

**Q1 – Q6:**

-Patient suffering from depression was prescribed Drug (I) as antidepressant. After sometimes, he developed condition that require administration of narcotic analgesic Drug (II). Unfortunately, he went into coma to which Drug (III) was given promptly to reverse the condition. He was saved and then given a non-reacting narcotic analgesic instead of Drug (II).

**1-Drug (I) may be:**

- A-MAOI.                                      B-SSRI.                                      C-TCA.  
D-All of the above                                      E-None of the above.

**2-Drug (II) may be:**

- A-Morphine.                                      B-Meperidine.                                      C-Dextromethorphan.  
D- A or B.                                      E-None of the above.

**3-The coma seen may be due to :**

- A-Displacement of PPB of Drug (II) by Drug (I).  
B-Inhibition of metabolism of Drug (II) by Drug (I).  
C-Added CNS depressant effect of Drug (I) and Drug (II).  
D-Both A & B.                                      E-None of the above.

**4-On urine analysis of this patient:**

- A-Parent Drug (II) conc.is high.                                      B-Metabolites of Drug (II) are high.  
C-Parent Drug (I) is high.  
D-Metabolites of Drug (I) are high.                                      E-None of the above.

**5-Drug (III) may be:**

- A-Naloxone.                                      B-Corticosteroid.                                      C-Aspirin.  
D-A or B.                                      E-None of the above.

**6-It is recommended that:**

- A-The dose of Drug (II) be reduced.                                      B-The dose of Drug (I) be reduced.  
C-Such combination should be avoided.  
D-Both A & B.                                      E-None of the above.

**Q7 – Q11:**

-Match inertacting Drug from column (I) with its potential mechanism from column (II) .

-Transfer your selected match for each question properly to the answer sheet.

(I)	(II)
7-NSAIDs	A-Provide cofactors to nucleic acids in normal cells.
8-Leucovorine	B-Delay gastric emptying.
9-Nandrolone	C-Inhibition of metabolism.
10-Maprotiline	D-Decrease glomerular filtration and PGs formation.
11-Allopurinol	E-Displacement of PPB.

**Q12 – Q16:**

- Match DI from column (I) with its potential outcome from column (II).
- Transfer your selected match for each question properly to the answer sheet.

(I)	(II)
12-Phenylbutazone/Fluoxymesterone	A-Respiratory and CNS depression.
13-Morphine/Ethyl alcohol	B-Blood dyscrasias.
14-Narcotic analgesics/Butyrophenon	C-Uric acid retention;Prolonged prothrombin time.
15-Aspirin/Sulfinpyrazone	D-Fecal blood loss; Increased bleeding time.
16-Aspirin/Ethyl alcohol	E-None of the above.

**Q17 – Q21:**

- Match DI from column (I) with its potential mechanism from column (II).
- Transfer your selected match for each question properly to the answer sheet.

(I)	(II)
17-Codiene/Rifampin	A-Induction of metabolism.
18-Narcotic Analgesic/MAOI	B-Inhibition of metabolism.
19-Morphine/Omeprazole	C-Added CNS depression.
20-Propoxyphen/Ethanol	D-Inhibition of metabolism; Increased 5-HT.
21-Probenecid/Bezafibrate	E-Displacement of PPB;Inhibition of tubular secretion.

**Q22 – Q26:**

-Pregnant woman with hypertension was prescribed Drug (I) for mangment of high blood pressure. While on Dug (I) for sometimes, she took Drug (II) as OTC-nasal decongestant. Then, she developed hypertensive crisis that mandate transfer to hospital where she was give Drug (III) to decrease her elevated blood pressure and save her pregnancy.

22-Drug (I) may be:

- A-Clonidine.
- B-Atenolol.
- C-Alpha methyl dopa.
- D-All of the above.
- E-None of the above.

23-Drug (II) may be:

- A-Pseudoephedrine.
- B-Norepinephrine.
- C-Timolol.
- D-Aspirin.
- E-None of the above.

24-The developed hypertensive crisis may be due to:

- A-Antagonistic beta -2 receptor activity.
- B-Added alpha-1 agonistic activity.
- C-Blockade of alpha-2 receptor activity.
- D-All of the above.
- E-None of the above.

25-Drug (III) may be:

- A-Diuretic.
- B-Hydralazine.
- C-Beta adrenoceptor blocker.
- D-All of the above.
- E-None of the above.

26-It is recommended that :

- A-Combination of Drug (I) and (II) should be avoided.
- B-The dose of Drug (II) be reduced.
- C-The dose of Drug (I) be increased.
- D-All of the above.
- E-None of the above.

**Q27 – Q31:**

- Match DI from column (I) with its potential outcome from column (II).
- Transfer your selected match for each question properly to the answer sheet.

(I)	(II)
27-Adrenergic neuronal blocker/ Inhalational anesthetic	A-Hypertensive crisis.
28-Clonidine withdrawal/Non selective beta blocker	B-Decreased antihypertensive effect.
29-ACEI/NSAID	C-Severe hypotension.
30-Cyclophosphamide/Xanthine Oxidase Inhibitor	D-Anorexia; Weight loss; Bloody diarrhea.
31-Methotrexate/Probenecid	E-Leukopenia; Thrombocytopenia.

**Q32- Q35:**

- Match DI from column (I) with its potential type of interaction from column (II).
- Transfer your selected match for each question properly to the answer sheet.

(I)	(II)
32-Methotrexate/Leucovorine	A-Pharmacokinetic.
33-Beta blockers/Calcium salts	B-Pharmacodynamic.
34-Propranolol/Oral contraceptives	C-Mixed pharmacokinetic/dynamic
35-Propranolol/Barbiturates	D-Pharmaceutical.
	E-None of the above.

**36- Drugs that interfere with L-thyroxin absorption include:**

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|----------------|--------------------|
| A- Amiodarone  | B- Ferrous sulfate |
| C- Propranolol | D- Lithium         |

**37- .....is an anticonvulsant that can be used safely with L-thyroxin without interactions.**

- |                  |              |
|------------------|--------------|
| A- Gabapentin    | B- Primidone |
| C- Carbamazepine | D- Valproate |

**38- Patients on L-thyroxin may experience tachycardia and tremors if received:**

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|-------------------------------|------------------|
| A- Aluminum hydroxide antacid | B- Ciprofloxacin |
| C- Propranolol                | D- Amiodarone    |

**39- Hypothyroid patients require higher doses of:**

- |                 |            |
|-----------------|------------|
| A- Theophylline | B- Digoxin |
| C- Warfarin     | D- Lithium |

**Q 40– Q 43:**

- Match DI from column (I) with its potential outcome from column (II).
- Transfer your selected match properly to the answer sheet.

(I)	(II)
40- Prednisolone/Bupropion	A- Cushing syndrome.
41- Prednisolone/Vegabatin	B- Increased nephrotoxicity.
42- Budesonide/Itraconazole	C-Increased risk of vision loss.
43- Cyclosporin/Gentamicin	D-Additive epileptogenic effect.

**Q 44 – Q 47:**

- Match DI from column (I) with its potential mechanism from column (II).
- Transfer your selected match properly to the answer sheet.

(I)	(II)
44- St Jones wart/Cyclosporin	A- Inhibition of metabolism.
45- Ketoconazole/Cyclosporin	B- Induction of metabolism
46- Prednisolone/Bupropion	C-Pharmacological antagonism.
47- Thiazide/Allopurinol	D-Pharmacological synergism
<b>48- Concerning enalapril/cyclosporin, which of the following is correct:</b>	
A- Additive hypokalemia may occur.	
B- Acute renal failure may occur.	
C- Enalapril decreases cyclosporin metabolism	
D- Enalapril increases the absorption of cyclosporin	
<b>49- ..... is a safe antiarrhythmic for treatment of digoxin induced arrhythmia.</b>	
A- Quinidine	B- Amiodarone
C- Procainamide	D- Triamterene
<b>50- .....is an example of time dependent interaction.</b>	
A- Digoxin\ Carvidolol	B- Digoxin\Quinidine
C- Digoxin\Diltiazem	D- Digoxin\Verapamil
<b>51- Concerning digoxin\amiodarone interaction, which of the following is correct:</b>	
A- Cardiac arrhythmia may occur	
B- It is dose dependent interaction	
C- Amiodarone impairs the metabolism of digoxin	
D- Digitoxin can be used safely with amiodarone	
<b>52- Digoxin toxicity may occur due to interaction with:</b>	
A- Rifampicin	B- Valproate
C- Furosemide	D- Neomycin
<b>53- .....is the most suitable diuretic that can be used with digoxin.</b>	
A- Thiazide	B- Triamterene
C- Furosemide	D- Spironolactone
<b>54- .....is the most suitable calcium channel blocker that can be used with digoxin.</b>	
A- Amlodipine	B- Verapamil
C- Diltiazem	D- Captopril
<b>55- Which of the following patient conditions require serum digoxin monitoring?</b>	
A- Hepatic impairment	
B- Renal dysfunction	
C- Patients receiving phenytoin with digoxin	
D- Patients receiving enalapril with digoxin	
<b>56- Concerning propranolol\lidocaine interaction, which of the following is correct.</b>	
A- Lidocaine leads to propranolol toxicity	
B- Propranolol decreases lidocaine metabolism due to decreased hepatic flow	
C- Propranolol decreases lidocaine excretion due to decreased renal blood flow	
D- Lidocaine inhibits propranolol metabolism	
<b>57- Lithium toxicity can occur due to:</b>	
A- Hypokalemia	B- Hyperkalemia
C- Sodium restricted diet	D- Sodium rich diet

**58- Concerning aspirin\methotrexate, which of the following is correct:**

- A- Aspirin decrease myelosuppression effect of methotrexate
- B-It is an example of pharmacological antagonism
- C- Aspirin impairs the excretion of methotrexate
- D- Aspirin decreases the absorption of methotrexate

**59-Regarding indomethacin\lithium, which of the following is correct:**

- A- Tremors and dyskinesia may occur.
- B- Indomethacin competes with lithium for active tubular renal secretion.
- C- Indomethacin inhibits lithium metabolism
- D- Indomethacin impairs lithium absorption

**60- .....is used to treat salicylate toxicity.**

- A- Ascorbic acid
- B- Ammonium chloride
- C- Sodium bicarbonate.

\*\* A 34 year-old woman who was stabilized on 2 mg warfarin therapy and she wishes now to start a contraception program. After consultation with the pharmacist in her community, he advised the woman with combined oral contraceptive (OCS) pills Microsept® (Ethinylestradiol 50 mcg plus levonorgestrel 0.15 mg)

**61. Which of the following will take place ?**

- A. The woman may be at risk for bleeding
- B. The woman may at risk to develop deep venous thrombosis
- C. Microsept ® is a good choice
- D. The woman may be at risk for contraceptive failure

\*\* A 49 year- old woman with a past medical history of deep venous thrombosis (DVT) on left leg. She was initially treated by subcutaneous heparin 5000 IU daily for two days and then shifted to warfarin 3 mg daily with good INR value of 2.3. Six months later, the woman returned back to the hospital since she accidentally bumped her arm on the side of the bed and immediately developed a large and ugly bruise. The physician ordered the state of PT that revealed INR value of 4.5. Her medical history over the past six months was serteraline 50 mg/day three weeks ago for depression, Fluconazole (150 mg/weekly for 6 weeks) one month ago for her valvovaginitis and colistipol 500 mg two times one week ago for her ulcer.

**62. Which of the following resulted in elevated INR value for this patient?**

- A. Serteraline
- B. Cloistipol
- C. Fluconazole

**63. The drug you select above results in hyperprothrombenemia via:**

- A. Inhibition of vitamin K absorption
- B. Increase of warfarin absorption
- C. Accumulation of R-warfarin
- D. Inhibition of warfarin metabolism

\*\* A 51 years-old patient on oral hypoglycemic sulfonylurea gliclazide 80 mg twice daily. The treating physician added warfarin 3 mg daily secondary to a suspected coagulation disorder.

**64. In this context, concurrent use of both drugs may expose the patient to:**

- A. Increase his gliclazide dose
- B. Increase his warfarin dose
- C. Use IV solution of 5% glucose+ 0.9 % sodium chloride solution
- D. Nothing since there is non-significant interaction

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\*\* A 55 year-old patient with grand mal epilepsy and DVT for which he was stabilized on valproic acid 200 mg three times daily and warfarin 5 mg once daily. After good response towards his therapy, the patient starts to complaints from abnormal events.

**65. These abnormal events that annoy the patient may be:**

- A. Black stool and haematuria  
B. Tinge yellow colour of his eyes and skin  
C. Increased seizure frequency  
D. DVT
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\*\* A 56 years old woman on warfarin therapy for atrial fibrillation with mild mitral stenosis appears to become resistance to warfarin after previously good control on 5 mg daily. Her INR doesn't arise above 1.4 even when her warfarin dose is increased to 20 mg daily. Her physician asked her about any medication which might have been introduced recently, she said as she lives lonely, her mood is down and her neighbor gave her some cocktail of medicinal herb that improves mood. After investigation, the physician discovered that this herbal cocktail contains Saint John's wart.

**66. Which of the following is correct about the case mentioned above?**

- A. It is recommended to replace Saint John's wart by flouxetine  
B. It is recommended to augment warfarin dose to address INR  
C. Low INR value is due induction of warfarin metabolism by Saint John's wart  
D. Immediate good INR will be achieved one day after stopping of Saint John's wart
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\*\* A 66 years old man with a history of atrial fibrillation with regular rate and prior cerebral vascular accident was maintained on warfarin 2.5 mg daily (INR 2.6). A freind told him about ginsing as a mean of improoving cognitive function and one's overall sens of wellbeing. He decided to purchase some ginsing and took it as directed by the herbalist. Three weeks later on, he felt tingling sensation over the lower left side of his face. He called the ambulance and was transported to the emergency room. He was found to have a transient ischemic attack and his INR was only 1.6.

**67. Which is the main cause of the man ischemic attack?**

- A. Ginsing accelerates warfarin metabolism  
B. Ginsing inhibits clotting factors turn over  
C. Ginsing enhances conversion of S- warfarin to less potent R-isomer  
D. Ginsing appears to have some procoagulant effects
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\*\* Bob, a 65-year-old man with atrial fibrillation, has been using warfarin for the past 12 months after he presented to the local emergency department with signs of bleeding including bruising and epistaxis. INR value which measured this morning was 4.6. Bob also has hypertension and osteoarthritis. Medications history involves atenolol 50 mg once daily, ramipril 10 mg once daily, clofibrate 300 mg at night and warfarin 6 mg at night with occasional use of p-cetamol 500 mg when needed. On examination: BP 140/80 mmHg; pulse rate is 65.

**68. Which of the following drugs resulted in Bob' problem?**

- A. Atenolol  
B. Ramipril  
C. Clofibrate  
D. P-cetamol
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**69. The drug you select above provoked Bob' problem through:**

- A. Inhibition of vitamin K absorption  
B. Inhibition of warfarin metabolism and displaces it from PPB sites  
C. Inhibition of warfarin metabolism  
D. Acceleration of clotting factors turn over
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**70. A 71 years-old patient with pancreatic carcinoma starts warfarin therapy at lowest possible dose of 1 mg/day. In the context of drug disease interaction, select the true statement**

- A. This patient may show DVT due to increased warfarin turn over due to his cancer
  - B. This patient can continue his medication without significant problem
  - C. This patient may show bleeding secondary to increased clotting factor turn over
  - D. This patient may developed DVT due to increased expression of factor X activator
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**Examiners**

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