure steam sterilization
UV light sterilization

6 Incompatibilities 2018 **

153. A pharmaceutist refused preparation of nasal drops to a patient because of incompatibility between collargol and dimedrol written in the prescription. What is the reason for incompatibility between these ingredients?
+Coagulation
Immiscibility
Adsorption
Dissection
Eutectic formation

154. A pharmaceutist has revealed an incompatibility in the prescription. What drug substances form an eutectic mixture?
+Chloral hydrate + camphor
Antipyrine + analgin
Calcium chloride + sodium chloride
Ephedrine hydrochloride + glucose
Sodium hydrocarbonate +hexamethylenetetramine

155. A pharmacy received a prescription for powders with a too high single dose of phenobarbital not justified by proper documentation. What actions should a pharmaceutist take?
+Put the stamp "invalid"and return the prescription to the patient
Supply 1/3 of the maximum single dose
Supply the maximum single dose, multiplied by the number of powders
Supply the highest single dose

Supply 1/3 of the maximum single dose, multiplied by the number of powders

156. A pharmacy got a formulation of a mixture containing manzanita decoction and belladonna extract. What is the reason for incompatibility between these components?
+Precipitation
Hydrolysis
Oxidation-reduction processes
Emission of gaseous substances
Coagulation of colloid systems

157. A pharmaceutist was preparing an ointment with ricin oil and Vaseline but failed to get homogenous system. What is the most likely cause of incompatibility between these components?
+Component immiscibility
Restricted solubility
Release of water of crystallization
Coagulation
Adsorption

158. A pharmaceutist revealed physical incompatibility caused by coagulation. This process takes place in a solution if the combination of the following substances is present:
+Dimedrol and collargol
Dimedrol and novocaine
Dimedrol and sodium chloride
Dimedrol and diazoline
Dimedrol and glucose

159. A pharmaceutist revealed physical incompatibility in a recipe. Specify the combination of drug substances demonstrating eutectic when blended:
+Camphor and menthol
Glucose and phenyl salicylate
Streptocid and antipyrine
Ascorbic acid and hydrocarbonate sodium
Basic bismuth nitrate and magnesium oxide

160. A patient has been administered a solution containing boric acid and camphor. What solvent should his doctor prescribe in order to prevent physical incompatibility?
+Ethyl alcohol 70%
Purified water
Sunflower oil
Glycerol
Ethyl alcohol 40%

161. A doctor gave a prescription for the tincture of digitalis with hydrochloric acid. What is the reason for their incompatibility?
+Hydrolysis (with no visible changes)
Precipitation
Gassing

Change in colour
Change in odour

162. A pharmaceutist revealed incompatibility in a prescription for powders with ascorbic acid and hexamethylene tetramine. What process takes place when these components are combined?
+Mixture dampening
Eutectic
Immiscibility
Adsorption
Isolation of crystallization water

163. A pharmacy received a prescription for a mixture. What drug substances are incompatible?
+Papaverine hydrochloride + aminophylline
Novocaine + diphenhydramine
Sodium bromide + sodium chloride
Codeine phosphate + extract of Thermopsis
Phenobarbital + glucose

164. A pharmacy got an order for manzanita decoction and hexamethylenetetramine.A pharmacist cancelled it with a stamp "Invalid prescription". What is the reason for the incompatibility?
+Deposition
Eutectic
Oxidization
Moisture-repellant
Insolubility

165. When preparing an ointment with castor oil and vaseline a pharmaceutist failed to obtain a homogeneous system. What is the most likely cause of incompatibility between these components?
+ Immiscibility of the ingredients
Limited solubility
Release of water of crystallization
Coagulation
Adsorption

166. A pharmacist technologist revealed incompatibility in the following prescription:
Rp.: Mentholi 0,5
Natrii hydrocarbonatis
Natrii tetraboratis aa 1,5
Aquae purificatae 100 ml
M.D.S. 1 tablespoon twice a day.
In order to prepare this drug form the pharmacist should apply the following techniques:
+Add stabilizer
Apply fractional dissolution
Apply another solvent
Change one of the component
Change dosage form

167. A pharmacy got an order for powders containing ascorbic acid and sodium hydrocarbonate. What process takes place between the ingredients?
+Dampening
Oxidization
Absorption
Sedimentation
Stratification

168. A pharmaceutist revealed incompatibility in the formulation.
Rp.: Sol. Collargoli 1%- 10 ml
Sol. Adrenalini hydrochloridi 0,1%- 1 ml
M.D.S. Nasal drops.
What chemical process underlies this incompatibility?
+Oxidization
Neutralization
Precipitation
Hydrolysis
Absorption

169. A pharmaceutist-technologist has to prepare a medication with the following formulation: Rp.: Mentholi 0,1 Glycerini 10,0 M.D.S. Nasal drops. What is the reason for their incompatibility?
+Insolubility of ingredients
Separation of the mixture
Adsorption of the medicinal agent
Eutectic alloy formation
Coagulation of colloidal system

170. A pharmacy got an order for a mixture containing manzanita decoction and belladonna extract.What is the reason for their incompatibility?
+Sedimentation
Hydrolysis
Redox (oxidation-reduction) processes
Liberation of gaseous substances
Coagulation of colloidal systems

171. A pharmaceutist refused preparation of nasal drops to a patient because of incompatibility between collargol and dimedrol written in the prescription. What is the reason for incompatibility between these ingredients?
+Coagulation
Immiscibility
Adsorption
Dissection
Eutectic formation

172. Preparation of multicomponent powders with phenyl salicylate and camphor is accompanied by generation of some fluid. What is the reason for their incompatibility?

+Eutectic alloy formation
Adsorption
Crystallization water exudation
Hygroscopic components
Gases separation