Перечень заданий по дисциплине Биофармация

|  |  |
| --- | --- |
| **Код** | **Тестовые задания** |
| 001 | Medicinal substances taken in the form of solutions are… |
| А | absorbed faster and have a therapeutic effect more quickly |
| Б | slowly absorbed |
| В | the most physiological and slowly have a therapeutic effect |
| Г | Their activity depends on the properties of intestinal content |
|  |  |
| 002 | In solutions, absorption is influenced by: |
| А | solvent composition, pH, viscosity, surface tension |
| Б | surface area, their complex formation, viscosity |
| В | selection of the type of base, surfactant, preparation technology |
| Г | drug concentration, viscosity, pH |
|  |  |
| 003 | Norm of disintegration of enteric-coated tablets (tablets, coated with a soluble coating –intestinal- ) |
| А | 1 hour |
| Б | 15 minutes |
| В | 3-5 minutes |
| Г | 3 hours |
|  |  |
| 004 | Norms of disintegration standards of tablets intended for the preparation of solutions |
| А | 3-5 minutes |
| Б | 10 minutes |
| В | 15 minutes |
| Г | 30 minutes |
|  |  |
| 005 | Sublingual tablets disintegrate in the course of … |
| А | 30 minutes |
| Б | 3 hours |
| В | 10 minutes |
| Г | 1 hour |
|  |  |
| 006 | Objects of biopharmaceutical research |
| А | Original and generic medicines |
| Б | Original medicines |
| В | Medicinal plants raw materials |
| Г | Generic medicines |
|  |  |
| 007 | The absorption of emulsions and suspensions occurs mainly |
| А | in the upper part of the small intestine, since they do not have sufficient water solubility for absorption from the stomach |
| Б | in any part of the gastrointestinal tract |
| В | in the stomach or small intestine, because they are dissolved in the digestive juices |
| Г | в верхнем отделе прямой кишки  |
|  |  |
| 008 | In suspensions and emulsions, the formation of complexes |
| А | impairs bioavailability |
| Б | improves bioavailability |
| В | does not affect bioavailability |
| Г | there is no right answer |
|  |  |
| 009 | The disintegration test of dosage forms determines: |
| А | the time during which complete disintegration of the dosage form will occur |
| Б | the amount of a medicinal substance that is a given period of time should be released in the medium of dissolution of the dosage form |
| В | the amount of a drug that has entered the bloodstream |
| Г | the time during which the drug gets into the digestive tract  |
|  |  |
| 010 | Types of bioavailability:a) physiologicalb) relativec) absoluted) mixede) generalf) local |
| А | b, c, e |
| Б | a, b, c |
| В | c, e, f |
| Г | a, d, e |
|  |  |
| 011 | Bioequivalence is determined |
| А |  When the equivalent of a medicinal product prepared by different manufacturers after administration to several patients in the same form and in the same dose, exhibit the same therapeutic effect  |
| Б | the equivalent of a medicinal product prepared by different manufacturers after administration to several patients in the same form and in the same dose, exhibit a different therapeutic effect |
| В | equivalent of a medicinal product prepared by different manufacturers after administration to several patients in different forms, but in the same dose, exhibit the same therapeutic effect  |
| Г | the equivalent of a medicinal product which after administration to one patient after a certain time in the same form and in the same dose, exhibit the same therapeutic effect |
|  |  |
| 012 | The founders of biopharmacy are : |
| А | Levy and Wagner |
| Б | Shatsky and Wagner |
| В | Trandafilov and Levi |
| Г | Zasetsky and Shatsky  |
|  |  |
| 013 | In what year was the term Biopharmacy first proposed ? |
| А | in the 60s of the XX century |
| Б | in the 50s of the XX century |
| В | in the 80s of the XX century |
| Г | in the 70s of the XX century  |
|  |  |
| 0014 | The solubility test of medicinal substances determines |
| А | the amount of a medicinal substance that, over a certain period of time, must be released into the dissolution medium from the dosage form |
| Б | time during which complete disintegration of the dosage form occurs |
| В | the amount of a drug that has entered the bloodstream |
| Г | the time during which the drug gets into the digestive tract  |
|  |  |
| 0015 | Molecules that can cross the cell barrier are : |
| А | molecules of the dissolved drug substance |
| Б | molecules of the undissolved drug substance |
| В | molecules of the dissolved and undissolved drug substance |
| Г | molecules of the drug substance can not overcome the cell barrier |
|  |  |
| 0016 | ??? Optimal … , is the one which does not result in a slowdown in the absorption of drug . |
| А | viscosity |
| Б | complex formation |
| В | indication of the amount of surfactants |
| Г | рH |
|  |  |
| 0017 | Liquid crystalline (mesomorphic) state of matter (substance) : |
| А | defines a structural property which is intermediate a solid crystal and a liquid |
| Б | characterizes the presence of two or more component systems formed by dissolution of amphiphilic molecules of surfactants |
| В | characterizes liquid, soft or solid dosage forms intended for spraying, injection |
| Г | there is no correct answer |
|  |  |
| 0018 | The term LADMER includes everything except |
| А | route of administration |
| Б | elimination |
| В | distribution |
| Г | absorption |
|  |  |
| 0019 | The process of drug distribution from the blood to the tissues and organs of the body: |
| А | distribution |
| Б | elimination |
| В | bioavailability |
| Г | bioequivalence |
|  |  |
| 0020 | The dissolution rate of a medicinal substance characterizes |
| А | the bioavailability of the drug substance |
| Б | the elimination intensity of the drug substance |
| В | the biotransformation intensity of the drug substance |
| Г | The reabsorption intensity of the drug substance |
|  |  |
| 0021 | As dissolution medium for biopharmaceutical research are used:  |
| А | water, aqueous acid solutions or buffer solutions |
| Б | aqueous acid solutions |
| В | buffer solutions |
| Г | water  |
|  |  |
| 0022 | Solutions are … |
| А | liquid homogeneous thermodynamically stable dosage forms obtained by dissolving one or more medicinal substances, intended for internal, external use or injections |
| Б | liquid dosage form containing one or more ground substances distributed in a liquid dispersion medium |
| В | uniform dosage form consisting of mutually insoluble dispersed liquids, intended for internal, external or injection use |
| Г | there is no correct answer  |
|  |  |
| 0023 | Suspensions are … |
| А | liquid dosage forms containing one or more ground substances distributed in a liquid dispersion medium |
| Б | uniform dosage form consisting of mutually insoluble dispersed liquids, intended for internal, external or injection use |
| В | liquid homogeneous thermodynamically stable dosage form obtained by dissolving one or more medicinal substances, intended for internal, injection or external use |
| Г | there is no correct answer |
|  |  |
| 0024 | Characteristics of the drug dissolution medium for biopharmaceutical research: |
| А | volume - 1000 ml, t - 37 ° С |
| Б | volume - 100 ml, t - 37 ° С |
| В | volume - 500 ml, t - 30 ºС |
| Г | the conditions for dissolution of the medicinal substance are not regulated  |
|  |  |
| 0025 | The liberation of the medicinal substance from the dosage form is studied: |
| А | by the agar plate method |
| Б | by the dynamic method |
| В | by the static method |
| Г | by the organometric method |
|  |  |
| 0026 | Emulsions … |
| А | uniform dosage form consisting of mutually insoluble dispersed liquids, intended for internal, external or injection use |
| Б | liquid dosage form containing one or more ground substances distributed in a liquid dispersion medium |
| В | liquid homogeneous thermodynamically stable dosage form obtained by dissolving one or more medicinal substances, intended for internal, injection or external use |
| Г | there is no correct answer |
|  |  |
| 0027 | Excretion |
| А | the process of removing a drug from the body |
| Б | the process of taking drugs in the body |
| В | rate of drug penetration through biological membranes |
| Г | the process of transitioning a drug substance into the systemic circulation |
|  |  |
| 0028 | The most common solvent in solutions: |
| А | water |
| Б | essential oils |
| В | polyethylene glycol |
| Г | ethanol  |
|  |  |
| 0029 | Substances that increase the viscosity: |
| А | reduce drug absorption |
| Б | increase drug absorption |
| В | do not affect the absorption of the drug |
| Г | there is no correct answer  |
|  |  |
| 0030 | Basic volume characteristics of solutions: |
| А | all answers are correct |
| Б | apparent molar volumes of solute |
| В | partial excess volumes |
| Г | partial limit molar volumes |
|  |  |
| 031 | The absorption of medicinal substances used in the form of emulsions and suspensions occurs … |
| А | in the upper part of the small intestine |
| Б | in the stomach |
| В | in the intestines |
| Г | in the colon  |
|  |  |
| 032 | High viscosity of the dispersion medium in the dosage form … |
| А | slows down the diffusion of the drug through the membranes |
| Б | increases the diffusion of the drug through the membranes |
| В | does not affect the diffusion of the drug through the membranes |
| Г | there is no correct answer  |
|  |  |
| 033 | The microbiological method is used in biopharmacy |
| А | to determine the process of release of a drug from a dosage form |
| Б | to determine the sensitivity of bacteria to antibiotics |
| В | to determine the solubility of a medicinal substance |
| Г | to determine the disintegration process of the dosage form  |
|  |  |
| 034 | The method of diffusion of a drug through a membrane characterizes … |
| А | the process of penetration of a drug through cell membranes |
| Б | disintegration process of a dosage form |
| В | the process of releasing a drug from a dosage form |
| Г | drug dissolution process  |
|  |  |
| 035 | The interaction of drugs at the stages of adsorption, distribution, metabolism and elimination determines: |
| А | pharmacokinetic interaction |
| Б | physicochemical interaction |
| В | pharmacodynamic interaction |
| Г | pharmaceutical interactions  |
|  |  |
| 036 | At what stage is the drug interaction of calcium and tetracycline preparations possible? |
| А | at the suction stage |
| Б | at the stage of distribution |
| В | at the metabolic stage |
| Г | at the stage of elimination  |
|  |  |
| 037 | Hydroregulators are necessary to |
| А | maintain the required moisture content of the dosage form |
| Б | giving elasticity to the dosage form |
| В | introduction of gases into the capsule mass |
| Г | prevent microbial contamination  |
|  |  |
| 038 | Oral dosage forms: |
| А | solutions, pills, granules |
| Б | granules, liniments, pastes |
| В | emulsions, ointments, capsules |
| Г | suspensions, tablets, suppositories  |
|  |  |
| 039 | Disintegration mechanisms of tablets: |
| А | all answers are correct |
| Б | swelling effect |
| В | capillary action |
| Г | humidification by expanding air in the pores with the release of the absorption's heat |
|  |  |
| 040 | During the dissolution of the dosage form, the following occurs: |
| А | both answers are correct |
| Б | release of molecules from crystalline bonds |
| В | diffusion of molecules into a solvent |
| Г | there is no right answer |
|  |  |
| 041 | The result of the pharmacokinetic interaction of calcium and tetracycline preparations: |
| А | the formation of non-adsorbable complexes |
| Б | calcium increases the pH of gastric juice and reduces absorption of the weak acid tetracycline |
| В | calcium induces liver enzymes, increases metabolism and reduces the effectiveness of tetracycline |
| Г | calcium stimulates gastrointestinal motility and reduces tetracycline absorption |
|  |  |
| 042 | The change in pH in the gastrointestinal tract is associated with the use of |
| А | antacids |
| Б | M-anticholinergics |
| В | tetracyclines |
| Г | narcotic analgesics  |
|  |  |
| 043 | Suspension viscosity is provided by … |
| А | surfactants, aerosil, bentonite |
| Б | starch |
| В | thymol |
| Г | petroleum jelly  |
|  |  |
| 044 | A combination of several suspension excipients is used |
| А |  |
| Б | to increase or maintain the biological activity of medicinal substances |
| В | to increase the stability of the dosage form |
| Г | to ensure high bioavailability |
|  |  |
| 045 | Average dissolution time: |
| А | the average arithmetic mean of the dissolution time of medicinal substances in different dosage forms |
| Б | the time it takes for 100% of the drug substance to enter the solution |
| В | the amount of a drug substance dissolved in a specified time from the start of the experiment |
| Г | drug release outside the biological system  |
|  |  |
| 046 | Methods used to determine dissolution rate: |
| А | all answers are correct |
| Б | adsorptive |
| В | dividing |
| Г | dialysis  |
|  |  |
| 047 | The absorption of what drugs decreases with an increase in the pH of gastric juice? |
| А | penicillins, cephalosporins |
| Б | morphine, chloroquine |
| В | calcium gluconate, phosphalugel |
| Г | atropine, lidocaine |
|  |  |
| 048 | The absorption of which drugs decreases with a decrease in the pH of gastric juice? |
| А | papaverine, lidocaine |
| Б | amoxicillin, tetracycline |
| В | calcium gluconate, phosphalugel |
| Г | phenobarbital, furosemide |
|  |  |
| 049 | Norm of Disintegration rates of capsules |
| А | 20 min |
| Б | 15 min |
| В | 10 min |
| Г | 1 hour  |
|  |  |
| 050 | The adsorption method is … |
| А | based on the absorption of the released substance by any adsorbent (activated carbon, bentonite, silicogel, etc.) with the subsequent quantitative determination of the substance in such |
| Б | based on the study of the ability of a substance released into the aqueous phase to pass into the lipophilic phase, which is often used as an organic solvent immiscible with water |
| В | based on the property of some membranes to pass low molecular weight substances and ions, as well as to retain colloidal particles and macromolecules |
| Г | there is no right answer |
|  |  |
| 051 | A Sediment formation as a sign of drug incompatibility is observed with the following combinations: |
| А | dibazol and euphyllin |
| Б | norepinephrine and glucose |
| В | mezaton and glucose |
| Г | glucose and adrenaline |
|  |  |
| 052 | Sediment formation as a sign of drug incompatibility is observed with the following combinations: |
| А | papaverine hydrochloride and sodium bicarbonate |
| Б | cardiac glycosides and glucose |
| В | glucose and ephedrine |
| Г | glucose and adrenaline |
|  |  |
| 053 | The function of the P-glycoprotein is |
| А | the elimination of xenobiotics from the cells of the body |
| Б | induction of liver enzymes |
| В | regulation of stomach pH |
| Г | regulation of tubular secretion  |
|  |  |
| 054 | An inhibitor of P-glycoprotein is … |
| А | atorvastatin |
| Б | amitriptilline |
| В | phenothiazine |
| Г | morphine  |
|  |  |
| 055 | Liquid dosage form containing one or more ground substances distributed in a liquid dispersion medium |
| А | suspension |
| Б | emulsion |
| В | molecular solutionof low molecular weight substances |
| Г | molecular solutionof high molecular weight substances  |
|  |  |
| 056 | Suspensions can be characterized as \_\_\_\_\_ systems |
| А | microheterogeneous |
| Б | colloidal |
| В | homogeneous |
| Г | combined  |
|  |  |
| 057 | An example of a pharmaceutical incompatibility used for a therapeutic purpose: |
| А | activated carbon and heavy metal salts |
| Б | activated carbon and tetracycline |
| В | weak base solution and alkaline solution |
| Г | weak base solution and alkaline solution |
|  |  |
| 058 | An example of a pharmaceutical incompatibility used for a therapeutic purpose: |
| А | weak acid solution and alkaline solution |
| Б | activated carbon and tetracycline |
| В | calcium preparations and tetracycline |
| Г | strong acid solution and alkaline solution  |
|  |  |
| 059 | P-glycoprotein substrate: |
| А | clarithromycin |
| Б | phenothiazine |
| В | morphine |
| Г | Hypericum preparations |
|  |  |
| 060 | P-glycoprotein inducer: |
| А | rifampicin |
| Б | tacrolimus |
| В | spironolactone |
| Г | quinidine |
|  |  |
| 061 | Which drug causes a slowdown in gastric and intestinal motility? |
| А | Loperamide |
| Б | domperidone |
| В | magnesium sulfate |
| Г | Senna preparations  |
|  |  |
| 062 | Positive property of the dosage form of the suspension: |
| А | pronounced prolonged action in comparison with solutions |
| Б | long shelf life |
| В | stability |
| Г | limiting the risk of microbial contamination  |
|  |  |
| 063 | Science that studies the therapeutic efficacy of drugs depending on pharmaceutical factors |
| А | biopharmacy |
| Б | pharmacology |
| В | biotechnology |
| Г | pharmaceutical chemistry |
|  |  |
| 064 | Relative pharmacological incompatibility of drugs is observed in … |
| А | pharmacokinetic drug-drug interactions |
| Б | pharmaceutical drug-drug interactions |
| В | pharmacodynamic drug-drug interactions |
| Г | any type of drug-drug interaction |
|  |  |
| 065 | Absolute pharmacological incompatibility of drugs is observed in … |
| А | pharmacodynamic drug-drug interactions |
| Б | pharmacokinetic drug-drug interactions |
| В | pharmaceutical drug-drug interactions |
| Г | any type of drug-drug interaction |
|  |  |
| 066 | The displacement of one drug from the connection with blood plasma proteins by another leads to … |
| А | an increase in the free fraction of the first drug, an increase in its pharmacological activity, and an increase in side effects |
| Б | an increase in absorption, an increase in pharmacological activity, a decrease in the elimination of the first drug |
| В | a decrease in the free fraction of the first drug, a decrease in its effectiveness |
| Г | a decrease in the absorption of the first drug, a decrease in its hepatic metabolism, an increase in side effects |
|  |  |
| 067 | Relative pharmacological incompatibility of drugs: |
| А | is a subject to correction |
| Б | not subject to correction |
| В | does not affect the therapeutic effectiveness of drugs |
| Г | there is no correct answer |
|  |  |
| 068 | Absolute pharmacological incompatibility of drugs: |
| А | is not a subject to correction |
| Б | subject to correction |
| В | does not affect the therapeutic effectiveness of drugs |
| Г | there is no correct answer |
|  |  |
| 069 | Medicines that are inducers of liver enzymes: |
| А | phenobarbital, ethanol |
| Б | cimetidine, ranitidine |
| В | omeprazole, famotidine |
| Г | almagel, phosphalugel  |
|  |  |
| 070 | Excipients used to increase the solubility of poorly soluble medicinal substances: |
| А | solubilizers |
| Б | emulsifiers |
| В | leavening agents |
| Г | prolongators |
|  |  |
| 071 | The optimal viscosity ; |
| А | does not slow down the absorption of medicinal substances |
| Б | leads to a slowdown in the absorption of medicinal |
| В | characterized by slow diffusion of the drug through the membranes |
| Г | provides thermodynamic stability of the dosage form |
|  |  |
| 072 | The effect observed in the interaction of menthol and camphor: |
| А | hygroscopic mixture formation |
| Б | sediment formation |
| В | mixture inactivation |
| Г | lack of reaction  |
|  |  |
| 073 | Pharmaceutical incompatibility: |
| А | physicochemical interaction of medicines in dosage forms, as well as during storage and transportation |
| Б | develops in the process of interaction of drugs with biological systems of the body |
| В | due to improper storage and transportation |
| Г | due to the presence of preservatives in the drug  |
|  |  |
| 074 | Medicines that are inhibitors of liver enzymes: |
| А | cimetidine, ranitidine |
| Б | bismuth trisalium citrate |
| В | almagel, phosphalugel |
| Г | phenobarbital, ethanol |
|  |  |
| 075 | Medicines that reduce the glomerular filtration rate: |
| А | neomycin, gentamicin |
| Б | furosemide, spironolactone |
| В | phenobarbital, sodium thiopental |
| Г | almagel, phosphalugel |
|  |  |
| 076 | Medicines causing suppression of tubular secretion: |
| А | indomethacin, ibuprofen |
| Б | almagel, phosphalugel |
| В | hydrochlorothiazide, ethacrynic acid |
| Г | phenobarbital, sodium thiopental |
|  |  |
| 077 | Emulsion composition: |
| А | finely dispersed, immiscible liquids |
| Б | multiple liquids |
| В | macromolecules and macroions distributed in a liquid |
| Г | micelles in a liquid dispersion medium  |
|  |  |
| 078 | What is used to determine the relative bioavailability |
| А | oral solutions |
| Б | pills |
| В | powders |
| Г | intravenous injection solutions  |
|  |  |
| 079 | Pharmacological incompatibility of medicinal substances |
| А | develops in the process of interaction with biological systems of the body |
| Б | due to improper storage and transportation |
| В | due to the presence of preservatives in the drug |
| Г | due to the physicochemical interaction of medicinal substances in dosage forms |
|  |  |
| 080 | Antacids and antisecretory drugs: |
| А | reduce the absorption of drugs - weak acids |
| Б | increase the absorption of drugs - weak acids |
| В | reduce the absorption of drugs - strong acids |
| Г | increase the absorption of drugs - strong acids  |
|  |  |
| 081 | Antacids and antisecretory drugs: |
| А | increase the absorption of drugs - weak bases |
| Б | reduce the absorption of drugs - weak bases |
| В | increase the absorption of drugs - strong bases |
| Г | reduce the absorption of drugs - strong bases  |
|  |  |
| 082 | In an acidic media, urinary excretion of the drug is accelerated: |
| А | quinidine |
| Б | ketoconazole |
| В | carvedilol |
| Г | tetracycline |
|  |  |
| 083 | In an alkaline media, urinary excretion of the drug is accelerated: |
| А | tetracycline |
| Б | ketoconazole |
| В | carvedilol |
| Г | quinidine |
|  |  |
| 084 | Preservatives are substances that … |
| А | prevent the growth of microorganisms |
| Б | reduce the rate of oxidative processes of solutions of medicinal substances |
| В | increase the solubility of medicinal substances |
| Г | increase the residence time of medicinal substances in the body |
|  |  |
| 085 | In suspensions, the surface area depends on … |
| А | the size of the dispersed particles |
| Б | macromolecules and macroions distributed in the liquid |
| В | micelles in a liquid dispersion medium |
| Г | presence of preservatives  |
|  |  |
| 086 | Activated carbon |
| А | adsorbs all drugs in the stomach and intestines |
| Б | adsorbs only antibiotics in the stomach and intestines |
| В | adsorbs only cardiac glycosides in the stomach and intestines |
| Г | adsorbs in the stomach and intestines only non-steroidal anti-inflammatory drugs  |
|  |  |
| 087 | Medicinal product for which interaction at the level of binding with proteins is of clinical importance |
| А | warfarin |
| Б | anaprilin |
| В | verapamil |
| Г | erythromycin  |
|  |  |
| 088 | A decrease in urine pH leads to inhibition of tubular reabsorption of the drug: |
| А | amphetamine |
| Б | sulfadimethoxine |
| В | phenylbutazone |
| Г | phenobarbital |
|  |  |
| 089 | An increase in urine pH leads to inhibition of tubular reabsorption of the drug: |
| А | nalidixic acid |
| Б | morphine |
| В | novocaine |
| Г | imipramine |
|  |  |
| 090 | The purpose of biopharmaceutical research: |
| А | creation of effective dosage forms and preparations |
| Б | establishing the mechanism of action of a drug |
| В | study of drug transport in the body |
| Г | study of the mechanisms of absorption of a medicinal substance in the body |
|  |  |
| 091 | Generic drug: |
| А | reproduced medicament |
| Б | original drug |
| В | medicinal product developed in a different dosage form |
| Г | patented medicament |
|  |  |
| 092 | Preclinical drug trials: |
| А | assessment of pharmacological efficacy and safety in laboratory animals, as well as in vitro |
| Б | assessment of drug toxicity in laboratory animals |
| В | assessment of the presence of pharmacological properties by computer prediction |
| Г | assessment of safety in healthy volunteers |
|  |  |
| 093 | Medicinal product for which interaction at the level of binding with proteins is of clinical importance |
| А | methotrexate |
| Б | verapamil |
| В | haloperidol |
| Г | aminazine |
|  |  |
| 094 | Medicinal product for which interaction at the level of binding with proteins is of clinical importance |
| А | diltiazem |
| Б | glibenclamide |
| В | ketoprofen |
| Г | digoxin |
|  |  |
| 095 | Generic and original medicinal product |
| А | have the same active medicinal substances in the same doses and dosage form |
| Б | have the same excipients |
| В | have the same active medicinal substances in different doses and dosage form |
| Г | are characterized by the same name |
|  |  |
| 096 | A drug patent protects the developer's copyright: |
| А | all answers are correct |
| Б | for the pharmacological properties of the drug |
| В | for the production technology of the drug |
| Г | for the chemical formula of a substance |
|  |  |
| 097 | In solutions, absorption is influenced by … |
| А | all answers are correct |
| Б | the composition of the solvent |
| В | viscosity |
| Г | surface tension  |
|  |  |
| 098 | Medicines that, due to their significant lipophilicity, facilitate the passage of medicinal substances across the membrane |
| А | all answers are correct |
| Б | ethanol, sorbitol |
| В | glycerin, propylene glycol |
| Г | dimexide |
|  |  |
| 099 | Route of drug administration providing 100% bioavailability: |
| А | intravenous |
| Б | rectal |
| В | oral |
| Г | sublingual |
|  |  |
| 100 | Bile affects |
| А | drug solubility |
| Б | drug dissociation constant |
| В | optical properties of the medicinal product |
| Г | mechanism of drug action |
|  |  |
| 101 | A drug for which interaction at the level of binding with proteins is not clinically relevant |
| А | haloperidol |
| Б | methotrexate |
| В | sibazon |
| Г | ceftriaxone |
|  |  |
| 102 | Insulin preparations: |
| А | increase the permeability of cell membranes for glucose and potassium ions |
| Б | reduce the diffusion of many drugs through the capillary wall |
| В | do not affect the permeability of cell membranes |
| Г | increase the permeability of the blood-brain barrier for penicillin preparations |
|  |  |
| 103 | The authorization for the release of generic medicinal products is issued |
| А | after bioequivalence confirmation |
| Б | after the entire cycle of preclinical and clinical studies |
| В | after registration of a patent for a medicinal product |
| Г | after comparing the chemical formula of drugs in the original and generic drugs |
|  |  |
| 104 | Therapeutic equivalence of original and generic medicines |
| А | therapeutic interchangeability |
| Б | use of the same active substance |
| В | the entry of the same amount of a drug into the systemic circulation |
| Г | the use of the same active substance in the same doses and form |
|  |  |
| 105 | Bioequivalence of original and generic medicines: |
| А | comparable bioavailability |
| Б | use of the same active substance |
| В | therapeutic interchangeability |
| Г | the use of the same active substance in the same doses and form |
|  |  |
| 106 | Bioavailability for bioequivalent drugs: |
| А | should not differ by more than 20% |
| Б | should not differ by more than 10% |
| В | should not differ by more than 30% |
| Г | should not be different |
|  |  |
| 107 | Medicines are washed down with milk if: |
| А | they irritate the gastrointestinal mucosa |
| Б | patient loves milk |
| В | drugs have the ability to bind to calcium in milk |
| Г | milk can not be washed down with any medications |
|  |  |
| 108 | The "primary passage effect" is NOT observed for drugs administered |
| А | rectally |
| Б | intravenously |
| В | orally |
| Г | intra-arterial |
|  |  |
| 109 | Tubular secretion inhibitor: |
| А | butadion |
| Б | digoxin |
| В | lithium salts |
| Г | methotrexate |
|  |  |
| 110 | Drugs interaction is : |
| А | a quantitative or qualitative change in the pharmacological effects caused by drugs with the simultaneous or sequential use of two or more drugs |
| Б | changes in the pharmacological effects caused by drugs with the simultaneous use of two or more drugs |
| В | quantitative change in the pharmacological effects caused by drugs with the sequential use of two or more drugs |
| Г | a change in the pharmacological effects caused by drugs with the simultaneous unjustified prescription of many drugs without taking into account their compatibility |
|  |  |
| 111 | Biopharmacy as a science studies the biological effect of drugs depending on |
| А | the physicochemical properties of drugs and excipients, dosage form, manufacturing technology |
| Б | the functional groups of the drug |
| В | the impact of environmental factors |
| Г | Only the manufacturing technology |
|  |  |
| 112 | Biopharmacy evaluates |
| А | the activity of a drug in a specific dosage form with certain excipients |
| Б | the pharmacological activity of a drug abstracted from the dosage form, usually in aqueous solution |
| В | the the quality of the dosage form based on merchandising indicators: content of active substances, melting point, solubility |
| Г | the amount of the drug reaching the systemic circulation |
|  |  |
| 113 | The original drug is |
| А | an innovative drug that has passed preclinical and clinical trials, protected by a patent for up to 20 years |
| Б | an innovative drug that has passed clinical trials and is protected by a patent for 10 years |
| В | medicinal substance in a new dosage form |
| Г | medicinal product produced by a company in the absence of patent protection for the purpose of reproducing a previously created product |
|  |  |
| 114 | Biological rhythm affecting the effectiveness of medicinal substances |
| А | metabolic rhythm |
| Б | age |
| В | floor |
| Г | there is no correct answer |
|  |  |
| 115 | With a decrease in body temperature, absorption and metabolism of the drug … |
| А | slows down |
| Б | accelerated |
| В | do not change |
| Г | absorption is accelerated, metabolism slows down |
|  |  |
| 116 | Interaction when combining aqueous and alcoholic solutions |
| А | physical drug interactions |
| Б | pharmacodynamic interaction of drugs |
| В | chemical interaction of drugs |
| Г | pharmacokinetic drug interaction |
|  |  |
| 117 | Violation of the adsorption of a medicinal substance with the simultaneous use of enterosorbents refers to |
| А | the pharmacokinetic drug interactions |
| Б | the pharmacodynamic drug interactions |
| В | the pharmaceutical drug interactions |
| Г | the drug-drug interactions |
|  |  |
| 118 | Requirements for generic medicines: |
| А | bioequivalence |
| Б | mandatory patent protection |
| В | other dosage form |
| Г | issue within the validity period of a patent for an original medicinal product |
|  |  |
| 119 | Clinical trials of medicinal products: |
| А | assessment of pharmacological efficacy and safety in healthy and sick people, with informed voluntary consent to the study |
| Б | assessment of pharmacological efficacy and safety in laboratory animals |
| В | assessment of pharmacological efficacy and safety in healthy and sick people |
| Г | assessment of drug safety in laboratory animals |
|  |  |
| 120 | Pharmaceutical equivalence of original and generic medicines |
| А | the use of the same active substance in the same doses and dosage form |
| Б | use of the same active substance |
| В | therapeutic interchangeability |
| Г | the entry of the same amount of a drug into the systemic circulation |
|  |  |
| 121 | When applied ascorbic acid and thiamine observed … |
| А | inactivation of drugs |
| Б | increased absorption of thiamine |
| В | increased absorption of ascorbic acid |
| Г | decreased anticoagulant activity |
|  |  |
| 122 | Meteorological factors include: |
| А | both are correct |
| Б | absolute air humidity |
| В | average daily temperature |
| Г | there is no correct answer |
|  |  |
| 123 | An example of a pharmaceutical incompatibility used for a therapeutic purpose: |
| А | activated carbon and heavy metal salts |
| Б | activated carbon and tetracycline |
| В | weak warping solution and alkaline solution |
| Г | activated carbon and acids |
|  |  |
| 124 | Non-absorbable complex compounds with calcium, magnesium, iron, zinc, bismuth preparations form … |
| А | tetracyclines |
| Б | fluoroquinolones |
| В | cephalosporins |
| Г | macrolides |
|  |  |
| 125 | Therapeutic equivalence of original and generic medicines: |
| А | the same clinical effect and the same safety profile |
| Б | opposite clinical effect and different safety profile |
| В | the entry of the same amount of a drug into the systemic circulation |
| Г | comparable indicator of the bioavailability of medicinal substances |
|  |  |
| 126 | Bioavailability as a cumulative indicator of the effectiveness of a drug determines everything except |
| А | the amount of injected drug |
| Б | the rate at which the drug appears in the blood |
| В | the rate of elimination of the drug from the body |
| Г | the proportion of the medicinal substance that entered the bloodstream |
|  |  |
| 127 | Trends in the global and domestic pharmaceutical markets: |
| А | there are dozens of generic analogues for one original drug |
| Б | there are dozens of originals per 1 generic drug |
| В | 1 original drug accounts for 1 generic drug |
| Г | the use of generic drugs is prohibited |
|  |  |
| 128 | Absorption of medicinal substances is slower in  |
| А | children |
| Б | men |
| В | people aged 20-30 |
| Г | women |
|  |  |
| 129 | Science that studies the effects of medicinal substances on the body depending on the time of day, seasons of the year |
| А | chronopharmacology |
| Б | pharmacodynamics |
| В | pharmacokinetics |
| Г | meteorology |
|  |  |
| 130 | Absorption of drugs metabolized by normal intestinal microflora, when used together with antibiotics |
| А | intensifies |
| Б | oppressed |
| В | does not change |
| Г | changes slightly |
|  |  |
| 131 | When two drugs are prescribed together, one of which induces hepatic enzymes, and the second is metabolized in the liver, when the inducer is canceled, the dose of the second substance must … |
| А | be reduced |
| Б | be increased |
| В | does not require modification |
| Г | requires minor change  |
|  |  |
| 132 | Biopharmacy: |
| А | studies the influence of pharmaceutical factors on the therapeutic efficacy of drugs |
| Б | studies the mechanism of action and pharmacological properties of medicinal substances |
| В | studies the features of the interaction of excipients and medicinal substances |
| Г | studies the pharmacokinetics of drugs |
|  |  |
| 133 | The degree of grinding or dispersion of medicinal substances determines:1.the physical state of the solvent;2. the physical state of the medicinal substance;3. features of the chemical modification of a medicinal substance;4. spatial isomerism of the medicinal substance;5. the way of drug administration into the body;6. Peculiarities of drug manufacturing technology. |
| А | 2, 6  |
| Б | 1, 5, 6 |
| В | 1, 2, 6 |
| Г | 1, 3, 4 |
|  |  |
| 134 | The particle size of the drug substance is dependent:1.mechanism of action2. bioavailability3.spatial arrangement4.speed and completeness of absorption5.concentration in biological fluids6.Affinity for receptors7.solubility8.chemical modification |
| А | 2, 4, 5, 7 |
| Б | all options are correct |
| В | 1, 2, 4, 5, 7, 8 |
| Г | 2, 4, 5, 6, 7, 8 |
|  |  |
| 135 | Is it always necessary to grind a medicinal substance in the manufacture of a medicinal product? |
| А | in the production of all drugs |
| Б | the grinding of a medicinal substance must be scientifically justified |
| В | only in the production of powders |
| Г | only in the production of drugs for injection solutions |
|  |  |
| 136 | Which route of administration is influenced by the greatest number of factors on bioavailability? |
| А | oral |
| Б | inhalation |
| В | rectal |
| Г | transdermal |
|  |  |
| 137 | Tetracycline hydrochloride contraindicated drink … |
| А | milk |
| Б | water |
| В | pineapple juice |
| Г | black tea |
|  |  |
| 138 | With the rectal route of administration, the drug reaches the bloodstream after … |
| А | 15 minutes |
| Б | 40 minutes |
| В | instantly |
| Г | metabolized in the liver without reaching the blood |
|  |  |
| 139 | Chemical modification of a medicinal substance |
| А | the ability of a substance to exhibit comparable pharmacological properties in different chemical compounds (salt, base, etc.) |
| Б | the ability of a substance to form crystals of various shapes |
| В | ability of a substance to exhibit comparable pharmacological properties in one chemical compound |
| Г | the ability of a substance to form crystals of the same shape |
|  |  |
| 140 | Biopharmaceutical task of grinding the drug substance:1.increase in the specific surface area of the substance;2. optimization of physical and chemical properties of substances;3. a decrease in the distance between elementary particles in a substance molecule;4. increasing the stability of the substance;5. increasing the drug safety of the substance. |
| А | 1, 2, 3 |
| Б | 1, 2, 3, 4 |
| В | 3, 5 |
| Г | 1, 4, 5 |
|  |  |
| 141 | In pharmaceutical technology, the following are most commonly used:1.surfacegrinding;2. volumetric grinding;3. deep grinding;4. layer by layergrinding;5. volumetric surface grinding;6. volumetric depth grinding;7. volumetric layer-by-layer grinding. |
| А | 5  |
| Б | 1, 3, 6 |
| В | 1, 2 |
| Г | all options are correct |
|  |  |
| 142 | Perpendicular and tangential directions of exposure are applied to the drug particles during \_\_\_\_\_ grinding: |
| А | surface |
| Б | volumetric |
| В | deep |
| Г | layered |
|  |  |
| 143 | With an increase in body temperature, absorption and metabolism of drugs: |
| А | are accelerating |
| Б | slow down |
| В | do not depend on body temperature |
| Г | not heavily dependent |
|  |  |
| 144 | To substantiate the optimum reception timing medicament keep records  |
| А | physiological rhythms |
| Б | eating |
| В | the patient's condition |
| Г | the relationship between sleep and wakefulness |
|  |  |
| 145 | Why the doses of some drugs when taken orally should be significantly higher than when administered intravenously? |
| А | some drugs under the influence of liver enzymes undergo significant changes |
| Б | due to poor absorption |
| В | medicinal substances with a low degree of binding to plasma proteins are quickly distributed in the body, causing a rapid onset of the effect |
| Г | there is no correct answer |
|  |  |
| 146 | Undesirable manifestations of a high degree of grinding for some medicinal substances:1. decrease in solubility;2. increasing solubility;3. inactivation of the substance;4. decrease in bioavailability;5. fast elimination of it from the body;6. manifestation of an undesirable effect on the body;7. decrease in the stability of the drug;8. increasing the stability of the drug. |
| А | 3, 5, 6, 7 |
| Б | 3, 5, 6 |
| В | 1, 5, 7 |
| Г | 5, 6 |
|  |  |
| 147 | Enantiomers of medicinal substances: |
| А | molecules that are chiral and related to each other through reflection symmetry |
| Б | molecules differing in the spatial arrangement of substituents |
| В | molecules with natural optical activity |
| Г | there are no correct answers |
|  |  |
| 148 | Chemical modification of a medicinal substance: |
| А | introducing an additional cation into the drug molecule or replacing one cation with another while maintaining the same basic chemical structure |
| Б | the ability of a substance to form crystals of various shapes |
| В | there is no right answer |
| Г | the ability of a substance to form crystals of the same shape |
|  |  |
| 149 | Pharmaceutical factors:1. the physical state of the medicinal substance;2. biotargets for the drug;3. chemical modification of a medicinal substance;4. spatial isomerism of receptors as a target for drugs;5. the initial state of the macroorganism;6. the structure of the active "core" of the drug substance;7. excipients;8. dosage form9. the way of drug administration into the body;10. drug manufacturing technology |
| А | 1, 3, 7, 8, 9, 10 |
| Б | 2, 5, 6, 7, 8 |
| В | 1, 2, 9 |
| Г | 1, 3, 7, 8, 10 |
|  |  |
| 150 | The physical state of the medicinal substance:1.the ability to form irreversible bonds;2. the degree of solubility of medicinal substances;3. modification of the structure;4. polymorphism of medicinal substances;5.amorphous or crystalline structure,6. shape and character of crystals;7. optical activity;8.philia. |
| А | 2, 4, 5, 6, 7, 8 |
| Б | 2, 3, 4, 5, 6, 7, 8 |
| В | 2, 4, 5, 6, 7 |
| Г | all options are correct |
|  |  |
| 151 | How does the correct choice of nutrition affect the bioavailability of medicines? |
| А | significantly increases |
| Б | reduces |
| В | has no effect |
| Г | significantly reduces |
|  |  |
| 152 | With the rectal route of administration, bioavailability is affected by: |
| А | individual feature of the blood supply to the rectum |
| Б | selected dosage form |
| В | patient's emotional state |
| Г | underlying disease |
|  |  |
| 153 | Grinding purpose:1. increasing the solubility of substances;2. transfer to a finely dispersed state;3. transfer to a coarse-dispersed state;4. an increase in the duration of action. |
| А | 1, 2 |
| Б | all options are correct |
| В | 3, 4 |
| Г | 2, 3 |
|  |  |
| 154 | With rectal administration the bioavailability of drugs is less … |
| А | in children |
| Б | in women |
| В | in men |
| Г | in the elderly |
|  |  |
| 155 | The bioavailability of a drug is |
| А | the part of the administered drug, expressed as a percentage, that reached the systemic circulation relative to the administered dose. |
| Б | value characterizing the proportion of the drug entering the bloodstream |
| В | amount of injected drug |
| Г | unchanged amount of eliminated substance |
|  |  |
| 156 | The higher the degree of grinding of the medicinal substance, the ...1. higher bioavailability;2. lower speed and completeness of absorption;3. higher concentration in biological fluids;4. higher solubility;5. lower solubility;6. the risk of developing an undesirable action is higher;7. lower risk of developing an undesirable action;8. higher stability of the substance;9. lower stability of the substance. |
| А | 1, 3, 4, 6, 9 |
| Б | 3,6, 8 |
| В | 2, 5, 7, 8 |
| Г | 1, 3, 4, 7, 8 |
|  |  |
| 157 | Drug substance polymorphism: |
| А | the ability of a substance to form crystals of various shapes |
| Б | the ability of a substance to exhibit comparable pharmacological properties in different chemical compounds (salt, base, etc.) |
| В | ability of a substance to exhibit comparable pharmacological properties in one chemical compound |
| Г | the ability of a substance to form crystals of the same shape |
|  |  |
| 158 | Absolute bioavailability: |
| А | value characterizing the proportion of the drug entering the bloodstream during extravascular administration in relation to its amount after intravenous administration of the drug |
| Б | a value that determines the degree of entry into the bloodstream of a medicinal substance from the test preparation in relation to the degree of entry into the bloodstream of a medicinal substance from the reference preparations |
| В | part of the administered drug, expressed as a percentage, reaching the systemic circulation relative to the administered dose |
| Г | unchanged amount of eliminated substance |
|  |  |
| 159 | Relative bioavailability: |
| А | a value that determines the degree of entry into the bloodstream of a medicinal substance from the test preparation in relation to the degree of entry into the bloodstream of a medicinal substance from the reference preparations |
| Б | part of the administered drug, expressed as a percentage, reaching the systemic circulation relative to the administered dose |
| В | the amount of drug excreted unchanged |
| Г | a value characterizing the proportion of the drug entering the bloodstream during extravascular administration in relation to its amount after intravenous administration of the drug. |
|  |  |
| 160 | Medicinal substances are predominantly |
| А | have a crystalline structure |
| Б | have an amorphous structure |
| В | spontaneously transform from a crystalline state to an amorphous state |
| Г | spontaneously transform from amorphous to crystalline |
|  |  |
| 161 | What is more suitable for prolonging the action of drugs? |
| А | sparingly soluble medicinal substances |
| Б | readily soluble medicinal substances |
| В | the solubility of drugs does not determine the duration of drug action |
| Г | the presence of a preservative in the medicinal product |
|  |  |
| 162 | The degree of grinding of the medicinal substance: |
| А | the ratio of the size of the smallest particles of a substance before grinding to the size of the smallest particles of a substance after grinding |
| Б | the ratio of the average particle size of a substance before grinding to the average particle size of a substance after grinding |
| В | there is no correct answer |
| Г | the ratio of the size of the largest particles of a substance before grinding to the size of the largest particles of a substance after grinding. |
|  |  |
| 163 | Types of technological grinding of medicinal substances:1.surface;2. volumetric;3. deep;4.layer |
| А | 1, 2 |
| Б | 1, 3 |
| В | all answers are correct |
| Г | 2, 4 |
|  |  |
| 164 | For what type of grinding is the force causing the destruction of the substance applied perpendicularly? |
| А | volumetric; |
| Б | superficial; |
| В | deep; |
| Г | layered |
|  |  |
| 165 | The formation of a micronized form of a medicinal substance is justified:1.prednisolone;2.suldiazin;3. erythromycin;4. griseofulvin;5.calciferol |
| А | 2, 4, 5 |
| Б | 2, 3, 4 |
| В | 1, 3 |
| Г | 4, 5 |
|  |  |
| 166 | Stereoisomers of medicinal substances: |
| А | molecules differing in the spatial arrangement of substituents |
| Б | molecule with absolute optical activity |
| В | molecules with natural optical activity |
| Г | molecules that are chiral and related to each other through reflection symmetry |
|  |  |
| 167 | Determination of Сmax in blood reflects |
| А | полноту поступления лекарственного вещества в кровь |
| Б | отражает скорость всасывания вещества и, соответственно, скорость наступления терапевтического эффекта |
| В | наиболее важный параметр биодоступности, характеризующий суммарную концентрацию лекарственного препарата в плазме крови в течение всего времени наблюдения и отражает количество лекарственного вещества, поступившего в кровь |
| Г | количество выведенного препарата из организма в неизмененном виде |
|  |  |
| 168 | Determination of Tmax in blood reflects |
| А | the rate of absorption of the substance and, accordingly, the rate of onset of the therapeutic effect |
| Б | the most important parameter of bioavailability, which characterizes the total concentration of the drug in the blood plasma during the entire observation period and reflects the amount of the drug entering the blood |
| В | the amount of a substance eliminated from the body unchanged |
| Г | completeness of drug intake into the blood |
|  |  |
| 169 | Optically active medicinal substances: |
| А | molecules with natural optical activity |
| Б | molecules differing in the spatial arrangement of substituents |
| В | molecules that are chiral and related to each other through reflection symmetry |
| Г | molecules with relative optical activity |
|  |  |
| 170 | Morphine and Codeine: |
| А | are distinguished by the presence of the CH3 |
| Б | have differences in the spatial arrangement of molecules |
| В | are enantiomers of the same molecule |
| Г | have an absolutely identical structure, differ in the localization of the biotarget |
|  |  |
| 171 | High efficiency and safety is possessed by: |
| А | ascorbic acid |
| Б | sodium salt of ascorbic acid |
| В | both connections are secure |
| Г | both compounds are toxic |
|  |  |
| 172 | Patent protection for an original drug in the Russian Federation is valid for … |
| А | up to 20 years |
| Б | 1 year |
| В | indefinitely |
| Г | established by the inventor of the medicinal product |
|  |  |
| 173 | A patent is |
| А | a title of protection certifying the exclusive right, authorship and priority of an invention, utility model, industrial design or selection achievement |
| Б | material object containing information in a fixed form |
| В | a written medium of information that certifies the existence of facts of a certain meaning |
| Г | the main regulatory document, a collection of standards and regulations that determine the quality indicators of medicinal substances produced in the Russian Federation and preparations made from them |
|  |  |
| 174 | A measure of the bioavailability of a medicinal substance |
| А | (А: Б) • 100 |
| Б | (А: Б) /100 |
| В | DA (Cs – C) / h |
| Г | dC/dt |
|  |  |
| 175 | Area under the concentration-time curve in biopharmaceutical research: |
| А | the most important parameter of bioavailability, which characterizes the total concentration of the drug in the blood plasma during the entire observation period and reflects the amount of the drug entering the blood |
| Б | the amount of a substance eliminated from the body unchanged |
| В | completeness of drug intake into the blood |
| Г | the rate of absorption of the substance and, accordingly, the rate of onset of the therapeutic effect |
|  |  |
| 176 | Research experiment: |
| А | general scientific method of testing causal hypotheses using interventions (controlled exposure) in the natural course of the phenomenon under study |
| Б | consequence of a chain (sequence) of actions (outcome) or events expressed qualitatively or quantitatively |
| В | the process of reasoning, during which a transition is made from some initial judgments (premises) to new judgments-conclusions |
| Г | subject test |
|  |  |
| 177 | Medicines: |
| А | substances or their combinations that come into contact with the human or animal body, penetrate the organs, tissues of the human or animal body, used for the prevention, diagnosis and treatment of diseases, and obtained from blood, blood plasma, from organs, tissues of the human or animal body, plants, minerals, by methods of synthesis or using biological technologies |
| Б | the state of the medicinal product corresponding to the methods of its administration and use and ensuring the achievement of the required therapeutic effect |
| В | medicines in the form of dosage forms used for the prevention, diagnosis, treatment of a disease, rehabilitation, for the preservation, prevention or termination of pregnancy |
| Г | a medicinal product in the form of one or more active substances with pharmacological activity, regardless of the nature of the origin, which is intended for the production, manufacture of medicinal products and determines their effectiveness |
|  |  |
| 178 | Original medicinal product: |
| А | an innovative firstly synthesized drug that has passed the full cycle of preclinical and clinical trials |
| Б | an innovative firstly synthesized drug that has passed a full cycle of preclinical studies |
| В | it is an innovative first synthesized drug that has passed a full cycle of clinical trials |
| Г | a reproduced drug that has passed preclinical and clinical studies |
|  |  |
| 179 | Generic drug: |
| А | a generic drug that has proven therapeutic interchangeability with an innovative drug of a similar composition, produced by another manufacturer, but not by the developer of the original drug and without a developer's license, as a rule, after the expiration of the patent protection period and on the basis of an assessment of the registration dossier and determination of bioequivalence in a reduced volume |
| Б | is an innovative first synthesized drug that has passed a full cycle of preclinical studies |
| В | substances or their combinations that come into contact with the human or animal body, penetrate the organs, tissues of the human or animal body, used for prevention, diagnosis, treatment of the disease, rehabilitation, and obtained from blood, blood plasma, from organs, tissues of the human or animal body , plants, minerals, by methods of synthesis or using biological technologies |
| Г | it is an innovative first synthesized drug that has passed a full cycle of clinical trials |
|  |  |
| 180 | Drug development: |
| А | search for new pharmacologically active substances, subsequent study of their medicinal properties, preclinical studies, development of pharmaceutical production technologies. substances, development of formulations and technologies for the production of a medicinal product |
| Б | methods of introducing drugs on sale |
| В | methods of selling medicines in a pharmacy |
| Г | transportation of medicines |
|  |  |
| 181 | Noah-Whitney equation used to estimate dissolution rate: |
| А | dC/dt = DA (Cs – C) / h  |
| Б | (А: Б) • 100 |
| В | (А: Б) /100 |
| Г | DA (Cs – C) / h |
|  |  |
| 182 | The rate of dissolution in the stomach of drugs belonging to the group of weak acids: |
| А | relatively low |
| Б | relatively high |
| В | do not dissolve |
| Г | dissolve slightly |
|  |  |
| 183 | The absorption of weak acids proceeds |
| А | in an acidic environment |
| Б | in an alkaline environment |
| В | in a slightly acidic environment |
| Г | does not depend on the pH of the gastrointestinal tract |
|  |  |
| 184 | Drug developer: |
| А | an organization that has the rights to the results of preclinical studies of a medicinal product, clinical trials of a medicinal product, as well as to the technology of its production |
| Б | organization working in the production of pharmaceuticals |
| В | organization that has received the rights to manufacture an innovative drug |
| Г | specialist with a higher pharmaceutical education working in the production of pharmaceuticals |
|  |  |
| 185 | Reproduced drug: |
| А | a medicinal product containing the same pharmacological substance or a combination of the same pharmaceuticals. substances in the same dosage form as the original product, and entered into circulation after the original product entered circulation |
| Б | substances of inorganic or organic origin used in the production process, manufacturing of medicinal products to give them the necessary physical and chemical properties |
| В | a medicinal product in the form of one or more active substances with pharmacological activity, regardless of the nature of the origin, which is intended for the production, manufacture of medicinal products |
| Г | medicines in the form of dosage forms used for the prevention, diagnosis, treatment of a disease, rehabilitation, for the preservation, prevention or termination of pregnancy |
|  |  |
| 186 | Important indicators of the tablet form, which are associated with the effectiveness of the therapeutic effect on the body: |
| А | disintegration, dissolution |
| Б | particle size, excipients |
| В | adhesives; factors associated with the tablet forming process |
| Г | type of granulation, coating material |
|  |  |
| 187 | The most optimal fillers in terms of drug bioavailability: |
| А | starch, mannitol, sorbitol |
| Б | lactose, calcium phosphate disubstituted |
| В | sugar, glucose, aerosil |
| Г | cellulose derivatives, sorbitol |
|  |  |
| 188 | Buccal tablets are placed: |
| А | between the gum and cheek |
| Б | closer to the gum |
| В | under the tongue |
| Г | all answers are correct |
|  |  |
| 189 | The main component of capsule shells: |
| А | gelatin |
| Б | glycerol |
| В | polypeptides |
| Г | sorbitol |
|  |  |
| 190 | Preclinical drug studies: |
| А | biological, microbiological, immunological, toxicological, pharmacological, physical, chemical and other studies of drugs by using scientific assessment methods in order to obtain evidence of the effectiveness, safety and quality of drugs |
| Б | a territorially separate complex of a drug manufacturer, designed to carry out the entire process of drug production or a certain stage of it |
| В | study of the diagnostic, therapeutic, prophylactic, pharmacological properties of a medicinal product in the process of its use in humans, animals, including the processes of absorption, distribution, change and excretion, by applying scientific methods of assessment in order to obtain evidence of the safety, quality and efficacy of the medicinal product. |
| Г | there is no correct answer |
|  |  |
| 191 | Objectives of preclinical drug studies: |
| А | obtaining evidence of the safety, efficacy and quality of medicines |
| Б | determination of prophylactic, pharmacological properties of drugs in the process of use in humans |
| В | determination of diagnostic, medicinal properties of drugs in the process of use in humans |
| Г | this type of research is not carried out |
|  |  |
| 192 | Hydro-regulators are necessary for: |
| А | maintaining the required moisture content of medicines |
| Б | giving elasticity to the dosage form |
| В | introduction of gases into the capsule mass |
| Г | prevent microbial contamination |
|  |  |
| 193 | Depending on the composition of the gelatinous mass, the capsules can be: |
| А | hard and soft |
| Б | soft |
| В | solid |
| Г | solid and liquid |
|  |  |
| 194 | Preclinical studies of drugs are carried out on: |
| А | animals |
| Б | people |
| В | plants |
| Г | there is no right answer |
|  |  |
| 195 | Standards governing actions during preclinical studies: |
| А | GLP |
| Б | GSP |
| В | GCP |
| Г | GMP |
|  |  |
| 196 | GLP Standard for Drug Development: |
| А | a system of norms, rules and guidelines aimed at ensuring the consistency and reliability of laboratory test results |
| Б | rules for organizing production and quality control of medicines |
| В | rules applied directly to the process of selling goods, and the entire complex technological chain from the production of products to presentation to the consumer |
| Г | rules for organizing clinical trials of medicinal products |
|  |  |
| 197 | Areas of preclinical drug research: |
| А | all answers are correct |
| Б | study of the pharmacokinetics of the drug (absorption, distribution, metabolism, excretion, pharmacokinetic drug interaction, other pharmacokinetic studies); |
| В | toxicological studies (toxicity with single and repeated drug administration, genotoxicity, carcinogenicity, reproductive toxicity, embryotoxicity, local tolerance, other toxicity studies). |
| Г | study of the pharmacology of a medicinal product (primary and secondary pharmacodynamics and safety pharmacology, pharmacology of drug interactions) |
|  |  |
| 198 | Ethical principles of preclinical drug research: |
| А | all answers are correct |
| Б | the adequacy of the number of subjects |
| В | validity |
| Г | efficiency |
|  |  |
| 199 | Oral dosage forms: |
| А | solutions, pills, granules |
| Б | granules, liniments, pastes |
| В | emulsions, ointments, capsules |
| Г | suspensions, tablets, suppositories |
|  |  |
| 200 | Oral tablets |
| А | For introduction into the buccale cavity |
| Б | for introduction into the nasal cavity |
| В | for spraying, blowing |
| Г | for spraying, blowing |
|  |  |
| 201 | Preclinical studies of drugs allow ; |
| А | B and C are true  |
| Б | the possibility of a better understanding of the laws and mechanisms of life processes under the action of drugs |
| В | determining the level of safe use of drugs in medical practice |
| Г | there is no correct answer |
|  |  |
| 202 | Disadvantages of preclinical drug studies: |
| А | all answers are correct |
| Б | experiment duration |
| В | the need to ensure proper conditions for keeping animals in vivariums |
| Г | the need to confirm the correlation with methods for determining efficacy and safety in humans |
|  |  |
| 203 | The GLP Rules impose certain requirements on: |
| А | all answers are correct |
| Б | methods of recruiting the study and control groups |
| В | conditions for keeping animals, layout of vivarium premises |
| Г | selection of experimental animals (gender, age, weight) |
|  |  |
| 204 | Structural components of the vivarium: |
| А | building, equipment, laboratory animals, service personnel |
| Б | building, equipment, laboratory animals |
| В | building, equipment, laboratory animals, attendants, staff rest room |
| Г | building, equipment, service personnel |
|  |  |
| 205 | Organization of preclinical laboratory tests of medicines: |
| А | must ensure objectivity and comparability of the obtained research data in experiments on humans |
| Б | must demonstrate data different from studies in human studies |
| В | should completely replace clinical trials |
| Г | preclinical studies are currently not carried out on the territory of the Russian Federation |
|  |  |
| 206 | GСP standard is : |
| А | an international ethical and scientific standard for the planning and conduct of research involving human subjects, and for the documentation and presentation of the results of such research |
| Б | a quality system covering the organizational process and conditions under which preclinical studies of medicinal products related to health and environmental safety are performed |
| В | an international standard that establishes requirements for the production and quality control of medicines for humans and animals, as well as special requirements for the production of active pharmaceutical ingredients and certain types of medicines |
| Г | good practice for the handling and storage of medicines |
|  |  |
| 207 | Disintegration of tablets |
| А | the appearance of a finely dispersed state of the form upon contact with liquid |
| Б | shaping process |
| В | the process of releasing a drug a dosage form |
| Г | all answers are correct |
|  |  |
| 208 | Binding (gluing) substances in tablets: |
| А | sugar syrup |
| Б | aramant |
| В | alginates |
| Г | twins |
|  |  |
| 209 | GMP standard: |
| А | an international standard that establishes requirements for the production and quality control of medicines for humans and animals, as well as special requirements for the production of active pharmaceutical ingredients and certain types of medicines |
| Б | an international ethical and scientific standard for the planning and conduct of research involving human subjects, and for the documentation and presentation of the results of such research |
| В | a quality system covering the organizational process and conditions under which preclinical studies of medicinal products related to health and environmental safety are performed |
| Г | good practice for the maintenance, storage of medicines |
|  |  |
| 210 | The basis of "evidence-based medicine" in the Russian Federation is compliance with the practices: |
| А | GLP, GCP and GMP |
| Б | GLP, GCP and GSP |
| В | GCP, GSP and GMP |
| Г | GLP, GMP and GSP |
|  |  |
| 211 | When conducting preclinical studies of generic drugs, it is determined: |
| А | pharmacokinetics and general toxicity |
| Б | pharmacokinetics |
| В | general toxicity |
| Г | there is no correct answer |
|  |  |
| 212 | When conducting preclinical studies of generic drugs, it is determined |
| А | pharmacokinetics and general toxicity |
| Б | pharmacokinetics |
| В | general toxicity |
| Г | there is no correct answer |
|  |  |
| 213 | The task of preclinical drug research is NOT: |
| А | there is no correct answer |
| Б | assessment of the effectiveness of a substance under the conditions intended for use |
| В | drug safety: toxicity, lethality, negative impact on the physiological properties of the body |
| Г | pharmacokinetics |
|  |  |
| 214 | Capsules: |
| А | solid drugs with a hard or soft shell of various shapes and capacities |
| Б | uncoated solid medicinal products containing medicinal substances with local and systemic effects |
| В | comminuted solid medicinal substances |
| Г | are balls rolled on pill machines from a specially prepared mass |
|  |  |
| 215 | Tablets are ... |
| А | solid dosed officinal dosage form, mainly for internal use |
| Б | solid drugs with a hard or soft shell of various shapes and capacities |
| В | comminuted solid medicinal substances |
| Г | are balls rolled on pill machines from a specially prepared mass |
|  |  |
| 216 | The task of preclinical drug research is NOT: |
| А | study of the pharmacological action of the drug on humans |
| Б | assessment of the effectiveness of a substance under the conditions intended for use |
| В | drug safety: lethality, negative impact on the physiological properties of the body |
| Г | general and specific toxicity |
|  |  |
| 217 | Bioavailability of medicines: |
| А | the percentage of a drug that reaches the systemic circulation, relative to the administered dose |
| Б | the process of transition of a drug from the place of intake into the systemic circulation |
| В | the ability of a medicinal substance to achieve the desired therapeutic effect |
| Г | biologically active part of a drug that implements a therapeutic effect |
|  |  |
| 218 | Excipients are additional substances required to give a medicinal product … |
| А | dosage form |
| Б | biological activity |
| В | pharmacological action |
| Г | physical properties |
|  |  |
| 219 | How many classes of excipients are distinguished according to the classification depending on the effect on the physicochemical characteristics of dosage forms? |
| А | 5 |
| Б | 2 |
| В | 1 |
| Г | 3 |
|  |  |
| 220 | Excipient not included in the list of natural: |
| А | methylcellulose |
| Б | agar-agar |
| В | alginate |
| Г | starch |
|  |  |
| 221 | Indicators of the quality of the tablet: |
| А | disintegration, dissolution |
| Б | dissolution, viscosity |
| В | disintegration, presence of preservatives |
| Г | color, dissolution |
|  |  |
| 222 | Factors that do not affect the disintegration of the tablets: |
| А | presence of preservatives |
| Б | wettability of tablet mass components |
| В | presence of surfactants |
| Г | particle size |
|  |  |
| 223 | Dissolution of tablets: |
| А | characterizes the process of release of a drug from a dosage form |
| Б | the state of the tablet when it acquires a finely dispersed state when it comes into contact with liquid |
| В | factors associated with the tablet forming process |
| Г | wettability of tablet mass components |
|  |  |
| 224 | The solubility of the tablets is NOT affect: |
| А | color of the tablet |
| Б | technological parameters of the tabletting process |
| В | excipients and their relationship to each other |
| Г | pressing pressure |
|  |  |
| 225 | Excipient related to microbial natural compounds: |
| А | aubazidan |
| Б | pectin |
| В | agar-agar |
| Г | gelatin |
|  |  |
| 226 | Excipient representing a product of limited hydrolysis of collagen: |
| А | gelatin |
| Б | pectin |
| В | alginate |
| Г | aerosil |
|  |  |
| 227 | Significant disadvantage of natural excipients: |
| А | microbial contamination |
| Б | immunogenicity |
| В | high affinity for the drug |
| Г | change in the therapeutic effect of a drug |
|  |  |
| 228 | Increasing the pharmaceutical availability of tablets containing a sparingly water-soluble drug, is possible by … |
| А | reducing the degree of dispersion of the substance |
| Б | the introduction of the optimal amount of leavening agents |
| В | granulating |
| Г | reshaping of crystals |
|  |  |
| 229 | Increasing the pharmaceutical availability of tablets containing a sparingly water-soluble drug, is possible by introducing \_\_\_\_ into their composition. |
| А | solubilizers |
| Б | the optimal amount of leavening agents |
| В | binders |
| Г | antifriction substances |
|  |  |
| 230 | Dissolution medium for biopharmaceutical analysis of dosage forms: |
| А | 0.1 N hydrochloric acid |
| Б | polyethylene glycol |
| В | ethanol |
| Г | isopropyl alcohol |
|  |  |
| 231 | Excipients that are alumohydrosilicates: |
| А | bentonites |
| Б | tween |
| В | polyphenols |
| Г | silicones |
|  |  |
| 232 | Concentrations of methylcelluloseaqueous solutions used in the technology of dosage forms |
| А | 0,5–1%, 3–8% |
| Б | 1%, 3% |
| В | 1–3%, 5–8% |
| Г | 1%, 3–8% |
|  |  |
| 233 | A group of semi-synthetic excipients which include dextrin, polydextrin and maltodextrin: |
| А | modified starches |
| Б | modified bentonites |
| В | modified pectins |
| Г | modified alginates |
|  |  |
| 234 | Synthetic excipients: |
| А | polyvinol, tweens, polyacrylamide |
| Б | twins, spines, bentonites |
| В | silicones, carboxymethyl cellulose |
| Г | polyacrylamide, silicones, starches |
|  |  |
| 235 | Dosage forms for which the dissolution test is carried out in two stages: |
| А | enteric tablets |
| Б | lozenges |
| В | capsules |
| Г | effervescent tablets |
|  |  |
| 236 | Diluents (fillers): |
| А | substances that are introduced into the composition of tabletting mixtures to achieve the required mass of tabletted preparations with a low content of medicinal substances (from 0.001 to 0.01 g) |
| Б | are added to the composition of the tablet mass to ensure the strength of the granules and tablets (as a rule, to moisturize during granulation) |
| В | contribute to the rapid mechanical destruction (disintegration) of the tablet in the stomach or intestines in contact with digestive juices |
| Г | there is no right answer |
|  |  |
| 237 | Excipients that increase the residence time of the drug in the body: |
| А | prolongators |
| Б | stabilizers |
| В | preservatives |
| Г | emulsifiers |
|  |  |
| 238 | Natural polymer polysaccharide: |
| А | cellulose |
| Б | aerosil |
| В | methylcellulose |
| Г | polyvinol |
|  |  |
| 239 | The preservatives in the eye drops provide |
| А | maintaining stability |
| Б | chemical stability |
| В | comfort |
| Г | required pH value |
|  |  |
| ?240 | Excipients: benzalkonium chloride, benzyl alcohol, allowed in ophthalmic solutions, belong to the group |
| А | preservatives |
| Б | inhibitors of chemical reactions |
| В | viscosity regulators |
| Г | isotonic substances |
|  |  |
| 241 | Diluents (fillers) in dosage forms: |
| А | sugar, sodium chloride |
| Б | ethyl alcohol, sugar syrup |
| В | starch paste, water |
| Г | starch and its derivatives |
|  |  |
| 242 | Binding (gluing) substances: |
| А | are added to the composition of the tablet mass to ensure the strength of the granules and tablets (as a rule, to moisturize during granulation) |
| Б | substances that are introduced into the composition of tabletting mixtures to achieve the required mass of tabletted preparations with a low content of medicinal substances (from 0.001 to 0.01 g) |
| В | contribute to the rapid mechanical destruction of the tablet in the stomach or intestines in contact with digestive juices |
| Г | there is no right answer |
|  |  |
| 243 | Adhesives: |
| А | IUD solutions (gelatin, polyvinyl alcohol) |
| Б | alginic acid and its salts |
| В | surfactants  |
| Г | sugar, sodium chloride |
|  |  |
| 244 | Nipagin in dosage forms: |
| А | preservative |
| Б | prolongator |
| В | antioxidant |
| Г | pH regulator |
|  |  |
| 245 | Sodium metabisulfate, sodium sulfite: |
| А | antioxidants |
| Б | preservatives |
| В | prolongators |
| Г | isotonic components |
|  |  |
| 246 | Group of excipients used as dispersion media in the technology of liquid dosage forms, fillers for solid forms, bases for ointments and suppositories |
| А | formative |
| Б | solubilizers |
| В | prolongators |
| Г | preservatives |
|  |  |
| 247 | Forming substances make it possible to give the dosage form \_\_\_\_\_\_ |
| А | the required mass or volume |
| Б | bioavailability |
| В | therapeutic effectiveness |
| Г | solubility and stability |
|  |  |
| 248 | Disintegrating agents: |
| А | contribute to the rapid mechanical destruction of the tablet in the stomach or intestines in contact with digestive juices |
| Б | are added to the composition of the tablet mass to ensure the strength of granules and tablets |
| В | substances that are introduced into the composition of tabletting mixtures to achieve the required mass of tabletted preparations with a low content of medicinal substances (from 0.001 to 0.01 g) |
| Г | there is no right answer |
|  |  |
| 249 | Disintegrating agents: |
| А | agar-agar, tween-80 |
| Б | cellulose derivatives |
| В | beet and milk sugar |
| Г | sugar syrup, starch paste |
|  |  |
| 250 | The formation of a viscous gel structure in the manufacture of starch solutions is due to the content of … |
| А | amylopectin |
| Б | amylose |
| В | dextrin |
| Г | vinyline |
|  |  |
| 251 | The advantage of semi-synthetic excipients: |
| А | The possibility of synthesis of substances with desired properties |
| Б | relatively low cost |
| В | the need for additional safety studies |
| Г | high biological safety |
|  |  |
| 252 | Natural inorganic polymer excipients: |
| А | bentonites, talc |
| Б | modified starches |
| В | starch, gelatin |
| Г | polyacrylamide, foam |
|  |  |
| 253 | A synthetic excipient used as a stabilizer for emulsions and suspensions, a prolonging agent, a binder and a disintegrant for tablets and dragees: |
| А | polyvinylpyrrolidone |
| Б | methylcellulose |
| В | aerosil |
| Г | aubazidan |
|  |  |
| 254 | Excipients that are natural organic polymers: |
| А | alginates |
| Б | bentonites |
| В | modified starches |
| Г | silicones |
|  |  |
| 255 | Retard capsules: |
| А | have a prolonged action |
| Б | resistant to the action of gastric juice |
| В | easy to use |
| Г | necessary for the rapid release of medicinal substances |
|  |  |
| 256 | The purpose of using disintegrants in dosage forms: |
| А | is to have a rapid release of drugs or the introduction of gases into the capsule mass |
| Б | prevention of microbial contamination |
| В | giving elasticity to the dosage form |
| Г | maintaining the required moisture content of the capsules |
|  |  |
| 257 | Preservatives: |
| А | prevent the growth of microorganisms |
| Б | increase the rate of oxidative processes of solutions of medicinal substances |
| В | increase the solubility of medicinal substances |
| Г | increase the residence time of drugs in the body |
|  |  |
| 258 | Excipients used to increase the solubility of poorly soluble drugs |
| А | solubilizers |
| Б | emulsifiers |
| В | baking powder |
| Г | prolongers |
|  |  |
| 259 | Sliding excipient in tablet technology: |
| А | calcium stearate |
| Б | ethanol |
| В | Vaseline oil |
| Г | twin-80 |
|  |  |
| 260 | Plasticizers are added to capsule shells |
| А | to give elasticity to the dosage form |
| Б | for the rapid release of medicinal substances or the introduction of gases into the capsule mass |
| В | to prevent microbial contamination |
| Г | to maintain the required moisture content of the capsules |
|  |  |
| 261 | Some medicinal substances with a high degree of dispersion exhibit toxic effects: |
| А | solubility increases, therefore, the amount of medicinal substance that has entered the bloodstream, forming too high concentrations |
| Б | the particle size of the substance decreases, which causes rapid inactivation of the drug |
| В | a high degree of dispersion of the substance contributes to the accumulation of the drug in the body and the manifestation of toxic effects |
| Г | grinding medicinal substances leads to a change in physical properties |
|  |  |
| 262 | Emulsifiers: |
| А | increase the aggregate stability of suspensions and emulsions |
| Б | protect drugs from microbial effects |
| В | increase the residence time of drugs in the body |
| Г | reduce the rate of oxidative processes of solutions of medicinal substances |
|  |  |
| 263 | Suction activators: |
| А | dimethyl sulfoxide |
| Б | ethanol |
| В | nitroglycerine |
| Г | dimethyldodecylbenzylammonium chloride |
|  |  |
| 264 | Prolongators: |
| А | increase the residence time of the drug in the body |
| Б | slow down the growth of microorganisms |
| В | give drugs chemical stability |
| Г | have the ability to impart stability to emulsions and suspensions |
|  |  |
| 265 | Method of prolonging the presence of the drug in the body: |
| А | increasing the viscosity of the dispersion medium (enclosing a drug substance in a gel) |
| Б | development of stable dosage forms |
| В | creation of stable solutions |
| Г | introduction of hydrophilic groups into the molecule or chemical bonding with a soluble polymer |
|  |  |
| 266 | Case where pharmaceutical incompatibility is used for a positive purpose: |
| А | in case of drug intoxication |
| Б | never |
| В | always |
| Г | sometimes |
|  |  |
| 267 | Interdrug interaction during absorption, which develops by the mechanism of formation of non-absorbable compounds, can be completely avoided when prescribing drugs at intervals: |
| А | 4 hours or more |
| Б | 1 hour |
| В | 2 hours |
| Г | 30 minutes |
|  |  |
| 268 | Chemical equivalence of medicines: |
| А | refers to pharmaceutical forms containing the same chemical compound in the same amount and in accordance with current official standards. |
| Б | refers to pharmaceutical preparations that, when administered to the body of the same patient in the same regimen, have equivalent concentrations of the drug in blood plasma and tissues |
| В | refers to pharmaceutical preparations that, when administered to the body of the same patient in the same regimen, have the same therapeutic and side effects |
| Г | there is no correct answer |
|  |  |
| 269 | Bioequivalence of medicines: |
| А | refers to pharmaceutical preparations that, when administered to the organism and the same patient in the same and in the same regime, have equivalent concentrations of the drug in blood plasma and tissues |
| Б | refers to pharmaceutical preparations containing the same and the same compound in the same amount and comply with the current official standards |
| В | refers to pharmaceutical preparations that, when administered to the organism and the same patient in the same regimen, have the same self-healing and side effects |
| Г | there is no correct answer |
|  |  |
| 270 | An example of a pharmaceutical incompatibility used for a therapeutic purpose: |
| А | weak acid solution and alkaline solution |
| Б | activated carbon and tetracycline |
| В | calcium preparations and tetracycline |
| Г | activated carbon and acids |
|  |  |
| 271 | Non-absorbable complex compounds with calcium, magnesium, iron, zinc, bismuth preparations form ... |
| А | tetracyclines |
| Б | fluoroquinolones |
| В | cephalosporins |
| Г | macrolides |
|  |  |
| 272 | The Absorption of drugs , metabolized by normal intestinal microflora, when used together with antibiotics: |
| А | Increases |
| Б | Decreases |
| В | Does not change |
| Г | Changes slightly |
|  |  |
| 273 | Absorption of drugs when used together with drugs that increase gastrointestinal motility: |
| А | Descreases- is inhibited |
| Б | Increases |
| В | Does not change |
| Г | Changes slightly |
|  |  |
| 274 | The therapeutic equivalence of drugs: |
| А | pharmaceutical preparations that, when administered to the organism and the same patient in the same and the same regime, have the same self-healing and side effects. |
| Б | refers to pharmaceutical preparations that, when administered to the organism and the same patient in the same and in the same regime, have equivalent concentrations of the drug in blood plasma and tissues |
| В | refers to pharmaceutical preparations containing the same and the same compound in the same amount and comply with the current official standards |
| Г | there is no correct answer |
|  |  |
| 275 | The Absorption of - P-glycoprotein substrates drugs in their combined use with drugs which are inhibitors of P-glycoprotein |
| А | increases |
| Б | oppressed |
| В | does not change |
| Г | changes slightly |
|  |  |
| 276 | Absorption of - P-glycoprotein substrates drugs in their combined use with drugs which are inducers of P-glycoprotein |
| А | decreases |
| Б | intensifies |
| В | does not change |
| Г | changes slightly |
|  |  |
| 277 | The Metabolism of a drug which is a substrate of a specific biotransformation enzyme when used together with inhibitor drugs: |
| А | Decreases- is inhibited  |
| Б | intensifies |
| В | Does ot change |
| Г | Changes slightly |
|  |  |
| 278 | Route of drug administration providing 100% bioavailability: |
| А | intravenous |
| Б | rectal |
| В | oral |
| Г | sublingual |
|  |  |
| 279 | Chemical reactions that reduce absorption, reducing the bioavailability of medicinal substances: |
| А | Both variants are correct |
| Б | tetracycline and Ca ++ Ions |
| В | digoxin and cholestyramine |
| Г | no correct answer |
|  |  |
| 280 | The combined use of drugs that increase the glomerular filtration rate, and drugs that are released mainly by passive filtration, leads to: |
| А | a decrease in both the concentration of the latter in the blood and in the therapeutic efficacy |
| Б | an increase in the concentration of the latter in the blood and the development of unwanted drug reactions. |
| В | an increase in the concentration of the latter in the blood and a decrease in therapeutic efficacy |
| Г | a decrease in the concentration of the latter in the blood and the development of unwanted drug reactions |
|  |  |
| 281 | The combined use of drugs that reduce the glomerular filtration rate and drugs released mainly by passive filtration leads to: |
| А | an increase in the concentration of the latter drug in the blood and the development of unwanted drug reactions. |
| Б | a decrease in the concentration of the latter in the blood and a decrease in therapeutic efficacy |
| В | an increase in the concentration of the latter in the blood and a decrease in therapeutic efficacy |
| Г | a decrease in the concentration of the latter in the blood and the development of unwanted drug reactions. |
|  |  |
| 282 | With a decrease in urine pH, the reabsorption of weak base drugs is … |
| А | Inhibited - decreases |
| Б | intensifies |
| В | does not change |
| Г | changes slightly |
|  |  |
| 283 | With a decrease in urine pH, the reabsorption of weak acid drugs is … |
| А | Intensifies - increases |
| Б | oppressed |
| В | does not change |
| Г | changes slightly |
|  |  |
| 284 | The bioavailability of medicines is determined by: |
| А | laboratory animals and by humans |
| Б | only on animals |
| В | only on humans |
| Г | bioavailability is not determined |
|  |  |
| 285 | The Pharmacokinetic method for assessing the bioavailability of drugs: |
| А | measures the relationship between the concentration and the time or the rate of elimination of a drug with a biological fluid after the appointment of one or repeated doses |
| Б | based on determining the severity of the pharmacological effect by measuring the corresponding physiological or biochemical indicator |
| В | refers to pharmaceutical preparations containing the same compound in the same amount and comply with the current official standards. |
| Г | reflects the amount of the unchanged eliminated substance  |
|  |  |
| 286 | With the simultaneous use of octadine and ephedrine, \_\_\_\_ is observed |
| А | pharmacodynamic drug incompatibility |
| Б | pharmacokinetic drug incompatibility |
| В | pharmaceutical drug incompatibility |
| Г | drug incompatibility |
|  |  |
| 287 | What happens with the simultaneous use of cardiac glycosides and calcium chloride? |
| А | the formation of hypokalemia, which is accompanied by the development of ventricular arrhythmias |
| Б | the formation of chelate complexes, which is accompanied by a decrease in the adsorption of cardiac glycosides in the intestine and a decrease in their effectiveness |
| В | competitive antagonism at the stage of protein binding, which leads to a decrease in the effectiveness of cardiac glycosides |
| Г | lack of any effect |
|  |  |
| 288 | Pharmacodynamic method for assessing the bioavailability of drugs: |
| А | is based on determining the severity of the pharmacological effect by measuring the corresponding physiological or biochemical indicator |
| Б | refers to pharmaceutical preparations containing the same compound in the same amount and comply with the current official standards |
| В | reflects the amount of the eliminated substance unchanged |
| Г | measures the relationship between the concentration and the time or rate of elimination of a drug with a biological fluid after the appointment of one or repeated doses |
|  |  |
| 289 | Thr determination scheme of bioavailability includes : |
| А | five consecutive stages of research |
| Б | two consecutive stages of research |
| В | three consecutive stages of research |
| Г | one stage of research |
|  |  |
| 290 | With the simultaneous use of paracetamol and metoclopramide, the following is observed: |
| А | reduced adsorption of paracetamol |
| Б | formation of chelating complexes |
| В | decreased adsorption of metoclopramide |
| Г | competitive antagonism |
|  |  |
| 291 | Is the creation of multivitamin preparations justified from the standpoint of drug-drug interaction? |
| А | yes, using special technological approaches |
| Б | no, a number of vitamins are not combined with each other |
| В | yes, different vitamins do not interact with each other |
| Г | no, different vitamins do not interact with each other |
|  |  |
| 292 | Absolute pharmacological incompatibility of drugs: |
| А | is not a subject of correction |
| Б | undergoing correction |
| В | does not affect the therapeutic efficacy of drugs |
| Г | affects drug safety |
|  |  |
| 293 | The first stage of the study of the bioavailability of drugs: |
| А | introduction of the studied medicinal substance in the studied dosage form |
| Б | sequential sampling of body fluids |
| В | determination and calculation of drug concentration in biological fluid |
| Г | analysis of the indicators obtained and conclusions that allow judging the bioavailability of the medicinal substance |
|  |  |
| 294 | Absorption of medicinal substances is slower in |
| А | children |
| Б | men |
| В | people aged 20-30 years |
| Г | among women |
|  |  |
| 295 | Relative pharmacological incompatibility of drugs: |
| А | undergoing correction |
| Б | not subject to correction |
| В | does not affect the therapeutic efficacy of drugs |
| Г | affects drug safety |
|  |  |
| 296 | Absolute pharmacological incompatibility of drugs is observed in case of : |
| А | pharmacodynamic drug-drug interactions |
| Б | pharmacokinetic drug-drug interactions |
| В | pharmaceutical drug interactions |
| Г | drug-drug interactions |
|  |  |
| 297 | Factors affecting the bioavailability of medicinal substances: |
| А | all answers are correct |
| Б | Age, gender |
| В | physical activity |
| Г | genetic factors, stress |
|  |  |
| 298 | The second stage of drug bioavailability studies: |
| А | sequential sampling of body fluids |
| Б | determination and calculation of drug concentration in biofluid |
| В | analysis of the indicators obtained and conclusions that allow judging the bioavailability of the medicinal substance |
| Г | introduction of the studied medicinal substance in the studied dosage form |
|  |  |
| 299 | Relative pharmacological incompatibility of drugs is observed in case of : |
| А | pharmacokinetic drug-drug interactions |
| Б | pharmaceutical drug-drug interactions |
| В | pharmacodynamic drug-drug interactions |
| Г | drug-drug interactions |
|  |  |
| 300 | In humans, the bioavailability of drugs can be determined |
| А | both answers are correct |
| Б | for patients in need of this type of treatment |
| В | in healthy volunteers |
| Г | there is no right answer |
|  |  |
| 301 | Specify the order of the stages in the development of the optimal dosage form:1. study of the stability of the dosage form;2. development of optimal technology;3. choice of excipients that affect the therapeutic effect of the substance. |
| А | 3,2,1 |
| Б | 1,2,3 |
| В | 2,1,3 |
| Г | 2,3,1 |
|  |  |
| 302 | An increase in the pH of gastric contents while taking medications leads to: |
| А | an increased ionization of weak acids drugs and decreased ionization of weak bases drugs |
| Б | a decrease in the ionization of weak acids drugs and an increase in the ionization of weak bases drugs |
| В | increasing the ionization of strong acids drugs and reducing the ionization of strong bases drugs |
| Г | reducing the ionization of strong acids drugs and increasing the ionization of strong bases drugs |
|  |  |
| 303 | The third stage of determining the bioavailability of drugs: |
| А | The determination and calculation of drug concentration in biological fluid |
| Б | The analysis of the indicators obtained and conclusions that allow judging the bioavailability of the medicinal substance |
| В | The introduction of the studied medicinal substance in the studied dosage form |
| Г | A sequential sampling of body fluids |
|  |  |
| 304 | The use of an anticoagulant in micronized form in the production of tablets entailed a significant increase in the concentration of the drug in the body, results in: |
| А | An overdose and poisoning of some patients |
| Б | A decrease in pharmacological action |
| В | An increase the safety of the facility |
| Г | improved absorption |
|  |  |
| 305 | What method(s) is/are used to determine the bioavailability of drugs? |
| А | in vivo and in vitro methods |
| Б | in vivo method only |
| В | in vitro method only |
| Г | bioavailability is not determined |
|  |  |
| 306 | At the fourth stage of determining the bioavailability of drugs: |
| А | the obtained experimental results are subjected to statistical processing |
| Б | analysis of the obtained indicators and justification of the conclusions of the experiment |
| В | introduction of the studied medicinal substance in the studied dosage form |
| Г | sequential sampling of body fluids |
|  |  |
| 307 | Slowly adsorbed drugs are more intensively adsorbed during the use of : |
| А | anticholinergics |
| Б | prokinetic drugs |
| В | cholinomimetics |
| Г | iron preparations |
|  |  |
| 308 | Rapidly adsorbed drugs are more intensively adsorbed during the use of … |
| А | prokinetic drugs |
| Б | anticholinergics |
| В | cholinomimetics |
| Г | iron preparations |
|  |  |
| 309 | The therapeutic equivalence of medicinal substances depends on the … |
| А | manufacturer |
| Б | dosage of medicinal substance |
| В | route of administration |
| Г | pharmaceutical factors |
|  |  |
| 310 | The bioavailability of medicines depends on the : |
| А | physicochemical properties of medicinal substances |
| Б | physical and chemical properties of excipients |
| В | material production processes |
| Г | dosage form |
|  |  |
| 311 | A Method which is not related to determining the pharmaceutical availability of medicines: |
| А | drug-drug interaction method |
| Б | natural circulation methods |
| В | artificial circulation methods |
| Г | zero concentration test methods |
|  |  |
| 312 | Types of medicines bioavailability: |
| А | absolute and relative |
| Б | average |
| В | constant |
| Г | dynamic |
|  |  |
| 313 | The influence of biological rhythms on the effectiveness of drugs is due to |
| А | the biorhythms of metabolism |
| Б | age |
| В | gender |
| Г | there is no correct answer |
|  |  |
| 314 | The absorption of the drug is slower |
| А | in persons over 60 years old |
| Б | in men |
| В | in people aged 20-30 years |
| Г | among women |
|  |  |
| 315 | When studying dosage forms , methods with natural convection of the solvent are used: |
| А | dosage forms are placed in a stationary solvent, mixing is carried out due to the difference in density of the solution and the pure solvent |
| Б | provide for the constant addition of new portions of the solvent to the investigational dosage form |
| В | provide for the permanent removal of the substance that has passed into the solution |
| Г | the determination of dissolution should be carried out at t 37±1°С |
|  |  |
| 316 | When studying dosage forms , methods with artificial convection of the dissolving medium are used. |
| А | provide for the constant addition of new portions of the solvent to the investigational dosage forms |
| Б | provide for the permanent removal of the substance that has passed into the solution |
| В | the determination of dissolution should be carried out at t 37±1°С |
| Г | dosage form is placed in a stationary solvent, mixing is carried out due to the difference in density of the solution and the pure solvent |
|  |  |
| 317 | The Vruble method used to determine the rate of dissolution of a drug: |
| А | the solid dosage form is placed in stationary tubes in a solvent; the tubes are attached to a disk rotating at a speed of 6-12 rpm (revolutions per minute) ; the device maintains a temperature of 37 ° С |
| Б | determination of the dissolution rate of solid dosage forms in a 0.1 M solution of hydrochloric acid in parallel with the determination of the disintegration time |
| В | the tested solid dosage form is placed in a 150 ml Erlenmeyer flask, to which 50 ml of 0.61 N hydrochloric acid solution is added at 37 ± 1° C; flask vibration frequency 65 count / min |
| Г | The dosage form is attached to an aluminum strip connected to the balance lever and maintained throughout the dissolution process |
|  |  |
| 318 | Criteria for excluding healthy volunteers from a clinical trial: |
| А | surgical interventions on the gastrointestinal tract, aggravated allergic history, chronic progressive diseases, acute infectious diseases, donation, drug intolerance, smoking, alcoholism |
| Б | surgical interventions on the gastrointestinal tract, chronic progressive diseases, acute infectious diseases, donation, smoking, alcoholism |
| В | surgical interventions on the gastrointestinal tract, aggravated allergic history, chronic progressive diseases, acute infectious diseases, donation, drug intolerance, smoking, alcoholism |
| Г | chronic progressive diseases, acute infectious diseases, donation, drug intolerance, smoking, alcoholism |
|  |  |
| 319 | Relative bioavailability of drugs: |
| А | determines the degree of entry into the bloodstream of a drug from the study drug in relation to the drug |
| Б | determines the part of the administered drug, expressed as a percentage, that reached the systemic circulation relative to the administered dose |
| В | the amount of drug excreted unchanged |
| Г | determines the proportion of the drug entering the bloodstream when administered extravascular in relation to intravenous administration |
|  |  |
| 320 | Requirements for water for determining the dissolution of drugs: |
| А | lack of enzymes |
| Б | the determination of dissolution should be carried out at t 39°С |
| В | the addition of surfactants is prohibited |
| Г | if the drug is insoluble in water (<0.2%), part of the aqueous solution can only be replaced with essential oil |
|  |  |
| 321 | Area under the concentration-time curve in biopharmaceutical drug research: |
| А | characterizes the total concentration of the drug in the blood plasma during the entire observation time |
| Б | characterizes the amount of the drug excreted from the body unchanged |
| В | characterizes the intensity of drug intake into the blood |
| Г | characterizes the rate of absorption of the substance and, accordingly, the rate of onset of the therapeutic effect |
|  |  |
| 322 | The thickness of the model membrane for studying the passage of medicinal substances should be \_\_\_\_\_\_\_ in order to avoid the adsorption of medicinal substances on it: |
| А | minimal |
| Б | average |
| В | maximum |
| Г | regulated |
|  |  |
| 323 | Factor determining the formation of equilibrium in a system of two immiscible liquids: |
| А | solubility of substances in the non-aqueous phase |
| Б | solution density |
| В | manufacturing technology |
| Г | presence of preservatives |
|  |  |
| 324 | The inhibitory effect on the dissolution rate of a substance already dissolved in the medium can be reduced by … |
| А | a significant increase in the solvent's volume |
| Б | the use of high dosages of the drug |
| В | significant reduction in solvent volume |
| Г | there is no right answer |
|  |  |
| 325 | Solvometry method used in biopharmaceutical research: |
| А | dosage form is placed in the receiver in the form of a "boat", which is immersed in the solvent; as the form dissolves, indicators appear on the calibration scale |
| Б | The dosage form is attached to an aluminum strip connected to the balance lever and maintained throughout the dissolution process |
| В | the dosage form is placed in stationary tubes in a solvent; the tubes are attached to a disk rotating at a speed of 6-12 rpm; the device maintains a temperature of 37°С |
| Г | determination is carried out in an instrument, which is a 400 ml vessel containing 250 ml of solvent |
|  |  |
| 326 | Method other than methods for determining availability at "zero" concentration: |
| А | hanging pill method |
| Б | Vruble method |
| В | propeller agitator method |
| Г | swing basket method |
|  |  |
| 327 | Dissolution rate of weak acids drugs in the stomach: |
| А | relatively low |
| Б | relatively high |
| В | no dissolution occurs |
| Г | dissolve slightly |
|  |  |
| 328 | The fifth stage of drug bioavailability studies is the : |
| А | analysis of the obtained indicators and justification of the conclusions of the experiment |
| Б | introduction of the studied medicinal substance in the studied dosage form |
| В | sequential sampling of body fluids |
| Г | the obtained experimental results are subjected to statistical processing |
|  |  |
| 329 | Methods with natural convection of a dissolving medium in biopharmaceutical drug research: |
| А | static methods |
| Б | dynamic methods |
| В | distribution method |
| Г | bioexperimental method |
|  |  |
| 330 | Artificial solvent convection methods for biopharmaceutical drug research |
| А | dynamic methods |
| Б | static methods |
| В | distribution method |
| Г | bioexperimental method |
|  |  |
| 331 | Shaking method for biopharmaceutical drug research: |
| А | the dosage form is placed in a 150 ml Erlenmeyer flask with 50 ml of 0.61 N hydrochloric acid solution at 37°C |
| Б | the dosage form is placed in a boat-shaped receptacle that is immersed in a solvent; as the form dissolves, indicators appear on the calibration scale |
| В | The dosage form is attached to an aluminum strip connected to the balance lever and maintained throughout the dissolution process |
| Г | determination is carried out in a device, which is a 400 ml vessel containing 250 ml of solvent |
|  |  |
| 332 | Interaction of drugs: |
| А | quantitative or qualitative change in the pharmacological effects caused by drugs with the simultaneous or sequential use of two or more drugs |
| Б | quantitative or qualitative change in the pharmacological effects caused by drugs with the simultaneous use of three or more drugs |
| В | quantitative change in the pharmacological effects caused by drugs with the sequential use of two or more drugs |
| Г | a change in the pharmacological effects caused by drugs while prescribing five or more drugs without taking into account their compatibility |
|  |  |
| 333 | Polypragmasia: |
| А | change in the pharmacological effects caused by drugs with the simultaneous unjustified prescription of five or more drugs without taking into account their compatibility |
| Б | changes in the pharmacological effects caused by drugs with the simultaneous use of three or more drugs |
| В | quantitative change in the pharmacological effects caused by drugs with the sequential use of two or more drugs |
| Г | quantitative or qualitative change in the pharmacological effects caused by drugs with the simultaneous or sequential use of two or more drugs |
|  |  |
| 334 | The study of the passage of medicinal substances through lipid barriers is based on the definition of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between water and a fatty medium: |
| А | distribution coefficient |
| Б | separation coefficient |
| В | speed ratio |
| Г | penetration rate coefficient |
|  |  |
| 335 | Fixed disc method for biopharmaceutical drug research: |
| А | the dosage form is placed in the socket of the acrylic holder, introduced into a vessel with a volume of 25 ml with 0.1 M hydrochloric acid solution; the dissolution rate is determined in an inverted vessel at 37 ° C by taking a solvent for analysis at set time intervals |
| Б | the dosage form is placed in a boat-shaped receptacle that is immersed in a solvent; as the form dissolves, indicators appear on the calibration scale |
| В | the dosage form is placed in stationary tubes in a solvent; the tubes are attached to a disk rotating at a speed of 6-12 rpm; the device maintains a temperature of 37 ° С |
| Г | the determination of the rate of dissolution of dosage forms is carried out in a medium of 0.1 M hydrochloric acid solution in parallel with the determination of the disintegration time |
|  |  |
| 336 | The most commonly used dissolution medium for the analysis of dosage forms: |
| А | 0.1 N hydrochloric acid |
| Б | buffer solutions |
| В | ethanol |
| Г | isopropyl alcohol |
|  |  |
| 337 | A medicinal product whose action changes during drug-drug interactions |
| А | an object |
| Б | biotarget |
| В | factor |
| Г | process |
|  |  |
| 338 | A medicinal product that determines drug-drug interactions: |
| А | factor |
| Б | biotarget |
| В | an object |
| Г | process |
|  |  |
| 339 | For which dosage forms are static pressing methods used? |
| А | tablets, capsules |
| Б | ointments, suppositories |
| В | capsules, liniments |
| Г | tablets, solutions |
|  |  |
| 340 | Models not used to study pharmaceutical availability of medicines: |
| А | complex |
| Б | single-chamber |
| В | bicameral |
| Г | three-chambered |
|  |  |
| 341 | Rotating disc method for biopharmaceutical cell research: |
| А | the tablet is fixed in a special holder made of acrylic plastic so that only one plane is exposed to the solvent. The dissolution rate is determined in a 0.1 M hydrochloric acid solution, 200 ml of which is poured into a 500 ml round-bottomed flask. The tablet with the holder is immersed in the solvent to a depth of 25 cm.Stirring is provided by a stirrer rotating at a speed of up to 400 rpm |
| Б | the tablet is placed in a 150 ml Erlenmeyer flask with 50 ml of 0.61 N hydrochloric acid solution at 37°C. Flask oscillation frequency 65 cpm |
| В | the tablet is placed in stationary tubes in a solvent. The tubes are attached to a disk rotating at a speed of 6-12 rpm. The device maintains a temperature of 37 ° С |
| Г | determination of the rate of dissolution of tablets is carried out in a medium of 0.1 M hydrochloric acid solution in parallel with the determination of the disintegration time |
|  |  |
| 342 | Dissolution efficiency of a medicinal substance: |
| А | the time it takes for 100% of the drug substance to enter the solution |
| Б | the volume of the dissolution medium, in which 100% of the drug will pass into the solution |
| В | the time it takes 50% of the drug substance to enter the solution |
| Г | the volume of the dissolution medium in which 50% of the medicinal substance passes into the solution |
|  |  |
| 343 | Synergism of medicines: |
| А | unidirectional action of two or more drugs, providing a higher pharmacological effect than the action of each drug separately |
| Б | unidirectional action of two or more drugs, providing an identical pharmacological effect |
| В | unidirectional action of five or more drugs, accompanied by a change in the pharmacological effect |
| Г | a change in the pharmacological effects caused by drugs with the simultaneous unjustified prescription of many drugs without taking into account their compatibility |
|  |  |
| 344 | Antagonism of drugs: |
| А | interaction of two or more drugs, accompanied by a weakening or change in the pharmacological effect |
| Б | unidirectional action of two or more drugs, providing an identical pharmacological effect, accompanied by an increase in safety |
| В | unidirectional action of two or more drugs, providing a higher pharmacological effect than the action of each drug separately |
| Г | unidirectional action of five or more drugs, accompanied by a weakening of the pharmacological effect |
|  |  |
| 345 | “Suspended” tablet method for biopharmaceutical research: |
| А | the tablet is attached to an aluminum strip connected to the balance lever and maintained during the entire dissolution process; by the force spent on maintaining the equilibrium of the system, it is concluded that the disintegration or the rate of dissolution of the tablet is |
| Б | the tablet is placed in a boat-shaped receptacle that is immersed in a solvent; as the form dissolves, indicators appear on the calibration scale |
| В | the tablet is placed in stationary tubes in a solvent; the tubes are attached to a disk rotating at a speed of 6-12 rpm; the device maintains a temperature of 37°С |
| Г | the determination of the rate of dissolution of the tablets is carried out in a medium of 0.1 M hydrochloric acid solution in parallel with the determination of the disintegration time |
|  |  |
| 346 | Pharmaceutical availability of medicines is determined |
| А | in vitro |
| Б | in vivo |
| В | both answers are correct |
| Г | not defined |
|  |  |
| 347 | The propeller agitator (stirrer) method for biopharmaceutical research: |
| А | the dosage form is placed at the bottom of the container of the apparatus, which is a 400 ml vessel containing 250 ml of solvent; mixing is carried out with a three-blade mixer |
| Б | The dosage form is attached to an aluminum strip connected to the balance lever and maintained so throughout the dissolution process; by the force spent on maintaining the equilibrium of the system, it is concluded that the disintegration or the rate of dissolution of the tablet is |
| В | the dosage form is placed in a boat-shaped receptacle that is immersed in a solvent; as the form dissolves, indicators appear on the calibration scale |
| Г | the dosage form is placed in stationary tubes in a solvent, the tubes are attached to a disk rotating at a speed of 6-12 rpm, the device is maintained at 37 ° C |
|  |  |
| 348 | The principle of drug interaction, when two substances have opposite effects by acting on different receptors: |
| А | indirect antagonism |
| Б | Synergie additive |
| В | sensitization |
| Г | potentiation |
|  |  |
| 349 | The principle of drug interaction, when two substances have opposite effects by acting on certain receptors: |
| А | direct antagonism |
| Б | indirect antagonism |
| В | sensitization |
| Г | Synergie additive |
|  |  |
| 350 | Disintegration of the dosage form: |
| А | determines the ability, upon contact with a solvent, to turn into particles of medicinal and auxiliary substances |
| Б | determines the rate of transition of active substances from the dosage form to the solvent |
| В | determines the process of drug release outside the biological system |
| Г | determines the amount of the total released medicinal substance in% of its content in the dosage form |
|  |  |
| 351 | Rocking Basket (swinging bascket) Method for Biopharmaceutical Research |
| А | the determination of the rate of dissolution of dosage forms is carried out in a medium of 0.1 M hydrochloric acid solution in parallel with the determination of the disintegration time |
| Б | the dosage form is placed at the bottom of the container of the apparatus, which is a 400 ml vessel containing 250 ml of solvent; mixing is carried out with a three-blade mixer |
| В | the dosage form is placed in stationary tubes in a solvent; the tubes are attached to a disk rotating at a speed of 6-12 rpm, the device is maintained at a temperature of 37 ° C |
| Г | the dosage form is placed in a boat-shaped receptacle that is immersed in a solvent; as the form dissolves, indicators appear on the calibration scale |
|  |  |
| 352 | Disk rotation speed in the Vruble method: |
| А | 6-12rpm |
| Б | 59 rpm |
| В | 25 rpm |
| Г | 109 rpm |
|  |  |
| 353 | The principle of drug interaction, when two substances eliminate the effects of each other when the concentration of any of them increases: |
| А | bilateral antagonism |
| Б | direct antagonism |
| В | indirect antagonism |
| Г | one-sided antagonism |
|  |  |
| 354 | The principle of drug interaction, when one of the drugs has a stronger effect and is able to remove and prevent the effect of the second: |
| А | one-sided antagonism |
| Б | direct antagonism |
| В | indirect antagonism |
| Г | bilateral antagonism |
|  |  |
| 355 | What constant temperature of the solution should be maintained in the fixed disk method? |
| А | 37 ° C |
| Б | 39 ° C |
| В | 36 ° C |
| Г | 38 ° C |
|  |  |
| 356 | How can the pharmaceutical availability of tablets containing a sparingly water-soluble drug be increased? |
| А | a decrease in the degree of dispersion of the substance |
| Б | the introduction of the optimal amount of leavening agents |
| В | granulating |
| Г | reshaping of crystals |
|  |  |
| 357 | The dissolution rate of a medicinal substance characterizes |
| А | bioavailability of a medicinal substance |
| Б | drug elimination rate |
| В | the intensity of the biotransformation of the medicinal substance |
| Г | drug adsorption rate |
|  |  |
| 358 | Bioavailability is … |
| А | percentage of a substance reaching the systemic circulation |
| Б | percentage of a substance that has reached the adsorption zone |
| В | percentage of a substance bound to protein |
| Г | there is no right answer |
|  |  |
| 359 | The sensitization of drugs can be indicated by the following mathematical formula: |
| А | 0+1 = 1,5 |
| Б | 1 + 1 = 1,75 |
| В | 1 + 1 = 2 |
| Г | 1 + 1 = 3 |
|  |  |
| 360 | Synergie additive can be represented by the following mathematical formula: |
| А | 1 + 1 = 1,75 |
| Б | 0 + 1 = 1,5 |
| В | 1 + 1 = 2 |
| Г | 1 + 1 = 3 |
|  |  |
| 361 | Factors determining the bioavailability of a medicinal product: |
| А | intensity of adsorption and presystemic blood flow |
| Б | the intensity of excretion by the kidneys and biotransformation in the liver |
| В | distribution volume |
| Г | all answers are correct |
|  |  |
| 362 | The bioavailability of a medicinal product is important to determine: |
| А | route of drug administration |
| Б | the frequency of taking the drug |
| В | drug elimination rate |
| Г | all answers are correct |
|  |  |
| 363 | Synergism of medicines: |
| А | unidirectional action of medicinal substances, leading to an increase in the pharmacological effect |
| Б | multidirectional action of medicinal substances, leading to a weakening of the pharmacological effect |
| В | drug-drug interactions leading to increased excretion of drugs |
| Г | drug-drug interaction leading to a change in the biotransformation of drugs |
|  |  |
| 364 | Pharmaceutical availability parameters of medicines:a) the time required to dissolve a certain amount of a medicinal substance;b) the amount of the total excreted drug substance in% of its content in the dosage form;c) the amount of a medicinal substance dissolved at a certain time |
| А | a, b, c |
| Б | b, c |
| В | a, c |
| Г | a, b |
|  |  |
| 365 | Medicinal product therapeutic index: |
| А | the difference between the minimum therapeutic and minimum toxic doses |
| Б | the difference between the maximum therapeutic and maximum toxic doses |
| В | the difference between the minimum therapeutic and maximum toxic doses |
| Г | the difference between the maximum therapeutic and minimum toxic doses |
|  |  |
| 366 | The summation of drugs can be indicated by the following mathematical formula: |
| А | 1 + 1 = 2 |
| Б | 0 + 1 = 1.5 |
| В | 1 + 1 = 1.75 |
| Г | 1 + 1 = 3 |
|  |  |
| 367 | Potentiation of drugs can be indicated by the following mathematical formula: |
| А | 1 + 1 = 1.75 |
| Б | 1 + 1 = 3 |
| В | 1 + 1 = 2 |
| Г | 0 + 1 = 1.5 |
|  |  |
| 368 | Route of drug administration with maximum bioavailability: |
| А | intravenous |
| Б | intramuscular |
| В | oral |
| Г | sublingual |
|  |  |
| 369 | Disintegration test methods for tablets: |
| А | static, dynamic |
| Б | thermostatic, dynamic |
| В | static, dynamic, mechanical |
| Г | mechanical, dynamic |
|  |  |
| 370 | The number of doses of the drug in determining the bioavailability in vivo: |
| А | 5-10 doses |
| Б | 3-5 doses |
| В | 1 dose |
| Г | the number of doses does not matter |
|  |  |
| 371 | Sampling start and frequency: |
| А | depends on the type of dosage form and route of administration |
| Б | depends on the type of dosage form and the amount of the administered drug |
| В | sampling is done 3 hours after taking the drug |
| Г | depends on the amount of the administered drug |
|  |  |
| 372 | drug-drug interactions in dosage form |
| А | competitive drug-drug interaction at the stage of drug adsorption |
| Б | potentiating drug-drug interaction in one syringe |
| В | competitive drug-drug interactions in the target area |
| Г | drug-drug interactions in dosage form |
|  |  |
| 373 | Improper storage of medicinal substances can lead to: |
| А | pharmaceutical drug interactions |
| Б | pharmacodynamic drug interactions |
| В | pharmacokinetic drug interactions |
| Г | drug-drug interactions |
|  |  |
| 374 | Relative bioavailability: |
| А | all answers are correct |
| Б | determined for drugs produced by various manufacturers |
| В | determined for various dosage forms |
| Г | is determined when changing the production technology of a medicinal product |
|  |  |
| 375 | Development of the optimal dosage form: |
| А | all answers are correct |
| Б | development of optimal technology |
| В | stability studies of the dosage form |
| Г | choice of excipients |
|  |  |
| 376 | Preclinical stage of the study of a new drug: |
| А | all answers are correct |
| Б | determination of carcinogenicity, teratogenicity, general toxicity |
| В | study of pharmacokinetics, pharmacodynamics, reproductive toxicity |
| Г | study of allergenicity, immunotoxicity, mutagenicity |
|  |  |
| 377 | Research on original drugs includes: |
| А | general and specific toxicity, pharmacokinetics and pharmacodynamics |
| Б | general and specific toxicity, pharmacodynamics |
| В | pharmacokinetics and general toxicity |
| Г | pharmacokinetics and pharmacodynamics |
|  |  |
| 378 | Violation of the adsorption of a medicinal substance when used simultaneously with enterosorbents refers to: |
| А | pharmacokinetic drug interactions |
| Б | pharmacodynamic drug interactions |
| В | pharmaceutical drug interactions |
| Г | drug-drug interactions by the type of synergy |
|  |  |
| 379 | In the manufacture of the dosage form, compounds that were exposed to atmospheric oxygen for a long time were used as solvents: |
| А | pharmaceutical drug interactions |
| Б | pharmacodynamic interaction of drugs |
| В | pharmacokinetic drug interaction |
| Г | drug-drug interactions by the type of antagonism |
|  |  |
| 380 | Generic drug research includes: |
| А | study of pharmacokinetics and general toxicity |
| Б | study of general and specific toxicity, pharmacodynamics |
| В | study of pharmacokinetics and pharmacodynamics |
| Г | study of general and specific toxicity, pharmacokinetics and pharmacodynamics |
|  |  |
| 381 | The equation characterizing the rate of dissolution of drug particles: |
| А | Noyes-Whitney |
| Б | Clapeyron-Mendeleev |
| В | Nernst |
| Г | Bernoulli |
|  |  |
| 382 | Complexation of medicinal substances: |
| А | reduces adsorption and, accordingly, bioavailability |
| Б | only reduces bioavailability |
| В | does not affect bioavailability |
| Г | increases bioavailability |
|  |  |
| 383 | Measurement of the relationship between the concentration and the time or rate of elimination of the drug after the appointment of a single dose: |
| А | pharmacokinetic method |
| Б | in vitro method |
| В | pharmacodynamic method |
| Г | pharmaceutical method |
|  |  |
| 384 | Application in the manufacture of a dosage form as solvents of compounds with altered pH values: |
| А | pharmaceutical drug interactions |
| Б | pharmacodynamic interaction of drugs |
| В | pharmacokinetic drug interaction |
| Г | drug-drug interaction by the type of additation |
|  |  |
| 385 | Stages of determining the bioavailability of drugs: |
| А | introduction of the studied medicinal product, sampling of biological samples, determination of the concentration of the drug in biofluid, statistical processing of results and their analysis |
| Б | sampling of biological samples, determination of the concentration of the drug in biofluid, statistical processing of the results and their analysis |
| В | introduction of the reference drug in a certain dose, determination of the drug concentration in the biofluid, statistical processing of the results and their analysis |
| Г | introduction of the studied medicinal product, determination of the concentration of the drug in biofluid, statistical processing of the results |
|  |  |
| 386 | Physicochemical factor that does not affect the diffusion rate of drug particles: |
| А | buffer tank |
| Б | particle size |
| В | hydrophilicity |
| Г | molecular size of the active substance |
|  |  |
| 387 | The minimum number of volunteers involved in the steps of assessing the bioavailability of medicinal products: |
| А | 18 |
| Б | 5 |
| В | 10 |
| Г | 50 |
|  |  |
| 388 | The results of physical drug interactions:1.insufficient solubility of drugs,2.immiscibility,3.sludge formation,4.volatility,5. the formation of gases;6.mutual adsorption or coagulation of ingredients,7. mutual melting or "dampening" of the mixture,8. The change in color and / or odor of drugs. |
| А | 1, 2, 4, 6, 7 |
| Б | 1, 5, 8 |
| В | 3, 5, 8 |
| Г | all answers are correct |
|  |  |
| 389 | Controlled clinical trial: |
| А | research of a medicinal product, the efficacy and safety of which has not been fully studied, including in comparison with a drug, the efficacy and safety of which is well known |
| Б | the subjects receive the sequentially studied drug and the reference drug |
| В | assignment of patients to treatment groups at random and have the same opportunity to receive study or control drug |
| Г | each patient receives both compared drugs, in a random sequence |
|  |  |
| 390 | Criteria for exclusion from clinical trials of medicinal products: |
| А | pregnancy, alcoholism, drug addiction, acute infections |
| Б | pregnancy, lactation, age 50, diabetes mellitus |
| В | healthy volunteers, people with cardiovascular diseases, diseases of the central nervous system |
| Г | mental illness, minors, age 45 |
|  |  |
| 391 | Double blind clinical trial of drugs: |
| А | neither the research staff nor the patient know if they are receiving the study drug or a placebo |
| Б | the patient does not know what treatment was prescribed |
| В | all participants in the trial know which drug the patient is receiving |
| Г | neither the research staff, nor the supervisor, nor the patient know what drug he is being treated with |
|  |  |
| 392 | Basic principles of the Ethics Committee, except for: |
| А | rationality |
| Б | pluralism |
| В | objectivity |
| Г | competence |
|  |  |
| 393 | The results of the chemical interaction of drugs:1.insufficient solubility of drugs,2.immiscibility,3.sludge formation,4.volatility,5. the formation of gases;6.mutual adsorption or coagulation of ingredients,7. mutual melting or "dampening" of the mixture,8. The change in color and / or odor of drugs. |
| А | 3, 5, 8 |
| Б | all answers are correct |
| В | 1, 5, 8 |
| Г | 1, 2, 4, 6, 7 |
|  |  |
| 394 | The combination of aqueous and alcoholic solutions leads to: |
| А | pharmaceutical drug interactions |
| Б | pharmacodynamic drug interactions |
| В | pharmacokinetic drug interactions |
| Г | drug-drug interactions by the type of synergy |
|  |  |
| 395 | The storage of all documentation of a clinical trial of medicinal products is carried out in a medical organization: |
| А | within 2 years |
| Б | indefinitely |
| В | 20 years |
| Г | for 5 years |
|  |  |
| 396 | Types of bioavailability of medicines, except for: |
| А | combined |
| Б | relative |
| В | general |
| Г | absolute |
|  |  |
| 397 | Factors affecting the bioavailability of medicines: |
| А | all variants are correct |
| Б | technological factors (physicochemical properties of the active and auxiliary substances, the type of the finished dosage form, the technology of its manufacture) |
| В | factors associated with the individual parameters of the patient's body (age, gender, concomitant diseases, biorhythms, etc.) |
| Г | external factors not related to patients and the drug (food intake, simultaneously taken medications, meteorological conditions, etc.) |
|  |  |
| 398 | Requirements prohibiting volunteers from participating in clinical trials of medicinal products: |
| А | all variants are correct |
| Б | military personnel |
| В | infectious diseases less than 4 weeks before the start of the trial |
| Г | drug intolerance |
|  |  |
| 399 | The combination of aqueous and alcoholic solutions leads to: |
| А | physical drug interactions |
| Б | pharmacodynamic drug interactions |
| В | chemical interaction of drugs |
| Г | pharmacokinetic drug interactions |
|  |  |
| 400 | The principle of drug interaction between β-blockers and nifedipine for the effect on heart rate: |
| А | antagonism |
| Б | synergy |
| В | addition |
| Г | sensitization |
|  |  |
| 401 | Bioavailability is less dependent on: |
| А | excipients |
| Б | dissolution of the dosage form |
| В | release of a drug from a dosage form |
| Г | disintegration of the dosage form |
|  |  |
| 402 | Methods for testing the disintegration of tablets, except: |
| А | statistical |
| Б | static sieve |
| В | static |
| Г | dynamic |
|  |  |
| 403 | The principle of drug interaction between insulin, glucose and potassium preparations: |
| А | sensitization |
| Б | antagonism |
| В | Synergie additive |
| Г | synergism |
|  |  |
| 404 | The principle of drug interaction between β-blockers and nitroglycerin: |
| А | Addition |
| Б | antagonism |
| В | synergism |
| Г | sensitization |
|  |  |
| 405 | The ability of a medicinal substance to have a toxic effect on the reproductive organs with a subsequent decrease in sexual function and the ability to reproduce |
| А | reproductive toxicity |
| Б | mutagenicity |
| В | immunotoxicity |
| Г | teratogenicity |
|  |  |
| 406 | If high reproductive toxicity is detected when studying a new drug: |
| А | termination of further preclinical trials, direction for improvement |
| Б | further preclinical testing |
| В | reducing the dose of the studied medicinal substance |
| Г | there is no right answer |
|  |  |
| 407 | An "immediate" type of allergic reaction develops ... |
| А | quickly, within a few minutes |
| Б | quickly, within a few hours |
| В | slowly, within 2 days |
| Г | quickly, within seconds |
|  |  |
| 408 | Teratogenic effects depend on: |
| А | from the stage of embryonic development |
| Б | on environmental conditions |
| В | from a person's age |
| Г | all options are correct |
|  |  |
| 409 | The preclinical phase of drug testing includes everything except: |
| А | marketing research |
| Б | studying pharmacokinetics |
| В | studying pharmacodynamics |
| Г | mutagenicity studies |
|  |  |
| 410 | The principle of drug interaction between two diuretics: |
| А | summation |
| Б | antagonism |
| В | synergism |
| Г | sensitization |
|  |  |
| 411 | The principle of drug interaction between β-blockers and nifedipine in terms of the effect on blood pressure: |
| А | potentiation |
| Б | antagonism |
| В | Synergie additive |
| Г | sensitization |
|  |  |
| 412 | The principle of drug interaction between M-cholinomimetics and M-anticholinergics: |
| А | direct antagonism |
| Б | indirect antagonism |
| В | Synergie additive |
| Г | sensitization |
|  |  |
| 413 | The principle of drug interaction between cholinomimetics and adrenergic agonists: |
| А | indirect antagonism |
| Б | direct antagonism |
| В | Synergie additive |
| Г | sensitization |
|  |  |
| 414 | Information on the availability of indications and contraindications for the use of medicines, their side effects, becomes possible to obtain: |
| А | at the stage of preclinical studies |
| Б | at the stage of clinical trials |
| В | in the study of pharmacokinetics |
| Г | in the study of pharmacodynamics |
|  |  |
| 415 | Preclinical studies of the general toxic effect of drugs include everything except: |
| А | reproductive toxicity study |
| Б | acute toxicity study |
| В | subchronic (subacute) toxicity study |
| Г | chronic toxicity study |
|  |  |
| 416 | The objectives of conducting clinical trials of medicinal products are all, except for: |
| А | development of a technology for manufacturing a dosage form |
| Б | establishing therapeutic efficacy in comparison with other drugs |
| В | study of the safety and tolerability of the drug |
| Г | study of the pharmacological action of the drug on humans |
|  |  |
| 417 | The phase of clinical trials of drugs includes confirmation of the effectiveness and safety of: |
| А | phase 3 |
| Б | phase 2 |
| В | phase 1 |
| Г | phase 4 |
|  |  |
| 418 | Factors affecting the pharmacokinetics of medicinal substances in soft dosage forms: |
| А | pharmaceutical and biological |
| Б | pharmaceutical |
| В | biological |
| Г | physiological |
|  |  |
| 419 | The rate of absorption of medicinal substances from ointments is determined by: |
| А | all of the above |
| Б | distribution coefficient between the stratum corneum and the base of the product, the concentration of the dissolved drug in the base |
| В | concentration of the dissolved drug substance in the base, the proportion of free and undissociated drug substance |
| Г | fraction of free and undissociated drug substance, size of damaged surface, concentration of dissolved drug substance in the base |
|  |  |
| 420 | Phase 4 clinical trials of medicinal products: |
| А | additionally assess the effectiveness to optimize the use of drugs, identify rare adverse drug reactions |
| Б | assess toxicity and safety, determine the parameters of pharmacokinetics |
| В | establish the effectiveness, determine the optimal dosage regimens |
| Г | confirm the effectiveness and safety |
|  |  |
| 421 | Pregnancy and lactation period: |
| А | exclusion criteria from clinical trials of medicinal products |
| Б | criteria for inclusion in clinical trials of medicinal products |
| В | relative limitation, permissible only in the 1st trimester of pregnancy |
| Г | relative limitation, permissible only in the 2nd trimester of pregnancy |
|  |  |
| 422 | The purpose of using cyclodextrins in complexation:a) an increase in the solubility of poorly soluble agentsb) the formation of poorly soluble fundsc) increased bioavailabilityd) decrease in bioavailabilitye) to optimize the production of a number of products |
| А | a, c, e |
| Б | a, b, c |
| В | b, c, e |
| Г | c, d, e |
|  |  |
| 423 | Molecules which penetrate biomembranes: |
| А | undissociated |
| Б | dissociated |
| В | the degree of diffusion does not depend on the degree of molecule dissociation |
| Г | there is no right answer |
|  |  |
| 424 | The diffusion coefficient of a medicinal substance depends on: |
| А | the magnitude of the substance molecule |
| Б | ambient temperature |
| В | ambient humidity |
| Г | there is no right answer |
|  |  |
| 425 | Preclinical studies of drugs make it possible to determine: |
| А | all answers are correct |
| Б | indications for use, contraindications, side effects |
| В | elimination period, distribution of substances throughout the body |
| Г | the rate and completeness of absorption of substances in the body |
|  |  |
| 426 | Phases of clinical trials of drugs: |
| А | Phase IV, according to some data Phase V |
| Б | Phase II |
| В | Phase III |
| Г | clinical trials are not phased |
|  |  |
| 427 | Phase registration of a medicinal product and entry into the State Register: |
| А | Phase IV |
| Б | Phase II |
| В | Phase I |
| Г | if necessary at any of the test phases |
|  |  |
| 428 | In combination with antidepressants and antibiotics, it causes insomnia, sleep disturbance and stressful psychoemotional state: |
| А | coffee |
| Б | milk |
| В | the juice |
| Г | tea |
|  |  |
| 429 | The ability to be absorbed is observed in substances with an oil / water distribution ratio equal to: |
| А | 1 |
| Б | 0.5 |
| В | 1.5 |
| Г | 2 |
|  |  |
| 430 | The bioavailability of a medicinal product is important to determine: |
| А | route of drug administration |
| Б | drug elimination rate |
| В | drug efficacy |
| Г | the size of the loading dose of the drug |
|  |  |
| 431 | Particles of suspension liniment, ointments and creams are able to penetrate into the stratum corneum, the pore size of which does not exceed |
| А | 100 microns |
| Б | 10 microns |
| В | 1 micron |
| Г | 1000 microns |
|  |  |
| 432 | Basics with high bioavailability when applied to the skin: |
| А | hydrophilic and emulsion oil / water |
| Б | hydrophobic water / oil type |
| В | hydrophobic oil / water type |
| Г | emulsion type water / oil |
|  |  |
| 433 | All types of bioavailability of medicines, except: |
| А | temporary |
| Б | relative |
| В | general |
| Г | absolute |
|  |  |
| 434 | Carcinogenic compounds include |
| А | substances that can increase the number of tumors of various localizations in the population |
| Б | substances that can reduce the number of tumors of various localizations in the population |
| В | substances that can cause hypersensitivity when introduced into the body |
| Г | substances capable of disrupting embryonic development with the occurrence of morphological anomalies and malformations |
|  |  |
| 435 | Pharmadinamics: |
| А | studies the features of the action of the drug on the human body |
| Б | studies the dynamics of drug movement in the human body |
| В | studies the processes of absorption, therapeutic effect, and excretion of the drug from the body |
| Г | studies the intensity and duration of the drug's action, as well as the processes of absorption and elimination from the body |
|  |  |
| 436 | Salicylic acid is better absorbed from ointments: |
| А | on an emulsion basis, type o / w |
| Б | on an emulsion basis, type w / o |
| В | on a gel basis, type i / m |
| Г | gel-based type m / w |
|  |  |
| 437 | When applied to the skin, the bioavailability of medicinal substances is higher if the bases of ointments are used: |
| А | hydrophilic |
| Б | hydrophobic |
| В | fatty |
| Г | emulsion type w / m |
|  |  |
| 438 | The type of preclinical studies of drugs in which toxic doses are detected: |
| А | general toxicity |
| Б | nephrotoxicity |
| В | reproductive toxicity |
| Г | mutation |
|  |  |
| 439 | The types of general toxic effects of drugs are all, except for: |
| А | Latent |
| Б | Chronic |
| В | acute |
| Г | Subacute |
|  |  |
| 440 | Optimal excipient in the manufacture of the polymorphic form of methylprednisolone: |
| А | twin-80 |
| Б | polyvinylpyrrolidone |
| В | methylcellulose |
| Г | gelatin |
|  |  |
| 441 | Conditions for increasing the efficiency and rate of release of salicylic acid: |
| А | all answers are correct |
| Б | in the case of mixing it with a ready-made base at room temperature |
| В | in case it is previously dissolved in the base |
| Г | in the case of mixing it with a ready-made grease emulsion base |
|  |  |
| 442 | The rights and obligations of clinical trial participants are determined by: |
| А | Federal Law "On the Circulation of Medicines", Declaration of Helsinki by the World Medical Association |
| Б | medical commission of a medical organization, FDA |
| В | independent ethics committee |
| Г | good clinical practice |
|  |  |
| 443 | Is not a participant in clinical trials of medicinal products: |
| А | ethics committee member |
| Б | sponsor |
| В | medical organization |
| Г | research subject |
|  |  |
| 444 | The subject of the assessment of the bioequivalence of medicinal products: |
| А | a healthy person or a person with certain pathologies, meeting special criteria, volunteer |
| Б | a healthy person who meets special criteria, a volunteer. |
| В | HIV-infected person. |
| Г | any volunteers, adults |
|  |  |
| 445 | Ophthalmic dosage forms are classified into: |
| А | all variants are correct |
| Б | eye sprays, eye inserts |
| В | eye drops, soft eye drugs |
| Г | eye drops, eye lotions |
|  |  |
| 446 | Barriers on the way of penetration of medicinal substances into the eye tissues: |
| А | "Blood-retina" and "blood-watery moisture" |
| Б | "Blood-retina" |
| В | "Blood-watery moisture" |
| Г | "Retina-aqueous humor" |
|  |  |
| 447 | The penetration of sodium, potassium and chlorine ions into the vitreous body occurs: |
| А | only through the ciliary part |
| Б | across its entire boundary surface |
| В | only through the Schlemm canal |
| Г | there is no right answer |
|  |  |
| 448 | Substances that reduce the stability of vitamin B in eye drops: |
| А | all answers are correct |
| Б | sodium sulfite |
| В | sodium bisulfite and sodium metasulfite |
| Г | antioxidants |
|  |  |
| 449 | The content of medicinal substances in the test drug and the reference drug should differ by no more than: |
| А | 5% |
| Б | 10% |
| В | 3.5% |
| Г | 2.8% |
|  |  |
| 450 | Evaluation of bioequivalence of drugs is carried out on healthy volunteers, except for : |
| А | psychotropic drugs, antineoplastic agents, as well as anti-HIV drugs |
| Б | psychotropic drugs, antineoplastic drugs |
| В | psychotropic drugs, antiepileptic drugs, hypnotics |
| Г | antineoplastic agents |
|  |  |
| 451 | Drug Clinical Trials Model: |
| А | open, randomized, crossover, blind, balanced |
| Б | open, direct, systematic, balanced |
| В | closed, randomized, crossover, unbalanced |
| Г | closed, randomized, crossover, balanced |
|  |  |
| 452 | Bioavailability determined for various series of drugs (with a change in production technology): |
| А | relative |
| Б | absolute |
| В | general |
| Г | therapeutic |
|  |  |
| 453 | A substance used to accelerate the penetration of medicinal substances into the eye tissues: |
| А | hyaluronidase |
| Б | lidase |
| В | rhodanidase |
| Г | there is no correct answer |
|  |  |
| 454 | Substances used to prolonge the action of nasal agents: |
| А | all variants are correct |
| Б | polyvinylpyrrolidone |
| В | methylcellulose, polyethylene glycol, polyvinyl alcohol |
| Г | gelatin |
|  |  |
| 455 | Oil solutions are of little relevance for the preparation of ear forms: |
| А | due to lack of osmotic effect |
| Б | due to the presence of a large number of stabilizers |
| В | due to instability to microbial contamination |
| Г | there is no correct answer |
|  |  |
| 456 | The indicator "area under the curve" in biopharmacy reflects: |
| А | a change in the maximum concentration of a drug in blood plasma at regular intervals |
| Б | time to reach the maximum concentration of a substance in the blood |
| В | the rate of absorption of the substance and the rate of onset of the therapeutic effect |
| Г | completeness of drug intake into the systemic circulation |
|  |  |
| 457 | The force of attraction is higher between the molecules of substances that are : |
| А | polar |
| Б | neutral |
| В | eponymous |
| Г | non-polar |
|  |  |
| 458 | Chemical stability provides: |
| А | stability of the active substance in the stomach during acid or enzymatic hydrolysis |
| Б | change in the chemical structure of a substance in the body |
| В | destruction of the drug in the stomach |
| Г | decreased bioavailability of the substance |
|  |  |
| 459 | Antifriction substances affect the release and absorption of medicinal substances: |
| А | slow down the penetration of liquid medium of gastric juice into a tablet or capsule, which can lead to a decrease in the rate of dissolution |
| Б | slow down the release of substances by the formation of insoluble complexes |
| В | increase the absorption of medicinal substances |
| Г | insignificant influence |
|  |  |
| 460 | Benefits of nanoparticles: |
| А | all variants are correct |
| Б | less toxic |
| В | nanoparticle size, targeted delivery |
| Г | have a prolonged action |
|  |  |
| 461 | Physicochemical properties of medicinal substances are all, except for: |
| А | particle size of the medicinal substance |
| Б | solubility |
| В | polymorphism |
| Г | dispersion |
|  |  |
| 462 | The bioavailability of medicinal substances for cutaneous application is higher if the bases used are : |
| А | hydrophilic |
| Б | hydrophobic |
| В | fatty |
| Г | emulsion type water / oil |
|  |  |
| 463 | Stage 1 of clinical trials of drugs: |
| А | study of drug safety in healthy volunteers |
| Б | definition of dosage regimens |
| В | selection of optimal dosage forms |
| Г | study of therapeutic efficacy |
|  |  |
| 464 | A factor that has a significant effect on the release of medicinal substances from ointments: |
| А | base type |
| Б | type of packaging |
| В | storage method |
| Г | qualitative analysis method |
|  |  |
| 465 | Preservatives: |
| А | prevent the growth of microorganisms |
| Б | reduce the rate of oxidative processes in solutions of medicinal substances |
| В | increase the solubility of medicinal substances |
| Г | increase the residence time of drugs in the body |
|  |  |
| 466 | The main characteristics of the static method for testing the disintegration of a tablet dosage form: |
| А | resting state of dosage form |
| Б | increased solubility of substances during oscillatory movements |
| В | penetration of substances through the pores of the filter |
| Г | decrease in solubility of substances |
|  |  |
| 467 | Diffusion coefficient of a medicinal substance: |
| А | depends on the size of its molecules and on the environment in which they move |
| Б | determines the ratio of the particle size of the powder to the height of the resulting tablet |
| В | determines the ratio of the bulk density of a form after compaction to the bulk density before compaction |
| Г | determines the ratio of the mass of the granulate to the expiration time |
|  |  |
| 468 | Creams: |
| А | viscous-plastic dosage forms of soft consistency, which are opaque emulsions of the forward or reverse type or multiple emulsions |
| Б | ointments of dense consistency, the content of insoluble powder substances in which is not less than 25% |
| В | soft dosage forms of a viscous consistency, as a rule, homogeneous and transparent, fluid or elastic and plastic |
| Г | all answers are correct |
|  |  |
| 469 | Dissolution time of coated tablets in the stomach: |
| А | 30 minutes |
| Б | 3 minutes |
| В | 2 hours |
| Г | 15 minutes |
|  |  |
| 470 | When conducting biopharmaceutical research, the "Flow-through method" is based on: |
| А | on the use of the device "Flow cell" |
| Б | using the apparatus "Rotating basket" |
| В | using the "Disk method" |
| Г | on the beaker method |
|  |  |
| 471 | Groups of excipients in the technology of soft dosage forms: |
| А | emulsifiers, preservatives, absorption activators, flavoring agents |
| Б | disintegrants, fillers, sliding, binding |
| В | surfactants, solubilizers, plasticizers, prolongers, flavoring agents |
| Г | preservatives, antioxidants, solvents, pH stabilizers, diluents |
|  |  |
| 472 | Oil / water emulsifiers: |
| А | polyoxyethylene glycol ethers of higher fatty alcohols |
| Б | mineral and vegetable oils |
| В | higher fatty alcohols |
| Г | petroleum jelly, lanolin |
|  |  |
| 473 | A clinical study in which the investigator knows who is the test group and who is the control group: |
| А | simple blind |
| Б | double blind |
| В | triple blind |
| Г | open |
|  |  |
| 474 | The effectiveness of preclinical trials of drugs in the form of a transition to the stage of clinical trials: |
| А | no more than 10% |
| Б | 100% |
| В | more than 50% |
| Г | more than 70% |
|  |  |
| 475 | Placebo in drug clinical trials: |
| А | a substance without obvious medicinal properties used as a model of a drug, the therapeutic effect of which is associated with the patient's belief in the efficacy of the drug |
| Б | substance capable of causing the development of pronounced therapeutic effects |
| В | substance that has a therapeutic effect comparable to the investigational agent |
| Г | non-therapeutic excipient |
|  |  |
| 476 | Water / oil emulsifiers: |
| А | wool wax alcohols |
| Б | ethanol and isopropanol |
| В | paraffin, spermaceti |
| Г | propylene glycol |
|  |  |
| 477 | Hydrophobic solvents: |
| А | mineral and vegetable oils |
| Б | higher fatty alcohols |
| В | petroleum jelly, lanolin |
| Г | polyoxyethylene glycol ethers of higher fatty alcohols |
|  |  |
| 478 | Multicenter clinical trial of a medicinal product: |
| А | a clinical trial of a medicinal product for medical use, conducted by a developer of a medicinal product in two or more medical organizations under a single protocol for a clinical trial of a medicinal product |
| Б | a clinical trial of a medicinal product for medical use conducted by a developer of a medicinal product in various countries under a single protocol for a clinical trial of a medicinal product |
| В | study of the diagnostic, therapeutic, prophylactic, pharmacological properties of a medicinal product in the process of its use in humans, animals, including the processes of absorption, distribution, change and excretion, through the use of scientific assessment methods in order to obtain evidence of the safety, quality and efficacy of the medicinal product |
| Г | there is no right answer |
|  |  |
| 479 | Pharmaceutical availability of medicines is assessed based on the study:1.solubility of medicinal substances,2.the disintegration of dosage forms,3.release of medicinal substances from the dosage form,4.the concentration of the drug in the biotarget area,5.processes of biotransformation of medicinal substances in the liver,6. processes of elimination of medicinal substances from the body. |
| А | 1, 2, 3 |
| Б | 1, 2, 6 |
| В | 5,6 |
| Г | 4 |
|  |  |
| 480 | Assessment of the parameters of pharmaceutical availability of medicines:1.is mandatory in the development of new drugs,2.carried out at the choice of the manufacturer of medicines when creating generics,3.Is mandatory in the development of generic medicines |
| А | 1, 3 |
| Б | 1,2 |
| В | 2 |
| Г | all answers are correct |
|  |  |
| 481 | A document that describes the purpose, objectives, scheme, methodology, statistical aspects and organization of the study: |
| А | clinical trial protocol |
| Б | good clinical practice guide |
| В | individual registration card |
| Г | manager's diary |
|  |  |
| 482 | The design of a clinical trial determines: |
| А | sponsor |
| Б | researcher |
| В | independent ethics committee |
| Г | healthy volunteers |
|  |  |
| 483 | Dissolution efficiency of a medicinal substance: |
| А | the time it takes for 100% of the drug substance to enter the solution |
| Б | the volume of the dissolution medium in which 100% of the medicinal substance passes into the solution |
| В | the time it takes 50% of the drug substance to enter the solution |
| Г | the volume of the dissolution medium in which 50% of the drug will pass into the solution |
|  |  |
| 484 | Pharmaceutical availability of medicines is determined |
| А | in vitro |
| Б | in vivo |
| В | both answers are correct |
| Г | not defined |
|  |  |
| 485 | How many years does it take to develop an innovative original drug: |
| А | at least 3-5 years |
| Б | 1-2 years |
| В | 50 years; |
| Г | as the need arises for this drug |
|  |  |
| 486 | Higher concentration of the drug in plasma with sublingual administration compared to oral administration: |
| А | the drug does not undergo first-pass metabolism |
| Б | the drug does not bind to plasma proteins |
| В | drugs do not bind to tissues |
| Г | the hydrophilicity of the drug increases |
|  |  |
| 487 | When developing innovative medicines, the study of pharmaceutical availability: |
| А | is a mandatory step in drug development |
| Б | carried out at the choice of the manufacturer |
| В | not studied |
| Г | is mandatory in the development of generic medicines only |
|  |  |
| 488 | The amount of a medicinal substance dissolved in a certain time from the beginning of the experiment is a criterion for studying: |
| А | pharmaceutical availability of a medicinal substance |
| Б | pharmacokinetic parameters of the drug |
| В | biotransformation processes of a medicinal substance |
| Г | bioavailability of a medicinal substance |
|  |  |
| 489 | Clinical trials of drugs: |
| А | any research conducted with human participation to confirm efficacy and safety |
| Б | a fundamental stage in the development and implementation of medicines |
| В | international clinical study of drug safety |
| Г | there is no right answer |
|  |  |
| 490 | Carcinogenic agents can cause: |
| А | tumors |
| Б | mutations |
| В | allergic reactions |
| Г | autoimmune diseases |
|  |  |
| 491 | Disintegration of the medicinal product: |
| А | the ability, in contact with digestive juices, to turn into particles of medicinal and auxiliary substances |
| Б | the rate of transition of medicinal substances from the form to the solvent |
| В | drug release outside the biological system |
| Г | the amount of the total released medicinal substance in% of its content in the dosage form |
|  |  |
| 492 | Solubility of medicines: |
| А | the rate of dissolution of medicinal substances and their transition from the dosage form to the dissolving medium |
| Б | the ability, in contact with water, to turn into particles of medicinal and auxiliary substances. |
| В | drug release outside the biological system |
| Г | the amount of the total released medicinal substance in% of its content in the dosage form |
|  |  |
| 493 | Delayed allergic reactions are manifested through: |
| А | 24-48 hours |
| Б | 30 minutes |
| В | 2 hours |
| Г | in a week |
|  |  |
| 494 | Dissolution efficiency of a medicinal substance: |
| А | the time it takes for 100% of the drug substance to enter the solution |
| Б | this is the arithmetic mean of the dissolution time of medicinal substances in different dosage forms |
| В | the amount of a drug substance dissolved in a specified time from the start of the experiment |
| Г | drug release outside the biological system |
|  |  |
| 495 | The statistical method for studying the disintegration of dosage forms is characterized by: |
| А | the resting state of the test forms in the dissolution medium under certain environmental and temperature conditions |
| Б | the state of rest of the test forms in a mobile dissolution medium |
| В | the mobile state of the test forms in an immobile dissolution medium |
| Г | the mobile state of the test forms in the dissolution medium under certain environmental and temperature conditions |
|  |  |
| 496 | The Ames test is designed to detect the ability of pharmacological substances or their metabolites to cause: |
| А | gene mutations |
| Б | chromosomal mutations |
| В | teratogenic effect |
| Г | autoimmune diseases |
|  |  |
| 497 | The consequences of the influence of xenobiotics are everything except: |
| А | hypertonic disease |
| Б | hypersensitivity |
| В | autoimmune processes |
| Г | immunosuppression |
|  |  |
| 498 | Disintegration rates for conventional tablets: |
| А | 15 minutes |
| Б | 30 minutes |
| В | 10 min |
| Г | 3-5 minutes |
|  |  |
| 499 | Disintegration rates for gastrointestinal coated tablets: |
| А | 30 minutes |
| Б | 3 hours |
| В | 15 minutes |
| Г | 10 min |
|  |  |
| 500 | Disintegration rates for sublingual tablets: |
| А | 3-10 minutes |
| Б | 3 hours |
| В | 30 minutes |
| Г | 40 minutes |