

Academic Half Day Guide for Learners
ITE High-Yield Review Questions

1. A 72-year-old man comes to your office after passing out. He has a 3/6 systolic ejection murmur in the LUSB. He has delayed and diminished carotid upstrokes and a delayed PMI. His echocardiogram shows aortic stenosis and a valve area of 0.9 cm². Which of the following do you recommend?
 - a) Referral for consideration of valve replacement
 - b) Referral for consideration of valve repair
 - c) Serial ECHOs twice annually
 - d) Antibiotic prophylaxis for dental procedures

2. A 46-year-old woman comes to you to discuss her recent echocardiogram done in follow up of rheumatic mitral regurgitation. She has a holosystolic murmur that radiates to the axilla. Her ejection fraction is 55%. Which of the following do you recommend?
 - a) Referral for consideration of valve replacement
 - b) Referral for consideration of valve repair
 - c) Serial ECHOs twice annually
 - d) Antibiotic prophylaxis for dental procedures

3. A 21-year-old comes to the office for evaluation of syncope while playing basketball. He is found to have a 3/6 harsh systolic ejection murmur at the base of the heart that decreases with squatting and increases with Valsalva. Which is the most likely diagnosis?
 - a) WPW
 - b) Ventricular Septal Defect
 - c) Atrial Septal Defect
 - d) Hypertrophic Obstructive Cardiomyopathy

4. You are called to the bedside of a patient with the rhythm strip below. They have a blood pressure of 120/80 and only complain of palpitations. Which of the following do you recommend?



- a) Direct current cardioversion
 - b) Diltiazem IV bolus
 - c) Metoprolol IV bolus
 - d) Amiodarone IV bolus and infusion
 - e) Verapamil IV bolus
5. A 32-year-old man presents to clinic with recurrent kidney stones. He also has high blood pressure with intermittent episodes of headache and flushing. His mother and maternal aunt have a history of thyroid cancer. What is the diagnosis?

- a) MEN1
- b) MEN2a
- c) MEN2b

6. A 20-year-old woman with T1DM presents to the ED with DKA. She has a glucose of 400 with anion gap metabolic acidosis. Normal saline & an insulin drip are initiated. Two hours later the following metabolic panel is obtained:

Na 140, K 4.8, Cl 100, CO₂ 16, BUN 30, Cr 1.3, Glucose 180
VBG pH 7.32 and pCO₂ 28

What is the next step in management?

- a) Continue current therapy & repeat BMP in 4 hours
- b) Stop the insulin drip & begin long acting insulin
- c) Change normal saline to ½ NS with dextrose & potassium and continue insulin drip.
- d) Stop normal saline & start fluids with dextrose

Bonus: What's the patient's acid base status?

7. A diagnostic paracentesis is performed on a woman with new onset abdominal distention. Which of the following is the most likely diagnosis?

Serum		Ascitic Fluid	
AST	68 U/L	WBC	89/cu mm
ALT	52 U/L	Diff	10% seg, 80% lymph
Albumin	3.2 g/dL	Protein	3.0 mg/dL
		Albumin	1.8 g/dL

- a) Ascites due to alcoholic cirrhosis
 - b) Tuberculous ascites
 - c) Ovarian cancer
 - d) Ascites due to cardiac disease
8. You are evaluating a 32-year-old woman for hypertension and hypokalemia. HTN was initially discovered by her gynecologist. Her oral contraceptives were discontinued, but her blood pressure remained elevated. Your evaluation reveals a blood pressure of 158/98 in arms bilaterally. Her BMI is 21. She has no abdominal bruits and no edema. No hirsutism is present. Renal duplex ultrasound shows normal vascular flow. In the next several visits, her blood pressure improves with the use of lisinopril and amlodipine. She takes no other medications or supplements. She denies headaches and flushing. Her serum sodium is 145 mEq/dL, potassium is 3.1 mEq/dL, and bicarbonate is 27 mg/dL. Which of the following is most likely in this case?
- a) Elevated 24-hour urine cortisol
 - b) Elevated serum aldosterone, plasma renin ratio
 - c) Elevated 24-hour urine metanephrines
 - d) Elevated plasma renin level

Bonus: Which other patients should you suspect secondary hypertension in?

Elevated BMI, headaches, fatigue	
Paroxysmal HTN, diaphoresis	
Elevated BMI, proximal muscle wasting, bruises	
Faint femoral pulses	
Cancer therapy class of meds	

9. A 26-year-old woman comes to your office for evaluation of tea colored urine. She has a history of SLE that has been quiescent while taking hydroxychloroquine for joint predominant symptoms. She complains of a sore throat and myalgia that began one day prior to the tea-colored urine. She denies fever, rash, oral ulcers, hair change and arthralgia. She is taking no other medication and has no other medical disease. She has a temperature of 99.8 F and a blood pressure of 155/95. Her urine shows 2+ protein and RBC casts. Her serum creatinine is 1.1 mg/dL. Serum complement levels are normal. Which of the following is the most likely diagnosis?
- a) Post-strep glomerulonephritis
 - b) IgA nephropathy
 - c) Lupus nephritis
 - d) Membranoproliferative glomerulonephritis

Low serum C3 and/or C4 levels	Normal serum C3/C4 levels

10. A 21-year-old college student develops diarrhea while on Spring break in Mexico. She has watery diarrhea with cramping but has no blood in the stool. Which of the following is the most likely?
- a) Salmonella sp.
 - b) Shigella sp.
 - c) Enterotoxigenic E. Coli
 - d) Campylobacter

Acute Diarrhea

Food poisoning 1-6 hours after eating	
Gas, bloating, flatulence, exposure to water	
AIDS, high volume stool, AFB+	
Returning traveler, non-bloody diarrhea	
Cruise ship, non-bloody diarrhea	
Undercooked chicken, pain, bloody diarrhea	
Acute inflammatory demyelinating polyneuropathy, bloody diarrhea	
Sick kid, bloody diarrhea	
Erythema nodosum, arthritis, bloody diarrhea	

Question 10 Continued

Chronic Diarrhea

Prior Roux-en-Y; gas, bloating, watery diarrhea	
Lower abdominal pain, alternating bowel habits	
Chronic diarrhea + itchy papules on elbows	
Steatorrhea, epigastric abdominal pain	
Old person with normal endoscopic appearance	
+hydrogen breath test	
History of cholecystectomy	
<100 cm TI removed	
>100 cm TI removed	
Fe, Folate, Vit D def	

11. A 26-year-old woman is on the ventilator for acute respiratory failure secondary to asthma exacerbation. The ventilator starts alarming for very high peak inspiratory pressures. An inspiratory hold reveals an elevated plateau pressure as well. What is the diagnosis?

- a) Mucus plug
- b) Bronchospasm
- c) Tension pneumothorax
- d) Biting on the tube

Normal plateau pressures	Increased plateau pressures

12. A 25-year-old man is evaluated for 2 months of joint pain. He currently complains of swelling in his right wrist, left knee and left second toe but is recovering from similar symptoms in his right shoulder and right knee. He awakens each morning with stiffness in the affected joints and back ache. He has taken ibuprofen 600 mg TID with little effect. He has no significant past medical history and denies rash, ocular symptoms, fever, or night sweats. He is afebrile and has synovial swelling and warmth in his right wrist and left knee. There is pain with passive range of motion. His left second toe is cylindrically swollen from base to tip and is tender. Which of the following information is needed in making this man's diagnosis?

- a) Antecedent diagnosis of *Chlamydia urethritis*
- b) Recent tick exposure
- c) Anti-streptolysin O titer
- d) Joint fluid analysis of the left knee

13. A 58-year-old man presents for SOB and DOE. Physical exam shows decreased breath sounds at the right base with dullness to percussion. He also has palmar erythema, spider angiomas and gynecomastia. His cardiac exam is normal.

Pleural Fluid		Serum	
LDH	110 mg/dL	LDH	340 mg/dL
Total Protein	1.2 mg/dL	Total Protein	6.8 mg/dL

Which of the following is the most likely cause of his pleural effusion?

- a) Pleural tuberculosis
- b) Parapneumonic effusion
- c) Adenocarcinoma of the lung
- d) Hepatic hydrothorax
- e) Pulmonary embolism

Other pleural fluid findings:

Lymphocytic predominant	
Purulent	
>Hct (over 50% peripheral crit)	
pH <7.2, +gram stain	
Glucose <60	
High Amylase	
High Triglycerides	
Adenosine deaminase	
Neutrophils > 50,000	

14. A 46-year-old male presents with right flank pain that started 3 hours ago. Sharp, severe with radiation to right testicle. History is significant for chronic diarrhea from Crohn's disease with 2-3 BMs daily. Labs show Na 138, K 3.9, Cl 106, Bicarb 21. UA sp grav 1.025, pH 5.5, moderate blood, no protein, LE's, or nitrites. CT demonstrates 6 mm stone at right ureteral pelvic junction. Which of the following is the most likely?

- a) Ca oxalate
- b) Ca phosphate
- c) Cystine
- d) Struvite
- e) Uric acid

Stone type	Risk factors	Stone appearance	Treatment
Calcium oxalate			
Calcium phosphate			
Uric acid			
Struvite			
Cystine			

15. A 29-year-old woman comes to your office for evaluation of excess hair growth and amenorrhea. She has not had a menstrual period in six months and has noted increasing growth of thick dark hair on her upper lip and abdomen. Her menstrual periods have been regular since onset at age 11. She is on no medications or supplements. Her blood pressure is 118/78. The rest of her physical exam is significant for a receding temporal hairline, excessive terminal hair growth on the upper lip, between her breasts and on the low abdomen. Her pelvic exam is normal except for clitoromegaly.

DHEA-S	820 µg/dL
Testosterone	11 ng/dL
LH	10 mIU/mL
FSH	12 mIU/mL
Glucose	78 mg/dL

Which of the following is the appropriate next test?

- CT scan of the adrenal glands
- Measurement of 17-OH progesterone levels before and after dexamethasone suppression
- Transvaginal pelvic ultrasound
- Karyotype analysis
- 24-hour urinary cortisol