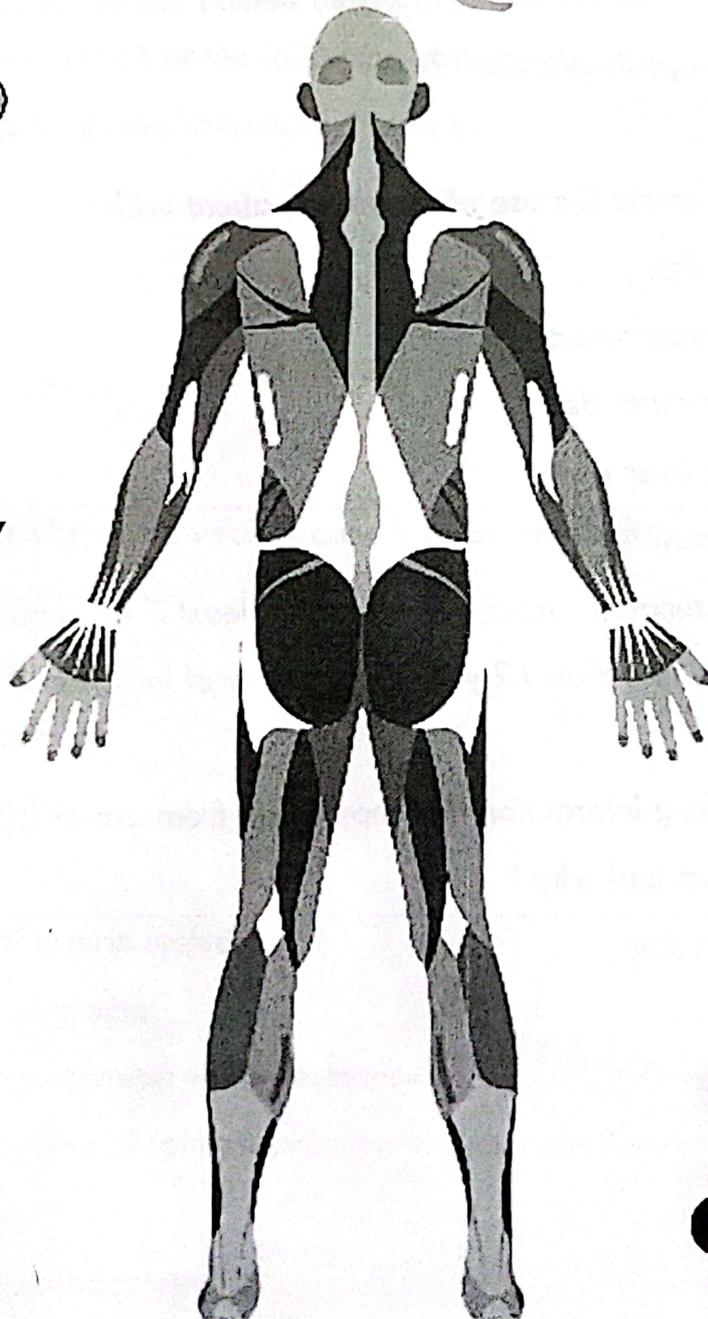
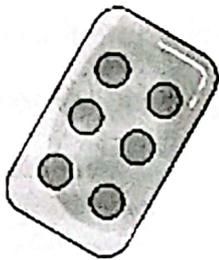


LEVEL 1 - SEMESTER 2

PHARMACOLOGY

MSK

MCQ 1



Dr. M. M.

1. Mention MOA of aspirin ?
2. Enumerate 4 side effects of aspirin ?
3. Enumerate 4 contraindication of aspirin ?
4. Compare between non selective and selective COX inhibitors or compare between aspirin and celecoxib ?
5. Mention MOA and side effects of paracetamol and acetaminophen ?
6. Explain the pharmacodynamic principle behind the use of sodium bicarbonate in treatment of aspirin overdose ?

7. Give reason , avoid the use of aspirin in patient with :
 - A. Peptic ulcer
 - B. Sever hypertension
 - C. Chronic renal dse
 - D. Chronic liver dse
 - E. Pregnancy
 - F. Before surgery , must be stopped at least 7 days before surgery
 - G. Children less than 12 years and has viral infection

8. Mention the drug interaction that may result from use of aspirin with the following drugs and why ?
 - a. Beta blocker
 - b. Warfarin
 - c. antacids

<p>1. All of the following are undesirable effects of aspirin EXCEPT:</p> <ul style="list-style-type: none">a) Gastritis with focal erosionsb) Tolerance and physical addictionc) Bleeding due to a decrease of platelet aggregationd) Reversible renal insufficiencye) Rye syndrome	B
<p>2. A 52-year-old man with chronic low back pain. He is complaining from severe hyperacidity. Which of the following agents may improve his pain without worsening his gastrointestinal symptoms?</p> <ul style="list-style-type: none">(A) Aspirin(B) Celecoxib(C) Ketorolac(D) diclofenac(E) Indomethacin	B
<p>3. Use of aspirin in children with viral disease is associated with:</p> <ul style="list-style-type: none">A. Metabolic acidosisB. Reye's syndromeC. Renal tubular acidosisD. Fixed drug eruptionE. Ototoxicity	B
<p>4. Therapeutic uses of aspirin include:</p> <ul style="list-style-type: none">A. Prophylaxis of migraine.B. Treatment of hypertension with pregnancy.C. Prevent the progress of joint destruction in rheumatic fever.D. Delayed labourE. Treatment of thrombocytopenia	C

<p>5. As regards selective COX-II inhibitors, which of the following is TRUE.</p> <ul style="list-style-type: none">A. May decrease incidence of thrombosis.B. Has less anti-inflammatory effect than the non-selective COX inhibitors.C. Are relatively safer than non-selective.D. Produce similar gastric mucosal damage.E. Has greater antipyretic effect	<p>C</p>
<p>6. What is the mechanism of action of ibuprofen?</p> <ul style="list-style-type: none">A. Non selective of COX enzyme inhibitorB. Selective Cox -2 inhibitorC. Phospholipase A2 inhibitorD. Lipooxygenase enzyme inhibitorE. Kallikrein system inhibitor	<p>A</p>
<p>7. Which of the following property combinations is peculiar to the majority of NSAIDs?</p> <ul style="list-style-type: none">A. Antihistaminic, antipyretic, analgesicB. Analgesic, immunodepressive, anti-inflammatory,C. Antipyretic, analgesic, anti-inflammatoryD. Anti-inflammatory, immunodepressive, antihistaminicE. Narcotic, analgesic, anti-inflammatory	<p>C</p>
<p>8. Which of the following NSAIDs is a selective COX-2 inhibitor?</p> <ul style="list-style-type: none">A. PiroxicamB. IndomethacinC. CelecoxibD. DiclofenacE. Morphine	<p>C</p>

<p>9. One of the following is not a side effect shared by NSAIDs:</p> <ul style="list-style-type: none"> A. Physical dependence B. Gastrointestinal ulceration C. Hypersensitivity D. Nephropathy E. Nausea and vomiting 	A
<p>10. Ibuprofen does not reduce the synthesis of one of the following eicosanoids:</p> <ul style="list-style-type: none"> A. TXA₂ B. PGE₂ C. PGF_{2α} D. LTB₄ E. PGI₂ 	D
<p>11. Which one of the following statements concerning Cox-2 inhibitors is correct:</p> <ul style="list-style-type: none"> A. They show greater analgesic activity than traditional NSAIDs B. They show anti-inflammatory activity greater than traditional NSAIDs C. They decrease platelet aggregation D. They harm the stomach less than non-selective COX inhibitors E. They are cardio protective. 	D
<p>12. NSAID proposed to be acting via inhibition of COX-3 is:</p> <ul style="list-style-type: none"> A. Nimesulide B. Paracetamol C. Ketorolac D. Rofecoxib E. Aspirin 	B

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<p>13. Among NSAIDs aspirin is unique because it:</p> <ul style="list-style-type: none">A. Irreversibly inhibits its target enzymeB. Reduces the risk of colon cancerC. Reduces feverD. Selectively inhibits COX-2 enzymeE. Analgesic	<p>A</p>
<p>14. Aspirin is used in the prophylaxis of myocardial infarction because it results in:</p> <ul style="list-style-type: none">A. Inhibition of thromboxane synthetaseB. Inhibition of cyclooxygenase in plateletsC. Decreased serum lipidsD. Coronary steal phenomenonE. Coronary vasodilator	<p>B</p>
<p>15. Which of the following patient characteristics is a possible reason for the use of celecoxib in the treatment of arthritis?</p> <ul style="list-style-type: none">A. History of severe rash after treatment with a sulfonamide antibioticB. History of goutC. History of peptic ulcer diseaseD. History of type 2 DME. History of myocardial infarction	<p>C</p>
<p>16. Which of the following drugs inhibit platelet cyclooxygenase irreversibly?</p> <ul style="list-style-type: none">A. AlprostadilB. AspirinC. IbuprofenD. PrednisoloneE. Acetaminophen	<p>B</p>

<p>17. Which of the following statements is not true about NSAIDs?</p> <p>A. Acetyl salicylic acid is an irreversible inhibitor of COX enzyme.</p> <p>B. Acetyl salicylic acid reduces in vivo synthesis of prostaglandins.</p> <p>C. Its clearance is independent of plasma concentration</p> <p>D. Antiplatelet effect of low dose aspirin is related to pre-systemic COX inhibition</p> <p>E. Alkalization of urine increases aspirin excretion</p>	D
<p>18. The therapeutic efficacy of antihypertensive drugs is blunted by NSAIDS because they:</p> <p>A. Cause sodium excretion</p> <p>B. Increase the clearance of antihypertensive drugs</p> <p>C. Decrease the absorption of antihypertensive drugs</p> <p>D. Decrease the synthesis of vascular prostacyclin</p> <p>E. Cause nephropathy</p>	D
<p>19. Aspirin inhibits which of the following enzymes?</p> <p>A. Lipoprotein lipase</p> <p>B. Lipoxygenase</p> <p>C. Cyclooxygenase</p> <p>D. Phospholipase D</p> <p>E. Phospholipase A2</p>	C
<p>20. Which one of the following analgesic agents inhibits mainly COX in CNS?</p> <p>a) Morphine</p> <p>b) Paracetamol</p> <p>c) Ketorolac</p> <p>d) Acetylsalicylic acid</p> <p>e) Ibuprofen</p>	B

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a) Asp
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<p>21. The effect of aspirin on Cox enzyme is:</p> <ul style="list-style-type: none">a) Reversibleb) Irreversiblec) Selectived) Nonselectivee) Irreversible & nonselective	<p>F</p>
<p>22. The effect of indomethacin on Cox enzyme is:</p> <ul style="list-style-type: none">a) Reversibleb) Irreversiblec) Selectived) Irreversible & nonselective	<p>A</p>
<p>23. Aspirin could be used prophylactically in:</p> <ul style="list-style-type: none">a) pulmonary edemab) heart failurec) peptic ulcersd) thrombotic disordere. metabolic acidosis	<p>D</p>
<p>24. The effect of Ketoprofen on Cox enzyme is:</p> <ul style="list-style-type: none">a) Reversibleb) Irreversiblec) Selectived) Irreversible & nonselective	<p>A</p>
<p>25. Which of the following analgesic is contraindicated to be taken in children with chickenpox or influenza?</p> <ul style="list-style-type: none">a) Meperidineb) Indomethacinc) Paracetamold) Pentazocinee) Aspirin	<p>E</p>

<p>26. The following statements concerning aspirin is FALSE:</p> <ul style="list-style-type: none"> a) Aspirin irreversibly inhibits COX enzymes b) Aspirin in toxic dose leading to Hyperthermia. c) Aspirin inhibits phospholipase A2. d) Aspirin inhibits thromboxane A2 formation. 	<p>C</p>
<p>27. Which one of the following statements concerning Cox-2 inhibitors is correct?</p> <ul style="list-style-type: none"> a) They show greater analgesic activity than traditional NSAIDs b) They show anti-inflammatory activity greater than traditional NSAIDs c) They increase platelet aggregation d) They don't harm kidney as do non-selective Cox inhibitors e) They are cardio protective athways.no COX-1 	<p>C</p>
<p>28. The cyclooxygenase isoenzymes COX-1 and COX-2 differ from each other in that:</p> <ul style="list-style-type: none"> a) They catalyse different pathways in prostanoid b) COX-1 is inhibited by aspirin but not COX-2 c) COX-2 is inhibited by ibuprofen but not COX-1 d) COX-1 is constitutive while COX-2 is largely inducible e) Cox-1 is inhibited by celecoxib but not COX-2 	<p>D</p>
<p>29. One of the following is an example of acetic acid derivatives of NSAIDs:</p> <ul style="list-style-type: none"> a) Ibuprofen b) Acetaminophen c) Piroxicam d) Celecoxib e) Diclofenac 	<p>E</p>

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30. One of the following is selective inhibitor of COX3 enzyme:

- a) Meloxicam.
- b) Acetaminophen.
- c) Piroxicam.
- d) Sulindac.
- e) Celecoxib.

B

31. As regards selective COX-2 Inhibitor:

- a) May increase incidence of thrombosis.
- b) Has less anti-inflammatory effect than the non-selective COX inhibitors.
- c) Are relatively safer than non-selective.
- d) Produce similar gastric mucosal damage.
- e) Has greater antipyretic effect

A

32. Which of the following is an analgesic and antipyretic drug that lacks an anti-inflammatory action?

- a) Acetaminophen
- b) Celecoxib
- c) Colchicine
- d) Indomethacin
- e) Probenecid

A

33. Inflammation is a complex tissue reaction that includes the release of cytokines, leukotrienes, prostaglandins, and peptides. Prostaglandins involved in inflammatory processes are typically produced from arachidonic acid by which of the following enzymes?

- (A) Cyclooxygenase-1
- (B) Cyclooxygenase-2
- (C) Glutathione-S-transferase
- (D) Lipoxygenase
- (E) Phospholipase A2

B

<p>34. The pharmacologic effects of acetylsalicylic acid include:</p> <ul style="list-style-type: none"> a. Reduction of high body temperature b. Promotion of platelet aggregation c. Reduction of pain by stimulation of PGs synthesis d. Less gastric irritation than other NSAIDS e. Promotion of diuretic effect of furosemide 	A
<p>35. One of the following is an example of acetic acid derivatives of NSAIDs:</p> <ul style="list-style-type: none"> a. Ibuprofen b. Acetaminophen c. Piroxicam d. Celecoxib e. Indomethacin 	E
<p>36. Non-steroidal anti-inflammatory drugs reduce the diuretic action of furosemide by:</p> <ul style="list-style-type: none"> a. Preventing prostaglandin mediated internal hemodynamic actions b. Blocking its action in ascending limb of loop of Henle. c. Enhancing salt and water reabsorption in distal tubule. d. Increasing aldosterone secretion. e. Blocking Na channel in the distal tubule 	A
<p>37. A 17-year-old patient complains of wheezing and severe dyspnea whenever he takes aspirin for headache. Which of the following agents may be responsible for this complains?</p> <ul style="list-style-type: none"> a. Prostaglandins. b. Thromboxanes. c. Leukotrienes. d. Endothelins e. Kinins. 	C

38. Aspirin overdose is characterized by a syndrome of:

- a) Bone marrow suppression and possibly aplastic anemia.
- b) Fever, hepatic dysfunction, and encephalopathy.
- c) Hyperthermia, tachypnea, metabolic acidosis, and coma.
- d) Rapid, fulminant hepatic failure.
- e) Rash, interstitial nephritis and acute renal failure.

C

39. Which one of the following can increase platelet aggregation?

- a) Ketanerine
- b) Meloxicam.
- c) Sulphinpyrazone.
- d) Aspirin.
- e) Epoprostenol.

B

40. When aspirin is given concomitantly with other drug the following interaction may occur:

- a. Potentiating the diuretic effect of furosemide.
- b. Potentiating of anticoagulation effect of warfarin.
- c. Increase uricosuric effect of probenecid
- d. Increase antihypertensive effect of B-blockers.
- e. Decrease free plasma level of phenytoin.

B

41. Which statement below is accurate regarding aspirin overdose?

- A. N-acetylcysteine should be given immediately
- B. The metabolism rate of aspirin is first-order
- C. Elimination rate is directly proportional to plasma concentration.
- D. Increasing urinary pH would be beneficial
- E. Plasma concentrations decrease exponentially with time

D

<p>42. The distinctive feature of the isoenzyme cyclooxygenase-2 is:</p> <p>A. It is not inhibited by indomethacin</p> <p>B. It is inducible</p> <p>C. It generates cytoprotective prostaglandins in gastric mucosa</p> <p>D. It is found only in fetal tissues</p>	B
<p>43. Selective COX-2 inhibitors differ from nonselective COX-1/COX-2 inhibitors in that they:</p> <p>A. Are anti-inflammatory but not analgesic</p> <p>B. Do not bring down fever</p> <p>C. Have no renal effects</p> <p>D. Do not inhibit platelet aggregation</p>	D
<p>44. Aspirin is contraindicated in children suffering from influenza or similar viral infection because of increased risk of:</p> <p>A. Gastric bleeding</p> <p>B. Thrombocytopenia</p> <p>C. Fancony syndrome</p> <p>D. Reye's syndrome</p>	D
<p>45. Choose the action for which the dose of aspirin required is the lowest:</p> <p>A. Analgesic</p> <p>B. Antipyretic</p> <p>C. Anti-inflammatory</p> <p>D. Antiplatelet aggregatory</p>	D
<p>46. The constellation of adverse effects associated with nonsteroidal anti-inflammatory drugs include the following except:</p> <p>A. Sedation</p> <p>B. Gastric irritation</p> <p>C. Fluid retention</p> <p>D. Rashes</p>	A

<p>47. The following nonsteroidal anti-inflammatory drug is a preferential cyclooxygenase-2 (COX-2) inhibitor:</p> <ul style="list-style-type: none"> A. Tenoxicam B. Meloxicam C. Diclofenac sod. D. Ketoprofen 	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">51. The tox A. Incre n Incre</p> <p style="text-align: center;">B</p>
<p>48. The selective COX-2 inhibitors have the following advantage(s) over the nonselective NSAIDs:</p> <ul style="list-style-type: none"> A. They are less likely to cause gastric ulcers and their complications B. They are likely to be more effective in rheumatoid arthritis C. They are not likely to produce renal complications D. All of the above 	<p style="text-align: center;">A</p>
<p>49. Indication for aspirin administration are the following, EXCEPT:</p> <ul style="list-style-type: none"> a) Inflammatory conditions b) Decreasing the incidence of transient ischemic attack, unstable angina, coronary artery thrombosis with myocardial infarction, and thrombosis after coronary artery bypass. grafting c) Relieving severe visceral pain (myocardial infarction, cancer pain condition, renal or biliary colic) d) Reducing elevated body temperature 	<p style="text-align: center;">C</p>
<p>50. The following statements about aspirin are correct EXCEPT:</p> <ul style="list-style-type: none"> A. May cause GIT hemorrhage after a single dose B. Enteric-coated tablets cause less gastric bleeding C. May cause metabolic alkalosis in high doses D. May cause Rye's syndrome in children E. Its toxicity may require treatment with hemodialysis 	<p style="text-align: center;">C</p>

<p>51. The toxicity spectrum of aspirin does not include:</p> <ul style="list-style-type: none"> A. Increased risk of encephalopathy in children with viral infections B. Increased risk of peptic ulcers C. Hyperprothrombinemia D. Metabolic acidosis E. Respiratory alkalosis 	<p>C</p>
<p>52. The action of aspirin that results in its greater efficacy as an antithrombotic (anti-platelet) drug is its ability to:</p> <ul style="list-style-type: none"> A. Inhibit lipooxygenase as well as cyclooxygenase B. Selectively inhibit cyclooxygenase I C. Inhibit leukocyte migration D. Promote uric acid excretion E. Acetylate cyclooxygenase 	<p>E</p>
<p>53. Potential adverse effects associated with aspirin include all of the following EXCEPT:</p> <ul style="list-style-type: none"> A. Gastrointestinal ulceration B. Renal dysfunction C. Enhanced methotrexate toxicity D. Cardiac arrhythmias E. Hypersensitivity asthma 	<p>D</p>
<p>54. What is the mechanism of action of ibuprofen?</p> <ul style="list-style-type: none"> a) Kallikrein system inhibitor b) Lipooxygenase enzyme inhibitor c) Nonselective COX enzyme inhibitor d) Phospholipase A2 inhibitor e) Selective Cox-2 inhibitor 	<p>C</p>

55. Which of the following NSAIDs is a selective COX-2 inhibitor?

- a. Morphine
- B. Celecoxib
- C. Piroxicam
- D. Diciofenac
- E. Indomethacin

B

56. Which of the following Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) is a nonselective Cyclooxygenase (COX) inhibitor?

- a) Celecoxib
- b) Diclofenac
- c) Methadone
- d) Morphine
- e) Rofecoxib

B