



1. Regarding unfractionated heparin which of the following is correct.....:

- A. It is a natural acetylated polysaccharide present in mast cells
- B. It carries a positive charge
- C. It has a rapid onset & short duration
- D. It has a low molecular weight

2. HMWH heparin can be given

- A. Orally
- B. IV
- C. By inhalation
- D. Rectally

3. Regarding HMWH heparin which of the following is correct.....

- A. It can be given by SC route
- B. It cannot cross BBB
- C. It is safe in pregnancy
- D. All of the above

4. Action of heparin depends on the presence of

- A. Antithrombin III
- B. Protein C
- C. Zinc
- D. Tissue thromboplastin

5. Heparin-antithrombin complex inhibits mainly.....

- A. Factor VIII
- B. Factor XIII
- C. Factor X
- D. Factor I

1. C	2. B	3. D	4. A	5. C
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6. For controlling therapy with heparin, APTT is kept at.....times of its normal value

- A. 1-2
- B. 2-3
- C. 3-4.
- D. 5-6

7. The most common and dangerous adverse effect of heparin is.....

- A. Hematoma
- B. Heparin-induced Thrombocytopenia
- C. Osteoporosis
- D. Bleeding

8. Heparin antidote is.....

- A. N-acetyl cysteine
- B. Vitamin K
- C. Protamine sulfate
- D. Aspirin

9. Heparin may induceas an adverse effect

- A. Leucopenia
- B. Agranulocytosis
- C. Anemia
- D. Thrombocytopenia

10. Heparin may cause hematoma if given.....

- A. IM
- B. Orally
- C. IV
- D. SC

6. B	7. D	8. C	9. D	10.A
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11. Which of the following is a low molecular weight heparin.....:

- A. Fondaparinux
- B. Rivaroxaban
- C. Enoxaparin
- D. Dabigatran

12. Regarding Enoxaparin which of the following is correct.....:

- A. It has a high risk of bleeding
- B. Thrombocytopenia is more common than unfractionated heparin
- C. It is less specific on factor X than unfractionated heparin
- D. It has a long half life

13. Regarding unfractionated heparin which of the following is correct.....:

- A. It is given once daily
- B. It has a low bioavailability after SC injection
- C. Non-specific binding to plasma proteins is low compared with enoxaparin
- D. APTT monitoring may be unnecessary

14. Unfractionated heparin induces thrombocytopenia in.....of cases

- A. 10%
- B. 5%
- C. 2%
- D. 1%

15. Heparin-induced Thrombocytopenia is due to development of antibodies against complex of heparin and.....:

- A. Von Willebrand factor
- B. Platelet factor 4
- C. Antithrombin
- D. None of the above

11.C	12.D	13.B	14.A	15.B
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16. Which of the following is a direct thrombin inhibitor

- A. Rivaroxaban
- B. Fondaparinux
- C. Dabigatran
- D. Aspirin

17. Regarding Fondaparinux which of the following is correct.....

- A. It is a selective inhibitor of factor Xa
- B. It is given by SC. injection
- C. It has a long half life so given once daily
- D. All of the above

18. Which of the following is an oral inhibitor of factor Xa

- A. Heparin
- B. Rivaroxaban
- C. Fondaparinux
- D. Dabigatran

19. Which of the following can be alternative to heparin to treat patients with heparin-induced thrombocytopenia?

- A. Rivaroxaban
- B. Fondaparinux
- C. Enoxaparin
- D. Dabigatran

20. Argatroban competitively inhibits.....

- A. Factor II a
- B. Factor X a
- C. Factor VII a
- D. Factor IX

16.C	17.D	18.B	19.D	20.A
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21. Which of the following can be given orally.....:

- A. Argatroban
- B. Dabigatran
- C. Fondaparinux
- D. Heparin

22. Warfarin is

- A. Synthetic pent-saccharide
- B. Natural sulfated polysaccharide
- C. Synthetic coumarin compound
- D. None of the above

23. Regarding warfarin which of the following is correct...

- A. It has a low bioavailability
- B. It cannot cross BBB and placenta
- C. It has a rapid onset and short duration
- D. It is highly bound to the plasma proteins

24. Onset of warfarin is delayed for?

- A. 8-12 hours
- B. 3-7 hours
- C. 2-3 hours
- D. 5-6 hours

25. Warfarin dose should be decreased from the usual when administrated with.....

- A. Phenobarbital
- B. Oral antibiotics
- C. Oral contraceptives
- D. Aluminum hydroxide

21. B	22. C	23. D	24. A	25. B
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26. Which of the following decreases warfarin metabolism.....:

- A. Phenobarbital
- B. Cimetidine
- C. NSAIDs
- D. Aluminum hydroxide

27. All of the following inhibits warfarin except

- A. Phenobarbital
- B. Oral contraceptives
- C. Liquid paraffin
- D. Aluminum hydroxide

28. All of the following potentiates warfarin except

- A. Cimetidine
- B. Oral antibiotics
- C. NSAIDs
- D. Vitamin K

29. Warfarin acts by inhibiting.....?

- A. Vitamin K epoxide reductase enzyme
- B. Cytochrome P450 enzyme
- C. Carbonic anhydrase enzyme
- D. Cholinesterase enzyme

30. Vitamin K dependent clotting factors include.....?

- A. Factor II
- B. Factor VII
- C. Factor X
- D. All of the above

26. B	27. C	28. D	29. A	30. D
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**31. Antidote of warfarin is.....:**

- A. N-acetyl cysteine
- B. Vitamin K
- C. Protamine sulfate
- D. Aspirin

32. Warfarin therapy is monitored by.....

- A. APTT
- B. Bleeding time
- C. Prothrombin time (PT)
- D. Thrombin time (TT)

33. For controlling therapy with warfarin, INR is kept at.....times of its normal value?

- A. 1-2
- B. 2-3
- C. 3-4.
- D. 5-6

34. Adverse effects of warfarin include all of the following except.....

- A. Bleeding
- B. Teratogenicity
- C. Serious thrombosis on sudden withdrawal
- D. Alopecia

35. Bleeding associated with warfarin can be treated by administration of.....?

- A. Phytomenadione
- B. Protamine sulfate
- C. Dabigatran
- D. Rivaroxaban

36. Regarding warfarin all of the following is correct except.....?

- A. It is given orally
- B. It crosses the placenta and milk
- C. It acts in vivo and in vitro
- D. It has a delayed onset and long duration

31. B

32. C

33. B

34. D

35. A

36. C



- 1. Regarding fibrinolytics which of the following is correct.....:**
- A. They cause rapid activation of plasminogen to form plasmin.
 - B. They activate fibrin-bound plasminogen only
 - C. They are not useful in the treatment of pulmonary embolism
 - D. All of the above
- 2. Which of the following is a fibrin selective recombinant tissue plasminogen activator?**
- A. Streptokinase
 - B. Urokinase
 - C. Alteplase
 - D. Clopidogrel
- 3. Regarding streptokinase which of the following is correct.....**
- A. It is a protease originally isolated from urine
 - B. It is a fibrin-non selective plasminogen activator
 - C. It doesn't cause allergy as it is non antigenic
 - D. It acts on circulating plasminogen only
- 4. Regarding urokinase all of the following is correct except.....**
- A. It is a protease originally isolated from urine.
 - B. It is now prepared in recombinant form from cultured kidney cells.
 - C. It acts on both fibrin bound plasminogen & circulating plasminogen
 - D. It is more antigenic than streptokinase
- 5. Which of the following is less likely to cause bleeding.....**
- A. Streptokinase
 - B. Urokinase
 - C. Alteplase
 - D. None of the above

1. A

2. C

3. B

4. D

5. C



6. Which of the following can be used in acute coronary syndrome?

- A. Rivaroxaban
- B. Warfarin
- C. Abciximab
- D. Alteplase

7. Maximum benefit of fibrinolytic drugs in the treatment of acute coronary syndrome is obtained if treatment is given within

- A. 90 minutes
- B. 180 minutes
- C. 6 hours
- D. 12 hours

8. Antidote of fibrinolytic drugs is.....

- A. N-acetyl cysteine
- B. Protamine sulfate
- C. Aminocaproic acid
- D. Vitamin K

9. Systemic bleeding due to fibrinolytic drugs can be stopped with.....

- A. N-acetyl cysteine
- B. Protamine sulfate
- C. Tranexamic acid
- D. Vitamin K

10. Which of the following inhibit COX-1 enzyme.....

- A. Abciximab
- B. Aspirin
- C. Clopidogrel
- D. Alteplase

6. D	7. A	8. C	9. C	10. B
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**11. Regarding Aspirin which of the following is correct.....:**

- A. At higher doses (> 325 mg/day), aspirin may increase endothelial synthesis of PGI₂
- B. Aspirin causes reversible inhibition of COX-1 enzyme
- C. Aspirin is used only for primary prevention of thromboembolic diseases
- D. Aspirin decreases platelet ADP synthesis

12. Aspirin should be stopped for..... before surgery

- A. 3-4 days
- B. 5-8 days
- C. 7-9 days
- D. 12-18 days

13. Which of the following is a platelet ADP receptors blocker.....

- A. Abciximab
- B. Clopidogrel
- C. Aspirin
- D. Enoxaparin

14. Clopidogrel is used for

- A. Treatment of cerebrovascular and cardiovascular disease
- B. Primary prevention of cerebrovascular and cardiovascular disease
- C. Secondary prevention of cerebrovascular and cardiovascular disease
- D. Tertiary prevention of cerebrovascular and cardiovascular disease

15. Which of the following blocks platelet glycoprotein IIb/IIIa receptor

- A. Abciximab
- B. Clopidogrel
- C. Aspirin
- D. Rivaroxaban

11.D

12.C

13.B

14.C

15.A



16. Regarding Abciximab all of the following is correct except.....:

- A. It is a monoclonal antibody
- B. It is administered orally
- C. It is effective during percutaneous coronary intervention (PCI)
- D. It blocks the final common pathway of platelet aggregation

17. Which of the following is a local hemostatic agent.....

- A. Vitamin K
- B. Aminocaproic acid
- C. Antihemophilic globulin
- D. Thrombin and thromboplastin powders

18. Which of the following is a systemic hemostatic agent?

- A. Heat
- B. Fibrin dried sheets
- C. Vitamin K
- D. Adrenaline nasal pack

19. Which of the following is an example of astringents?

- A. Aluminum sulphate.
- B. Tranexamic acid
- C. Thromboplastin
- D. Fibrin

20. Which of the following can be used to prevent hypofibrinemia of the newborn?

- A. Aminocaproic acid
- B. Vitamin K
- C. Alteplase
- D. Rivaroxaban

16.B	17.D	18.C	19.A	20.B
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21. Which of the following is used to prevent bleeding from tissues rich in plasminogen activators

- A. Aminocaproic acid
- B. Vitamin K
- C. Thromboplastin
- D. Adrenaline

22. Which of the following is used for prophylaxis of rebleeding from Intracranial aneurysm

- A. Vitamin K
- B. Tranexamic acid
- C. Thromboplastin
- D. Alteplase

23. All of the following are physical methods of hemostasis except...

- A. Pressure,
- B. Cooling
- C. Heat coagulation.
- D. Fresh blood transfusion

24. Vitamin K is used in all of the following except.....?

- A. To reverse bleeding episodes caused by overdose of warfarin or salicylates.
- B. To correct vitamin deficiency in patients receiving oral antibiotics.
- C. To prevent thrombosis in both cerebrovascular and cardiovascular diseases
- D. To prevent hypothermia of the newborn

21. A

22. B

23. D

24. C



- 1. Mechanism of action of glucocorticoids include all of the following except.....:**
 - A. Interfere with the cell cycle of activated T cells
 - B. Decrease production of T and B lymphocytes and macrophages,
 - C. Suppress inflammatory response
 - D. Activate complement system

- 2. Glucocorticoids suppress inflammatory response by inhibition of.....?**
 - A. Phospholipase A2.
 - B. Cyclooxygenase 1
 - C. Cyclooxygenase 2
 - D. Lipoxygenase

- 3. First-line immunosuppressive therapy for both solid organ and hematopoietic stem cell transplantation is.....**
 - A. Cyclosporine
 - B. Glucocorticoids
 - C. Azathioprine
 - D. Mycophenolate Mofetil

- 4. All of the following are side effects of glucocorticoids except.....**
 - A. Increased susceptibility to infection.
 - B. Osteoporosis
 - C. Decreased blood glucose levels
 - D. Electrolyte imbalances

- 5. All of the following are side effects of cyclosporine except**
 - A. Nephrotoxicity
 - B. Hepatotoxicity
 - C. Seizures
 - D. Alopecia

1. D

2. A

3. B

4. C

5. D



6. Regarding cyclosporine all of the following is correct except.....?

- A. Given intravenously or orally.
- B. Metabolized by the P450 3A enzyme system in the liver
- C. It is 10 to 100 times more potent than tacrolimus in inhibiting immune responses
- D. It is a peptide antibiotic

7. The cyclosporine-cyclophilin complex serves as an inhibitor on what component in the cytoplasm

- A. Calcineurin
- B. Neuricalcin
- C. MTOR
- D. None of the above

8. Tacrolimus binds with

- A. Cyclophilin
- B. Immunophilin FK-binding protein
- C. TNF-alpha
- D. None of the above

9. Regarding cyclosporine which of the following is correct

- A. It activates calcineurin
- B. It increases the synthesis of IL-2, IL-3
- C. It prevents the activation of NF-AT
- D. It prevents the activation of B-cell-specific transcription factor

10. Which of the following is a side effect of tacrolimus

- A. Hypoglycemia
- B. Hypokalemia
- C. Hypertrichosis
- D. Alopecia

6. C	7. A	8. B	9. C	10. D
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11. Which of the following is the prototype of the antimetabolite group of cytotoxic immunosuppressive drugs?

- A. Cyclosporine
- B. Glucocorticoids
- C. Azathioprine
- D. Mycophenolate Mofetil

12. Bone marrow suppression or toxicity is not an adverse effect of.....

- A. Cyclosporine
- B. Glucocorticoids
- C. Azathioprine
- D. Mycophenolate Mofetil

13. Azathioprine.....

- A. Interferes with purine nucleic acid metabolism and stops lymphoid cell proliferation
- B. Prevent activation of antigen receptor-induced differentiation of T cells
- C. Inhibit the functions of tissue macrophages and other antigen-presenting cells
- D. Suppress downstream release of inflammatory cytokines

14. Which of the following can be used in acute glomerulonephritis

- A. Cyclosporine
- B. Tacrolimus
- C. Azathioprine
- D. All of the above

15. Mycophenolate Mofetil

- A. Inhibits salvage pathway of purine synthesis
- B. Inhibit de novo pathway of purine synthesis.
- C. Inhibits both de novo and salvage pathway of purine synthesis
- D. None of the above

11. C	12. B	13. A	14. D	15. B
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16. Which of the following is used in refractory bronchial asthma

- A. Azathioprine
- B. Mycophenolate Mofetil
- C. Omalizumab
- D. Infliximab

17. Which of the following is used in Psoriasis

- A. Azathioprine
- B. Cyclosporine
- C. Mycophenolate Mofetil
- D. Omalizumab

18. Which of the following can be used in lupus nephritis

- A. Mycophenolate Mofetil
- B. Cyclosporine
- C. Tacrolimus
- D. Infliximab

19. Which of the following can be used in inflammatory bowel disease?

- A. Mycophenolate Mofetil
- B. Azathioprine
- C. Infliximab
- D. All of the above

20. Which of the following can be used in multiple sclerosis?

- A. Mycophenolate Mofetil
- B. Azathioprine
- C. Cyclosporine
- D. Tacrolimus

16.C	17.B	18.A	19.D	20.B
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21. Cyclosporine can be used in all of the following except.....:

- A. Cardiac transplants.
- B. Ocular graft-versus-host disease.
- C. Psoriasis.
- D. Acute glomerulonephritis

22. Adverse effects of azathioprine include.....

- A. Hepatic dysfunction
- B. Hypertension
- C. Nephrotoxicity
- D. Seizures

23. Which of the following blocks TNF-alpha from binding to its receptors on inflammatory cell surfaces?

- A. Omalizumab
- B. Infliximab
- C. Cyclosporine
- D. Azathioprine

24. Infliximab is used in all of the following except.....?

- A. Rheumatoid arthritis
- B. Psoriatic arthritis.
- C. Acute & chronic graft-versus-host disease in hematopoietic stem cell transplantation.
- D. Organ transplantation

25. Omalizumab is an.....?

- A. Anti-Ig M recombinant humanized monoclonal antibody
- B. Anti-Ig G recombinant humanized monoclonal antibody
- C. Anti-Ig A recombinant humanized monoclonal antibody
- D. Anti-Ig E recombinant humanized monoclonal antibody

21. D	22. A	23. B	24. C	25. D
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**26. Rho (D) antibody is.....:**

- A. Ig A
- B. Ig M
- C. Ig G
- D. Ig E

27. Rho (D) antibody should be administered withinafter delivery

- A. 72 hours
- B. 96 hours
- C. 5 days
- D. 7 days

26.C

27.A



1. Histamine is formed from the amino acid:

- A. Arginine
- B. Leucine
- C. Histidine
- D. Valine

2. Histamine is stored in.....?

- A. Eosinophils
- B. Mast cells
- C. Neutrophils
- D. Macrophages

3. Which of the following causes release of histamine from mast cells by Ca²⁺ dependent mechanism?

- A. Penicillin
- B. Morphine
- C. Tubocurarine
- D. Venoms

4. Morphine releases histamine from mast cells by.....

- A. Ca²⁺ influx and degranulation of mast cells.
- B. Displacement of histamine from storage granules
- C. Mast cell damage
- D. None of the above

5. Which of the following causes release of histamine from mast cells by displacement of histamine from storage granules?

- A. Penicillin
- B. Venoms
- C. Tubocurarine
- D. All of the above

1. C

2. B

3. A

4. B

5. C



6. Which of the following causes mast cell damage and release of histamine.....?

- A. Penicillin
- B. Morphine
- C. Tubocurarine
- D. Venoms

7. Which of the following releases histamine from mast cells as part of hypersensitivity reaction

- A. Penicillin
- B. Morphine
- C. Tubocurarine
- D. Venoms

8. Histamine functions in the CNS are related to

- A. Control of body posture
- B. Memory
- C. Appetite and satiety
- D. None of the above

9. Pharmacological effects of histamine include all of the following except.....

- A. Bronchoconstriction
- B. Decrease exocrine secretions
- C. Pain and itching
- D. Increase capillary permeability and fall of BP

10. Which of the following is a 2nd generation H1 blocker.....

- A. Diphenhydramine
- B. Clemastine
- C. Cyclizine
- D. Loratadine

6. D	7. A	8. C	9. B	10. D
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11. Which of the following is a 1st generation H1 blocker?

- A. Cetirizine
- B. Diphenhydramine
- C. Fexofenadine
- D. Ketotifen

12. Which of the following is a mast cell stabilizer.....

- A. Cromoglycate
- B. Loratadine
- C. Cetirizine
- D. Cyproheptadine

13. Regarding 2nd generation H1 blockers which of the following is correct.....

- A. They can cross BBB
- B. They are shorter in duration than first generation H1 blockers
- C. They are more potent than first generation H1 blockers
- D. They cause sedation and atropine-like actions

14. Loratadine causes all of the following except.....

- A. Relief of itching, pain and allergic response.
- B. Decrease capillary permeability and inflammatory edema induced by histamine
- C. Decrease bronchoconstriction and bronchial secretions
- D. Serotonin and alpha receptor blocking

15. Which of the following has an antiemetic action

- A. Loratadine
- B. Cyclizine
- C. Cetirizine
- D. Fexofenadine

11.B

12.A

13.C

14.D

15.B



16. All of the following H1 blockers causes sedation and atropine-like actions

except.....:

- A. Diphenhydramine
- B. Dimenhydrinate
- C. Fexofenadine
- D. Clemastine

17. Which of the following can be used in allergic rhinitis

- A. Diphenhydramine
- B. Loratadine
- C. Cetirizine
- D. All of the above

18. Which of the following can be used in motion sickness and vestibular

disturbances

- A. Loratadine
- B. Diphenhydramine
- C. Cetirizine
- D. All of the above

19. Which of the following can be used in carcinoid syndrome?

- A. Cyclizine
- B. Loratadine
- C. Cetirizine
- D. Ketotifen.

20. Which of the following is an adverse effect of loratadine?

- A. Sedation
- B. Atropine-like action
- C. Prolonged QT interval
- D. Orthostatic hypotension

16.C	17.D	18.B	19.A	20.C
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21. Which of the following inhibit Ca²⁺ influx into mast cells and prevent mast cell degranulation

- A. Loratadine
- B. Ketotifen
- C. Diphenhydramine
- D. Cyclizine

22. 2nd generation H1 blockers shouldn't be given in patients with.....

- A. Liver diseases
- B. Renal diseases
- C. Cardiac diseases
- D. Respiratory depression

23. When 2nd generation H1 blockers are given with drugs that inhibit CYP450, they cause.....?

- A. Excitation and convulsions
- B. Atropine-like action
- C. Torsade de pointes
- D. Orthostatic hypotension

24. Regarding 1st generation H1 blockers which of the following is correct.....?

- A. They can cross BBB
- B. They decrease capillary permeability and inflammatory edema induced by histamine
- C. They can cause excitation and convulsions in children after toxic doses.
- D. All of the above

21. B

22. A

23. C

24. D