1) A patient has been taking ferrous sulfate twice daily for two weeks and is complaining of a bad taste after each dose. Which of the following oral iron formulations would improve tolerability and provide a similar total daily dose of elemental iron? A. Ferric ammonium citrate B. Ferrous gluconate C. Ferrous sulfate, anhydrous D. Polysaccharide–iron complex E. Ferrous fumarate	**D**
2) A 60-year-old patient presented with anorexia, weakness, paresthesia and mental changes. His tongue was red, tendon reflexes were diminished, hemoglobin was 6 g% with large red cells . Endoscopy revealed atrophic gastritis. * Deficiency of which factor is likely to be responsible for his condition? A. Folic acid B. Vitamin B12 C. Pyridoxine D. Riboflavin	B
3) Which of the following is the best treatment of pernicious anaemia? a) Oral iron b) Oral folic acid C)Oral vitamin B12 d) Hydroxocobalamin injection e) Parenteral iron	D
4) Which of the following is the cause of folic acid deficiency in patient receiving oral contraceptive pills? a) Decreased intake. b) Increased demands c) Impaired absorption d) Increased metabolism e) Decreased excretion.	C
5) Which is an appropriate treatment for a nutritional anemia that presents as a hunger for ice and/or upward curvature of the fingernails? a) Folic acid b) Darbepoetin c) Cyanocobalamin d) Iron fumarate,	**D**

6) Which of the following is a possible side effect of oral iron therapy? a) Abdominal pain b) Headache c) Hypersensitivity reaction d) Muscular pain c) Palpitations	A
7) A45-year-old woman treated with methotrexate due to rheumatoid arthritis. After several months, she complained of easily fatigability, pallor, and peripheral blood showed macrocytic anemia. Which of the following is the best treatment option for her? a) Folic acid b) Folinic acid c) Hydroxocobalamin d) Iron fumarate. e) Folic acid Hydroxocobalamin	B
8) year-old woman presents to the emergency department with progressive weakness, fatigue, and confusion. Her physical exam was positive for pallor but negative for koilonychias or cracking at the corners of the mouth. Which deficiency would be the highest priority in this patient's workup? A. Vitamin B12 B. Iron C. Folate D. Calcium	A
9) A 45-year-old male stomach cancer patient underwent tumor removal surgery. After surgery, he developed megaloblastic anemia. His anemia is caused by a deficiency of X and can be treated with Y. (A) X = intrinsic factor; Y = folic acid. (B) X intrinsic factor; Y = vitamin B12 (C) X = extrinsic factor; Y = parenteral iron (D) X = extrinsic factor; Y = sargramostim	B

10) **A 65-year-old man with stage 3 CKD presents to the nephrology office. He has a 7-year history of type 2 diabetes and presents with a foot ulcer. CBC showed Hb 7.4 g/dL, normocytic normochromic anemia, & his serum ferritin level is 98 ng/mL (desired 100 ng/mL). The best initial treatment of this patient's anemia is:** a) Parentral iron therapy b) Parentral EPO & oral iron therapy c) Parentral EPO & parentral iron therapy d) Parentral EPO alone e) Parentral vitamin B12	C
11) **Which of the following is most likely to be required by a 5-year-old boy with chronic renal insufficiency?** (A) Cyanocobalamin (B) Deferoxamine (C) Erythropoietin (D) Filgrastim (G-CSF) (E) Oprelvekin (IL-11)	**C**
12) **A 24-year-old female at 4th week of pregnancy. Which one of the following is the most important supplementation should be administered to her:** a) Oral vitamin C. b) Parenteral vitamin K. c) Oral folic acid. d) Oral vitamin B2. e) Oral vitamin A.	**C**
13) **Vitamin B12:** A. Is normally absorbed in the upper small intestine B. Therapy by mouth is the first choice in pernicious anemia C. Is good trial therapy in undiagnosed anemias D. Its deficiency can lead to anemia and neurological symptoms E. Is the first choice for the treatment of aplastic anemia.	D

14) **Forty years old male patient, a diagnosed case of CA small intestine, had hemoglobin of 9.2 gm/dl. He was started on oral iron therapy. After few days, patient complained of some GIT upset (on and off nausea, vomiting & diarrhea). Which one of the following oral iron preparation was responsible for his problem?** A. Iron dextran B. Sodium ferric gluconate. C. Iron sucrose D. Ferrous sulfate	**D**
15) **A patient of chronic renal failure maintained on intermittent haemodialysis has anaemia not responding to iron therapy. Which of the following additional drug is indicated:** A. Epoetin B. Cyanocobalamin C. Folic acid D. Pyridoxine	**A**
16) **Absorption of iron:** A. Is greater in anemic man than in normal one B. Is decreased by ascorbic acid. C. Is more efficient when it is in ferric form D. Takes place mostly in the ileum. E. Is enhanced by co-administration of desferroxamine	**B**
17) **Which of the following increases the absorption of oral iron supplements?** a) Acidity of gastric juice b) Activity of salivary amylase c) Secretory function of the stomach d) Decreased body demands e) The proteolytic activity of human gastric juice	A
18) **A child of 3 years of age has clinical and laboratory signs of moderate iron deficiency anemia. Choose the most efficient method of treatment:** a) Parenteral iron preparations b) B12 and folic acid supplements c) Oral iron preparations only until the normal Hb d) Oral iron until the normal Hb is reached and additionally 2-3 months of prophylactic dose e) Only diet changes with food rich in iron.	D

19) In the treatment of iron deficiency anemia: A. Therapy with iron should last for 6 months to replenish iron stores B. Parentral iron is usually preferred than oral iron C. The patient is advised to take oral iron on an empty stomach. D. Black stool is a strong indication for discontinuation of oral iron. E. Metabolic alkalosis is the major feature of acute iron toxicity	A
20) The following about absorption of iron in the gut is wrong: a) Absorption is greater in an anemic than in a normal person b) Absorption is enhanced by HCI c) Absorption is more efficient if it is in ferric form d) Absorption is reduced by formation of phosphate salts e) Absorption takes place mostly in upper small intestine	C
21) A 22-year-old woman is pregnant and at 14-week gestation. Her hemoglobin level is 9 g/dL. She has microcytic hypochromic anemia. She asked why she could have iron deficiency when she is no longer menstruating? Which of the following is the best explanation? A. Occult gastrointestinal blood loss B. Expanded blood volume and iron transport to the fetus C. Hemolysis D. Folate deficiency E. Decreased iron absorption.	**B**
22) Pemicious anemia is developed due to deficiency of: A. Erythropoetin B. Vitamin B12 C. Iron D. Vitamin B6	B
23) An adverse effect of oral iron therapy is: A. Anemia B. Thrombocytopenia C. Headache D. Constipation	D

24) **The following drug increase absorption of iron from intestine**: a) Folic acid b) Cyanocobalamin c) Antacids d) Ascorbic acid e) Tetracycline	D
25) The side effect which primarily limits acceptability of oral iron therapy is: A. Epigastric pain and bowel upset B. Black stools C. Staining of teeth D. Metallic taste	A

1) The primary advantage of enoxaparin over heparin is that it? A. More effectively inhibits the synthesis of clotting factors B. Has a more rapid onset C. Does not cause thrombocytopenia D. Has a shorter half-life	C
2) A 22-year-old woman with deep vein thrombosis in her first trimester of pregnancy, was treated for 7 days with intravenous unfractionated heparin. Which one of the following drugs would be most appropriate for follow-up therapy for this patient? A. Warfarin. B. Aspirin. C. Alteplase. D. Unfractionated heparin (HMWH). E. Low-molecular-weight heparin (LMWH).	E
3) Which of the following is direct thrombin inhibitor ? A. Warfarin. B. Fondaparinux C. Alteplase. D. Unfractionated heparin (HMWH). E. Argatroban.	E
4) A 52-year-old female diagnosed as DVT, what does warfarin affect coagulation profile: a) Increase partial throbomoplastin time b) Increase bleeding time c) Increase prothrombin time d) Decrease partial thromboplastin time	C
5) Major unwanted effect of heparin is: a) Bleeding b) Crossing the placenta c) Elevation of hepatic transaminase d) Allergic reaction e) Inhibition of aldosterone synthesis	A

6) All of the following are recognized adverse effects of heparin EXCEPT: a) Osteoporosis. b) Alopecia. c) Thrombocytopenia. d) Allergy. e) Fetal cleft palate.	E
7) Antagonize the action of oral anticoagulant is: a) heparin b) urokinase c) aspirin d) vit K e) warfarin	**D**
8) Oral anticaoagulant is: a) Heparin b) Urokinase c) Aspirin d) Vit K e) Warfarin	E
9) **Which of the following can be used to antagonize the action of heparin in case of heparin overdose**? A. Heparin sulfate B. Dextran sulfate C. Protamine sulfate D. Ancrod E. Vitamin K	C
10) A 64 year old man brought to emergency department with pulmonary embolism. he is considered for immediate therapy with heparin, which of the following would represent a contraindication for heparin therapy: a) Heart failure b) Drug abuse c) Hypotention d) Immune deficiency state e) Recent eye surgery	E

11) Which of the following is direct oral factor Xa inhibitor and inhibit both freeXa and bound Xa to clotting system: a) rivaroxoban b) hirudin c) Argatroban d) fondaprainx e) heparin	**A**
12) The primary advantage of enoxaparin over heparin is that it A. is unlikely to cause bleeding B. more effectively Inhibits the synthesis of clotting factors C. has a more rapid onset D. cause thrombocytopenia E. has a shorter half-life	A
13) Which of the following is indirect factor Xa inhibitor and does not require monitoring: a) rivaroxoban b) hirudin c) Argatroban d) fondaprainx e) heparin	D
14) LMWH differ from conventional heparin in: a) metabolized rapidly and shorter duration of action b) more active c) do not significantly prolong clotting time d) selectively inhibit factor 2 e) selectively inhibit factor Xa	E
15) Sudden withdrawal of warfarin leads to which of the following? A) Alopecia B) Hemorrhage C) Osteoporosis D) Tachycardia E) Thrombosis	E

16) Which of the following tests would provide accurate information about the coagulation status of a patient taking enoxaparin? a) aPTT b) Factor X test c) INR d) Prothrombin Time e) Clotting Time	B
17) A patient develops severe thrombocytopenia in response to treatment with unfractionated heparin and still requires parenteral anticoagulant. The patient is most likely to be treated with: a) Aminocaproic acid b) Argatroban c) Vitamin K d) Plasminogen e) Ticlopidine	B
18) Urgent reversal of warfarin therapy can be done by administration of: a) Cryoprecipitates b) Platelet concentrates c) Fresh frozen plasma d) Packed red blood cells e) Protamine sulphate	C
19) Relative to unfractionated heparin, enoxaparin: a) Can be used without monitoring the patient's aPTT b) Has a shorter duration of action c) Is less likely to have a teratogenic effect d) Is more likely to be given intravenously e) Is more likely to cause thrombosis and thrombocytopenia	A
20) The following is relative contraindication of warfarin therapy: a) First trimester of pregnancy b) Prosthetic heart valves c) Coronary thrombosis d) Concurrent digoxin therapy e) Venous thrombosis	**A**

21) **A woman who has a mechanical heart valve and who is taking warfarin informs you that she hopes to get pregnant in the near future. What advice should she receive regarding her antithrombotic medication during the anticipated pregnancy**? a) Warfarin should be continued until the third trimester. b) Warfarin should be replaced with aspirin at analgesic doses. c) All medications that affect the blood should be discontinued. d) Warfarin should be replaced with heparin. e) Warfarin should be discontinued, and supplementary vitamin K taken throughout the pregnancy.	**D**
22) **The patient was treated with a bolus of heparin, and a heparin drip was started. One hour later, he was bleeding profusely from the intravenous site. The heparin therapy was suspended, but the bleeding continued. Protamine sulfate was administered intravenously that works in which of the following ways?** a) Activates the coagulation cascade b) Activates tissue plasminogen activator c) Degrades the heparin d) Inactivates antithrombin e) lonically combines with heparin	E
23) **The primary mechanism by which heparin prevents coagulation of blood is:** a) Direct inhibition of prothrombin to thrombin Conversion b) Facilitation of antithrombin III mediated inhibition of factor Xa and thrombin c) Activation of antithrombin III to inhibit factors IX and XI d) Inhibition of factors XIla and XIIIa	**B**
24) **Vitamin that should be avoided during oral anticoagulant therapy:** a- Vitamin A b- Vitamin B c- Vitamin C d- Vitamin D	E

25) Vitamin KWhich of the following statements about anticoagulant therapy is correct? a. Heparin produces its effect by inhibiting antithrombin III. b. Heparin is effective orally. c. Warfarin is effective in vivo only d. Warfarin is antagonized by protamine sulfate. e. Low molecular weight heparin has shorter duration of action:	C
26) Warfarin is an anticoagulant. Its proposed mechanism of action is that it: a- Inhibits platelet synthesis b- Block prostaglandin synthesis c- Prohibits absorption of vitamin K d- Binds to fibrinogen e- Inhibits synthesis of vitamin K-dependent clotting factors	E
27) Which of the following is a low-molecular weight heparin: a- Desmopressin b- Foscasnet c- Entacapone d- Enoxaparin e- Hirudin	D
28) Warfarin has the following actions EXCEPT: a- It inhibits vitamin K-epoxide reductase b- It inhibits carboxylation of vitamin K-dependent factors c- Anticoagulant effect is observed after 8-12 hours d- Its antidote is protamine sulfate e- It prolongs prothrombin time	D
29) Correct statements about heparin include all of the following EXCEPT: a. It is a mucopolysaccharide b. It crosses the placenta c. It is not absorbed from the GIT d. It is found in mast cells e. It prolongs clotting time of blood both in vivo and in vitro	B

30) **Heparin therapy is monitored by**: a. Sedimentation rate b. Level of a-2 antiplasmin c. Partial thromboplastin time d. Prothrombin tine e. Plasma fibrinogen concentration	C
31) Adverse effects of heparin include all of the following EXCEPT: a. Hemorrhage b. Fetal malformations c. Thrombocytopenia d. Alopecia e. Osteoporosis	B
32) Regarding heparin, the following statement is WRONG: a- It is effective orally b- It has an anticoagulant effect both in vivo and in vitro c- It increases the activity of antithrombin III d- Its dose is controlled by partial thromboplastin time e- Protamine sulphate is its antidote	A
33) Which of the following is contraindication of Heparin? a) COVID-19 pneumonia b) Bleeding peptic ulcer c) Pulmonary embolism d) Hip replacement surgery. e) Pregnancy	B

1) Aspirin prolongs bleeding time by inhibiting the synthesis of: a. Clotting factors in liver b. Prostacyclin in vascular endothelium c. Cyclic AMP in platelets d. Thromboxane A2, in platelets e. Platelet synthesis	**D**
2) What is the mechanism of action of aspirin? a. Blocks the glycoprotein IIb/Illa receptors b. Converts inactive plasminogen into active plasmin c. Enhances the interaction between antithrombin III and both thrombin and the factors involved in the intrinsic clotting cascade d. Inhibits COX and thus thromboxane synthesis e. Inhibits phosphodiesterase enzyme	D
3) Which drug belong to fibrinolytic inhibitors: a) Aminocaproic acid b) Ticlopedine c) Streptokinase d) Vit K e) Alteplase	**A**
4) She is given an intravenous dose of alteplase. Characteristics of this agentinclude which of the following? a. High antigenicity b. Acts on free plasminogen c. Success at clot resolution d. Low fibrin specificity e. Long half-life	**C**
5) Which of the following is used to degrade an established thrombus? A) Aspirin B) Clopidogrel C) Ticlopidine D) Tranexamic acid E) Urokinase	E

6) **The .... drug inhibits platelets aggregation by binding to integrin receptor GPIIb/IIIA and inhibit the interaction of fibrinogen and Von Willebrand factor to the integrin receptor** A. Aspirin B. Abciximab C. Clopidogrel D. Warfarin	**B**
7) **Reduce platelet aggregation by reducing thromboxan level by which drug:** a) Heparin b) Urokinase c) Aspirin d) Vit K e) warfarin	C
8) **year old woman present to emergency department with crushing chest pain. the doctor administrate fibrinolytic drugs. her symptoms resolve but later she begin to vomit blood. which would be appropriate medication to be given now:** a) Abciximab b) Aminocaproic c) Anistreplase d) Clpodigrel e) Urokinase	B
9) **Which of the following statements is true regarding the parenteral administration of alteplase?** a) It increases the formation of plasminogen. b) It is less effective than streptokinase when given after a myocardial infarction. c) It causes a high incidence of thrombocytopenia. d) It may cause bleeding reversible by aminocaproic acid. e) It activates free plasminogen.	D
10) **The following statements about platelet activity are correct EXCEPT:** a) Intact vascular endothelium does not attract platelets because it synthesizes PG12. b) TXA2 is synthesized mainly by platelets. c) Injured vascular endothelium attract platelets by activating receptors of collagen on the platelet. d) Clopidogrel blocks platelet ADP receptors. e) Aspirin is a reversible inhibitor of TXA2.	E

11) Which is considered "fibrin selective" because it rapidly activates plasminogen that is bound to fibrin? a) Alteplase. b) Fondaparinux. c) Streptokinase. d) Urokinase	**A**
12) Which of the following compounds is most likely to block ADP receptors and prevent platelet aggregation? a) Clopidogrel b) Aspirin c) Prostacyclin d) Abciximab e) Montelukast	A
13) Thromobolytic agent synthesized by kidney is: a) heparin b) urokinase c) aspirin d) vit K e) warfarin	B
14) Which of the following pharmacological agents alter plasminogen after binding to fibrin? a) Streptokinase b) Urokinase c) Alteplase (IPA) d) Antiplasmin e) Aminocaproic acid	C
15) One of the following drugs is an inhibitor of platelet glycoprotein IIb/Iila receptors: a) Aspirin b) Clopidogrel c) Ticlopidine d) Abciximab e) Dipyridamole	D

16) The most important complication of streptokinase therapy is: a. Hypotension b. Bleeding c. Fever d. Anaphylaxis e. Tinnitus	B
17) What is the mechanism of action of alteplase? a) Binds to glycoprotein receptor IIb/IIIa b) Blocks ADP receptors c) Converts plasminogen to plasmin d) Inhibits COX-1 & COX-2 e) Inhibits thrombin	C
18) Which of the following drugs accelerates the conversion of plasminogen to plasmin? a) Aminocaproic acid b) Heparin c) Argatroban d) Reteplase e) Warfarin	D
19) A 20-year-old woman presents to her primary care physician with heavy menstrual bleeding. An endometrial biopsy revealed no cellular atypia. Her physician prescribes tranexamic acid. What is tranexamic acid's mechanism of action? a) Activates plasminogen b) Activates platelets c) Blocks cyclooxygenase d) Inhibits plasmin e) Suppresses LH surge	**D**
20) Tranexaemic acid is a specific antidote of a) Fibrinolytic drug b) Organophosphates c) Barbiturates d) Heparin	**A**

21) doctor administers a fibrinolytic drug. Her symptoms resolve, but later she begins to vomit up blood. Which would be an appropriate medication to give now? a) Abciximab b) Clopidogrel c) Aminocaproic acid d) Urokinase e) Anistreplase	C
22) A cardiac patient was replaced clopidogrel for aspirin due to development of allergy to aspirin. Which of the following is the mechanism of action of the newly prescribed drug? a- It binds to the active site of cyclo-oxygenase by acetylation b- It blocks binding of plasminogen to fibrin c- It hinders the production of TXA2 d- It antagonizes action of platelet ADP, thus preventing fibrinogen binding to platelets e- None of the above	D
23) The following statements about alteplase are correct EXCEPT: a- It rapidly activates plasminogen bound to a thrombus b- It is superior in dissolving old clots c- It is fibrin selective d- It has minimal allergic reaction e- It is used orally	E
24) Anti-platelet drugs include which of the following: a- Nimodipine b- Clopidogrel c- Neostigmine d- Pirenzepine e- Nicardipine	B
25) Which of the following is a thrombolytic agent: a- Alteplase b- Abciximab c- Enoxaparin d- Carvedilol e- Baclofen	**A**

26) A 58-year-old businessman is brought to the emergency room 2 hours after the onset of severe chest pain. ECG changes confirm the diagnosis of myocardial infarction. Th following fibrinolytic drug is used to open his occluded coronary: a- Aminocaproic acid. b- Heparin. c- Lepirudin. d- Reteplase. e- Warfarin.	D
27) A 65-year-old man with history of cerebral thrombosis. To prevent recurrence of this disease, the patient is most likely to be treated indefinitely with following antiplatelet drug: a- Aminocaproic acid. b- Aspirin c- Enoxparin. d- Lepirudin. e- Warfarin.	B
28) Streptokinase is used to: a- Dissolve recent blood clots b- Treat digestive disorders c- Treat muscle injuries d- Replace pepsin e- Promote carbohydrate degradation	A
29) What is the mechanism of action of astringents in controlling bleeding? a) They promote fibrin formation b) They precipitate surface proteins c) They act as vasoconstrictors d) They inhibit fibrinolysis	B
30) Which coagulation factor is deficient in Hemophilia A? a) Factor III (Thromboplastin) b) Factor VIII (Antihemophilic globulin) c) Factor IX d) Factor X	B

31) Which agent is used to reverse bleeding caused by warfarin overdose? a) Aminocaproic acid b) Fresh frozen plasma c) Vitamin K d) Adrenaline	C
32) Which of the following is NOT a local haemostatic agent? a) Thrombin b) Fibrin sheets c) Fresh blood transfusion d) Alum sulphate	C

1) Cyclosporine inhibits: a) T lymphocyte proliferation b) B lymphocyte proliferation c) Antibody production d) Both T and B lymphocyte proliferation e) NK cells only	A
2) A 5 years old child with severe nephrotic syndrome on treatment with tacrolimus, frusemide and prednisolone developed seizures. What is the likely cause of this symptom: a) Frusemide b) Hypokalemia c) Hypotension d) Prednisolone e) Tacrolimus	E
3) Immunosuppressive effect of glucocorticoids is caused by: A. Reducing concentration of lymphocytes and inhibiting function of tissue macrophages and other antigen-presenting cells B. Suppression of cyclooxygenase II expression which results in reducing amount of an enzyme available to produce prostoglandins C. Activation of phospholipase A2 and reducing prostaglandin and leukotriene synthesis. D. Activation of angiotensin-converting enzyme E. Suppression of histamine release	**A**
4) 5 years old child with severe nephrotic syndrome on treatment with tacrolimus, frusemide and prednisolone developed seizures. What is the likely cause of this symptom? a. Hypokalemia b. Hypotension c. Tacrolimus. d. Frusemide e. predinsolone	C

5) Which of the following is a widely used drug that suppresses cellular immunity, inhibits prostaglandin and leukotriene synthesis, and increases the catabolism of IgG antibodies? a) Cyclophosphamide b) Cyclosporine c) Infliximab d) Mycophenolate mofetil e) Prednisone	E
6) Which of the following drugs specifically inhibits calcineurin in the activated T lymphocytes? a) Basiliximab. b) Tacrolimus. c) Prednisone. d) Sirolimus. e) Mycophenolate mofetile	B
7) Which of the following is a chimeric monoclonal antibody that binds toTNF-a and inhibits its action? a) Etanercept b) Infliximab c) Sirolimus d) Trastuzumab e) Thalidomide	B
8) Which of the following is an immunosuppressant that suppresses both B and lymphocytes via inhibition of de novo synthesis of purines? a) Cyclophosphamide b) Methotrexate c) Mycophenolate mofetil d) Prednisone e) Tacrolimus	C

9) Cyclosporine is effective in organ transplantation. Which of the following most accurately describes the immunosuppressant action of cyclosporine? a) Activation of NK cells b) Blockade of tissue responses to inflammatory mediators c) Increased catabolism of IgG antibodies d) Inhibition of the gene transcription of interleukins e) Interference with MHC II-peptide activation of T cells	D
10) Which of the following most accurately describes the immunosuppressant action of cyclosporine? A) Activation of NK cells B) Blockade of tissue responses to inflammatory mediators C) Increased catabolism of IgG antibodies D) Inhibition of calcineurin mediated gene transcription of interleukins E) Interference with MHC II-peptide activation of T cells	D
11) Which of the following is a monoclonal antibody that binds to TNF-a and inhibits its action? a. Etanercept b. Infliximab c. Sirolimus d. Thalidomide e. Trastuzu	B
12) One of the following is not a possible side effect of glucocorticoids usage, it is: a. Elevated blood glucose levels b. Fluid retention c. Hyperkalemia d. Increased susceptibility to infection. e. Elevated blood pressure	C
13) Which of the following is anti-lg-E monoclonal antibody used in treatment of refractory bronchial asthma : a. anakinera b. infliximab c. abatacept d. toafacitinib e. omalizumab	E

14) **A 45-year-old woman has just received a kidney transplant. She is placed on several immunosuppressants to prophylactically prevent her body rejecting the donor organ. Which of the following immunosuppressants interferes with T-cell activation by modifying the activity of calcineurin?** a) Cyclosporine b) Methotrexate c) Prednisolone d) Sirolimus e) Temsirolimus	A
15) **Corticosteroid therapy can aggravate the following disorders except:** a) Congenital adrenal hyperplasia b) Diabetes mellitus c) Hypertension d) Peptic ulcer	**A**
16) **Corticosteroids exert anti-inflammatory action by inhibiting the following enzyme:** a) Cyclooxygenase b) Lipoxygenase c) Phospholipase-A d) Phosphodiesterase	C
17) **A patient is treated with an immunosuppressant drug following a liver transplant. The drug is known to bind to cyclophilin and inhibit the actions of calcineurin. For what drug toxicity should this patient be monitored?** a) Pulmonary fibrosis b) Hypotension c) Hypoglycemia d) Nephrotoxicity e) CHF	**D**
18) **The most important mechanism of anti-inflammatory action of glucocorticoids is** a) Inhibition of lysosomal enzymes b) Restriction of recruitment of inflammatory cells at the site of inflammation c) Antagonism of action of interleukins d) Suppression of complement function	B

19) **Which of the following drugs specifically inhibits calcineurin in the activated T lymphocytes**? a) Basiliximab. b) Tacrolimus. c) Prednisone. d) Sirolimus. e) Mycophenolate mofetil.	B
20) A patient on immunosuppresive therapy is given tacrolimus as part of their drug regimen. Which side effect is most likely to occur with this drug? a) hypoglycemia b) hypokalemia c) hypotension d) profound myelosuppression e) renal toxicity	E
21) A patient was given combination of immunosuppressant drugs following a liver transplant. Six months after his transplant his lab results indicate a 20 mm Hg mean arterial blood pressure, elevated fasting increase in blood glucose, hyperkalemia, and elevated serum creatinine. Which drug is most likely responsible for these side effects? a) azathioprine b) everolimus c) mycophenolate mofetil d) sirolimus e) tacrolimus	E
22) A 53-year-old man with a heart transplant underwent immunosuppressive treatment that included oral cyclosporine. Which of the following cells represent the main site of action of this drug? A. Macrophages B. Dendritic cells C. T-helper cells D. Plasma cells E. Natural killer cells.	C

23) Which of the following actions most likely mediated the therapeutic effectof the drug cyclosporine? A. Stimulation of synthesis of tumor necrosis factor B. Stimulation of B-cell differentiation into memory B cells C. Inhibition of the apoptosis pathway in target cells D. Stimulation of gene expression for interleukin-2 pro- duction E. Inhibition of calcineurin enzyme	E
24) A 43-year-old man who underwent a kidney transplant had been receiving an immunosuppressive treatment that included a macrolide antibiotic. The drug binds to a FK-binding proteins located in T cells, thus blocking gene expression for production of several cytokines. Which of the following drugs most likely works with this mechanism of action? A. Azithromycin B. Azathioprine C. Tacrolimus D. Cyclosporine E. Tobramycin	C
25) Indication of glucocorticoids include all the following EXCEPT: A. Chronic (Addison's disease) and acute adrenocortical insufficiency B. Organ transplants (prevention and treatment of rejection-immunosuppression) C. Inflammatory conditions of bones and joints (arthritis, bursitis, tenosynovitis). D. Hypocalcemia E. Gastrointestinal diseases (inflammatory bowel disease)	**D**
26) One of the following adverse effects is not due to prolonged therapy with corticosteroids a) Fluid retention b) Increased susceptibility to infection c) Elevated blood pressure d) Muscle hypertrophy e) Hypokalemia	D

27) **A 56-year-old man with end-stage renal disease underwent a kidney transplant. He received immunosuppressive therapy that included a drug that suppresses cellular immunity, inhibits both prostaglandin and leukotriene synthesis, and increases the catabolism of immunoglobulin G (IgG) antibodies. Which of the following drugs has all of these actions?** A. Prednison B. Azathioprine C. Tacrolimus D. Muromonab-CD3 E. Cyclophosphamide	**A**

1) Which category of histamine H1 antagonists is recognized for as second-generation antihistamines? a) Promethazine b) Cetirizine and loratidine c) Diphenhydramine d) Cyclizine e) Cyproheptadine	B
2) Which of the following antihistamines has the LEAST sedation at therapeutic dose? A. Diphenhydramine B. Loratidine C. Promethazine D. Antazoline E. Cyproheptadine	B
3) Indication for administration of histamine H1 antagonists is: a) Prevention or treatment of allergic rhinitis b) Hypertension. c) Peptic ulcer d) Histamine overdose	**A**
4) Side effect of first-generation histamine H1 antagonists is: a) Aplastic anemia b) Vomiting, tinnitus, decreased hearing c) Sedation d) Gastric ulcers and upper gastrointestinal bleeding	C
5) Side effect of first-generation histamine H1 antagonists is: a) Aplastic anemia b) Vomiting, tinnitus, decreased hearing c) Postural hypotension d) Gastric ulcers and upper gastrointestinal bleeding e) Arrhythmia	**C**

6) Indication for administration of histamine H1 antagonists is: a) Prevention or treatment of the symptoms of allergic reactions (rhinitis, urticaria) b) Motion sickness and vestibular disturbances c) Nausea and vomiting in pregnancy (morning sickness) d) All of the above	D
7) Which of the following antihistaminic drugs would be the most appropriate treatment for a car driver with allergic sinusitis? a) Chlorpheniramine b) Diphenhydramine c) Promethazine d) Loratidine e) Cyclizine	**D**
8) Adverse effect of Loratidine may include which one of the following? a) Blurred vision. b) Dry mouth. c) Arrhythmia d) Orthostatic hypotension. e) Sleepiness.	C
9) Which one of the following drugs could significantly impair the ability to drive a car? a) Diphenhydramine b) Ergotamine c) Fexofenadine d) Ranitidine e) Sumatriptan	A
10) Some of second-generation antihistamine (H blockers) may cause: a) Arrhythmias b) Sedation c) Dry mouth d) Urine retention e) 5-HT receptor block	A

11) An old man patient with benign prostatic hyperplasia complains of allergic rhinitis. Which of the following would by the best antihistaminic to be prescribed for him? a. Diphenhydramine. b. Dimenhydrinate c. Antazoline. d. Meclizine e. Cetirizine	E
12) Adverse effect of Loratidine may include which one of the following? a) Blurred vision. b) Dry mouth. c) Torsade de pointes arrhythmia d) Orthostatic hypotension. e) Sleepiness.	**C**
13) **H1 histamine receptor subtype is distributed in**: a. Smooth muscle, capillary endothelium and sensory nerve endings. b. Gastric mucosa, cardiac muscle. c. Presynaptically in brain, mesenteric plexus and other neurons. d. Mast cells. e. All of the above	A
14) A 52-year-old overweight male steamroller operator presents to his primary care physician complaining of itchy, watery eyes and runny nose in the springtime. He says that he has had this problem for as long as he can remember but does not like going to doctors. His wife finally convinced him to come today to see what his physician might be able to do for him. What is the most appropriate treatment for this patient? a. Albuterol b. Diphenhydramine c. Epinephrine d. Hydroxyzine e. Loratadine	E

15) Which one of the following drugs could significantly impair the ability to drive an automobile? A. Diphenhydramine. B. Ergotamine. C. Fexofenadine. D. Ranitidine. E. Sumatriptan.	A
16) Drugs used in the treatment of allergic rhinitis include all EXCEPT: A. Loratadine B. Cetirizine C. Chlorpheniramine D. Diphenhydramine E. Buspirone	E
17) Which of the following is frequently associated with sedation and atropinelike action? A. Loratadine B. Cetirizine C. Diphenhydramine D. Histamine E. Misoprostol	C
18) **Loratadine is clinically effective in blocking actions of histamine on**: A. Vestibular apparatus B. Cardiac muscle C. Allergic rhinitis D. Reticular formation of the brain E. Gastric acidity	C
19) One of the following is not an indication of H1 antagonists: a) Urticaria b) Motion sickness c) Nausea and vomiting in pregnancy d) Abdominal colic	D

20) Class I H1 blockers have which of the following effects? A. Parasympathomimetic action B. Local anesthetic effects if injected C. Convulsion in children if the dose is too high D. Increase in the total peripheral resistance E. al blocking action	E