	<b>Tanta University - Faculty of Pharmacy</b>			
	<b>Department of Clinical Pharmacy</b>			
	<b>Final Examination For 4<sup>th</sup> year Pharmacy Students</b>			
<b>Course Title:</b> <b>Clinical Pharmacy</b>			<b>Course Code:</b> <b>5018</b>	
<b>March 17 2021</b>	<b>Term:</b> <b>First</b>	<b>Marks:150</b>	<b>Q:75 ; Pages: 9</b>	<b>Time: 2hr.</b>

**PART I: Prof. Sahar Hegazy QUESTIONS # 1-20**

(Question 1-4) A patient came to the emergency room suffering from knife-like epigastric pain radiating to the back with nausea and vomiting. His medical history showed that he has gallstones many years ago.

1-The suggestive diagnosis may be:

- A- Ulcerative colitis  
 B- Chronic pancreatitis  
 C- Crohn's diseases  
 D- Acute pancreatitis  
 E- Chemotherapy-induced nausea and vomiting.

2- The diagnosis is confirmed by:

- A- Laboratory tests involve high serum amylase.  
 B- Contrast computed tomography.  
 C- Endoscopic cholangiopancreatigraphy.  
 D- Laboratory tests involve high serum lipase  
 E- All of the above.

3- Concerning the nutrition of the previous case

- A- Enteral or parenteral nutrition  
 B- Oral food or liquids should be withholding  
 C- Small and frequent meals and a diet restricted in fat  
 D- Both A&B

4- Treatment of the previous case

- A- Ribavirin  
 B- Somatostatin  
 C- 30,000 IU of lipase  
 D- Salfasalzine

(Question 5-8) A patient suffers from abdominal pain, diarrhea, fistula, blurred vision and arthritis.

5-The primary diagnosis may be:

- A- Acute pancreatitis  
 B- Chronic pancreatitis  
 C- Ulcerative colitis  
 D- Crohn's disease.  
 E- None of the above.

6- Concerning the smoking effect on the previous case

- A- Protective  
 B- Precipitating factor  
 C- No effect

7- The diagnosis is confirmed by:

- A- X-ray shows involvement of the small intestine.  
 B- Decreases hematocrit value.  
 C- Increased serum amylase level.  
 D- Decreased hemoglobin concentration.  
 E- Surgical examination of the pancreas.

8- Concerning treatment this condition:

- A- Surgery is the first line of therapy.  
 B- There is greater reliance on drug therapy more than surgery.  
 C- Severe cases treated with octreotide 0.1 mg S.C every 8 hours.  
 D- 30,000 IU of lipase capsule is recommended to be given with each meal.  
 E- None of the above.

**9- Concerning liver injury in case of HAV infection:**

- A- It occurs as a result of interruption in bilirubin metabolism and flow.
  - B- It results from elevated gamma-globulin and aminotransferases to about twice normal.
  - C- It is caused by the replication effect of the virus in the hepatocytes.
  - D- It is caused by the effect of cytolytic T-lymphocytes which cause cell destruction.
  - E- All of the above
- 

**10- Treatment of HAV infection is primarily:**

- A- Supportive as the disease is self-limited.
  - B- Medical using interferon or lamivudine.
  - C- Surgical involve liver transplantation.
  - D- All of the above.
  - E- None of the above.
- 

**11- Concerning IgM antibodies detected in the serum of HAV infected person:**

- A- It indicate recent infection
  - B- It indicate not recent infection
  - C- It persists throughout life and confers immunity to HAV.
  - D- Both B & C
  - E- All of the above
- 

**12-Concerning vaccine to prevent HAV infection:**

- A- It is useful in preventing secondary infection in household contacts of infected cases of HAV
  - B- The primary vaccination is a single dose, with a booster dose 6 to 12 months later
  - C-It can be given at the same time as other vaccines.
  - D- Its side effects include local reactions at the injection site (IM) and headache.
  - E- All of the above
- 

**13-Lab profile for HB vaccinated person is:**

- A- HBs Ag +ve, HBe Ag -ve, anti HBs +ve
  - B- HBs Ag -ve, HBe Ag -ve, anti HBs +ve
  - C- HBs Ag +ve, HBe Ag +ve, anti HBs +ve
  - D- None of the above
- 

**14- Concerning the use of interferon in treatment of HBV:**

- A- It shouldn't be taken to patients with ascitis and cirrhosis
  - B- It shouldn't be taken to patients with elevated ALT levels greater than five times the upper limit of normal
  - C- It's antiviral that alter viral replication
  - D- Both A&B
  - E- All of the above
- 

**15- Concerning lamivudine:**

- A- It act as immuno-modulator
  - B- It has more rapid response than that of IFN- $\alpha$ 2b.
  - C-Its main adverse effect is nephrotoxicity
  - D- Both B&C
  - E- All of the above
- 

**16-Concerning HCV, Individuals who have a weaker type 1 T-helper response**

- A- Clear HCV
  - B- Develop chronic infection
  - C- Develop complications
- 

**17- Concerning liver support systems**

- A- It provides specific liver functions until liver transplantation is performed.
  - B- It uses albumin to remove toxins as bile acid and bilirubin from the bloodstream.
  - C- It improves the maintenance of electrolytes, acid-base and fluid balance
  - D- All of the above
- 

**18-Concerning the process of pegylation**

- A- It increases the rate of S.C. absorption.
  - B- It decreases clearance
  - C- It allows less frequent administration
  - D- Both B&C
  - E- All of the above
-

**19-Concerning Peginterferon**

- A- It has fewer side effects than non pegylated versions
- B- It's given 3 times a week SC.
- C- It's contraindicated in neonates and infants.
- D- All of the above

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**20-Sofosbuvir alone has been assigned a Pregnancy Category**

- A- Category A
- B- Category B
- C- Category X

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**PART II: Dr. Dalia Afify QUESTIONS # 21-48**

**21- Concerning allergic rhinitis early response reaction, which of the following is correct:**

- A-It involves migration of eosinophils, neutrophils to nasal mucosa
- B- It is inflammatory response occur within 4-24h of the exposure to allergen
- C-  $\beta_2$ -agonists can effectively block the early phase reaction.
- D- Rhinorrhea, sneezing and itching usually occurs in the early phase reaction.

**22- Regarding Hay fever, which of the following is correct:**

- A- It usually causes chronic symptoms
- B- It occurs in response to dust
- C- It occurs in response to pollen grains
- D- It exists all the year

**23- Regarding chlorpheniramine maleate, which of the following is correct:**

- A- It is a long acting  $\beta_2$  agonist
- B- It does not cause sedation
- C- It is effective in treating sneezing and rhinorrhea
- D- It is effective in relieving nasal congestion

**24- Regarding Xylometazoline hydrochloride, which of the following is correct:**

- A- It usually cause drowsiness
- B- It has anticholinergic effects
- C- It is a long-acting nasal decongestant
- D- It is effective in treatment of asthma early response symptoms

**25- Concerning intranasal beclomethasone, which of the following is correct:**

- A- It decreases capillary permeability and nasal secretions
- B- It does not work effectively in nasal congestion
- C- It is effective in treatment of asthma early response symptoms
- D- Its side effects include dry mouth and blurred vision

**26- Intranasal antihistaminic includes:**

- A- Loratadine
- B- Azelastine
- C- Cyproheptadine
- D- Cromolyn sodium

**27- Concerning the use of Montelukast in allergic rhinitis, which of the following is correct:**

- A- It is approved for treatment of perennial rhinitis
- B- It is once daily topical treatment
- C- It is leukotriene receptor antagonist approved for age more than 2 years
- D- It is a mast cell stabilizer for treatment of seasonal rhinitis

**28- Regarding omalizumab, which of the following is correct:**

- A- It is a dilute antigen with increasing antigen concentration.
- B- It can be used as chewable tablets for children.
- C- It is used for non-responding severe persistent asthma.
- D- It may cause cardiac arrhythmia.

- 29- Hereditary  $\alpha$ 1-antitrypsin deficiency is risk factor of:**  
 A- Asthma  
 B- Chronic bronchitis  
 C- Emphysema  
 D- Allergic rhinitis
- 30- Concerning the role of oxidative stress in COPD, which of the following is correct:**  
 A- It inhibits protease activity  
 B- It damages proteins and lipids contributing to tissue damage  
 C- It is a protective defense mechanism in lung  
 D- It inhibits elastase activity.
- 31- Which of the following is correct concerning emphysema:**  
 A- It is pathological alveolar wall destruction and airspace enlargement.  
 B- It occurs in severe acute asthmatic exacerbations.  
 C- It leads to increasing gas exchange surface area.  
 D- It is a pathological hallmark in allergic rhinitis.
- 32- ..... are the inflammatory mediators in COPD**  
 A- IL-4  
 B- IL-13  
 C- IL-5  
 D- IL-8
- 33- ..... are the main inflammatory cells in COPD:**  
 A- TH2 lymphocytes  
 B- Eosinophils  
 C- Mast cells  
 D- Neutrophils
- 34- ..... is an ultra-long-acting  $\beta$ 2 agonist:**  
 A- Indacaterol  
 B- Salmeterol  
 C- Albuterol  
 D- Terbutaline
- 35- Regarding use of aminophylline in COPD, which of the following is correct:**  
 A- It produces bronchodilatation through increasing cGMP  
 B- It inhibits calcium influx into smooth muscle  
 C- It is used as MDI or DPI  
 D- It decreases mucus secretion
- 36- Regarding asthma late response reaction, which of the following is correct:**  
 A- It usually lasts approximately 1 hour after allergen exposure.  
 B- Corticosteroids can effectively block the late phase reaction.  
 C-  $\beta$ 2-agonists can effectively block the late phase reaction.  
 D- Nasal congestion usually occurs in the late phase reaction.
- 37- The cause of acute COPD exacerbations is:**  
 A- Cold weather  
 B- Respiratory tract infection  
 C- Stress  
 D- Exercise
- 38- Regarding the role of IL-13, which of the following is correct:**  
 A- It stimulates the production of IgE.  
 B- It activates eosinophil.  
 C- It stimulates mucus production.  
 D- It causes epithelial damage

39- .....can be used at home by patients with asthma to assess chronic therapy  
A- Spirometry  
B- Peak flow meter  
C- Sphygmomanometer  
D- Spacer device

40- Regarding the use of inhaled corticosteroids in asthma, which of the following is correct:

- A- It causes bronchodilatation through inhibition of phosphodiesterase enzyme
- B- It is used for rapid relief of acute asthmatic attack
- C- It should be started on low doses then doses are increased gradually
- D- It should be started on higher and more frequent doses and then tapered down

**(Q 41 – Q 45):** 18-years old female admitted to the hospital complaining from chest tightness, cough and whistling sound during expiration. The patient said that these symptoms occurred once every day in the last week and she awaked at night complaining of severe dyspnea 3 times last week. Spirometry results of this patient was FEV1 72%, FEV1\FVC 80% and the administration of albuterol caused an improvement of FEV1 of 14%.

41- The most probable diagnosis of the patient condition is:

- A- Asthma
- B- COPD
- C- Allergic rhinitis

42- According to the severity classification, the patient condition is:

- A- Mild
- B- Moderate
- C- Severe
- D- Very severe

43- The most probable risk factor for the patient condition is:

- A- Atopy
- B- Tobacco smoking

44- Which of the following drugs should be given to patient for rapid relief of her symptoms:

- A- Isoproterenol
- B- Loratidine
- C- Prednisone
- D- Montelukast

45- The drugs that may worsen the patient condition include:

- A- Fluticasone
- B- Aspirin
- C- Theophylline
- D- Digoxin

46- Concerning the use of albuterol in asthma, which of the following is correct:

- A- It reduces bronchial inflammation.
- B- It is used for acute relief of asthmatic attack.
- C- It blocks both early and late phase response of asthma.
- D- Its effect lasts for 12 hours.

47- Regarding zafirlukast use in asthma, which of the following is correct:

- A- It reduces inflammation and bronchoconstriction in asthmatic patients.
- B- It inhibits CYP3A4.
- C- Usually used 4 times daily.
- D- It inhibits leukotriene synthesis.

- 48- Regarding use of ipratropium bromide in COPD, which of the following is correct:
- A- Hoarseness is common side effect
  - B- It is a long-acting agent used only once daily
  - C- It causes bronchodilatation through decreasing cGMP.
  - D- It causes prostaglandin inhibition

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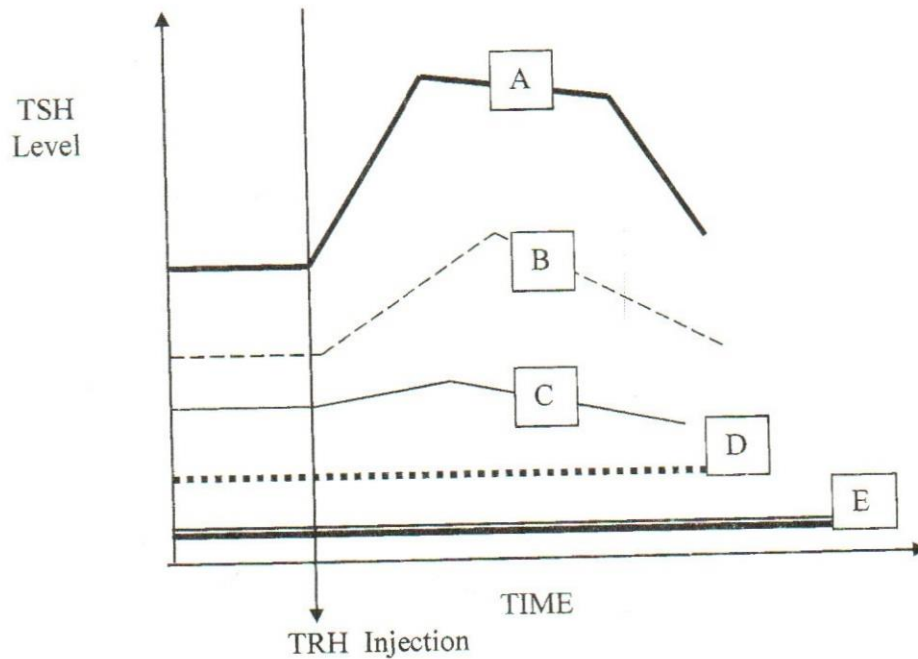
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**PART III: Prof. Osama Ibrahim**

**QUESTIONS # 49-75**

49. All of the following are diagnostic for hypothyroidism EXCEPT:
- A. Increased TSH
  - B. Decreased T3 and T4
  - C. Increased T3 and T4
  - D. Positive for antibodies
50. Patient suffering from heat intolerance, weight loss, tachycardia, and anxiety may be treated with:
- A- Acetaminophen
  - B- levothyroxine
  - C- Propylthiouracil
  - D- Diazepam
51. A.L. is 45 Y.O obese male with bradycardia, edematous eyelid, cold intolerance, constipation. The suspected laboratory data for this patient will include all of the following Except:
- A- Low T3 resin uptake
  - B- High level of TSH
  - C- High level of free T4 index
  - D- Low radioactive Iodine uptake
52. T3 resin uptake is an indirect measure of unsaturated TBG which its level increased in female patient taking oral contraceptive
- A. TRUE
  - B- FALSE
53. The curves representing a flat TSH response (zero level) in addition to a no response after external TRH administration indicating which of the followings:
- A. Tertiary Hypothyroidism
  - B. Hyperthyroidism
  - C. Euthyroid person
  - D. Primary Hypothyroidism
54. Effects of iodine on thyroid gland include all of the following EXCEPT:
- A. They inhibit thyroid hormone release
  - B. They block iodotyrosine synthesis
  - C. They decrease the vascularity of the thyroid gland.
  - D. Large doses may accentuate hyperthyroidism
  - E. All of the above
55. I.V. is a 70-year-old woman who was admitted to a hospital. I.V. has had hypertension for 3 years. He weighs 43.4 kg. Results of laboratory tests thyroid function tests: T<sub>4</sub> = 15 (5-12), RT<sub>3</sub>U = 30 (25-35), TSH = 15. The calculated Free thyroxin index for this patient equals:
- A. 4.5
  - B. 6.0
  - C. 1.3
  - D. 100
56. The curves representing a flat TSH response (zero level) in addition to a no response after external TRH administration indicating which of the followings:
- A. Tertiary Hypothyroidism
  - B. Hyperthyroidism
  - C. Euthyroid person
  - D. Primary Hypothyroidism

Use the diagram below to answer Q# 57-61 The curves represent the TSH response (level)



57. Hypothyroid patient on good thyroxin dose = curve ( )  
 58. Tertiary Hypothyroidism = curve ( )  
 59. Hyperthyroidism = curve ( )  
 60. Primary Hypothyroidism = curve ( )  
 61. Secondary Hypothyroidism = curve ( )

C.K. is a 62-year-old male who comes to clinic for a follow-up visit for multiple medical problems. He complains of increased fatigue, thirst, and urination. C.K. takes them according to the following schedule insulin: 7 AM = NPH 20 U & R 10 U; 7 PM = NPH 10 & R 5 U. Physical Examination revealed obese, cushingoid appearing male in no apparent distress. His VS T 37; BP 170/95; HR 88-regular; RR 20; Wt 100 kg; Ht 178 cm.

**Results of Laboratory Tests**

Na 141	BUN 53	WBC 12	Ca 7.8
K 4.0	Cr 3.6	Plts 198	PO4 6.1
Cl 109	Hct 33	Alb 3.4	MgP
HCO3 19	Hgb 11	<b>FBG 400</b>	Chol 250    TGL 160

Urinalysis: (++) Glucose; (+) Protein; (-) Ketones; (-) Crystals; (-) WBCs

Over the last few weeks, blood glucose recorded at home was as follows:

	7 AM	12 noon	7 PM	10PM
Mon	110	120	80	220
Tus	100	140	90	210
Wed	110	150	100	200
Thurs	110	160	90	215

**Questions:**

**62. According to C.K.'s FBG & daily glucose readings, which dose of insulin should be increased:**

- a) Increase AM regular and AM NPH
- b) Increase PM regular
- c) Increase PM NPH only
- d) Increase AM NPH only

**63. According to the answer in the above question, the type of insulin that should be used:**

- a) Regular
- b) NPH
- c) Glargine or Lent

**64. Over the last week, C.K. blood glucose recorded at the hospital while he was on both NPH and regular insulin for both am & pm injections, and was found to read as follows: At 7 AM, blood glucose = 110; while at 12 noon= 90; 6 PM reading = 250; 11PM= 100; accordingly, as a clinical pharmacist you should increase his:**

- a) Am NPH
- b) Am regular
- c) Pm NPH
- d) Pm regular

**65. All of the following are considered chronic complications of type 1 diabetes EXCEPT:**

- a) Diabetic Retinopathy
- b) Diabetic Nephropathy
- c) Diabetic ketoacidosis
- d) Diabetic Neuropathy
- e) None of the above

**66. Afrizza<sup>®</sup> can be used for which type of diabetes?**

- a) Type I
- b) Type II
- c) Both a & b
- d) Type I only

**67. Afrizza<sup>®</sup> is indicated in all of the following patient EXCEPT:**

- a) Smoker who stopped smoking for > one year
- b) Want to discontinue insulin injections with meals
- c) Need a rapid acting insulin
- d) COPD or asthmatic patient

**68. The Afrizza<sup>®</sup> inhaler can be used for up to 15 days from the date of first use; after 15 days of use, the inhaler must be discarded and replaced with a new inhaler**

- a) True
- b) False



70. The best strategy to help to prevent insulin to counteract rise in glucose following meals?  
a) Rapid insulin bolus  
b) Administer insulin patches

71. A 28-year-old female known to have type 1 diabetes is found unconscious by her roommate. She is tachycardic and diaphoretic. A finger stick measurement of her blood glucose is 45 mg/dL. Which of the following is BEST recommendation for management of this patient?  
a) Reduce insulin dose 25% and observe  
b) Administer glucagone 1 mg SQ  
c) Administer 8 oz. of fruit juice orally  
d) Administer propranolol to lower heart rate  
e) Identify the precipitating cause

72. Which statement regarding insulin therapy is true?  
a) Clear (regular) insulin should be mixed in the same syringe  
b) Regular insulin should be drawn up before NPH insulin when mixing  
c) NPH insulin should be drawn up before regular insulin when mixing  
d) Regular insulin should be administered intramuscularly

73. Non-pharmacologic management for patient with type 1 Diabetes includes:  
a) Diet  
b) Diet (sufficient caloric intake)  
c) Foot & eye care  
d) All of the above  
e) None of the above

74. Which of the following is characteristic of Somogyi effect?  
a) 3 am hypoglycemia  
b) Rebound morning hyperglycemia  
c) 4-8 am hyperglycemia  
d) Answer a & b are correct  
e) Answer c & d are correct

75. ALL of the following is characteristic of Dawn Phenomenon Except:  
a) A rise in blood glucose between 4-8 am  
b) Occurs in type 1, 2, and in normal individual  
c) It is due to increase in counter regulatory hormones  
d) All you need to do is to monitor blood glucose  
e) There is an increase in growth hormone level

76. Canagliflozin (Invokana) is a potent oral hypoglycemic drug that is usually dosed as 15 or 30 mg per day. This drug belong to which class:  
a) Sodium-glucose co-transporter 2 inhibitor  
b) IE  
c) BG  
d) AGI

END OF YOUR FINAL EXAM.... BEST WISHES