1. A pharmacist prepared a powder with a poisonous substance. What is the minimal amount of the poisonous substance that can be weighed by manual balance 1?
A 0.05
B 0.1
C 0.03
D 0.01
E 0.02

2. A pharmacist should weigh 4.0 of glucose. What balance will he use for weighing?
A MB 5.0
B MB 200.0
C MB 50.0
D MB 10.0
E MB 500.0

3. A pharmasit prepares powders with a poorly powdered substance. What substance should be powdered with a volatile liquid?
A Camphor
B Magnesium oxide
C Zinc sulphate
D Copper sulphate
E Glucose

4. A pharmacist prepared powders with 0.05 g of platiphylline hydrotartrate for all doses. Did he use trituration of platiphylline hydrotartrate?
A He did not use it
B He used in the ratio of 1:10
C He used in the ratio of 1:100
D He prepared powders in double quantity
E Powders containing 0.05 g of a poisonous substance are not prepared

5. A pharmacist-technologist should prepare 5.0 g of atropine sulphate trituration (1:100). Indicate the amount of atropine sulphate and lactic sugar that should be used:
A 0.05:4.95
B 1.0:4.0
C 0.1:4.9
D 0.5:4.5
E 0.01:4.99

6. A pharmacist should prepare powders with atropine sulphate in the amount of 0.0003 g per one dose. Calculate the amount of atropine sulphate trituration (1:100) for preparing 10 powders:
A 0.3
B 0.03
C 3.0
D 0.27
E 2.7

7. A pharmacist prepared powders with Streptocide. Indicate the right way of introduction of this substance:
A Triturate with alcohol at first
B Add as trituration

C Use the three layers method
D Add at the end and mix to homogeneity
E Add at first while triturating with glycerol

8. A pharmacist should prepare powders according to the following formulation:
Rp.: Camphorae 0.1
Glucosi 0.25
M.f.pulv.
D.t.d. N 10
S. Use 1 powder 3 times a day.
What is the optimal technology?
A Powder glucose and pour out on the paper capsule; powder camphor with the alcohol and mix
B Weigh camphor into a mortar, add glucose and mix
C Powder glucose and pour out on the paper capsule; powder camphor and mix
D Put camphor between the layers of glucose and mix
E Powder glucose with the alcohol, add camphor and mix

9. A pharmacist prepares powders according to the following formulation:
Rp.: Proserini 0.002
Sachari 0.25
M.f. pulvis
D.t.d. No. 10
S. 1 powder three times a day.
Calculate the amount of substances for the powders prescribed:
A Proserine trituration (1:10) – 0.20, sugar – 2.3
B Proserine trituration (1:10) – 0.20, sugar – 2.5
C Proserine – 0.02, sugar – 2.5
D Proserine trituration (1:100) – 2.0, sugar – 2.5
E Proserine trituration (1:100) – 0.2, sugar – 2.3

10. What the minimal mass of glucose can be weighed by manual balance-1?
A 0.02
B 0.01
C 0.03
D 0.04
E 0.05

11. In prescription 0.0001 g of atropine sulphate was prescribed. Indicate the amount of atropine sulphate trituration (1:100) for preparing 10 powders:
A 0.1
B 0.2
C 0.5
D 0.01
E 0.02

12. A pharmacist prepared a medicine. What is the optimal technology?
Rp.: Magnesii oxydi
Natrii hydrocarbonatis ana 0.2
M. f. pulv.
D. t. d. No.12
S. Use 1 powder 3 times a day.

A Powder sodium hydrocarbonate, add magnesium oxide and mix
B Powder magnesium oxide, add sodium hydrocarbonate and mix
C Powder sodium hydrocarbonate with alcohol, add magnesium oxide and mix
D Powder a part of magnesium oxide, add sodium hydrocarbonate, then add the rest of magnesium oxide and mix
E Powder magnesium oxide with alcohol, add sodium hydrocarbonate and mix

13. A pharmacist prepared powders with belladonna extract in the amount of 0.02 g per one dose. What amount of a dry belladonna extract (1:2) is required for preparing per 10 doses?
A 0.4 g
B 0.6 g
C 0.5 g
D 0.8 g
E 0.2 g

14. A pharmacist prepared 20.0 g of atropine sulphate trituration (1:100). Indicate the amount of the poisonous substance and the excipient that should be used:
A 0.2:19.8
B 0.02:19.98
C 0.1:19.0
D 2.0:18.0
E 0.2:20.0

15. A pharmacist prepared trituration of scopolamine hydrobromide. What excipient for preparing trituration should be used?
A Lactic sugar
B Sucrose
C Glucose
D Starch
E Talc

16. A pharmacist prepares powders with riboflavin. What is the way of its introduction into a powdered mixture?
A Use the “three layers method”
B Use a preliminary sifted riboflavin
C Use the principle of mixing from smaller to larger
D Use the principle of mixing from larger to smaller
E Introduction of rifoblavin on the surface of the powdered mixture

17. A pharmacist prepares powders with this substance in a separate mortar at the special working place using the method of “three layers”. What is the substance?
A Riboflavin
B Sulphur
C Glucose
D Protargol
E Copper sulphate

18. For preparation of the external powder a pharmacist powdered this substance with alcohol. Indicate a poorly powdered substance:
A Streptocid
B Cooper sulphate

C Sugar
D Codeine
E Glucose

19. This substance has a blue colour, but unlike colouring agents it does not colour the filter paper, mortar and pestile; powders with this substance are prepared by general rules. What is the substance?
A Copper sulphate
B Ethacridine lactate
C Riboflavin
D Acrichin
E Furacilin

20. What is the weight of one powder according to the following prescription?
Rp.: Dibazoli 0.05
Papaverini hydrochloridi 0.15
Sachari 2.5
M.f. pulv.
Divide in partes aequales No.10
S. Use 1 powder 3 times a day.
A 0.27
B 2.7
C 0.25
D 0.26
E 0.3

21. Indicate what substance should be added into a powdered mixture without additional powdering?
A Starch
B Camphor
C Menthol
D Salicylic acid
E Streptocid

22. Indicate the composition of the dense belladonna extract solution:
A 60 parts of water, 30 parts of glycerol, 10 parts of alcohol
B 60 parts of water, 30 parts of alcohol, 10 parts of glycerol
C 60 parts of alcohol, 30 parts of water, 10 parts of glycerol
D 60 parts of alcohol, 30 parts of glycerol, 10 parts of water
E 60 parts of glycerol, 30 parts of water, 10 parts of alcohol

23. What is meant by the solution concentration of 1:10?
A 1.0 of a medicinal substance and a solvent to obtain 10 ml of the solution
B 1.0 of a medicinal substance and 10 of a ml solvent
C 1 ml of a solvent and 10.0 of a medicinal substance
D 1.0 of a medicinal substance and 10.0 of a solvent
E 1.0 of a medicinal substance and 9 ml of a solvent

24. To improve the solubility of iodine in purified water it is necessary to:
A Dissolve iodine in the saturated solution of potassium iodide
B Dissolve in boiling water

C Triturate iodine in a fine powder
D Disperse iodine with glycerol
E Disperse iodine with alcohol

25. A pharmacist prepared 100 ml of 20% magnesium oxide solution. Indicate the amount of water for its preparation (VIC=0.5ml/g):
A 90 ml
B 100 ml
C 94.5 ml
D 92 ml
E 91 ml

26. While preparing 100 ml of 10 % solution of Burov liquid the quantity of the standard aluminium acetate topical solution is:
A 10 ml
B 25 ml
C 12.5 ml
D 30 ml
E 50 ml

27. To prepare 100 ml of 3 % solution of hydrogen peroxide it is necessary to take 30 % of perhydrol in the amount of:
A 10.0 g
B 20.0 g
C 0.3 g
D 30.0 g
E 3.0 g

28. Indicate the optimal technology of the formulation:
Rp.: Spiritus aethylici 20 ml
Resorcini 0.2
M.D.S. For skin.
A Weigh a substance in the bottle for dispensing and measure alcohol
B Measure a solvent in the auxiliary bottle, weigh a substance
C Measure alcohol in the bottle for dispensing, weigh salicylic acid
D Weigh a substance in the auxiliary bottle and measure a solvent
E Powder a substance in a mortar, add a solvent

29. A pharmacist prepared the following drops:
Rp.:Tincturae Belladonnae 5ml
Tincturae Valerianae
Tincturae Leonuri
Tincturae Convallariae ana 10 ml
Misce. Use 30 drops 3 times a day.
What tincture should be added first in the bottle for dispensing?
A Belladonna tincture
B Leonurus tincture
C Convallaria tincture
D Valeriana tincture
E Mixture of tinctures

30. A pharmacist prepared a mixture with 2.0 g of sodium benzoate. What volume of 10 % solution of sodium benzoate was used?
A 20 ml
B 2 ml
C 8 ml
D 10 ml
E 12 ml

31. For preparation of 200 ml of etacridine lactate solution (1:1000) a pharmacist should weigh etacridin lactate in the amount of:
A 0.2
B 0.1
C 0.02
D 0.04
E 2.0

32. A patient doses the mixture by spoon. What is the capacity of a tablespoon?
A 15 ml
B 25 ml
C 10 ml
D 20 ml
E 5 ml

33. What concentration of hydrogen peroxide should be dispensed if it is not indicated in the prescription?
A 3 %
B 30 %
C 20 %
D 10 %
E 2 %

34. A pharmacy receives the prescription for preparation of a liquid medicinal form with the medicinal substance, which is soluble in the alkaline medium. Indicate this substance:
A Osarsol
B Themysal
C Iodine
D Lead acetate
E Furacillin

35. A pharmacist added a tincture into the mixture. Indicate the right technology:
A In the bottle for dispensing measure tinctures according to increase of the alcohol concentration at the end
B Place tinctures in the bottle, add water
C In the auxiliary bottle mix tinctures with an equal amount of the mixture
D In the auxiliary bottle mix tinctures with the mixture and strain
E In the auxiliary bottle measure water, add tinctures and filter

36. How should iodine be dissolved while preparing Lugol solution?
A Dissolve in the saturated solution of potassium iodide
B Dissolve in hot water
C Dissolve in alcohol

D Dissolve in diluted solution of potassium iodide
E Dissolve in cold water

37. What is the right technology?
Rp.: Acidi borici 0.1
Glycerini 10.0
M.D.S. Ear drops.
A Place boric acid in the bottle for dispensing, add glycerol and heat
B Powder boric acid with glycerol
C Place glycerol in the bottle for dispensing, add boric acid and heat
D Place glycerol in the auxiliary bottle, dissolve in it boric acid
E Place glycerol in a porcelain cup, dissolve boric acid in it

38. What technology can be used for preparation of the starch solution?
A Mix with cold water, pour out in boiling water and heat for 1-2 min
B Mix with hot water, pour out in cold water
C Dissolve in cold water and heat
D Dissolve in fresh filtered purified water in the bottle for dispensing
E Dissolve in a boiling water

39. What is the right technology for preparation of this medicine?
Rp.: Spiritus aethylici 70 % 30 ml
Acidi salicylici 0.3
M.D.S. For skin.
A Place the substance in the bottle for dispensing and measure alcohol
B Measure the solvent, add the substance, filter in the bottle
C Measure alcohol in the bottle for dispensing and add salicylic acid
D Weigh the substance in the auxiliary bottle and measure the solvent, strain in the bottle for dispensing
E Powder the substance in a mortar, add the solvent and transfer in the bottle for dispensing

40. What is the peculiarity of the technology for 10 % solution of calcium gluconate for internal use?
A Dissolve when heating and purified by activated carbon
B Triturate preliminary in the mortar and dissolve in warm water
C Use filtered water
D Dissolve in part of alcohol dilute with water to the volume
E Add acetic acid for better dissolving

41. A pharmacist prepares 100 ml of 1 % solution of ammonia. What is the amount of 10% ammonia solution and water used?
A 10 ml and 90 ml
B 5 ml and 95 ml
C 15 ml and 85 ml
D 20 ml and 80 ml
E 5 ml and 100 ml

42. What is the amount of the hydrochloric acid solution (1:10) and water for preparing this medicine?
Rp.: Sol. Acidi hydrochlorici 1% 100 ml
D.S. Use 1 table-spoon 3 times a day

A 10 ml and 90 ml
B 1 ml and 99 ml
C 20 ml and 80 ml
D 10 ml and 100 ml
E 3 ml and 97 ml

43. What is the type of the dispersion system for this medicine?
Rp.: Dimedroli 0.2
Sol. Natrii bromidi 3% 20 ml
M.D.S. Use 1 tablespoon 3 times a day.
A True solution
B Suspension
C Emulsion
D Colloidal solution
E Solution of HMC

44. What amount of aromatic water is used for preparing the mixture?
Rp.: Analgini 2.0
Natrii bromidi 3.0
Aquae Menthae 200 ml
Tinct. Convallariae
Tinct. Valerianae ana 5.0
M.D.S. Use 1 tablespoon 3 times a day.
A 200 ml
B 190 ml
C 185 ml
D 180 ml
E 184 ml

45. A doctor prescribed a medicine with 0.5 g of iodine and 10 ml of purified water. What additional component should be used for preparing the medicine?
A Potassium iodide
B Potassium bromide
C Sodium hydrocarbonate
D Sodium chloride
E Sodium bromide

46. Calculate a single dose for analgin in this medicine:
Rp.: Analgini 3.0
Kalii bromidi 4.0
Aquae purificatae ad 150 ml
Da. Signa. Use 1 tablespoon 2 times a day.
A 0.3
B 3.0
C 0.6
D 0.9
E 6.0

47. What medicinal substance requires using a fresh purified water for preparing the solution?
A Silver nitrate
B Glucose

C Sodium acetate
D Sodium tetraborate
E Pepsin

48. What concentration of alcohol is used if it is not indicated in the prescription?
A 90 %
B 70 %
C 45 %
D 60 %
E 30 %

49. The total volume of a liquid dosage form is calculated as the sum of:
A volumes of the liquid ingredients prescribed in the prescription
B volumes of all liquid ingredients dosed by mass and by volume
C volumes of concentrated solutions and purified water
D volumes of concentrated solutions and changes of volumes when dissolving dry medicinal substances
E volumes of purified water and changes of volumes when dissolving dry medicinal substances

50. A pharmacist should prepare drops according to the prescription:
Rp.: Adonisidi
Tincturae Belladonae ana 5 ml
Tincturae Valerianae
Tincturae Convallariae ana 10 ml
M.D.S. 30 drops 3 times a day.
What ingredient should be measured off first in the bottle for dispensing?
A Adoniside
B Tincture of valerian
C The mixture of belladonna tincture and adoniside
D Tincture of convallaria
E Tincture of belladonna

51. What is the way of dissolving analgin while preparing a mixture?
A Dissolve in the auxiliary bottle into purified water, strain
B Add as a concentrated solution
C Add in the bottle for dispensing at the end
D Dissolve in purified water, filter
E Place in the bottle at first

52. What substance requires a boiling water for preparing the solution?
A Boric acid
B Sodium hydrocarbonate
C Sodium chloride
D Sodium bromide
C Ascorbic acid

53. A pharmacist prepares a mixture with ammonia-anise drops. What is the way of their introduction?
A Mix with an equal amount of the mixture prepared in the additional bottle and transfer it in the bottle
B Add to the mixture at the end

C Mix with concentrated solutions in the auxiliary bottle
D Add in the bottle for dispensing at first
E Mix with purified water in the auxiliary bottle, strain in the bottle for dispensing

54. A pharmacist prepared the concentrated solution. What should he do after positive chemical analysis?
A Filter the solution
B Register for dispensing
C Percolate the solution
D Write a WCP
E Place in the bottle

55. Liquid medicinal forms are prepared using the concentrated solution of medicinal substances or using VIC during dissolution of the substances if the prescribed solvent is:
A purified water
B aromatic water
C glycerol
D alcohol
E PEG-400

56. A pharmacist added galenic medicines and tinctures into a mixture. What is the right technology?
A Measure water, concentrated solutions, galenic medicines, tinctures in the bottle for dispensing
B Place tinctures, galenic medicines in the bottle, then add water and concentrated solutions
C Mix with an equal amount of the mixture in the auxiliary bottle
D Add to the mixture at the end and filter
E Measure water, galenic medicines, concentrated solutions and then tinctures in the bottle for dispensing

57. What is the right technology of dissolving potassium bromide?
Rp.: Tincturae Belladonnae 5 ml
Tincturae Convallariae
Tincturae Valerianae ana 10 ml
Mentholi 0.2
Kalii bromidi 3.0
M.D.S. Use 25-30 drops 3 times a day (Zelenin drops).
A Dissolve in the equal amount of water
B Dissolve dry substances in belladonna tincture
C Dissolve in the mixture of tinctures
D Add in the bottle for dispensing at the end
E Dissolve in valerian tincture

58. A pharmacist prepares drops:
Rp.: Atropini sulfatis 0.01
Aquae purificatae 10 ml
M. D. S. Use 2 drops 2 times a day.
How does he dispense atropine sulphate?
A As a water solution of 1 % concentrated solution
B As a water solution of 10 % concentrated solution
C As an alcoholic solution of 1 % concentrated solution
D As trituration of 1:10

E As trituration of 1:100

59. What is the way of dissolving menthol for preparing the medicine?
Rp.: Adonisidi 5 ml
Tincturae Convallariae
Tincturae Valerianae aa 10 ml
Mentholi 0.1
Kalii bromidi 2.0
Misce. Da. Signa. Use 25 drops 3 times a day.
A Add to the bottle for dispensing at the end
B Dissolve in convallaria tincture
C Dissolve in some drops of alcohol
D Dissolve in adoniside
E Dissolve in the mixture of tinctures

60. What concentration of alcohol is of the highest bactericidal activity?
A 70%
B 60%
C 90%
D 95%
E 40%

61. What is the total volume of this mixture?
Rp.: Natrii hydrocarbonatis 3.0
Aquae purificatae 200 ml
Sirupi simplicis 10 ml
Liquoris ammonii anisati 5 ml
Misce. Da. Siqna. Use 1 tablespoon twice a day.
A 215 ml
B 200 ml
C 218 ml
D 210 ml
E 205 ml

62. At the chemist's shop the quality of purified water is checked:
A daily
B every shift
C every month
D every quarter of a month
E every year

63. For the complete chemical analysis purified water is transfered to the control-analytical laboratory once every:
A quarter per month
B month
C six months
D year
E week

64. The bacteriological control of purified water is carried out at the sanitary and epidemiological station:

A twice in a quarter per month
B twice a month
C once a month
D once every quarter per month
E once a week

65. The shelf-life of purified water is:
A 3 days
B 1 shift
C 1 day
D 1 week
E 5 days

66. What is the concentration of alcohol for preparing resorcinol solution?
A 70%
B 40%
C 90%
D 95%
E 96%

67. What is the concentration of alcohol for preparing levomycetin solution?
A 70 %
B 40 %
C 90 %
D 95 %
E 96 %

68. What concentration of alcohol is used for preparing 2 % alcoholic solution of diamond green?
A 60%
B 90%
C 70%
D 95%
E 96%

69. What is the peculiarity of protargol introduction when preparing a solution?
A Apply as a thin layer on the surface of water to complete dissolution
B Dissolve while shaking in a dark bottle
C Dissolve in water previously heated
D Disperse with water at the room temperature
E Dissolve in the acidified water

70. A pharmacist prepared 2 % solution of collargol. What is the right technology?
A Dissolve while powdering with purified water in a mortar
B Dissolve in purified water in the bottle for dispensing
C Place on the surface of water to complete dissolution
D Dissolve in the heated water in the auxiliary bottle
E Dissolve when powdering with alcohol in a mortar

71. What is an unlimited sweeling HMC?
A Pepsin
B Starch

C Gelatonose
D Pectin
E Methylcellulose

72. What substance should be dissolved in water acidified by the solution of hydrochloric acid (1:10)?
A Pepsin
B Tannin
C Osarsol
D Collargol
E Copper sulphate

73. What substance is the limited sweeling one?
A Gelatinose
B Ichthyol
C Tannin
D Pepsin
E Belladonna extract

74. A chemist's shop received the following prescription:
Rp.: Mucilaginis Amyli 50.0
Da. Signa. For the enema purposes.
What amount of starch and distilled water did the pharmacist use in order to make this medicine?
A 1.0 g of starch; 49 ml of distilled water
B 1.0 g of starch; 50 ml of distilled water
C 2.0 g of starch; 48 ml of distilled water
D 5.0 g of starch; 45 ml of distilled water
E 10.0 g of starch; 40 ml of distilled water

75. What substance is limited sweeling in hot water and unlimited swelling in cold water?
A Methylcellulose
B Gelatin
C Starch
D Pepsin
E Dense belladonna extract

76. What concentration of collargol is required for the following technology: place a substance in the bottle for dispensing, add filtered water and shake?
A To 1 %
B To 2 %
C To 5 %
D To 10 %
E To 20 %

77. What substance is a protected colloid?
A Protargol
B Basic bismuth nitrate
C Potassium iodide
D Camphor
E Sodium chloride

78. What is the optimal technology for this substance?
Rp.: Sol. Protargoli 0.3 % 10 ml
Glycerini 1.0
D.S. For lotion.
A Triturate protargol with glycerol in a mortar and add water
B Dissolve glycerin with water and add protargol
C Dissolve protargol in the auxiliary bottle and add glycerin
D Weigh protargol in the bottle, dissolve in water and add glycerin
E Put glycerin in the bottle, add water and protargol

79. What is the rational technology for preparing the starch solution?
A Mix starch with a cold water, dissolve in a warm water when heating
B Mix starch with a hot water, dissolve in a cold water
C Mix starch with a cold water
D Mix starch with a hot water
E Mix starch with glycerol and dissolve in a cold water

80. A pharmacist prepared a suspension by the dispersion method. What technological stage is not used for its preparation?
A Straining
B Powdering
C Mixing
D Packing
E Registration

81. What amount of the liquid should be added to 10.0 g of zinc oxide while triturating according to the Deryagin's rule?
A 5 ml
B 10 ml
C 2 ml
D 1 ml
E 0.5 ml

82. A pharmacist prepared a suspension with 2.0 g of menthol. What amount of 5 % solution of methylcellulose did he use for stabilisation of the suspension?
A 4.0
B 0.5
C 1.0
D 0.4
E 2.0

83. What method is used for preparing a suspension with basic bismuth nitrate?
A Method of "making muddy"
B Method of the physical condensation
C Method of the chemical condensation
D Method of the solvent replacement
E Continental method

84. What stabilizer should be used for preparation of a suspension with sulphur?
A Potassium or green soap
B 5 % Solution of methylcellulose

C Gelatose
D Starch
E Lanolin

85. A pharmacist prepared a suspension. What is the amount of liquid he used according to the Deryagin rule?
A 0.4-0.6 ml and 1.0 of a medicinal substance
B 1.0-0.8 ml and 1.0 of a medicinal substance
C 1.5-0.7 ml and 1.0 of a medicinal substance
D 0.9-2.0 ml and 1.0 of a medicinal substance
E 0.1-1.0 ml and 1.0 of a medicinal substance

86. A pharmacist prepares a water suspension with zinc oxide. What concentration of the substance is required preparing it by mass?
A 3 % and more
B 1 %
C 1.5 %
D 2 % and less
E 0.5 %

87. What is the rational way of introduction of menthol into the oil emulsion?
A Dissolve in oil before emulsifying
B Disperse with adding the emulsion prepared
C Dissolve in water prepared for dilution of the primary emulsion
D Dissolve in the emulsion prepared when heating
E Add into the primary emulsion

88. A pharmacist prepared the emulsion. What oil did he use?
A Peach
B Castor
C Vaselin
D Mint
E Balm

89. What is the rational way of phenylsalicylate introduction into the emulsion for internal use?
A As a suspension type in the emulsion prepared
B Dissolve in oil
C Dissolve in water to dilute the primary emulsion
D Dissolve in water to prepare the primary emulsion
E Dissolve in the emulsion prepared

90. What is the rational way of zinc oxide introduction into the emulsion?
A By the suspension type (introduced into the emulsion prepared)
B By dissolving in oil
C By powdering with water for dilution of the primary emulsion
D By dissolving in water for preparing the primary emulsion
E By dissolving in the emulsion prepared

91. A doctor prescribed 100.0 g of the oil emulsion. Indicate the amount of oil, gelatose and purified water used for preparing the primary emulsion by the continental method?
A 10.0; 5.0; 7.5 ml

B 20.0; 10.0; 30 ml
C 5.0; 10.0; 7.5 ml
D 10.0; 5.0; 1.5 ml
E 5.0; 5.0; 5 ml

92. What is the optimal way of camphor introduction into the oil emulsion?
A Dissolve in oil
B As a suspension type in the emulsion prepared
C Dissolve in water to dilute the primary emulsion
D Dissolve in water to prepare the primary emulsion
E Add in the emulsion prepared in the last turn

93. What amount of Tween-80 should be used for preparing 100.0 g of the oil emulsion?
A 2.0
B 4.0
C 6.0
D 10.0
E 1.0

94. What is the ratio for manzanita (Uvae ursi) leaves decoction?
A 1:10
B 1:20
C 1:5
D 1:30
E 1:400

95. What is the ratio for the infusion of digitalis leaves and thermopsis herb?
A 1:400
B 1:200
C 1:50
D 1:30
E 1:10

96. A pharmacist infused the plant raw material for 30 min on a water bath and strained it immediately. Indicate what plant raw material this technology is typical for.
A Oak bark
B Althea root
C Rhizomes with roots of Valerian
D Leaves of Senna
E Flowers of Chamomile

97. A pharmacist prepares a water extract from thermopsis herb. What ingredients does he use?
A Thermopsis herb, hydrochloric acid solution (1:10), purified water
B Thermopsis herb, sodium hydrocarbonate, purified water
C Thermopsis herb, sodium chloride, purified water
D Thermopsis herb, purified water
E Thermopsis tincture, purified water

98. What is the optimal time for infusing and cooling of the 200 ml water extract of spring adonis?
A Infuse for 15 min and cool for 45 min
B Infuse for 30 min and cool for 10 min

C Infuse for 10 min and cool for 2 hours
D Infuse for 12 min and cool for 5 hours
E Infuse for 16 min and cool for 6 hours

99. What is the ratio for the infusion from valerian roots and rhizomes?
A 1:30
B 1:400
C 1:10
D 1:20
E 1:40

100. A pharmacist prepared 300 ml of lily-of-the-valley herb (Convallaria) infusion. What amount of the plant raw material and purified water did he use ($C_{water\text{-}absorption}$ of lily-of-the-valley herb is 2.5)?
A 10.0 and 325 ml
B 10.0 and 300 ml
C 10.0 and 275 ml
D 0.75 and 300 ml
E 30.0 and 375 ml

101. A pharmacist prepared 100 ml of peppermint leaves infusion. What amount of purified water did he use ($C_{water\text{-}absorption}$ of peppermint leaves is 2.4)?
A 124 ml
B 110 ml
C 118 ml
D 121 ml
E 126 ml

102. What is the way of introduction of standardized extracts-concentrates of the plant in the mixture?
A Dissolve in water into the auxiliary bottle
B Dissolve in a hot water
C Dissolve in concentrated solutions
D Dissolve in a mixture of water with concentrated solutions
E Dissolve in tinctures

103. A pharmacist used a dry standardized thermopsis extract (1:1) while preparing 200 ml of the infusion. What amount of the dry extract did he use?
A 0.5
B 1.0
C 2.0
D 5.0
E 10.0

104. What is the right way of hexamethylentetramine introduction in the mixture-infusion containing manzanita decoction?
A Dispense as a dosed powders separately
B Add into an infuser before heating
C Dissolve in the water extract prepared
D Dissolve in the bottle for dispensing
E Add into an infuser after extraction

105. What active substances are extracted in the neutral medium?
A Cardiac glycosides
B Saponins
C Tannins
D Alkaloids
E Anthraglycosides

106. What is the ratio of infusion for digitalis leaves and thermopsis herb?
A 1:400
B 1:200
C 1:50
D 1:30
E 1:10

107. What is the peculiarity of alkaloids extraction?
A Extraction in a weak acidic medium
B The medium does not change the extraction process
C Extraction in the alkaline medium
D Extraction in the neutral medium
E Extraction in a weak alkaline medium

108. What substance can replace xeroform in the composition of Vishnevsky liniment?
A Dermatol
B Anaesthesin
C Camphor
D Zinc oxide
E Novocaine

109. What substance can replace the cod liver oil in the composition of Vishnevsky liniment?
A Castor oil
B Sunflower oil
C Camphor oil
D Vaselin oil
E White petrolatum

110. A pharmacist prepared the ammonium liniment. What ingredients did he use?
A Sunflower oil, oleinic acid, 10 % solution of ammonia
B Peach oil, oleinic acid, 10 % solution of ammonia
C Sunflower oil, ascorbic acid, 10 % solution of ammonia
D Sunflower oil, oleinic acid, 5 % solution of ammonia
E Sunflower oil, ascorbic acid, turpentine

111. A pharmacist prepared the ointment-solution with the lipophilic base. What substance forms an ointment of this type?
A Menthol
B Novocain
C Dermatol
D Starch
E Sulfur

112. What is the peculiarity of the paste preparation?

Rp.: Zinci oxydi
Amyli ana 10.0
Vaselini 20.0
Misce ut fiat pasta
Da. Signa. Apply on the skin.
A Melt vaselin for dispersion of medicinal substances
B Powder zinc oxide and starch with alcohol
C Powder zinc oxide and starch with vaselin oil
D Mix the mixture of medicinal substances with a unmelted base
E Powder medicinal substances with glycerol

113. What is the way of introduction of a dry substance into the base?
Rp.: Streptocidi 1.0
Vaselini 9.0
Misce ut fiat unquentum
Da. Signa. For burns
A Disperse streptocid with 0.5 g of the melted vaselin
B Disperse streptocid with 4.5 g of the melted vaselin
C Disperse streptocid with 0.5 g of the unmelted vaselin
D Disperse streptocid with 4.5 g of the unmelted vaselin
E Disperse streptocid with 9.0 g of the melted vaselin

114. Indicate the way of introduction of water-soluble substances in the ointment if their amount is more than 5 %:
A As the suspension type with a part of the melted base
B Dissolve in purified water
C Dissolve in the melted base
D Dissolve in a liquid suitable for the base
E Add to the ointment prepared at the end

115. What concentration of the ointment is prepared if it is not indicated by a doctor?
A 10 %
B 5 %
C 1 %
D 20 %
E 2 %

116. A pharmacist prepared the ointment-solution with the lipophilic base melted to 40$^{o}$C. What substance forms an ointment of this type?
A Menthol
B Novocain
C Dermatol
D Starch
E Sulfur

117. What is the way of protargol introduction into the ointment base while preparing an ointment for nose?
A First triturate with glycerol, then with water
B Powder with water or alcohol
C Powder with alcohol or ether
D First triturate with the base, then with glycerol

E Place by a thin layer on the surface of water

118. What is the way of novocaine introduction into the vaselin-lanolin base?
A Dissolve preliminary in the minimal amount of water
B Powder with glycerol
C Powder with alcohol or ether
D Powder with a part of the melted base
E Dissolve in the melted base

119. What is the order of melting medicines?
Rp.: Cerae flavi 4.0
Cetacei 3.0
Lanolini anhydrici 18.0
Olei Amygdalari 35.0
Misce ut fiat unquentum
Da. Signa. Ointment for hands.
A Wax – spermacet – lanolin – almond oil
B Almond oil – spermacet – wax – lanolin
C Almond oil – wax – lanolin – spermacet
D Lanolin – wax – almond oil – spermacet
E Lanolin – wax – spermacet – almond oil

120. What emulsifier should be used for preparing the emulsion base of Kutumova?
A Emulsifier T-2
B Tween -80
C Solution of methylcellulose
D Spen-80
E Anhydrous lanolin

121. A pharmacist should prepare the emulsion ointment with collargol. What excipient should be used for dissolution of collargol?
A Purified water
B Glycerol
C Vaseline oil
D Ethyl alcohol
E Sunflower oil

122. A pharmacist prepared a combined ointment. What is the order of its preparation?
A Suspension – solution – emulsion
B Solution – emulsion – suspension
C Emulsion – suspension – solution
D Solution – suspension – emulsion
E Emulsion – solution – suspension

123. According to the way of preparation Naphthalane ointment is:
A Ointment-alloy
B Ointment-solution
C Extraction ointment
D Ointment-emulsion
E Ointment-suspension

124. A chemist's shop obtained ointment bases. Polyethylenoxides are:
A Hydrophilic bases
B Hydrophobic bases
C Diphilic emulsion bases
D Silicon bases
E Carbohydrate bases

125. What is the melting temperature for the suppository base if it is not indicated?
A Not more than 37°C
B Not more than 37.8°C
C Not more than 36.6°C
D Not more than 38°C
E Not more than 36°C

126. A pharmacist prepared suppositories with novocaine hydrochloride in the amount less than 5 % by the rolling method. What is the method of introduction of this substance into the base?
A Dissolve in the minimal amount of purified water
B Dissolve in the minimal amount of castor oil
C Dissolve in the melted cocoa butter
D Dissolve in vaselin oil
E Dissolve in alcohol

127. What is the way of streptocid introduction into the PEO base?
A Dissolve in the melted base
B By the suspension type
C Dissolve in vaselin oil
D Dissolve in water, emulsify with anhydrouse lanolin
E Dissolve in glycerol

128. What is the permissible limit of the average weight of rectal suppositories?
A 1.0 – 4.0
B 2.0 – 5.0
C 3.0 – 6.0
D 4.1 – 7.0
E 5.0 – 8.0

129. What is the permissible limit of the average weight of vaginal suppositories?
A 1.5 – 6.0
B 1.0 – 4.0
C 2.0 – 6.5
D 3.0 – 7.0
E 4.0 – 7.5

130. What is the permissible limit of the average weight of suppositories for children?
A 0.5 – 1.5
B 1.0 – 2.0
C 0.5 – 2.0
D 0.1 – 0.5
E 0.5 – 3.0

131. What is the weight of one rectal suppository if it is not indicated by a doctor?

A 3.0
B 2.5
C 3.5
D 2.0
E 1.5

132. What amount of the base should be used for preparing vaginal suppositories if it is not indicated in the prescription?
A 4.0
B 5.0
C 3.0
D 2.0
E 1.5

133. What is the permissible limit of the average weight for sticks?
A 0.5-1.0
B 0.5-1.5
C 0.1-2.0
D 0.1- 1.0
E 0.5-3.0

134. What liquid is used for treating the suppository form while preparing suppositories on the hydrophobic base?
A Soapy alcohol
B Glycerol
C Peach oil
D Purified water
E Vaselin oil

135. What base should be used for preparation of suppositories by the rolling method?
A Cocoa butter
B Butyrol
C Gelatin-glyceric base
D Vaselin
E Mixture of vaseline with lanolin

136. What liquid is used for treating a suppository form while preparing suppositories on the hydrophilic base?
A Vaselin oil
B Glycerol
C Soapy alcohol
D Peach oil
E Sweet water

137. What is the optimal shape of rectal suppositories?
A Torpedo or sigar
B Cylinder
C Cone
D Flat
E Globular

138. What shape of rectal suppositories is used if it is not indicated in the prescription?
A Cone
B Cylinder
C Flat
D Torpedo or sigar
E Globular

139. What amount of cacao butter is used for preparation of 10 rectal suppositories containing 5.0 g of teophylline by the rolling method?
A 25.0
B 30.0
C 5.0
D 35.0
E 40.0

140. What amount of the base should be used for preparation of the following prescription:
Rp.: Anaesthesini 0.1
Xeroformii 0.5
Olei Cacao q. s. ut fiant suppositoria numero 10
Da. Signa. Use 1 rectal suppository daily
A 24.0
B 25.0
C 30.0
D 36.0
E 40.0

141. At the chemist's shop suppositories are prepared on the gelatin-glyceric base. Indicate the amount of this base, which is necessary to use for preparation of suppositories compared to the fatty base.
A 1.21 times more
B Equal amount
C 2.5 times more
D 2 times more
E 1.21 times less

142. What is the way of dry belladonna extract (1:2) introduction into the suppository base?
A Mix with the base after dissolving in the equal amount of the alcohol-water-glycerol mixture
B Mix with a base
C Mix with the suppository mass prepared
D Triturate after dissolving in water
E Triturate after dissolving in alcohol

143. What is the way of dermatol introduction into the hydrophobic base by the casting method?
A Powder with a part of the melted base
B Dissolve in water, emulsify with and mix with the base
C Dissolve in the melted base
D Powder as a dry substance, mix with a liquid suitable for the base
E Dissolve in vaselin oil

144. The dissolution time for suppositories on the hydrophilic base is:
A 60 min

B 45 min
C 30 min
D 15 min
E 5 min

145. What is the way of boric acid introduction in cacao butter if its amount is more than 5%?
A Add as a thin powder
B Powder with vaselin oil
C Powder with a small amount of purified water
D Dissolve in a liquid suitable for the base
E Dissolve in alcohol

146. What is the time of complete deformation for rectal suppositories on the hydrophobic base (according to the SPhU)?
A 15 min
B 3 min
C 5 min
D 10 min
E 30 min

147. What amount of suppositories should be weighed to determine the average weight of one suppository according to the SPhU?
A 20
B 10
C 5
D 30
E 2

148. What is deviation of suppositories by mass?
A ± 5 %
B ± 10 %
C ± 3 %
D ± 4 %
E ± 1 %

149. What base is not used for preparation of vaginal suppositories?
A Soapy-glyceric base
B Gelatin-glyceric base
C Alloy of PEO
D Cacao butter
E Butyrol

150. What base should be used for preparation of suppositories by the rolling method?
A Cocoa butter
B Butyrol
C Gelatin-glyceric base
D Vaseline
E Mixture of vaseline with lanolin

151. What stabilizer is used for preparing the solution of atropine sulphate for injection?
A 0.1 M solution of hydrochloric acid

B 0.1 M solution of sodium hydroxide
C Stabilizer of Weibel
D 0.1 % solution of sodium hydrocarbonate
E 0.1 % solution of sodium chloride

152. A pharmacist prepares the solution for injection at 20°C, does not shake it, fills up to 80 % (2/3) of the volume and sterilizes in horizontal position. What medicinal substance is in the bottle?
A Sodium hydrocarbonate
B Ascorbic acid
C Glucose
D Apomorphine hydrochloride
E Calcium gluconate

153. What substance is used for making a solution for injection isotonic if it is not indicated in the prescription?
A Sodium chloride
B Sodium methabisulphite
C Sodium sulphite
D Sodium nitrate
E Sodium bisulphite

154. What excipients are used for preparing the solution of ascorbic acid for injection?
A Sodium sulphite and sodium hydrocarbonate
B Solution of hydrochloric acid 0.1M
C Boric acid
D Solution of sodum hydroxide 0.1M
E Stabilizer of Weibel

155. A pharmacist should prepare 5 % solution for infusion of glucose. What solvent should he use?
A Water for injection
B Purified water
C Demineralizated water
D 0.9 % water solution of sodium chloride
E Purified water with hydrochloric acid up to pH 3.5-5.0

156. A pharmacist prepared 150 ml of 10 % solution of glucose. What amount of Weibel liquid did he use for stabilization?
A 7.5 ml
B 5 ml
C 10 ml
D 15 ml
E 3 ml

157. What substance should be stabilized by sodium hydrocarbonate while preparing a solution for injection?
A Sodium thiosulphate
B Novocain
C Ephedrine hydrochloride
D Sodium chloride
E Glucose

158. A pharmacist prepared a solution for injection with a stabilizer – 0.1 M solution of sodium hydroxide. What is the solution?
A Caffeine-sodium benzoate solution
B Dibasol solution
C Sodium hydrocarbonate solution
D Sodium chloride solution
E Glucose solution

159. What substance is an easily oxidizable and required adding an antioxidant?
A Ascorbic acid
B Dimedrol
C Sodium chloride
D Hexamethylentetramine
E Calcium gluconate

160. Indicate the composition of Weibel liquid used for stabilisation of glucose solution?
A Sodium chloride and the solution of hydrochloric acid
B Solution of hydrochloric acid
C Sodium hydrocarbonate and the solution of boric acid
D Solution of sodium hydroxide
E Solution of boric acid and sodium tetraborate

161. What method can be used for sterilization of solutions of a thermolabile substance?
A Sterile filtration through the membrane filter
B In autoclave by vapour and pressure
C Sterilization by UV-rays
D By dry heat
E By radiation

162. What method for calculating the isotonic concentration is Pharmacopoeian?
A Sodium chloride isotonic equivalent
B Van't Hoff law
C Mendeleyev-Clapeyron equation
D Graphic method
E Cryoscopic method (by Raoult's law)

163. What optimal method of sterilization is used for 10 % solution of sodium chloride for injection?
A In autoclave by the saturated vapour under pressure
B Sterile filtration through the membrane filter
C Sterilization by gases
D Sterilization by dry heat
E Sterilization by radiation

164. The amount of the stabilizer for novocain solution for injection depends on:
A Concentration of novocain in the solution
B Volume of the solution prescribed
C Sterilization conditions
D Way of application
E Purity of initial substances

165. What is the mode of sterilization for 100 ml of 0.9 % solution of sodium chloride?

A 120°C - 8 min
B 120°C - 12 min
C 120°C - 15 min
D 180° C - 30 min
E 100°C – 15 min

166. What method of sterilization for the solution of novocain is used?
A By autoclave
B Pasterization
C Tyndalization
D By dry air
E By ultrasound

167. A pharmacist prepares the solution for injection. What is the condition of depyrogenization for sodium chloride?
A Heat at 180 °C 2 hours
B Heat at 190 °C 1.5 hours
C Heat at 150 °C 3 hours
D Heat at 200 °C 1 hour
E Heat at 120 °C 30 min

168. What substance is used as a thermo-test for checking the temperature in the autoclave?
A Benzoic acid, sulphur
B Ascorbic acid
C Citric acid
D Succinic acid
E Thiourea

169. What is the additional requirement to water for injection according to the SPU?
A Apyrogenicity
B Sterility
C Transparency
D Absence of chloride ions
E Absence of particulate matter

170. What method for sterilization of glassware is used while preparing a solution for injection?
A By dry heat
B Tyndalization
C By fluid vapour
D By chemical substances
E By UV-rays

171. A pharmacist prepared Ringer solution and Ringer-Lockes solution. What is the component that distinguishes these solutions from each other?
A Glucose
B Solution of hydrochloric acid 0.1 M
C Boric acid
D Calcium chloride
E Weibel liquid

172. What stabilizer is used for glucose solution for injection?

A Weibel liquid
B Sodium chloride solution
C Hydrochloric acid solution
D Sodium nitrate solution
E Sodium sulphate solution

173. What amount of 0.1 M solution of hydrochloric acid is used for preparing 1000 ml of 2 % solution of novocain?
A 12 ml
B 6 ml
C 3 ml
D 4 ml
E 9 ml

174. What number of bottles of one batch is checked on the leakage test?
A All bottles (100 %)
B 75 %
C 25 %
D 10 %
E 50 %

175. A pharmacist sterilized a bottle for injection. What is the time of storing the sterile glassware?
A Not more than 24 hours under aseptic conditions
B Not more than 3 days under aseptic conditions
C Not more than 12 hours under common conditions
D Not more than 48 hours under common conditions
E Not more than 1 month under aseptic conditions

176. How often is the pyrogenic control of water for injection carried out?
A Once in a month
B Once in two quarters
C As possible
D Once in a quarter
E Daily

177. What is the shelf-life of water for injection?
A Not more than 24 hours
B Not more than 2 days
C Not more than 12 hours
D Not more than 7 days
E Not more than 3 days

178. How often is the chemical analysis of water for injection carried out at the chemist's shop?
A Daily
B In 48 hours
C Once in a quarter
D In 72 hours
E Once in a month

179. When can a bottle with the solution of sodium hydrocarbonate be opened after sterilization?
A In 2 hours

B In 30 min
C Immediately after sterilization
D In 24 hours
E In 15 min

180. What a stabilizer is used for preparing the solution of strychnine nitrate for injection?
A Hydrochloric acid
B Ascorbic acid
C Sodium hydrocarbonate
D Sodium hydroxide
E Trilon B

181. What stabilizer is used for stabilisation of the solution of dibasol for injection?
A Hydrochloric acid
B Weibel liquid
C Rongalite
D Sodium chloride
E Sodium hydroxide

182. When should solutions for injection be sterilized after their preparation?
A In 30 min
B In 3 hours
C In 2 hours
D Immediately
E In 1-1.5 hours

183. A pharmacist prepared the ophthalmic drops with the following dry substances: riboflavin, potassium iodide, ascorbic acid. What is the way of introduction of potassium iodide?
A Add after sterilization under aseptic conditions
B Dissolve in the solution of riboflavin
C Add in the auxiliary bottle at the end
D Dissolve in purified water, sterilize
E First place in the bottle for dispensing

184. What property should be taken into account while preparing ophthalmic drops with adrenaline hydrochloride?
A Thermolabile
B Sparingly soluble in water
C Slightly soluble in water
D Thermostable
E Volatile

185. What substance is used for making the ophthalmic drops with zinc sulphate isotonic?
A Sodium sulphate
B Glucose
C Sodium nitrate
D Sodium sulphite
E Sodium chloride

186. What substance is used for making the ophthalmic drops with protargol isotonic?
A These drops can not be isotonic

B Sodium chloride
C Sodium nitrate
D Sodium sulphite
E Boric acid

187. What ointment base is used for preparation of the ophthalmic ointment with norsulfazol?
A Alloy of vaselin and lanolin (9:1)
B Emulsion base of the o/w type
C Alloy of vaselin and paraffin (6:4)
D Alloy of vaselin and lanolin (6:4)
E Alloy of vaselin and paraffin (8:2)

188. What is the way of introduction of pilocarpine hydrochloride into the ophthalmic ointment base?
A Dissolve in sterile purified water
B Triturate with a sterile vaselin oil
C Triturate with a sterile base
D Triturate with a sterile vaselin
E Dissolve in the melted base

189. What mode of sterilization is used for ophthalmic drops with protargol?
A The solution is not subject to sterilization
B By fluid vapour
C By autoclave
D By UV-rays
E By dry heat

190. A chemist's shop prepares ophthalmic ointments. What disperse system is formed when introducing resorcinol into the ophthalmic pharmacopoeian base?
A Emulsion
B Suspension
C Solution
D Alloy
E Combined

191. What substance is used for the isotonic concentration of ophthalmic drops with levomycetin?
A Sodium chloride
B Sodium sulphate
C Sodium nitrate
D Ascorbic acid
E Glucose

192. What is the technology of preparing the yellow mercury oxide ointment?
A Triturate a substance with vaselin oil, add sterile vaselin and lanolin
B Dissolve a substance in water, add sterile vaselin and lanolin
C Triturate a substance with the melted sterile base
D Triturate a substance with glycerol, add the base
E Triturate a substance with alcohol, add sterile vaselin and lanolin

193. What is the way for introduction of sodium salt of benzylpenicillin into the ophthalmic base?
A Powder with a part of the melted base

B Dissolve in vaselin oil
C Dissolve in water
D Powder with vaselin oil

194. What is the role of methylcellulose or polyvinylpyrolidone in the composition of ophthalmic drops?
A Drug prolongator
B Antioxidant
C pH adjustors
D Preservative
E Isotonic agent

195. What is the way for introduction of zinc sulphate into the ophthalmic ointment?
A Dissolve in a small amount of water
B Powder with glycerol
C Powder with a liquid suitable for the base
D Powder with a part of the melted base
E Powder with a base

196. What substance can be sterilized in the composition of ophthalmic drops with antibiotics at $100^0$C?
A Levomycetin
B Erytromycin
C Neomycin
D Sodium salt of benzylpenicillin
E Streptomycin sulphate

197. What ratio is used for preparation of the ophthalmic vaselin-lanolin base?
A 9:1
B 1:1
C 5:1
D 6:4
E 7:3

198. What disperse system forms the ophthalmic base with norsulfazol?
A Ointment-suspension
B Ointment-emulsion
C Ointment-solution
D Ointment-alloy
E Combined ointment

199. What is the way of introduction of collargol into an ophthalmic ointment?
A Dissolve preliminary in some amount of water
B Powder with a liquid suitable for the base
C Powder with a part of the melted base
D Powder with glycerol
E Powder with the weighed base

200. What concentration of riboflavin solution is used for preparation of ophthalmic drops
A 0.02 %
B 0.002 %

C 0.03 %
D 0.1 %
E 0.05 %

201. A pharmacist has found a physical incompatibility in this prescription:
Rp.: Phenylii salicylatis 0.25
Camphorae 0.2
M. f. pulv.
D. t. d. No. 10.
S. Use 1 powder 3 times a day
What is the cause of this incompatibility?
A Formation of an eutectic alloy
B Incompatibility of ingredients
C Stratification process
D Absorption process
E Oxidation-reduction process

202. A pharmacist prepares the prescription with atropine sulphate and aluminium hydroxide. Indicate the process occurring between ingredients?
A Absorption of active substances
B Formation of vapour and gases
C Oxidation-reduction process
D Formation of a dampened mixture
E Incompatibility of ingredients

203. A pharmacist has found incompatibility in this prescription:
Rp.: Sol. Ichthyoli 3 % 100 ml
Aquae Plumbi 50 ml
M.D.S. For compresses.
Indicate the process occurring in this formula:
A Coagulation
B Absorption of active substances
C Incompatibility of liquids
D Neutralization
E Hydrolysis

204. A doctor prescribed ophthalmic drops with zinc sulphate and protargol. Indicate the type of incompatibility:
A Coagulation of the colloidal system
B Insolubility of ingredients
C Absorption of medicinal substances
D Immiscibility
E Oxidation-reduction process

205. A doctor prescribed powders with incompatibility. What substance form an eutectic alloy with phenyl salicylate?
A Menthol
B Analgin
C Dibazol
D Dimedrol
E Ascorbic acid

206. A pharmacist has found an incompatibility in this prescription:
Rp.: Ammonii chloridi
Natrii hydrocarbonatis ana 3.0
Aquae purificatae 100 ml
M.D.S. Use 1 tablespoon 3 times a day
What process occurs in this formula?
A Formation of vapour and gases
B Oxidation-reduction process
C Incompatibility of liquids
D Absorption of active substances
E Formation of a precipitate

207. A pharmacist has found incompatibility in this prescription:
Rp.: Phenoli liquefacti 0.5
Olei Helianthi 10.0
M.D.S. Drops for ears.
What physical process occurs in this formula:
A Incompatibility of liquids
B Coagulation
C Formation of a precipitate
D Formation of a dampened mixture
E Hydrolysis

208. A pharmacist has found incompatibility in this prescription:
Rp.: Acidi acethylsalicylici 0,3
Hexamethylentetramini 0.2
M. f. pulv.
D. t. d. № 10
S. Use 1 powder 3 times a day
Indicate a physical-chemical process occurring in this formula:
A Formation of a dampened mixture
B Absorption of active substances
C Hydrolysis
D Neutralization
E Stratification

209. A pharmacist has found incompatibility in this prescription:
Rp.: Emulsi olei Ricini 50.0
Magnesii sulfatis 10.0
M.D.S. Use 1 tablespoon at night
Indicate a physical process occurring in this formula:
A Stratification
B Insolubility of ingredients
C Incompatibility of liquids
D Hydrolysis
E Formation of a precipitate

210. A pharmacist has found incompatibility in this prescription:
Rp.: Zinci sulfatis 0.05
Natrii tetraboratis 0.1

Aquae purificatae 10 ml
M.D.S. Ophthalmic drops
Indicate a chemical process occurring in this formula:
A Reaction of exchange with formation of a precipitate
B Absorption of active substances
C Formation of a dampened mixture
D Neutralization
E Displacement of weak acids from salts

211. A pharmacist has found incompatibility in this prescription:
Rp.: Mentholi 0.5
Sol. Acidi borici 2 % 100 ml
M.D.S. For skin
Indicate a physical process occurring in this formula:
A Insolubility of ingredients
B Displacement of weak acids from salts
C Formation of an eutectic alloy
D Stratification
E Coagulation

212. A doctor wrote a prescription with incompatibility.
Rp.: Zinci sulfatis 0.1
Tanini 0.5
Solutionis Acidi borici 2 % 100 ml
M.D.S. For application on the skin
Indicate a chemical process occurring in this formula:
A Formation of a precipitate
B Neutralization
C Oxidation-reduction process
D Hydrolysis
E Formation of vapour and gases

213. A pharmacist has found incompatibility in the formula with potassium permanganate and hydrogen peroxide. Indicate the type of the chemical reaction:
A * Oxidation-reduction process
B Neutralization
C Exchange
D Precipitation
E Displacement

214. A pharmacy received a prescription with incompatibility:
Rp.: Extracti Belladonnae 0.015
Papaverini hydrochloridi 0.05
Carbonis activati 0.2
M. ut f. pulv.
D. t. d. No. 10.
S. Use 1 powder 3 times a day
What is the cause of incompatibility?
A Absorption of medicinal substances
B Coagulation of the colloidal system
C Oxidation-reduction reaction

D Acidic-alkaline interaction
E Formation of an eutectic alloy

215. A doctor prescribed the ophthalmic ointment with resorcinol and mercury amidochloride. Indicate a process occurring:
A Oxidation-reduction
B Stratification of the base with introduced medicinal substances
C Absorption of medicinal substances
D Coagulation of the colloidal system
E Change of consistency

216. A pharmacist has found incompatibility in the formula:
Rp.: Sol. Ichthyoli 5 % - 200 ml
Zinci sulfatis 4.0
Glycerini 10.0
M.D.S. For mucous membrane
Indicate a process occurring in this formula:
A Coagulation
B Immiscibility
C Insolubility
D Stratification
E Absorption

217. A pharmacy received a prescription with incompatibility. What physical incompatibility is it?
A Adsorption of active substances
B Antagonism
C Synergism
D Change of the drug consistency as a result of the chemical reaction
E Formation of a precipitate as a result of the chemical reaction

218. What is the cause of incompatibility in the formula with vaselin oil and the solution of adrenaline hydrochloride?
A Immiscibility of ingredients
B Deterioration of solubility conditions
C Coagulation
D Dampening
E Eutectic alloy

219. What is the cause of physical incompatibility in this formula?
Rp.: Sol. Iodi spirituosae 10 % 0.5 ml
Sol. Acidi borici 2 % 100 ml
Misce. Da. Signa. For washing eyes.
A Deterioration of solubility conditions
B Stratification
C Coagulation
D Dampening of a mixture
E Formation of boric acid crystals

220. What is the cause of physical incompatibility in this formula?
Rp.: Sulfuris 1.0
Olei Ricini 10.0

Spiritus aethylici 70 % 20 ml
Misce. Da.
Signa. For skin.

A Immiscibility of castor oil with alcohol of the given concentration
B Stratification
C Deterioration of solubility conditions
D Immiscibility of sulfur with alcohol of the given concentration
E Immiscibility of sulfur with castor oil

221. A doctor prescribed a mixture registered by a pharmacist as an incompatibility. What is the cause?

Rp.: Solutionis Natrii bromidi 2 % 200 ml
Validoli 4 ml
Misce. Da.
Signa. Use 1 tablespoon 3 times a day.

A Immiscibility of ingredients
B Adsorption of medicinal substances
C Replacement of the solvent
D Formation of an insoluble compound
E Coagulation of colloidal solutions

222. A doctor prescribed a mixture registered by a pharmacist as an incompatibility. What is the cause?

Rp.: Solutionis Natrii bromidi 2 % 200 ml
Validoli 4 ml
Misce. Da.
Signa. Use 1 tablespoon 3 times a day.

A Immiscibility of ingredients
B Adsorption of medicinal substances
C Replacement of the solvent
D Formation of an insoluble compound
E Coagulation of colloidal solutions

223. A doctor prescribed powders with euphyllin, ephedrine hydrochloride and dimedrol. Indicate what process occurs:

A Dampening
B Absorption
C Stratification
D Formation of an eutectic alloy
E Melting

224. What process occurs when prescribing the solution of pepsin, sodium salt of benzylpenicillin and hydrochloric acid?

A Inactivation of antibiotic by a strong acid
B Displacement of weak acids from the salt of the stronger acids
C Precipitation
D Reaction of diazotization
E Oxidation-reduction reaction

225. While preparing a mixture it is coloured in an emerald green colour.

Rp.: Antipyrini 4.0

Solutionis Natrii nitritis 1 % 200 ml
Misce. Da.
Signa. Use 1 tablespoon 3 times a day

What is the cause of incompatibility?

A Formation of nitrozo-antipyrine
B Formation of nitrogen oxide
C Hydrolysis of active substances
D Physical incompatibility
E Deterioration of solubility

226. What is the cause of incompatibility in the formula with manzanita decoction and belladonna extract?

A Formation of a precipitate
B Hydrolysis
C Oxidation-reduction process
D Formation of gas
E Coagulation of the colloidal system

227. A pharmacist-technologist has found incompatibility in the following prescription:

Rp.: Mentholi 0.5
Natrii hydrocarbonatis
Natrii tetraboratis ana 1.5
Aquae purificatae 100 ml
M.D.S. 1 tablespoon twice a day.

In order to prepare this drug the pharmacist should do the following:

A Add a stabilizer
B Use fractional dissolution
C Use another solvent
D Change one of the component
E Change a dosage form

228. Concentrated solutions cannot be used in mixture-making if:

A Aromatic water is solvent
B Purified water is solvent
C Mixture contains a potent agent
D Mixture contains syrups
E Mixture contains tinctures

229. What is the mass of one rectal suppository if it is not indicated by a doctor?

A. 3,0
B. 2,5
C. 3,5
D. 2,0
E. 1,0

230. If the pharmacist prepares suppositories with cocoa butter, which substance he dissolves in water with glycerin?

A. Protargol
B. Streptocide
C. Dermatol
D. Zinc oxide
E. Xeroform

231. Which substance does pharmacist use to improve the stability of suspension?
A. Stabilizer
B. Sealing agent
C. Alcohol solution
D. Emulsifier
E. Oil solution

232. A pharmacist prepared emulsion. What the emulsifier did he use?
A. 5 % solution of methylcellulose
B. Simple syrup
C. Glycerin
D. Pectoral elixir
E. Purified water

233. What is the time for preparing of Marshmallow (*Althea*) root infusion?
A. 30 min
B. 5 min
C. 15 min
D. 10 min
E. 60 min

234. What is the ratio for the infusion of Plantago leaves?
A. 1:10
B. 1:40
C. 1:50
D. 1:100
E. 1:200

235. What substance forms the ointment-solution on the polyethylene oxide base?
A. Sreptocide
B. Zinc oxide
C. Dermatol
D. Xeroform
E. Basic bismuth nitrate

236. Select the method of introduction of water-soluble substance tannin into the ointment on Vaseline-Lanolin-base
A. Dissolve in a minimum amount of water
B. Grind with an auxiliary liquid
C. Dissolve in an equal amount of melted base
D. Grind with a portion of melted base
E. Alloy with the base

237. Select the auxiliary liquid for preparing of suspension ointment on a hydrophilic base:
A. Purified water
B. Sunflower oil
C. Castor oil
D. Vaseline oil
E. Peppermint oil

238. A pharmacist prepared concentrated solution for burett system. Select the medicine substance:
A. Potassium bromide
B. Salicylic acid
C. Protargol
D. Starch
E. Menthol

239. A pharmacist prepared the solution of Collargolum. Specify the type of disperse system:
A. Colloidal solution
B. Suspension
C. Emulsion
D. True solution
E. Aerosol

240. A pharmacist prepared powder with a spraying substance. Select this substance:
A. Magnesium oxide
B. Sugar
C. Sodium bicarbonate
D. Sodium chloride
E. Boric acid

241. Powder was prepared with poorly-powdered substance. Select this substance:
A. Camphor
B. Sodium chloride
C. Osarsol
D. Talc
E. Sugar

242. Powder with magnesium oxide was prepared in the pharmacy. Indicate the group of this substance:
A. Spraying substances
B. Aromatic substances
C. Colored substances
D. Strong-effective substances
E. Dyeing substances

243. What is the minimal amount of ascorbic acid that can be weighted by the manual balance-1?
A. 0,02
B. 0,01
C. 0,03
D. 0,04
E. 0,05

244. Indicate the way of menthol introduction into powdered mixture:
A. Grinding with an alcohol in prepared mortar at last
B. Grinding with an alcohol at first
C. Using a three layers method
D. Adding at last
E. Adding into powdered mixture without additional grinding

245. Indicate of volatile and aromatic medicinal substance for powder preparing:
A. Camphor
B. Zinc oxide
C. Sodium hydrocarbonate
D. Talc
E. Magnesium oxide

246. Indicate the substance for grinding of which alcohol is used:
A. Menthol
B. Glucose
C. Starch
D. Sodium chloride
E. Sugar

247. Choose the solvent for preparing a concentrated solution of sodium bicarbonate in the pharmacy.
A. Purified water
B. Peach oil
C. Chloroform
D. Vaseline oil
E. Ethyl alcohol

248. Which substance should be present when dissolving oscarsol?
A. Sodium hydrocarbonate
B. solution of ammonia
C. Furacilin
D. Solution of hydrogen peroxide
E. Iodine

249. Choose a standard Pharmacopoeian liquid for the solution preparing
A. Acetic acid
B. Boric acid
C. Salicylic acid
D. Aminocaproic acid
E. Acetylsalicylic acid

250. What is the concentration of alcohol used for preparation of salicylic acid solution?
A. 70 %
B. 40 %
C. 60 %
D. 90 %
E. 95 %

251. Indicate the duration of extraction while preparing the water extract of Origanum herb in the volume of 3000 ml
A. 25 minutes
B. 5 minutes
C. 30 minutes
D. 10 minutes
E. 60 minutes

252. Indicate the ratio of the of Mint leaves and water while the infusion preparing
A. 1:10
B. 1:400
C. 1:50
D. 1:100
E. 1:200

253. What decoction of the plant raw material was prepared with cooling for 3-4 hours?
A. Senna leaves
B. Thermopsis herb
C. Lily-of-the-valley herb
D. Buckthorn bark
E. Motherwort herb

254. Indicate the duration of cooling the plant raw material decoction with the total volume of 200 ml.
A. 10 minutes
B. 15 minutes
C. 25 minutes
D. 2 hours

E. 1,5 hours

255. What coefficient was used in calculation of purified water while preparing the infusion?
A. Water-absorption coefficient
B. Replacement coefficient
C. Volume increase coefficient
D. Transition coefficient
E. Consumption coefficient

256. Indicate the hydrophilic base for vaginal suppositories prepared by the casting method
A. Gelatin-glycerin
B. Butyrol
C. Vitepsol
D. Lasupol
E. Solid fat

257. Indicate the composition of gelatin-glycerin base for suppositories:
A. gelatine : glycerol : water
B. gelatine : water
C. glycerol : water
D. gelatin : aethyl alcohol : water
E. protargol : glycerol : water

258. What solution for injections doesn't require stabilization?
A. Solution of Analgin
B. Solution of Novocain
C. Solution of Glucose
D. Solution of Ascorbic acid
E. Solution of Atropine sulphate

259. What substance forms the ointment-solution on the hydrophobic base?
A. Phenol crystalline
B. Atropine sulphate
C. Dermatol
D. Zinc oxide
E. Sulphur

260. Indicate the solution of substance for preparing of which fresh distillated purified water is used:
A. Potassium permanganate
B. Sodium chloride
C. Calcium chloride
D. Sodium hydrocarbonate
E. Potassium iodine