2015 IN-SERVICE EXAMINATION
Item 1
A 53-year-old female presents to the office with the complaint of fever and headache that has been worsening over the past several weeks. On further questioning she admits to pain in her jaw and several instances of sudden darkening of her vision. On examination her overall condition is unremarkable except for a tender, thickened, non-pulsatile temporal artery. You quickly decide to
(A) treat with high-dose steroids and order a biopsy of the temporal artery
(B) order a CT scan with contrast to rule out cerebral ischemia with ocular movement
(C) order an erythrocyte sedimentation rate, antinuclear antibody test, and complete blood count and recommend an ophthalmology consult
(D) order a stat temporal artery biopsy, erythrocyte sedimentation rate, and complete blood count and begin steroid therapy if the biopsy results are positive
(E) treat with low-dose steroids until test results are available

Item 2
A 57-year-old male presents to the office with the complaint of progressive calf pain when walking more than four blocks. He is a smoker. Laboratory studies reveal a total cholesterol of 256 mg/dL and a low-density lipoprotein cholesterol of 168 mg/dL. He has a history of glucose intolerance. The next most appropriate diagnostic test is
(A) angiography
(B) ankle brachial index
(C) bone scan
(D) electromyelogram/nerve conduction studies
(E) MRI of the lumbar spine

Item 3
A 5-year-old female is brought to the office with a four-month history of a rash on the back of her right leg. The rash does not itch or drain and has not spread. The rash is made of distinct, flesh-colored, umbilicated papules. Her medical history is otherwise unremarkable. The most likely diagnosis is
(A) milia
(B) bacterial folliculitis
(C) verruca vulgaris
(D) molluscum contagiosum
(E) atopic dermatitis

Item 4
A spry 84-year-old male with hypertension controlled by a low-dose diuretic presents with his grandson. The grandson informs you that the elderly gentleman has fallen several times during the previous week. On questioning the patient denies having fallen, stating that he just lost his balance and slid to the floor. Vital signs are stable and physical examination is unremarkable aside from some bruising to the left hip and forearm. Which of the following is the most appropriate course of action?
(A) ECG and chemistry profile
(B) lumbosacral spine and pelvic radiographs
(C) prescription for a front-wheeled walker
(D) referral for aquatherapy and gait training
(E) referral to adult protective services to investigate possible abuse
**Item 5**
A 30-year-old African-American female presents to the office with complaints of fatigue, dyspnea, and a dry cough. Physical examination reveals uveitis and parotid enlargement. Chest radiograph reveals bilateral hilar adenopathy. Laboratory studies are most likely to reveal

(A) hypocalcemia  
(B) increased angiotensin-converting enzyme level  
(C) increased lymphocytes on peripheral smear  
(D) increased rheumatoid factor  
(E) thrombocytosis

**Item 6**
A 72-year-old male underwent a protracted intensive care unit hospitalization. Upon discharge to the general medical floor, you note a 4-cm area of full-thickness skin loss to his right heel. This pressure ulcer is a stage

(A) I  
(B) II  
(C) III  
(D) IV  
(E) V

**Item 7**
Which of the following is correct regarding Alzheimer disease?

(A) currently available treatments are likely to reverse existing neuronal damage and halt progression  
(B) enhancing cholinergic neurotransmission is an accepted treatment strategy  
(C) in addition to having proven efficacy, ginkgo biloba has no adverse effects in older patients  
(D) use of apo-E genotyping as screening in asymptomatic persons is recommended  
(E) visual hallucinations early in the course of the disease are common

**Item 8**
During a well-child visit for an 11-month-old infant, you evaluate a scalp rash that has been present for the past three months. The scalp is diffusely inflamed, with thick greasy scales and fissuring. On Wood light examination, the rash is not fluorescent and a KOH prep is negative. The most likely diagnosis is

(A) seborrheic dermatitis  
(B) tinea capitis  
(C) pediculosis capitis  
(D) eczema  
(E) contact dermatitis
Item 9
Two hours after returning from a picnic, a patient develops intense abdominal cramping followed by explosive diarrhea and vomiting. The most likely cause of these symptoms is
(A) *Campylobacter*
(B) *Clostridium*
(C) *Salmonella*
(D) *Shigella*
(E) *Staphylococcus*

Item 10
Which of the following is the most appropriate post-myocardial infarction medication regimen for a patient with type 2 diabetes and hypertension who has had an uncomplicated myocardial infarction?
(A) ACE inhibitor, nitrate, and statin
(B) angiotensin receptor blocker, ACE inhibitor, and statin
(C) β-blocker, ACE inhibitor, and nitrate
(D) β-blocker, statin, and ACE inhibitor
(E) calcium channel blocker, statin, and nitrate

Item 11
An 87-year-old male is noted to have progressive confusion and disorientation over the past three days. He was recently started on diphenhydramine (Benadryl®) to help him sleep. He has no focal muscle weakness, but is confused as to time and date. A preliminary diagnosis of delirium is made. The most likely cause is
(A) acute subdural hematoma
(B) Alzheimer disease
(C) anticholinergic effects of medication
(D) aseptic meningitis
(E) sundowning

Item 12
A 28-year-old new patient answered “yes” to 40 out of 50 possible complaints. All of these complaints have been present for more than five years, and she has great difficulty holding down a job due to these problems. She is concerned about these complaints, yet does not obsess about having a disease. Her mother has many health problems that are undiagnosed as well. Her physical examination is completely normal. The most likely diagnosis is
(A) hypochondriasis
(B) major depressive disorder
(C) conversion disorder
(D) somatization disorder
(E) body dysmorphic disorder
Item 13
A 22-year-old nursing student completed the three-injection series for hepatitis B six months ago. Which of the following tests should be utilized to determine her immunity?

(A) HBV-DNA
(B) hepatitis B IgG core antibody
(C) hepatitis B IgM core antibody
(D) hepatitis B surface antibody
(E) hepatitis B surface antigen

Item 14
In which of the following circumstances is a breach of confidentiality required?

(A) a 14-year-old minor is buying and using cigarettes
(B) an office worker admits to a previous history of alcohol abuse
(C) a 22-year-old woman admits to a plan to kill her coworker
(D) an 11-year-old minor admits to being sexually active
(E) the husband of a couple, both of whom are patients, admits to homosexual behavior

Item 15
The contraceptive failure rate of the “mini-pill” norethindrone (Micronor®, Nor-QD®) is

(A) lower than with the Mirena® intrauterine device
(B) about the same as with the Mirena® intrauterine device
(C) lower than other oral contraceptives
(D) higher than other oral contraceptives
(E) about the same as other oral contraceptives

Item 16
Which of the following office policies is affected by Occupational Safety and Health Administration (OSHA) regulations?

(A) PPD testing of all employees is to be conducted quarterly
(B) any medical waste is to be placed in a red bag
(C) only latex gloves are to be worn as hand protection
(D) masks are to be worn by employees with a cough
(E) separate refrigerators are to be used for food and medications
Item 17
A 25-year-old primigravid female at 39 weeks’ gestation presents to the hospital in active labor. History reveals that her hepatitis B surface antigen is positive, and that she was treated for a group B streptococci urinary tract infection at 18 weeks’ gestation. The remainder of her prenatal history is normal. Which of the following intrapartum management strategies is most appropriate for this patient?

(A) oral clindamycin (Cleocin®)
(B) intravenous penicillin
(C) antibiotics only if febrile
(D) intravenous gentamicin (Gentagam®)
(E) antibiotics only if urinalysis indicates current infection

Item 18
A patient presents with a chronic tremor. Emotional stress has been shown to exacerbate the movement disorder, and alcohol intake reduces it. The most likely diagnosis is

(A) brain tumor
(B) parkinsonism
(C) essential tremor
(D) malingering
(E) tardive dyskinesia

Item 19
A 70-year-old male presents with the complaint that he “just can’t move.” He reports that activities of daily living take increasing amounts of time. On examination he seems depressed, speaks softly and slowly with little emotion, and appears to stare at you without blinking. The most likely diagnosis is

(A) adrenoleukodystrophy
(B) Alzheimer disease
(C) major depressive disorder
(D) multiple sclerosis
(E) Parkinson disease

Item 20
What are the current recommendations of the U.S. Preventive Services Task Force (USPSTF) regarding screening for osteoporosis with bone mineral density testing?

(A) only high risk women should be screened
(B) there is strong evidence against screening
(C) all post-menopausal women should be screened
(D) all women over the age of 65 should be screened
(E) evidence is insufficient to recommend for or against screening
Item 21
A 26-year-old female presents with white scaly patches on her chest, back and shoulders. Examination with a Wood lamp reveals orange-brown fluorescence. KOH examination of the skin scraping reveals a “spaghetti and meatballs” pattern. The most likely diagnosis is

(A) candidiasis  
(B) erythrasma  
(C) pityriasis rosea  
(D) tinea corporis  
(E) tinea versicolor

Item 22
The most common cause of first trimester fetal loss is

(A) chromosomal abnormality in the fetus  
(B) maternal smoking  
(C) maternal hypertension  
(D) maternal diabetes  
(E) cervical incompetence

Item 23
The first choice therapy for the treatment of panic disorders is

(A) benzodiazepines  
(B) β-blockers  
(C) monoamine oxidase inhibitors (MAOIs)  
(D) selective serotonin re-uptake inhibitors (SSRIs)  
(E) tricyclic antidepressants (TCAs)

Item 24
A patient with AIDS develops severe headaches. CT scan reveals multiple ring-enhancing lesions of the brain. The most likely diagnosis is

(A) toxoplasmosis  
(B) histoplasmosis  
(C) lymphoma  
(D) Cytomegalovirus  
(E) herpes encephalitis

Item 25
Which of the following factors allows you to code at a higher complexity visit based on counseling or coordination of care?

(A) complexity of care  
(B) presence of a psychiatric condition complicating care  
(C) number of tests ordered  
(D) number of referrals made  
(E) time
Item 26
A type of incontinence most frequently encountered in postmenopausal females due to reduced intraurethral pressure with increased intraabdominal pressure is
(A) urge incontinence
(B) stress incontinence
(C) overflow incontinence
(D) functional incontinence
(E) atonic incontinence

Item 27
A 54-year-old postmenopausal female presents for a routine Pap test. Results reveal the presence of endometrial cells. She is currently not on hormone replacement therapy. All previous Pap tests over the past five years have been normal. The most appropriate initial management is to
(A) repeat the Pap test in one year
(B) repeat the Pap test in six months
(C) perform an endometrial biopsy
(D) perform a colposcopy with directed biopsy
(E) consider referral for a hysterectomy

Item 28
Which term has been used to describe the osteopathic manipulative procedures that apply palpatory information gained from tests for motor function?
(A) high velocity, low amplitude (HVLA) thrust
(B) cranial technique
(C) counterstrain
(D) functional technique
(E) soft tissue technique

Item 29
You examine an asymptomatic 2-year-old child two weeks after she was treated for bilateral acute otitis media. Your examination reveals bilateral middle ear effusion. The most appropriate treatment is
(A) ten additional days of the original antibiotic
(B) ten additional days of a different antibiotic
(C) oral antihistamine-decongestant
(D) observation and recheck in 30 days
(E) referral to an ENT specialist for possible tympanostomy tubes
Item 30
A common premalignant skin lesion due to sun-induced damage is
(A) actinic keratosis
(B) basal cell carcinoma
(C) Bowen disease
(D) pemphigus vulgaris
(E) seborrheic keratosis

Item 31
The most appropriate initial treatment for postherpetic neuralgia is
(A) famciclovir (Famvir®)
(B) gabapentin (Neurontin®)
(C) oxycodone (Roxicodone®)
(D) topical betamethasone (Diprolene®)
(E) varicella-zoster immune globulin

Item 32
A 31-year-old female presents with irregular menses and galactorrhea of three months’ duration. The remainder of her history is unremarkable and her physical examination is unremarkable except for galactorrhea. Laboratory studies are within normal limits, except for a prolactin level of 300 mg/mL. The most appropriate next step in her work-up is
(A) dexamethasone suppression test
(B) mammogram
(C) MRI of the brain
(D) oral contraceptive therapy
(E) PET scan of the brain

Item 33
An 8-year-old male with a history of attention deficit hyperactivity disorder presents for a six-month follow-up examination. Current medications include methylphenidate (Ritalin®). His mother reports marked improvement in his overall behavior, but is concerned with his frequent nose wrinkling and sniffling. Examination reveals no nasal congestion, rhinorrhea, allergic shiners, or polyps. The most likely diagnosis is
(A) acute sinusitis
(B) obsessive-compulsive disorder
(C) partial complex seizure
(D) seasonal allergic rhinitis
(E) Tourette syndrome
Item 34
Which type of medical malpractice insurance is purchased at the time of retirement from medical practice?
(A) claims-made policy
(B) claims-paid policy
(C) nose coverage
(D) occurrence policy
(E) tail coverage

Item 35
A female at 28 weeks’ gestation presents to the emergency department with bright red, painless vaginal bleeding. Her blood pressure and heart rate are stable. Fetal heart tones are 150/min without any decelerations. The most appropriate next step is
(A) digital vaginal examination to assess for cervical dilation
(B) discharge and place on bed and pelvic rest
(C) immediate delivery by cesarean section
(D) obstetrical ultrasound
(E) vaginal and cervical cultures

Item 36
A 9-year-old male with a history of asthma presents for a routine examination. Physical examination reveals a large polyp in the left naris. The most appropriate initial management is
(A) allergy referral
(B) intranasal antihistamine spray
(C) intranasal steroid spray
(D) oral antihistamine
(E) otolaryngology referral

Item 37
At what time during pregnancy are group B streptococci cultures recommended?
(A) 10-12 weeks
(B) 18-20 weeks
(C) 26-28 weeks
(D) 35-37 weeks
(E) at the onset of labor
Item 38
A 32-year-old female presents with the complaint of weakness and episodes of blurred vision. She states that she has to lift her legs with her hands to enter her minivan. Prior laboratory studies were normal. Physical examination reveals an ill-appearing young female with normal vital signs, a positive Babinski sign on the left, and subtle bilateral ophthalmoplegia. The next most appropriate evaluation for this patient is

(A) CT scan of the head with and without contrast
(B) electromyelogram
(C) erythrocyte sedimentation rate
(D) MRI of the brain and spinal cord
(E) three-phase bone scan

Item 39
The correct treatment position when utilizing muscle energy to correct a right first and second rib exhalation dysfunction (inhalation restriction) is with the patient’s head

(A) rotated left and with the left forearm over the head
(B) rotated left and with the right forearm over the head
(C) rotated right and extended
(D) rotated right and flexed
(E) rotated right and with the right forearm over the head

Item 40
A 17-year-old male with chronic persistent asthma presents for evaluation. History reveals that he is compliant with his medications and has experienced reduced episodes of wheezing. He does note that when he exerts himself or becomes upset, wheezing occurs. In order to reduce the effect of sympathetic tone, to which of the following anatomic structures should osteopathic manipulative treatment be performed?

(A) C1-C3
(B) T1-T6
(C) T8-T12
(D) costal nerves
(E) phrenic nerve

Item 41
Which of the following presentations is most consistent with a diagnosis of normal pressure hydrocephalus?

(A) abnormal gait, dementia, and urinary incontinence
(B) aphasia, decreased deep tendon reflexes, and agitation
(C) dysesthesia, delirium, and depression
(D) paresis, perseveration, and cranial nerve abnormalities
(E) tremor, nystagmus, and increased deep tendon reflexes
Item 42
Which of the following should be used with caution in patients with diabetes when treating chronic behavior disorders of dementia?

(A) citalopram (Celexa®)
(B) donepezil (Aricept®)
(C) haloperidol (Haldol®)
(D) lorazepam (Ativan®)
(E) olanzapine (Zyprexa®)

Item 43
A 14-year-old male requests treatment for acne. He has open and closed comedones on his face without evidence of inflammation or cyst formation. The most appropriate initial treatment is

(A) oral isotretinoin (Accutane®)
(B) oral tetracycline (Minocycline®)
(C) topical erythromycin (Erygel®)
(D) topical clindamycin (Cleocin-T®)
(E) topical tretinoin (Retin-A®)

Item 44
Five thousand patients with coronary heart disease risk factors were randomized to receive either a statin or a placebo for three years. The study results are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
<th>Hazard Ratio (95% Confidence Interval)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal and non-fatal MI</td>
<td>13%</td>
<td>16%</td>
<td>0.81 (0.74-0.97)</td>
<td>&lt; 0.01</td>
</tr>
</tbody>
</table>

What is the number needed to treat (NNT) with a statin for three years to prevent one myocardial infarction?

(A) 2
(B) 10
(C) 33
(D) 5
(E) 100

Item 45
A 45-year-old male presents for evaluation of recurrent episodes of hematuria and flank pain. Spiral CT scan of the abdomen and pelvis reveals urolithiasis. He eventually passes the stone into a urine strainer. Analysis of the stone reveals calcium oxalate. Dietary recommendations would include a/an

(A) decrease in calcium
(B) decrease in fiber intake
(C) decrease in natural forms of citrate
(D) increase in salt intake
(E) normal calcium diet
Item 46
During mid-season a 17-year-old high school track athlete develops pain in his right foot. Onset during practice was sudden and involved no trauma. He reports that it is painless at rest, but exacerbates with running. Walking is not uncomfortable. An arch taping helps but does not eliminate the pain. Examination reveals that it is centered in his midfoot. There is no erythema or edema. The most likely diagnosis is
(A) cuneiform torsion
(B) Lisfranc dislocation
(C) pes planus
(D) plantar fasciitis
(E) stress fracture

Item 47
A young male presents for a health maintenance examination. His father was diagnosed with colon cancer at age 48. The most appropriate recommendation for this patient is
(A) annual flexible sigmoidoscopy
(B) biannual rectal examination
(C) colonoscopy starting at age 38
(D) colonoscopy starting at age 50
(E) fecal occult blood testing

Item 48
A Medicare patient presents to a medical office early in the day. Later that day the patient presents to the hospital and is admitted by the same physician. The visits should be coded by using
(A) both the office visit and hospital admission codes
(B) both the office visit and hospital admission codes with a -25 modifier
(C) the appropriate level hospital admission code
(D) the appropriate level office visit code
(E) the office visit code but upcode one level

Item 4
A 45-year-old female is noted to have incidental cholelithiasis on plain films of the abdomen. Past medical history is unremarkable. She denies abdominal pain, nausea, vomiting and bowel changes. Abdominal examination is unremarkable. The most appropriate next step is
(A) dissolution therapy with ursodiol (Actigall®)
(B) endoscopic retrograde cholangiopancreatography
(C) extracorporeal shockwave lithotripsy
(D) prophylactic cholecystectomy
(E) watchful waiting
Item 50
Non-stress tests are of limited usefulness in gestational ages less than 30 weeks due to

(A) cardiovascular immaturity
(B) central nervous system immaturity
(C) lack of adequate fetal movement
(D) lung immaturity
(E) poor outcomes for fetuses at this age

Item 51
A 26-year-old right-handed female in her sixth month of pregnancy complains of paresthesias in the fingers of both hands that wake her at night. She also reports shoulder aching. Examination reveals a positive Tinel sign at bilateral wrists with a 4/5 power of the right abductor pollicis brevis muscle. The most likely diagnosis is

(A) brachial plexopathy
(B) cervical myelopathy
(C) Erb palsy
(D) median neuropathy
(E) musculoskeletal disease

Item 52
An 82-year-old male presents for an annual health maintenance examination. He reports that his wife of 40 years died two weeks ago. The couple had been living independently with minimal outside help. He has no history of depression. His daughter notes that her father has taken his wife’s death quite hard. It is most important for the physician to inform the patient and his daughter of the need for

(A) adult daycare
(B) antidepressant medications to treat the bereavement
(C) increasing frequency of office visits
(D) pursuing a transition from independent to assisted living
(E) putting the loss of his wife behind him as soon as possible

Item 53
A 29-year-old female presents for evaluation of dyspareunia and a vaginal discharge. She is sexually active and has unprotected intercourse. After appropriate work-up you diagnose *Chlamydia* cervicitis. The most appropriate treatment is

(A) azithromycin (Zithromax®)
(B) ceftriaxone (Rocephin®)
(C) clindamycin cream (Cleocin®)
(D) metronidazole (Flagyl®)
(E) penicillin G benzathine (Bicillin®)
Item 54
A 45-year-old male is brought to the emergency department following a motor vehicle collision. History reveals that he was stopped at a red light when he was hit from behind. He reports that he never properly adjusted the headrest in his new car. This patient most likely injured the

(A) anterior longitudinal ligament
(B) interspinous ligament
(C) ligamentum flavum
(D) posterior longitudinal ligament
(E) supraspinous ligament

Item 55
A 65-year-old male presents with a history of smoking and hypertension. Family history is significant for coronary artery disease. Ultrasound of the abdomen reveals a 4 cm abdominal aortic aneurysm. The most appropriate next step is

(A) MRA of the abdomen
(B) MRI of the abdomen
(C) noncontrast CT scan of the abdomen
(D) observation
(E) surgical consultation

Item 56
A 27-year-old asymptomatic female presents for a routine health maintenance examination. She is current on immunizations and reports that her last tetanus shot was nine years ago. Which of the following is most appropriate regarding immunizing this patient?

(A) administer a tetanus and diphtheria (Td) booster
(B) administer one dose of tetanus, diphtheria, pertussis (Tdap)
(C) administer tetanus toxoid (TT)
(D) no immunization is needed
(E) tetanus, diphtheria, pertussis (Tdap) now and then every ten years

Item 57
A 30-year-old female reports that she is having difficulty completing her activities of daily living. Further questioning reveals that it takes her two hours to leave the house in the morning because of the need to check up to 15 times that the door is locked. The most appropriate treatment is

(A) amitriptyline (Elavil®)
(B) bupropion (Wellbutrin®)
(C) buspirone (BuSpar®)
(D) sertraline (Zoloft®)
(E) valproic acid (Depakote®)
Item 58
A 55-year-old female presents with the complaint of difficulty concentrating and lack of energy. She reports that for the past three months she has been unable to fall asleep at night. She states that when she finally does get to sleep, she awakens at 4 am. Laboratory studies reveal a normal basic metabolic profile and a normal thyroid-stimulating hormone level. The most likely diagnosis is

(A) adjustment reaction with depressed mood
(B) generalized anxiety disorder
(C) major depressive disorder
(D) panic disorder
(E) schizophrenia

Item 59
A 30-year-old healthy female who is contemplating pregnancy presents for routine laboratory evaluation. Laboratory studies reveal:

Leukocyte count: 7 x 10^3/mcL
Erythrocyte count: 6.45 x 10^6/mcL
Hemoglobin: 9 g/dL
Hematocrit: 27%
Mean corpuscular volume: 28 mcm³
Mean corpuscular hemoglobin: 20.3 pg
Red cell distribution width: 12%
Platelet count: 320 x 10^3/mcL

If this patient has normal testing in her blood chemistries, the most appropriate next step would be

(A) bone marrow biopsy
(B) CT scan of the abdomen
(C) esophagogastroduodenoscopy
(D) hemoglobin electrophoresis
(E) reassurance that no further studies are needed

Item 60
A 35-year-old female presents with a six-month history of occasional dizziness, a feeling of fullness, ringing in the ears, and hearing loss. The symptoms occur every couple of weeks and have occurred over the last 12 hours. The sensation is characterized as “the room is spinning around me.” She also reports nausea and vomiting. Physical examination reveals horizontal nystagmus. The slow phase is to the left and the rapid phase is to the right. Audiogram reveals bilateral sensorineural hearing loss in the low frequencies. The most likely diagnosis is

(A) acoustic neuroma
(B) acute labyrinthitis
(C) benign positional vertigo
(D) Ménière disease
(E) vestibular neuritis
Item 61
A 29-year-old female presents with a one-day history of nausea, vomiting, and right-sided abdominal pain. She also describes mild dysuria. She has not eaten for 24 hours and states that she feels warm. Her last menstrual period was two weeks ago. Past medical history is unremarkable. On physical examination she appears ill and has a temperature of 38.1°C (100.5°F). Tenderness to palpation is noted in bilateral lower abdominal quadrants, with right greater than left. Rebound tenderness is present. Rectal examination is heme negative with right-sided tenderness. No costovertebral angle tenderness is noted. The most likely diagnosis is

(A) acute appendicitis
(B) acute cholecystitis
(C) acute pyelonephritis
(D) interstitial cystitis
(E) ovarian cyst

Item 62
A 34-year-old female presents to the office with recurrent dysuria. She has been treated for similar symptoms over the past 6 weeks, first with a course of trimethoprim-sulfamethoxazole (Bactrim®) for 3 days, then levofloxacin (Levaquin®) for 3 days, followed by another course for 7 days. Her symptoms improved somewhat with the initial antibiotic treatment, but returned shortly after completing the medication course. Urinalysis and cultures are negative. The most likely diagnosis is

(A) chlamydial urethritis
(B) interstitial cystitis
(C) recurrent urinary tract infection
(D) transitional cell carcinoma
(E) vaginal candidiasis

Item 63
An asymptomatic obese male presents with a history of hyperlipidemia. History reveals that he consumes an average of 2 alcoholic beverages each day. He has a blood pressure of 140/90 mmHg. Laboratory studies reveal:

- Alanine aminotransferase: 70 U/L
- Aspartate aminotransferase: 60 U/L
- Alkaline phosphatase: 75 U/L
- Total bilirubin: 0.9 mg/dL
- Cholesterol: 275 mg/dL
- High-density lipoprotein: 30 mg/dL
- Low-density lipoprotein: 170 mg/dL
- Triglycerides: 350 mg/dL

The most likely diagnosis is

(A) alcoholic hepatitis
(B) latent hepatitis
(C) metabolic syndrome
(D) nonalcoholic steatohepatitis
(E) stage 2 hypertension
Item 64
A 48-year-old female had a total hysterectomy due to excessive bleeding from uterine fibroids. She has no history of abnormal Pap tests, has been in a monogamous relationship since age 20, and has no history of diethylstilbestrol exposure or any immunocompromised condition. According to the American Cancer Society Guidelines, how often should this patient have a Pap test?

(A) every year
(B) every two years
(C) every three years
(D) every five years
(E) Pap tests are not indicated

Item 65
An 82-year-old male with Parkinson disease presents for evaluation of a rash that has been worsening over the past year. He is noted to have oily scales overlying erythematous patches in his scalp, especially at the hairline. He also has scaling noted in the eyebrows, external auditory canals, and nasolabial folds. His only medication is levodopa-carbidopa (Sinemet®). The most appropriate treatment is

(A) a water-based moisturizer
(B) fluoridated glucocorticoid cream
(C) ketoconazole (Nizoral®) cream
(D) metronidazole (Flagyl®) gel
(E) topical erythromycin solution

Item 66
A 54-year-old female presents with a two-week history of significant intermittent diaphoresis and facial pallor. She also complains of “fluttering” in her chest and headaches. Vital signs reveal:

<table>
<thead>
<tr>
<th>Temperature:</th>
<th>37.4°C (99.4°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood pressure:</td>
<td>180/106 mmHg</td>
</tr>
<tr>
<td>Heart rate:</td>
<td>104/min</td>
</tr>
<tr>
<td>Respiratory rate:</td>
<td>22/min</td>
</tr>
</tbody>
</table>

To confirm the diagnosis, you order urine levels of

(A) dopamine
(B) glucagon
(C) metanephrine
(D) serotonin
(E) urea
Item 67
A 27-year-old male is an inpatient in orthopedic service, status postoperative reduction and fixation. He sustained right tibia and fibula fractures during a motor vehicle collision. The ambulance call report notes that he had alcohol on his breath en route to the hospital. On postoperative day three, he suddenly becomes agitated and disoriented, develops bizarre hallucinations, and becomes combative to the point where he has to be sedated and restrained. The most likely diagnosis is

(A) acute psychosis  
(B) bipolar disorder  
(C) delirium tremens  
(D) fat emboli syndrome  
(E) pulmonary embolus

Item 68
A healthy 28-year-old male presents to the office after falling backwards against a chair and injuring his back. He reports that he has pain between his shoulder blades at the level of the inferior angle of the scapula. Which of the following sets of symptoms would be most consistent with a sympathetic viscerosomatic response to this patient’s injury?

(A) belching and dyspepsia  
(B) difficulty defecating with straining and tenesmus  
(C) difficulty urinating and pain with intercourse  
(D) nasal drainage and sneezing  
(E) pain radiating down the back of the right leg to the back of the knee

Item 69
A 15-year-old football player presents to the office following an injury to the right shoulder. History reveals that immediately following the injury he complained of burning and shooting pain from his neck into the right upper arm. On examination he complains of muscle weakness of the right deltoid muscle. A small circular patch on the lateral deltoid that appears to have decreased sensation to touch is noted. Deep tendon reflexes are +2/4 for biceps, triceps, and brachioradialis bilaterally. The most likely diagnosis is

(A) biceps tendonitis  
(B) brachial plexus stretch injury  
(C) deltoid tendonitis  
(D) impingement syndrome  
(E) rotator cuff strain

Item 70
A 75-year-old female with osteoporosis is taking omeprazole (Prilosec®) for reflux esophagitis and a calcium supplement 500 mg daily for osteoporosis. Recent laboratory studies reveal a 25-hydroxyvitamin-D level of 42 mg/dL and a serum calcium level of 9.8 mg/dL. Which of the following modifications in calcium dosing would you recommend for this patient?

(A) calcium carbonate 1,000 mg twice daily  
(B) calcium citrate 1,500 mg daily  
(C) calcium carbonate 500 mg twice daily  
(D) calcium citrate 500 mg twice daily  
(E) no modification necessary
Item 71
A 25-year-old female presents with increased frequency, urgency, and suprapubic tenderness. Urine dipstick reveals positive nitrates and leukocytes. The most appropriate antibiotic treatment is
(A) amoxicillin (Amoxil®) 500 mg 3 times daily for 3 days
(B) ciprofloxacin (Cipro®) 500 mg twice daily for 10 days
(C) doxycycline (Doryx®) 100 mg twice daily for 7 days
(D) metronidazole (Flagyl®) 500 mg twice daily for 7 days
(E) trimethoprim-sulfamethoxazole (Bactrim DS®) twice daily for 3 days

Item 72
A 56-year-old male presents to the office for evaluation of an irregular-shaped erythematous maculopapular rash along the skin folds in the axilla and groin area. On Wood lamp examination the rash becomes coral-red fluorescence. KOH prep is negative. The most likely diagnosis is
(A) erythrasma
(B) hidradenitis suppurativa
(C) psoriasis
(D) tinea corporis
(E) tinea versicolor

Item 73
The most appropriate first-line prophylactic treatment for exercise-induced asthma is
(A) inhaled long-acting β-agonist 15 minutes prior to exercise
(B) inhaled short-acting β-agonist 15 minutes prior to exercise
(C) inhaled steroids prior to exercise
(D) oral leukotriene inhibitors
(E) oral steroid therapy

Item 74
A 28-year-old pregnant female presents with shortness of breath and a cough after returning from a 6-month visit to India. Her PPD test is positive. A chest radiograph is negative. The most appropriate therapy for this patient is
(A) ethambutol (Myambutol®)
(B) isoniazid (Laniazid®) and pyridoxine (vitamin B6)
(C) pyrazinamide (Tebrazid®)
(D) rifampin (Rifadin®) and isoniazid (Laniazid®)
(E) streptomycin (Streptomycin®)
**Item 75**
A 63-year-old male is admitted to the intensive care unit with congestive heart failure. You apply osteopathic manipulative treatment in an attempt to complement the medical management. The mechanical impact of somatic dysfunction would be expected to exert its most direct affect on which of the following aspects of cardiovascular circulation?

(A) arterial circulation  
(B) blood pressure  
(C) heart rate  
(D) salutary affect of baroreflex-induced sinus arrhythmia  
(E) venous and lymphatic circulation

**Item 76**
A 17-year-old male with streptococcal pharyngitis presents for osteopathic manipulative treatment for his discomfort. In which of the following spinal areas is the sympathetically mediated viscerosomatic reflex from the upper respiratory tract located?

(A) C1-C2  
(B) C3-C5  
(C) C6-C8  
(D) T1-T4  
(E) T5-T7

**Item 77**
A 60-year-old asymptomatic female with a history of occasional alcohol consumption presents for a health maintenance examination. She is 1.7 m (5'7'') tall and weighs 102 kg (225 lb). The remainder of the physical examination is normal. Laboratory studies reveal:

- Alanine aminotransferase: 85 U/L  
- Aspartate aminotransferase: 60 U/L  
- Alkaline phosphatase: 70 U/L  
- Total bilirubin: 0.8 mg/dL

The most likely diagnosis is

(A) alcoholic liver disease  
(B) Gilbert disease  
(C) intrahepatic cholestasis  
(D) nonalcoholic fatty liver disease  
(E) steatohepatitis
Item 78
A 7-year-old female presents with a one-day history of a lesion on her back. History reveals that it began as one patch on her back, and has now evolved into multiple, smaller erythematous macules on her extremities that are itchy and spreading peripherally. She denies any current fevers. Physical examination reveals the findings shown in exhibit 1 and exhibit 2. The most likely diagnosis is

(A) erythema infectiosum
(B) pityriasis alba
(C) pityriasis rosea
(D) tinea corporis
(E) tinea versicolor
Item 79
A 32-year-old female who is 3 months postpartum reports that she has been crying daily, feels sad almost every day, has trouble sleeping, and does not find joy in her former hobbies. She states that she feels she is not bonding with her infant. She denies any suicidal or homicidal ideations. She has no history of depression and is not breast-feeding. On the Edinburgh Postnatal Depression Scale (EPDS) she scores a 15. She is counseled regarding postpartum depression and potential treatment options. She agrees to a trial of an antidepressant and interpersonal psychotherapy. In your chart you note that “total visit was 20 minutes, over half of which was counseling.” When using time-based billing, you code this as a

(A) 99211, Level-I visit
(B) 99212, Level-II visit
(C) 99213, Level-III visit
(D) 99214, Level-IV visit
(E) 99215, Level-V visit

Item 80  (A)
Which of the following is correct regarding pelvic inflammatory disease (PID)?

(A) condom use reduces the risk of PID
(B) most cases involve *Chlamydia trachomatis* as the sole agent
(C) progesterone-only intrauterine devices increase PID risk
(D) prophylactic treatment with oral trimethoprim-sulfamethoxazole (Bactrim®) reduces PID risk
(E) vaginal douching reduces PID risk

Item 81  (E)
A 35-year-old female presents to the office with the sudden onset of severe midepigastric pain and vomiting following meals. History reveals that these symptoms have been present for the past two years, ever since she purposefully lost 13.6 kg (30 lb). She reports that she has continued to lose weight due to the postprandial pain and vomiting. Physical examination reveals a midepigastric bruit. The most likely diagnosis is

(A) aortic aneurysm
(B) atherosclerotic disease of the celiac trunk
(C) chronic pancreatitis
(D) duodenal ulcer
(E) superior mesenteric artery syndrome

Item 82
The most common cause of sudden death in an athlete older than age 45 is

(A) anomalous coronary artery
(B) aortic dissection
(C) coronary artery disease
(D) hypertrophic cardiomyopathy
(E) myocarditis
Item 83
A 68-year-old male presents to the office with the complaint of decreased urine output. Laboratory studies reveal a serum creatinine of 2.5 mg/dL. Laboratory studies two months ago revealed a serum creatinine of 1.2 mg/dL. Which of the following laboratory results is most likely to confirm a diagnosis of prerenal acute kidney injury in this patient?

(A) blood urea nitrogen/creatinine ratio greater than 20 mg/dL  
(B) fraction of filtered sodium greater than 2%  
(C) granular casts in urine sediment  
(D) urine osmolality less than 400 mOsm/kg water  
(E) urine sodium greater than 40 mEq/d

Item 84
A 42-year-old male presents to the office with the complaint of a headache. He states the headache is around his left eye, develops very rapidly, and has awakened him from sleep. He also complains of excessive tearing from his left eye and nasal congestion. The most likely diagnosis is

(A) acute glaucoma  
(B) cluster headache  
(C) dissection of the carotid artery  
(D) sinusitis  
(E) tension-type headache

Item 85
A male patient presents to the office complaining that while at rest he has an urge to move his legs, which is accompanied by an uncomfortable feeling. It is relieved with movement and is worse in the evening. Past medical history includes hypertension, for which he is taking a diuretic. The most appropriate test to support the diagnosis is

(A) complete blood count  
(B) polysomnography  
(C) serum ferritin level  
(D) thyroid-stimulating hormone  
(E) urine drug screen

Item 86
A 38-year-old female presents with intense right flank pain, shaking chills, urgency, frequency, dysuria, and a temperature of 39.8°C (103.6°F). Pyelonephritis is suspected. Examination is most likely to reveal significant tissue texture changes in the paravertebral soft tissue without distinct motion restriction at the spinal levels of

(A) T5-T9 bilaterally  
(B) T5-T10 right  
(C) T9-L1 right  
(D) T11-L2 bilaterally  
(E) T12 right, with concomitant tenderness over the tip of rib 12
Item 87
A 23-year-old female presents to the office with symptoms of gingival bleeding, epistaxis, purpura, and palpitations. Physical examination is otherwise normal. A bone marrow biopsy reveals < 5% cellularity with increased fat accumulation and few, if any, hematopoietic cells. Progenitor and precursor cells are morphologically normal. The most likely diagnosis is
(A) anemia of chronic disease
(B) aplastic anemia
(C) leukemia
(D) megakaryocytosis
(E) myelodysplasia

Item 88
A 38-year-old male presents to the office for a follow-up evaluation. Laboratory studies reveal:
- Fasting blood glucose: 195 mg/dL
- Glycosylated hemoglobin: 7.3%
- BUN: 18 mg/dL
- Creatinine: 1.1 mg/dL
- Total cholesterol: 195 mg/dL
- High-density lipoprotein: 42 mg/dL
- Low-density lipoprotein: 118 mg/dL

Current medications include lisinopril (Zestril®) 5 mg daily, pravastatin (Pravachol®) 20 mg daily, and glimepiride (Amaryl®) 2 mg daily. Vital signs reveal a blood pressure of 148/92 mmHg. His last 3 readings were consistent and similar. According to JNC 8, which of the following is the most appropriate next step in the management of this patient’s blood pressure?
(A) increase lisinopril (Zestril®) to achieve a blood pressure goal of less than 140/90 mmHg
(B) no treatment since he is at his blood pressure goal
(C) recheck blood pressure in 3 months and encourage lifestyle modifications
(D) recheck blood pressure in 2 weeks and encourage lifestyle modifications
(E) reduce lisinopril (Zestril®) to 2.5 mg daily and add a thiazide diuretic to maintain similar blood pressures

Item 89
A 32-year-old gravida 2 para 1-0-0-1 female at 35 weeks’ gestation presents for a prenatal examination. She reports that she has not felt as many fetal movements in the last three days as she had one week prior to this visit. The findings that would indicate a reactive nonstress test in this patient would include fetal movement with a/an
(A) acceleration in fetal heart rate of 10/min or more above the baseline for at least 15 seconds
(B) acceleration in fetal heart rate of 10/min or more above the baseline for at least 10 minutes
(C) acceleration in fetal heart rate of 15/min or more above the baseline for at least 5 seconds
(D) acceleration in fetal heart rate of 15/min or more above the baseline for at least 15 seconds
(E) deceleration in fetal heart rate of 10/min or more below the baseline for at least 10 minutes
Item 90
A 26-year-old gravida 1 para 0-0-0-0 female at 31 weeks’ gestation presents with the complaint of clear fluid leaking from her vagina. A fetal monitoring strip does not detect any uterine contractions. Premature rupture of membranes (PROM) is suspected. The most appropriate next step to confirm the diagnosis is to

(A) obtain Nitrazine paper testing of a urine sample  
(B) obtain uterine fluid samples for cytology and Pap test  
(C) perform a sterile glove examination to confirm the diagnosis and assess cervical dilatation and length  
(D) perform a sterile vaginal speculum examination to confirm the diagnosis and assess cervical dilatation and length  
(E) place a sample of urine on a microscopic slide, air dry, and examine for ferning

Item 91
A 60-year-old male presents with the complaint of fatigue. Complete blood count reveals pancytopenia with a striking monocytopenia. Physical examination reveals massive splenomegaly. Bone marrow aspiration reveals a TRAP-positive histochemical staining pattern. The most likely diagnosis is

(A) acute myelogenous leukemia  
(B) chronic lymphocytic leukemia  
(C) chronic myelomonocytic leukemia  
(D) hairy cell leukemia  
(E) myelodysplastic syndrome

Item 92
A 78-year-old male nursing home resident is brought to the emergency department with a productive cough, fever, and tachypnea. History reveals that he has received his annual flu shot and pneumococcal immunization. Chest radiograph reveals consolidated pneumonia. The most likely organism to cause this patient’s bacterial pneumonia is

(A) adenovirus  
(B) Haemophilus influenzae  
(C) Mycoplasma pneumoniae  
(D) Mycoplasma tuberculosis  
(E) Streptococcus pneumoniae

Item 93
A 13-year-old female presents with a 3-day history of sore throat, cough, and congestion. Low grade fever is present. Physical examination reveals tonsillar exudate and mild conjunctivitis. The most likely cause for this patient’s symptoms is

(A) adenovirus infection  
(B) group A streptococcal infection  
(C) herpes simplex  
(D) infectious mononucleosis  
(E) mycoplasma
**Item 94**
A 22-year-old senior medical student presents with the complaint of severe headache, retroorbital pain, chills, fever, and myalgia. History reveals that she recently returned from a rescue operation in Haiti. The most likely diagnosis is

(A) dengue infection  
(B) Ebola infection  
(C) HIV infection  
(D) leishmaniasis  
(E) West Nile encephalitis

**Item 95**
You are investigating a treatment modality for a patient. In your literature search, you discover the studies reporting the results of treatment consist of 2 separate case control studies with consistent results. You determine the level of evidence to be level

(A) I  
(B) II  
(C) III  
(D) IV  
(E) V

**Item 96**
A 19-year-old male college student presents to the office with a 4-day history of a painful lesion on his penis. He states that he has been in a monogamous relationship and has not been using condoms. He claims that his partner has never had a sexually transmitted infection. Physical examination reveals an inflamed area about 4-5 mm in diameter that looks slightly scabbed over on the glans of his penis. The most appropriate initial step in this patient’s evaluation is

(A) biopsy of the lesion  
(B) herpes simplex virus culture  
(C) urine test for gonococcus and *Chlamydia trachomatis*  
(D) Venereal Disease Research Laboratory (VDRL) test  
(E) Western Blot test for HIV

**Item 97**
A pharmacologic measure to prevent infection in patients with sickle cell disease is the

(A) live attenuated influenza vaccine (LAIV) at 2 months of age and annually  
(B) measles, mumps, rubella (MMR) at 6 months, 12 to 15 months, and 5 years of age  
(C) meningococcal conjugate (MCV4) at birth  
(D) pneumococcal conjugate (PCV13) vaccine at 2 months of age  
(E) tetanus, diphtheria, and acellular pertussis booster every 5 years starting at age 5
**Item 98**
Before graduating and accepting a job, you begin comparing relative value units for different areas of the country. The three factors the Resource Based Relative Value Scale determines prices on are

(A) demand of service, quality of service, and specialty level of care
(B) effect of care, specialty level of care, and malpractice expense
(C) professional service performed, practice expense, and malpractice expense
(D) professional service performed, quality of service, and demand of service
(E) practice expense, malpractice expense, and quality of service

**Item 99**
A 45-year-old female with a 40 pack-year history of tobacco and occasional marijuana abuse presents with a 2-month history of marked fatigue, orthostatic hypotension, occasional vomiting with abdominal pain, and intermittent fever. History reveals that several times over the last year she presented with asthma exacerbations. She has a long history of asthma, and has been treated with oral and inhaled steroids on numerous occasions over the last couple of years. Initial work up reveals a normal complete blood count, normal electrolytes, and a sodium of 126 mEq/L. Her liver and renal values are normal. The most likely diagnosis is

(A) acquired adrenal insufficiency
(B) chronic lymphocytic leukemia
(C) H1N1 influenza
(D) Hashimoto thyroiditis
(E) Zollinger-Ellison disease

**Item 100**
One of the most common neoplastic tumors associated with epistaxis is

(A) acute myelocytic leukemia
(B) basal cell
(C) carcinoid
(D) Kaposi sarcoma
(E) squamous cell carcinoma

**Item 101**
A 48-year-old male presents with the complaint of acute low back pain that radiates to the right foot. He reports that he started tripping over his right foot today. Examination reveals weakness of knee extension and decreased sensation at the medial aspect of the foot. The patellar reflex is diminished on the involved side. The nerve root most likely affected is

(A) L2
(B) L3
(C) L4
(D) L5
(E) S1
**Item 102**
A 74-year-old male with benign prostatic hypertrophy presents with the complaint of increasing trouble when urinating. Which of the following medications most likely contributed to the urinary retention in this patient?

(A) ophthalmic timolol (Timoptic®)
(B) oral buspirone (BuSpar®)
(C) oral cetirizine (Zyrtec®)
(D) oral glyburide (Micronase®)
(E) oral imipramine (Tofranil®)

**Item 103**
A 23-year-old male is brought to the office by his wife for evaluation. While he sits silently and stares at the ground, his wife reports that over the past four months he has gradually become withdrawn and has lost interest in everything. She states that most recently he will not even bathe without her insistence. She reports outbursts of anger over the past few weeks and describes him as yelling at the plants in their home. Initial management of this patient should include

(A) electroconvulsive therapy
(B) one-on-one psychotherapy
(C) prescription of fluoxetine (Prozac®)
(D) prescription of olanzapine (Zyprexa®)
(E) prescription of venlafaxine (Effexor®)

**Item 104**
A 28-year-old female presents to the office with a 6-month history of diffuse knee pain. History reveals no known trauma to the knee. She reports that the pain is worse after being seated for long periods of time. Radiographs and MRI reveal no fractures or ligamental injuries. The most likely diagnosis is

(A) bucket-handle tear of the posterior meniscus
(B) patellofemoral syndrome
(C) stress fracture of the tibia
(D) tibial torsion
(E) torn anterior cruciate ligament

**Item 105**
If the U.S. Preventative Services Task Force (USPSTF) assigns a grade A to one of its recommendations, it means that the

(A) physician must offer this service to the practices patients in some form
(B) USPSTF highly recommends the service but only in select populations
(C) USPSTF recommends the service and it is proven to be beneficial
(D) USPSTF recommends the service and there is a high certainty that the net benefit is substantial
(E) USPSTF recommends the service and there is a moderate certainty that the net benefit is substantial
Item 106
A 3-year-old female is brought to the office by her mother for a well-child examination. You discuss and recommend to the mother the influenza vaccine for the patient. The mother complies and the child is immunized. Which of the following ethical principles is being utilized?

(A) autonomy
(B) beneficence
(C) freedom
(D) justice
(E) non-malfeasance

Item 107
A 26-year-old male presents to the office for evaluation of angry outbursts, mood swings, and vivid and disturbing dreams that are interfering with his relationships. History reveals that he recently completed a tour of duty in Afghanistan. The most appropriate treatment for this patient is

(A) alprazolam (Xanax®)
(B) aripiprazole (Abilify®)
(C) duloxetine (Cymbalta®)
(D) paroxetine (Paxil®)
(E) risperidone (Risperdal®)

Item 108
Which of the following is the strongest risk factor for recurrent urinary tract infections in young females?

(A) delayed voiding patterns
(B) douching
(C) frequency of sexual intercourse
(D) use of tight undergarments
(E) wiping patterns

Item 109
A 33-year-old female states that she wants to attempt to conceive. She is currently being treated for benign essential hypertension with lisinopril (Zestril®), and is well controlled on the medication. When discussing the treatment of her hypertension you explain that control of her blood pressure during pregnancy is

(A) not necessary since the increase in hormone levels will help regulate the blood pressure and she can stop her medication
(B) not very important and she can resume her medication for blood pressure following delivery
(C) very important and the use of an ACE inhibitor has been found to be teratogenic during all trimesters of pregnancy
(D) very important during pregnancy and she should always be compliant with her current blood pressure medication
(E) very important, however her medication has only been shown to be teratogenic during the second and third trimesters of pregnancy
Item 110  
A 42-year-old female presents to the office with the complaint that her heart “jumps” occasionally, but not every day. She does not experience shortness of breath with the episodes and does not have pain when they occur. She denies any previous problems relative to her heart and denies a family history of heart disease. She admits to drinking 2 cups of decaffeinated beverages each day. Physical examination is noncontributory. Laboratory studies, including thyroid studies and electrolytes, are within normal limits. A 12-lead ECG reveals no ectopy. The most appropriate next step is  
(A) 24-hour Holter monitor  
(B) event diary of when the symptom occurs between now and the next visit  
(C) event monitor for 30 days  
(D) referral for cardiac exercise stress testing  
(E) repeat ECG at next office visit

Item 111  
A 35-year-old female presents to the office with a 10-day history of acute onset polydipsia. She has a 1-year history of type 2 diabetes mellitus and a 5-year history of autoimmune hypothyroidism. She reports that since the onset of polydipsia, her fasting fingerstick blood glucose readings have been elevated and range from 180-220 mg/dL. She also reports adherence to her prescribed medications, diet, and exercise regimen. Her last glycosylated hemoglobin 2 months ago was 6.4%. You suspect she may have an autoimmune component to her diabetes mellitus. Which of the following are distinguishing characteristics of this patient’s condition?  
(A) acute symptom of polyuria, intentional weight loss, and a personal history of autoimmune disease  
(B) age greater than 50 years old, acute symptom of polydipsia, and a body mass index greater than 25 kg/m²  
(C) body mass index less than 25 kg/m², acute symptom of polydipsia, and age greater than 50 years old  
(D) family history of autoimmune disease, a body mass index greater than 25 kg/m², and acute symptom of polyuria  
(E) personal history of autoimmune disease, unintentional weight loss, and a body mass index greater than 25 kg/m²

Item 112  
A 35-year-old male presents for a preventive health maintenance examination. He has not seen a physician in several years, and he has not received any vaccinations since childhood. History reveals that all of his sexual partners are male. Physical examination is normal, and review of systems is otherwise normal. HIV test is negative. Which of the following preventive services should also be offered to this patient?  
(A) chest radiograph  
(B) complete blood count  
(C) lipid profile  
(D) liver function studies  
(E) urinalysis
Item 113
A 21-year-old male basketball player presents to the office with the complaint of chest pain, dyspnea, palpitations, and occasional episodes of syncope while playing during the season. Physical examination reveals a harsh systolic, crescendo-decrescendo murmur at the left sternal border that increases with Valsalva, the presence of an $S_4$, and pulsus bisferiens. ECG reveals the presence of left ventricular hypertrophy, abnormal Q waves in the lateral and inferior leads, and taller than normal R waves in the right precordial leads. The most likely diagnosis is
(A) aortic stenosis
(B) cardiac amyloidosis
(C) Fabry disease
(D) hypertensive heart disease
(E) hypertrophic cardiomyopathy

Item 114
A 36-year-old male presents for evaluation of palpitations. His heart rate is 180/min. He denies any other symptoms and his blood pressure is normal. Vagal maneuvers do not lower his heart rate. A dose of intravenous verapamil (Calan®) 5 mg precipitates ventricular fibrillation. The underlying rhythm is
(A) atrial fibrillation
(B) atrial flutter
(C) paroxysmal supraventricular tachycardia
(D) sinus tachycardia
(E) Wolff-Parkinson-White syndrome associated with tachycardia

Item 115
A 43-year-old female presents to the office for follow up of complex regional pain syndrome. She has been compliant with osteopathic manipulative treatment and home exercises. She has been unable to tolerate amitriptyline (Elavil®), gabapentin (Neurontin®), or other adjuvant medications and rates her pain as a 10 on a scale of 0 to 10. She signs a narcotics agreement and you prescribe 60 tablets of hydrocodone/APAP (Norco®) 5/325 mg to be taken as 1 tablet every 6 hours as needed for pain. You instruct her to begin with 1 tablet in the morning and 1 at night and to return in 2 weeks. She returns in 2 weeks and states that she requires 5 tablets a day to obtain adequate pain relief. The most appropriate next step is to
(A) discontinue treating this patient for exceeding the recommended dose of hydrocodone
(B) prescribe a fentanyl (Duragesic®) patch 50 mcg every 3 days
(C) prescribe long-acting oxycodone (OxyContin®) 10 mg twice daily with hydrocodone for breakthrough
(D) prescribe short-acting oxycodone/APAP (Percocet®) 5/325 mg every 6 hours
(E) recommend Narcotics Anonymous for treatment of opioid addiction
Item 116
A 27-year-old trauma victim is transferred to the intensive care unit after sustaining multiple fractures in a motorcycle accident. He is stabilized, and has received 2 units of packed red blood cells. Vital signs reveal a blood pressure of 100/60 mmHg, a heart rate of 120/min, and a respiratory rate of 15/min. Laboratory studies reveal a hemoglobin of 10.1 g/dL and a creatinine of 2.3 mg/dL. The remaining laboratory studies are unremarkable. The most appropriate treatment for this patient’s acute kidney injury is to

(A) administer dobutamine 2 mcg/min drip
(B) administer fluid bolus with 1 L normal saline
(C) administer intravenous furosemide (Lasix®) 40 mg followed by saline flush
(D) initiate total parenteral nutrition
(E) transfuse 1 additional unit of packed red blood cells

Item 117
A 30-year-old female presents to the office for evaluation of fatigue, arthralgias, a malar facial rash, and hematuria. History reveals that her mother has lupus. Which of the following is the most specific laboratory study to confirm this patient’s diagnosis?

(A) anti-dsDNA
(B) anti-La (SS-B)
(C) anti-Ro (SS-A)
(D) erythrocyte sedimentation rate
(E) rheumatoid factor

Item 118
A new mother presents with her 2-week-old son and asks about the safest location to place her son’s car seat. The most appropriate response is

(A) forward facing in the front seat
(B) forward facing in the rear window seat
(C) rearward facing in the front seat
(D) rearward facing in the rear middle seat
(E) rearward facing in the rear window seat

Item 119
A 19-year-old female college student presents to the office with a 2-week history of postcoital bleeding. She states that she has had unprotected sex with a single male partner over this period. Physical examination reveals a friable inflamed cervix with a yellowish discharge. Bimanual examination is unremarkable. The most appropriate initial step is to

(A) administer an intramuscular injection of ceftriaxone without any further testing
(B) obtain a specimen for high risk human papillomavirus testing
(C) obtain a specimen for Pap test
(D) obtain a specimen to test for Chlamydia trachomatis
(E) order a pelvic ultrasound
Item 120
You are investigating a treatment modality for a patient. In your literature search, you search the Cochrane database and discover the studies reporting the results of treatment consist of 3 separate retrospective, double blind randomized control studies with consistent results. You determine the level of evidence of the studies to be level
(A) I
(B) II
(C) III
(D) IV
(E) V

Item 121
An 87-year-old female presents to the office for evaluation of fatigue and pagophagia. Physical examination is pertinent for skin and conjunctival pallor and angular cheilosis. Laboratory studies reveal:

- Hemoglobin: 8.2 g/dL
- Hematocrit: 23.6%
- Mean corpuscular hemoglobin: 18 pg
- Mean corpuscular volume: 50 micron^3

The most likely findings for serum iron studies in this patient would be
(A) decreased iron level, decreased total iron binding capacity, and decreased ferritin level
(B) decreased iron level, decreased total iron binding capacity, and increased ferritin level
(C) decreased iron level, increased total iron binding capacity, and decreased ferritin level
(D) decreased iron level, increased total iron binding capacity, and increased ferritin level
(E) increased iron level, increased total iron binding capacity, and decreased ferritin level

Item 122
A 21-year-old female presents to the office for a health maintenance examination. She signs in on a sheet at the reception desk. The next patient signs in right after her and sees her name, date of birth, and reason for her visit. Which federal law is potentially violated in this case?

(A) Affordable Care Act
(B) Fraud Prevention Act
(C) Health Insurance Portability and Accountability Act (HIPAA)
(D) Stark Law
(E) Women’s Health Care Act
Item 123
An 80-year-old male is brought to the office by his daughter for evaluation of depression. She states that he is not tearful or sad, but seems disinterested and apathetic. She also notes that his memory is worsening, and he is having trouble concentrating. He states nothing is wrong with him and that he is unsure why he is at this appointment today. He has no history of depression. Daily medications include a multivitamin. Physical examination is age appropriate. He has an abbreviated mental status examination score of 16/30 and a Geriatric Depression Rating Scale score of 1/15. The most likely diagnosis is

(A) Alzheimer disease
(B) bipolar disorder
(C) major depressive disorder
(D) Parkinson syndrome
(E) Pick disease

Item 124
A 76-year-old female who resides in an extended care facility develops a discoloration of her urine. She has a chronic indwelling urinary catheter. She has no fever, no mental status changes, and is generally asymptomatic. A urinalysis is positive for nitrates, leukocyte esterase, and leukocytes. Which of the following is the most appropriate next step?

(A) no treatment is necessary at this time
(B) order a urine culture and treat with trimethoprim/sulfamethoxazole (Bactrim®) until results return
(C) order a urine culture and withhold antibiotics until culture results return
(D) treat with ciprofloxacin (Cipro®) for 3 days
(E) treat with trimethoprim/sulfamethoxazole (Bactrim®) for 5 days

Item 125
A 35-year-old male presents with a 3-month history of an asymmetric polyarthritis noted in 6 separate joints. Physical examination reveals pitting of the fingernails along with a scaly, silver rash noted on both elbows. Which of the following has been shown to delay further progression of this patient’s joint erosion?

(A) aspirin
(B) etanercept (Enbrel®)
(C) methotrexate (Trexall®)
(D) naproxen sodium (Naprosyn®)
(E) sulfasalazine (Asacol®)
Item 126
A 6-day-old female neonate is evaluated for jaundice. The neonate was born at term and had Apgar scores of 7 and 9 at one and five minutes. No prenatal history is available and the mother had no prenatal care. Initial examination of the neonate was normal. The mother has elected to nurse her infant. The initial hospital course was uneventful and she was discharged at 48 hours of age without evidence of jaundice. Physical examination reveals moderate jaundice. No additional abnormalities are noted. Laboratory studies reveal a total bilirubin of 14.0 mg/dL, an indirect bilirubin of 13.1 mg/dL, and a direct bilirubin of 0.9 mg/dL. The most likely diagnosis for this infant is

(A) ABO incompatibility
(B) breast milk associated jaundice
(C) familial nonhemolytic icterus
(D) physiologic jaundice
(E) urinary tract infection

Item 127
A 2-year-old female is brought to the office for evaluation of a rash. The parents report that she had been ill with a temperature of 40.0°C (104.0°F) for several days preceding the rash. The rash appeared after resolution of her fever and her parents state that she was fussy during her febrile period. Medical history is noncontributory and she has received all her recommended immunizations. Physical examination reveals tender suboccipital adenopathy and mild pharyngitis with a macular rash on her trunk. She is clinically well and the remainder of the examination is unremarkable. This patient’s presentation is most consistent with an infection due to

(A) Cytomegalovirus
(B) Epstein-Barr virus
(C) roseola
(D) rotavirus
(E) rubella

Item 128
A 70-year-old male with a 45-year history of well controlled hypertension presents to the office for a health maintenance examination. His blood pressure is 180/100 mmHg. Three weeks later, on a follow-up evaluation, his blood pressure is 200/110 despite adjusting and adding medications to his regimen. The most likely etiology for the sudden loss of control of this patient’s hypertension is

(A) coarctation of the aorta
(B) Cushing disease
(C) hyperaldosteronism
(D) pheochromocytoma
(E) renal artery stenosis
**Item 129**
A 55-year-old male who is HIV positive presents with xerostomia and bilateral swelling and pain of the parotid glands. Pus is expressed from the Stensen duct, which reveals a large amount of inflammatory cells with some large inclusion cells. No bacteria or fungus is noted. The most likely opportunistic organism that would be associated with this patient’s infection is
(A) *Candida albicans*
(B) Cytomegalovirus
(C) herpes simplex virus
(D) *Pseudomonas aeruginosa*
(E) *Streptococcus viridans*

**Item 130**
A 30-year-old female presents to the office with the complaint of nasal congestion and obstruction, purulent nasal discharge, facial pressure that is worse when bending forward, fever, fatigue, generalized headache, and halitosis that has gradually progressed over the last 2 weeks. On physical examination, reproducible pressure is elicited over the cheek bones with palpation. The most likely diagnosis is
(A) acute maxillary rhinosinusitis
(B) chronic rhinosinusitis
(C) orbital cellulitis
(D) subacute maxillary rhinosinusitis
(E) tooth abscess

**Item 131**
A 49-year-old female with a past medical history significant for hypertension and obesity presents to the office for follow up of her blood pressure. At home readings are normally around 150/95 mmHg and it is approximately the same today. Current medications include metoprolol (Lopressor®), amlodipine (Norvasc®), hydrochlorothiazide (HydroDIURIL®), and losartan (Cozaar®), all at the maximal doses. She states that she is compliant and you believe her, and you have ruled out secondary hypertension. The most appropriate treatment for this patient is
(A) atenolol (Tenormin®)
(B) prazosin (Minipress®)
(C) spironolactone (Aldactone®)
(D) terazosin (Hytrin®)
(E) valsartan (Diovan®)
Item 132
A 24-year-old female presents to the office with the complaint of pelvic pain. She uses oral contraceptives and her last period was 2 weeks ago. Her last Pap test 6 months ago was normal. She has had 8 sexual partners. She has been with her newest boyfriend for 1 month. She is afebrile and vital signs are within normal limits. Bimanual examination reveals tenderness to cervical motion, mild adnexal tenderness, and no vaginal discharge. The most appropriate tests to order for this patient include

(A) empiric treatment without laboratory testing
(B) Neisseria gonorrhoeae and Chlamydia trachomatis testing, and pelvic ultrasonography
(C) urine HCG, complete blood count, and fecal occult blood
(D) urine HCG, fecal occult blood, and Pap test
(E) urine HCG, urine culture, and sexually transmitted infection testing

Item 133
A 2-year-old male is brought to the office by his parents for a health maintenance examination. They are concerned that he is not talking yet. He does make some vowel sounds, and some environmental noises including roaring like an airplane. They say he does not seem to be listening to them, but he gets very upset when there is a loud noise. Physical examination reveals the child is in the 50th percentile for both height and weight. He ambulates well, and intermittently, he will walk on his tip toes and flap his hands. He does randomly hug his parents, but makes no eye contact with you. He does not smile back at you. You send him for a hearing test and an eye examination, which are normal. The most likely diagnosis is

(A) attention deficit hyperactivity disorder
(B) autistic spectrum disorder
(C) mutism
(D) oppositional defiant disorder
(E) sensory integration disorder

Item 134
A 13-year-old male presents to the office with the complaint of right foot pain. History reveals he returned from spring break with a gastrointestinal illness, with symptoms that included nausea, diarrhea, fever, and red eyes. Several weeks later he developed pain in his foot. The pain is primarily located at the Achilles tendon insertion. He denies any trauma and reports that no other family members experienced similar symptoms. The most appropriate next step is to

(A) inject the Achilles tendon with steroids
(B) obtain an HLA-B27
(C) obtain laboratory studies, including a complete blood count and erythrocyte sedimentation rate
(D) prescribe oral prednisone (Deltasone®)
(E) tap one of his joints to look for a bacterial infection
Item 135
An 11-year-old female is brought to the office by her mother for evaluation of “pain all over.” She reports a 6-week history of pain primarily in her hips, knees, and ankles, but states that it is much worse in her fingers and toes. Physical examination reveals swelling and bogginess of the right knee. No swelling is noted in any of her proximal interphalangeal or metacarpophalangeal joints. She appears very apprehensive and complains of pain when you examine these joints, which seems out of proportion to your examination. Which of the following is most likely to confirm the diagnosis?

(A) HLA-B27
(B) knee joint aspiration
(C) plain film radiography of the hands
(D) erythrocyte sedimentation rate
(E) trial of nonsteroidal antiinflammatory d283617

Item 136
A 38-year-old male presents to the office with a 6-week history of intermittent indigestion and generalized abdominal pain. Examination of the abdomen reveals nonspecific findings. Palpation for viscerosomatic reflexes demonstrates tissue texture abnormalities at the levels of the occiput to C2 on the right and paravertebral tissue texture abnormalities at the level of T5 to T6 on the right. A tender point with a firm texture is palpated in the left fifth intercostal space adjacent to the sternum. The most likely diagnosis is

(A) cholecystitis
(B) duodenal ulcer
(C) erosive gastritis
(D) pancreatitis
(E) regional ileitis

Item 137
A 34-year-old female with a history of systemic lupus erythematosus presents to the office with the complaint of acute pain in her left knee with noticeable swelling, warmth, and erythema. She denies recent trauma or overuse. She is currently taking hydroxychloroquine (Plaquenil®) and prednisone (Deltasone®). Her other lupus symptoms have been well controlled. The most likely cause of this patient’s knee pain is

(A) infectious arthritis
(B) patellofemoral syndrome
(C) rheumatoid arthritis
(D) Sjögren syndrome
(E) systemic lupus erythematosus flare
Item 138
A 14-year-old male is brought to the office by his parents for evaluation of right anterior knee pain that has gradually increased over time. The pain is exacerbated by running, jumping, and climbing stairs and is relieved by rest. His parents report that he has recently undergone a rapid growth spurt. On physical examination, tenderness is elicited on palpation of a noted bony prominence of the right tibial tubercle. There are no additional significant clinical findings. The most likely diagnosis

(A) chondromalacia patella
(B) infrapatellar fat pad syndrome
(C) plica syndrome
(D) stress fracture of the proximal tibia
(E) tibial tuberosity avulsion

Item 139
The most common organism causing neonatal meningitis is

(A) Chlamydia trachomatis
(B) Escherichia coli
(C) Haemophilus influenzae
(D) Neisseria meningitidis
(E) Streptococcus pneumoniae

Item 140
A 62-year-old male presents to the office following the gradual onset of erectile dysfunction for the past 6 months. He is unable to achieve a satisfactory erection to have sexual intercourse with his wife. He has noticed increased fatigue but attributes it to lack of physical activity during the winter season. Past medical history reveals obstructive sleep apnea, benign prostatic hyperplasia, and a left breast lumpectomy. He is not on any medications. He has occasional headaches that are relieved with acetaminophen (Tylenol®). He denies alcohol consumption and does not smoke cigarettes. Physical examination reveals decreased muscle mass and thinning hair. The remainder of the examination is unremarkable. The most appropriate next step to rule out the primary cause of this patient’s condition is to

(A) confirm empiric use and efficacy of phosphodiesterase-5 inhibitors
(B) obtain a luteinizing hormone level
(C) obtain a prolactin level
(D) obtain an early morning testosterone level
(E) order a scrotal ultrasonography
Item 141
A 19-year-old female is brought to the office by her mother for evaluation. Her mother is concerned because she has lost 7 kg (15 lb) over the past 6 months and has no appetite. On questioning, she has no complaints and states that she feels that her weight and appetite are appropriate. She has been amenorrheic for the last 4 months. On examination no significant pathology is found. Her body mass index is 18.4 kg/m². Initial laboratory testing reveals a negative urine pregnancy test and a hematocrit of 34%. The most appropriate next step in the evaluation of this patient is to obtain a/an

(A) blood HCG level  
(B) bone densitometry scan  
(C) follicle-stimulating hormone level  
(D) MRI of the brain  
(E) erythrocyte sedimentation rate

Item 142
A 23-year-old male presents to the clinic after being discharged from the county lock up for drug possession and dealing. He currently smokes cigarettes and has a 15 pack-year history. He admits to use of high dose opioids. He requests help to stay clean since he has been drug free for the past 7 days. Which of the following is most appropriate to prescribe for this patient?

(A) buprenorphine/naloxone (Suboxone®)  
(B) clonidine (Catapres®)  
(C) disulfiram (Antabuse®)  
(D) naltrexone (Vivitrol®)  
(E) varenicline (Chantix®)

Item 143
A 70-year-old female is brought to the office by her daughter for evaluation of increasing memory loss over the past year and an inability to manage her finances alone. She is able to recognize family members, but not new acquaintances and has subsequently stopped going to church functions. She is diagnosed with early to moderate Alzheimer disease. Following discussion with the patient and her family, you decide to start pharmacologic therapy. The most appropriate initial treatment for this patient is

(A) donepezil (Aricept®)  
(B) mirtazapine (Remeron®)  
(C) ropinirole (Requip®)  
(D) selegiline (Eldepryl®)  
(E) vitamin E

Item 144
A 68-year-old male with chronic obstructive pulmonary disease received his PPSV23 (Pneumovax®) pneumococcal polysaccharide vaccine at age 65. He is administered a PCV13 (Prevnar 13®) pneumococcal conjugate vaccine during his office visit today. When would this patient need revaccination?

(A) 1 year  
(B) 3 years  
(C) 5 years  
(D) 10 years  
(E) not needed
Item 145
At what age should screening for cervical cancer be discontinued in patients with no history of abnormal Pap smears?
(A) 55 years
(B) 60 years
(C) 65 years
(D) 70 years
(E) 75 years

Item 146
A 46-year-old obese female presents with a 6-month history of weight gain, fatigue, and increased acne. Physical examination reveals thin and pale skin, facial fullness, and a dorsocervical fat pad. Testing for thyroid disease and diabetes is negative. The next most appropriate screening test for this patient is
(A) fasting adrenocorticotropic hormone
(B) fasting serum cortisol
(C) insulin tolerance test
(D) random prolactin
(E) urine free cortisol

Item 147
A 69-year-old male presents to the clinic for a periodic chronic renal failure evaluation. He reports a decrease in his strength and a lack in appetite. Which of the following would be a reason to consider dialysis in this patient?
(A) ECG reveals flat T-waves suggesting hypokalemia
(B) laboratory studies reveal hemoglobin decreased from 10.0 to 8.0 g/dL
(C) laboratory studies reveal hyperphosphatemia
(D) laboratory studies reveal metabolic alkalosis
(E) severe dehydration resulting from lack of fluids

Item 148
A 6-year-old male is brought to the office by his mother for assessment of behavior problems. History reveals that he is failing first grade and has had behavior issues since infancy. Neither of his parents completed high school and his father had a diagnosis of attention deficit hyperactivity disorder as a child. His parents report that he is disruptive, not respectful of adults, actively defies their requests, and argues with adults that are not custodial. He deliberately annoys others and is vindictive. The most likely diagnosis is
(A) antisocial personality disorder
(B) attention deficit disorder
(C) conduct disorder
(D) oppositional defiant disorder
(E) pervasive developmental disorder
Item 149
A 66-year-old male presents to the clinic for his initial Medicare evaluation (Welcome to Medicare or Initial Preventive Physical Exam). In addition to a history and physical examination, which of the following is included in this visit?

(A) end of life counseling
(B) glaucoma screening
(C) lipid panel
(D) medical nutrition counseling
(E) prostate specific antigen level

Item 150
A 5-year-old male is brought to the office by his parents for a health maintenance examination. They are concerned because he is the shortest child in his kindergarten class. His mother is 1.6 m (5'4") tall and his father is 1.7 m (5'6") tall. The patient is currently in the 9th percentile for height. His growth velocity from 6 months of age to around 3 years of age was approximately 6 cm per year (normal = 10 cm per year), but for the past 2 years he has been growing at a velocity of 5 cm per year. His weight is normal in the 40th percentile. Physical examination reveals a short statured young male. The remainder of the examination is unremarkable. Laboratory studies reveal a normal thyroid function. Adrenocorticotropic hormone and growth hormone levels are within normal limits. Radiographs reveal delayed bone age. The most likely cause of this patient’s stature is

(A) constitutional delay of growth
(B) cushing syndrome
(C) genetic short stature
(D) growth hormone deficiency
(E) hypothyroidism

Item 151
A married couple presents to the office for consultation regarding fertility. They report that they have been trying to conceive for over 14 months and have been unsuccessful. Testing from another physician determined that the male partner had a significantly depressed sperm count. Both partners are employed, healthy, and have no chronic medical conditions. They both deny smoking or the frequent use of alcohol. Questioning reveals that the male patient was abusing other drugs. The drug this patient most likely abused to cause the abnormal laboratory finding is

(A) cocaine
(B) γ-hydroxybutyric acid
(C) marijuana
(D) methamphetamine
(E) phencyclidine
**Item 152**
A 14-year-old female is brought to the office by her mother to establish care. A complete history and physical examination are performed as part of the preventive service. She has a history of a syncopal episode following prior immunization. The mother is not sure which immunization caused the reaction. The immunization that most likely cause this reaction is

(A) *Haemophilus influenzae type b* (Hib)  
(B) hepatitis A (HepA)  
(C) human papillomavirus (HPV)  
(D) inactivated poliovirus vaccine (IPV)  
(E) tetanus, diphtheria, pertussis (Tdap)

**Item 153**
A 9-year-old male presents to an urgent care center for evaluation of severe sore throat, malaise, and low-grade fever. He is given amoxicillin (Amoxil®). He presents 3 days later with the same symptoms. He is still febrile, his throat pain is worse, and he is extremely congested. Physical examination reveals a maculopapular rash on the trunk, arms, and legs. Laboratory studies are most likely to reveal

(A) elevated BUN  
(B) elevated IgE levels  
(C) low serum albumin  
(D) lymphocytosis with atypical lymphocytes  
(E) reduced complement CH50

**Item 154**
A 40-year-old male presents to the office with a 2-week history of right groin pain that increases with coughing and worsens by the end of the day. Hernia examination reveals no palpable mass. The most appropriate diagnostic test to confirm or rule out the diagnosis is

(A) CT scan  
(B) lower gastrointestinal study  
(C) MRI  
(D) radiography  
(E) ultrasonography

**Item 155**
A 14-year-old male presents to the office with a 1-day history of worsening lower abdominal pain. History reveals 1 episode of emesis and a decreased appetite. His temperature is 38.1°C (100.6°F). Abdominal examination reveals decreased bowel sounds and right lower quadrant pain with rebound. Laboratory studies reveal a leukocyte count of 15.0 x 10³/mcL, a C-reactive protein level of 2.0 mg/dL, and hematuria. Which of the following is the most appropriate next step?

(A) admit for observation  
(B) CT scan  
(C) lower gastrointestinal study  
(D) surgery  
(E) ultrasonography
Item 156
A 29-year-old male presents to the office with complaints of a sore throat and headache. During the course of the visit, he also states that he would like to have some warts on his feet frozen today since he has transportation problems and cannot return for another visit. The most appropriate action is to

(A) bill and code as an evaluation and management visit and use a modifier for the procedure
(B) bill and code for the sore throat and headache and have the patient pay cash for wart treatment
(C) schedule two separate appointments for the same patient
(D) the patient must return since procedures, evaluation, and management visits cannot be coded on the same day
(E) treat both the sore throat, headache, and warts and code as a higher level visit

Item 157
A 26-year-old gravida 1 para 0 female presents to labor and delivery in active labor. She is complete, and after several pushes she expels the fetal head but appears unable to deliver the shoulders. Which of the following is the most appropriate next step?

(A) apply fundal pressure and increase maternal pushing
(B) forcibly rotate the fetal head to a transverse axis
(C) immediate cesarean section
(D) McRoberts maneuver
(E) use of a vacuum extractor

Item 158
A 75-year-old male who underwent coronary artery bypass graft surgery 3 days ago becomes confused and disoriented and begins to pull out his intravenous and drainage catheters. Prior to surgery, he lived at home with his wife and managed his activities of daily living. Two months ago, he received a diagnosis of age-related dementia. Initial laboratory studies reveal no infection or metabolic abnormalities. A CT scan of the head reveals cortical atrophy appropriate for age. After optimizing environmental factors, the next most appropriate course of action is

(A) antipsychotic medication
(B) complete bed rest
(C) four point restraints
(D) zolpidem (Ambien®) 5 mg
(E) reduction in pain medication
Item 159
A 28-year-old male presents to the clinic for a routine health maintenance examination. Vital signs reveal:

- Temperature: 36.5°C (97.7°F)
- Blood pressure: 190/95 mmHg
- Heart rate: 70/min
- Respiratory rate: 12/min

All previous vital signs have been normal, including his last visit 3 months prior. Physical examination reveals a right flank bruit. The remainder of the examination is unremarkable. He is sent to interventional radiology, and the suspected diagnosis is confirmed. The patient informs you that he does not wish to proceed with the definitive treatment. Which of the following treatments is currently recommended in combination with a diuretic to control this patient’s blood pressure?

(A) amlodipine (Norvasc®)
(B) hydralazine (Apresoline®)
(C) lisinopril (Zestril®)
(D) metoprolol (Lopressor®)
(E) propranolol (Inderal®)

Item 160
A 45-year-old male presents to the outpatient clinic with a 2-day history of right foot pain. The symptoms began after playing cards and drinking 12 beers. Current medications include hydrochlorothiazide (HydroDIURIL®) 25 mg daily to control his blood pressure. Past medical history is otherwise unremarkable. On physical examination the right metatarsophalangeal joint is red, swollen, erythematous, warm to palpation, and very tender. The most appropriate treatment for this patient is

(A) acetaminophen (Tylenol®) 650 mg every 6 hours for 5 days
(B) allopurinol (Zyloprim®) 300 mg daily for 10 days
(C) cephalaxin (Keflex®) 500 mg every 6 hours for 10 days
(D) hydrocodone/APAP (Norco®) 5/300 mg every 6 hours for 5 days
(E) naproxen (Naprosyn®) 500 mg twice daily for 10 days

Item 161
A 12-year-old female presents to the office with a puncture wound to the hand. History reveals that she was bitten while playing with her cat. After cleaning and examining the wound, you note no additional injury to the hand. The most appropriate antibiotic prophylaxis for this patient is

(A) amoxicillin/clavulanate (Augmentin®)
(B) azithromycin (Zithromax®)
(C) cephalaxin (Keflex®)
(D) clindamycin (Cleocin®)
(E) nitrofurantoin (Macrobid®)
**Item 162**
A 28-year-old male presents with the complaint of diffuse, gradual scrotal pain that is located posterior of the testes and radiates to the lower abdomen. On physical examination the scrotum is red and painful. The most likely cause for this patient’s symptoms is/are
(A) *Escherichia coli* or group B streptococci
(B) gonorrhea and chlamydia
(C) HIV and herpes
(D) systemic tuberculosis or *Mycobacterium avium*
(E) testicular torsion or trauma

**Item 163**
A 30-month-old male presents to the emergency department with a 14-hour history of low-grade fever, hoarseness, mild-moderate stridor, and barking cough. The mother reports that her son had an episode similar to this last fall. Evaluation of this patient is most likely to reveal
(A) enlarged tonsils
(B) foreign body in the lower airway on chest film
(C) foreign body in the upper airway on chest film
(D) steeple sign on lateral neck radiograph
(E) tender larynx on palpation

**Item 164**
A 21-year-old female with a past history of a renal transplant presents with the complaint of facial weakness and slurred speech. Physical examination reveals weakness of the right-sided facial muscles and small erythematous vesicles coalescing in the right ear canal. The most appropriate treatment for this patient is
(A) amoxicillin (Amoxil®)
(B) azithromycin (Zithromax®)
(C) prednisone (Deltasone®)
(D) triple antibiotic cream (Neosporin®)
(E) valacyclovir (Valtrex®)

**Item 165**
A 45-year-old male is being treated for gastroesophageal reflux disease with esomeprazole (Nexium®) 40 mg daily. He has been asymptomatic for years, but now presents with recurrent symptoms despite compliance with his medications. Which of the following medications is most likely to trigger symptom recurrence?
(A) amlodipine (Norvasc®)
(B) atorvastatin (Lipitor®)
(C) cetirizine (Zyrtec®)
(D) losartan (Cozaar®)
(E) sertraline (Zoloft®)
Item 166
A 55-year-old male with a 20 pack-year smoking history presents with the complaint of heartburn that has become progressively worse. He has also noticed a nocturnal cough. He has tried over-the-counter ranitidine (Zantac®) with some relief. The patient is informed that not treating this disease places him at higher risk for

(A) esophageal cancer
(B) gastric cancer
(C) gastric varices
(D) laryngeal cancer
(E) liver cancer

Item 167
A 22-year-old male presents with a 1-week history of profuse bloody diarrhea. He denies eating anything out of the ordinary or recent travel. He reports that he has been under a great deal of stress recently with his job. The most appropriate initial test is

(A) abdominal ultrasonography
(B) barium enema
(C) CT scan of the abdomen with contrast
(D) flat plate of the abdomen
(E) sigmoidoscopy

Item 168
A 33-year-old male presents to the emergency department with a 3-hour history of chest pain. While in the emergency department he vomits numerous times and becomes agitated. On physical examination he is noted to be tachycardic and his pupils are dilated. The cardiac monitor reveals narrow complex tachycardia at 120/min. Oxygen saturation is 98% on room air. Which of the following substances most likely caused this patient’s symptoms?

(A) cannabis sativa (marijuana)
(B) cocaine
(C) ethanol
(D) hydromorphone (Dilaudid®)
(E) secobarbital (Seconal®)

Item 169
A 7-year-old previously well male is brought to the office for evaluation of a skin rash that developed this morning over his buttocks and legs in a “waist down” distribution. The rash began with petechiae that soon coalesced into purplish areas. There is some pruritus with the rash. His face and hands are spared. He complains of colicky abdominal pain but no nausea or vomiting. He has a low-grade fever today with malaise and headache. His mother reports a “cold” 2 weeks ago that resolved spontaneously. Physical examination reveals mild swelling of the ankle joints and knees, although no warmth or erythema is noted. The most likely diagnosis is

(A) Henoch-Schönlein purpura
(B) molluscum contagiosum
(C) Kawasaki syndrome
(D) rheumatic fever
(E) systemic lupus erythematosus
Item 170
According to current Centers for Disease Control and Prevention recommendations, routine tuberculosis skin testing should be performed for which of the following groups?

(A) children at 1 year of age  
(B) college freshman  
(C) elementary school teachers  
(D) patients living in homeless shelters  
(E) patients with fibromyalgia

Item 171
A 34-year-old male presents with dyspnea and nocturnal wheezing following the onset of the fall season. Pulmonary function tests reveal the following:

- FVC: 92% of predicted  
- FEV₁: 89% of predicted  
- FEF₂₅-₇₅: 58% of predicted  
- FEV₁/FVC: 0.98 of predicted

After treatment with an aerosolized bronchodilator, the pulmonary function tests are as follows:

- FVC: 93% of predicted  
- FEV₁: 92% of predicted  
- FEF₂₅-₇₅: 80% of predicted  
- FEV₁/FVC: 0.99 of predicted

These findings are compatible with

(A) moderate restrictive disease  
(B) mild reversible obstructive disease  
(C) mild reversible restrictive disease  
(D) moderate obstructive disease  
(E) normal spirometry

Item 172
A 5-month-old male is brought to the office for evaluation of a cough. His mother reports that for the past week he has been coughing in bursts. He tries to catch his breath after coughing with deep, whooping inhalations. He often vomits after coughing. The most appropriate first-line medication class to prescribe is

(A) antivirals  
(B) broad-spectrum cephalosporin  
(C) fluoroquinolones  
(D) immunoglobulins  
(E) macrolides
Item 173
A 51-year-old male with a history of cigarette smoking presents to the office with the complaint of dyspnea on exertion. A thorough work-up confirms chronic obstructive pulmonary disease. Which of the following interventions will have the most impact on slowing the progression of this patient’s chronic obstructive pulmonary disease?

(A) inhaled corticosteroids  
(B) osteopathic manipulative treatment to the thoracic spine  
(C) prophylactic antibiotics  
(D) regular use of anticholinergic bronchodilators  
(E) tobacco cessation

Item 174
A 6-month-old female presents for evaluation of failure to thrive, wheezing, and respiratory distress with accessory muscle usage. Past medical history reveals wheezing since birth, excess sputum production with cough, and intermittent dyspnea. Her mother reports that she has poor feeding habits and is not gaining weight. Physical examination reveals apical rales and an increased AP diameter. Which of the following is most likely to confirm the diagnosis?

(A) antinuclear antibody test  
(B) bronchoscopy  
(C) CT scan of the chest  
(D) pulmonary function tests  
(E) sweat chloride test

Item 175
A 26-year-old gravida 1 para 0 female is concerned regarding care and feeding of her child after delivery. Past medical history is significant for hepatitis C, HIV, occasional reflux, and hypothyroidism that is treated with levothyroxine (Synthroid®). She smokes and has a 6 pack-year history. You recommend that she only formula feed upon delivery because

(A) it can avoid reflux in the infant  
(B) she has hepatitis C  
(C) she is a current smoker  
(D) she is HIV positive  
(E) she is on thyroid supplementation

Item 176
After performing osteopathic manipulative treatment on your patient in the hospital, you document the encounter using the numeric code 739. This code is

(A) currently employed to identify adjunctive therapeutic interventions such as osteopathic manipulative treatment, respiratory therapy, and physical therapy  
(B) listed in Current Procedural Terminology to identify osteopathic manipulative treatment  
(C) used only for osteopathic manipulative treatment that is included in the hospital discharge summary  
(D) used to indicate somatic dysfunction listed in the International Classification of Diseases, 9th edition (ICD-9)  
(E) written in the progress note and indicates a viscerosomatic reflex
Item 177
A patient has sustained an acute myocardial infarction and undergone successful inpatient revascularization with stenting. You are reviewing the discharge medications, which include atorvastatin (Lipitor®), metoprolol (Lopressor®), and enteric-coated aspirin. Which of the following additional medications is also indicated?

(A) atenolol (Tenormin®)
(B) clopidogrel (Plavix®)
(C) nifedipine (Procardia®)
(D) pantoprazole (Protonix®)
(E) terazosin (Hytrin®)

Item 178
A 65-year-old female presents to the office with complaints of dysuria and urinary frequency. Past medical history is significant for recurrent complicated urinary tract infections. Vital signs reveal an oral temperature of 38°C (100.4°F), a blood pressure of 90/50 mmHg, and a heart rate of 112/min. Her clean-catch urine specimen reveals leukocytes, occult blood, and nitrates. The most appropriate treatment for this patient is

(A) intravenous levofloxacin (Levaquin®) 500 mg every 24 hours
(B) intravenous vancomycin (Vancocin®) 1 g every 12 hours
(C) oral levofloxacin (Levaquin®) 500 mg every 24 hours
(D) oral nitrofurantoin (Macrobid®) 100 mg twice a day
(E) oral trimethoprim/sulfamethoxazole (Bactrim DS®) 40/200 mg daily

Item 179
A healthy 12-year-old female is evaluated for a preparticipation sports physical examination. She has previously received all recommended vaccinations through age 5. The most appropriate vaccination for this patient is

(A) diphtheria and tetanus (DT) and FluMist® (influenza)
(B) Gardasil® (HPV) only
(C) tetanus, diphtheria, pertussis (Tdap) only
(D) tetanus, diphtheria, pertussis (Tdap), meningococcal conjugate (MCV4), and Gardasil® (HPV)
(E) varicella (Varivax®), measles, mumps, rubella (MMR), and diphtheria and tetanus (DT)

Item 180
A 24-year-old female presents for an annual health maintenance examination. Menstrual history and all previous Pap tests have been normal. Physical examination is unremarkable. Pap test reveals low-grade squamous intraepithelial lesion. Which of the following is the most appropriate management for this patient?

(A) colposcopy
(B) endometrial biopsy
(C) human papillomavirus DNA typing
(D) pelvic ultrasonography
(E) repeat Pap test in 12 months
Item 181
A 26-year-old female presents to the office for counseling regarding oral contraceptives. You recommend a progestin only pill. When describing the mechanism of action, you accurately state that this method
(A) immobilizes sperm
(B) inhibits estrogen
(C) inhibits ovarian follicle formation
(D) provides a barrier
(E) thickens cervical mucus

Item 182
A 45-year-old female presents with a 6-month history of irregular and heavy vaginal bleeding. She cannot identify any particular pattern. She has experienced occasional hot flashes, but does not have menstrual cramping or breast tenderness. Physical examination is unremarkable. The most appropriate description of her menstrual bleeding pattern is
(A) dysmenorrhea
(B) menometrorrhagia
(C) menorrhagia
(D) oligomenorrhea
(E) polymenorrhea

Item 183
A 68-year-old right-handed female presents with progressive weakness of right hand grip strength. History reveals that she is retired and spends her time crocheting blankets for the homeless. She denies cervical spine pain, paresthesias, numbness, or recent injury. She has dull pain over the lateral and posterior wrist and rates the pain as a 2 on a scale of 0 to 10. Examination reveals a radial pulse of 2/4, an ulnar pulse of 2/4, a negative Phalen maneuver, a negative Tinel test, a negative Finkelstein test, a negative thenar atrophy, a negative Spurling test, a positive tender thenar circumduction, and tenderness over the posterior and lateral wrist. The most likely diagnosis is
(A) C6 radiculopathy
(B) carpal tunnel syndrome
(C) carpometacarpal arthritis
(D) de Quervain tenosynovitis
(E) sesamoiditis

Item 184
A 17-year-old female presents for an annual health maintenance examination. She is sexually active, consistently utilizes oral contraceptives, and is in a stable monogamous relationship. Her vaccination history reveals that she received all appropriate vaccinations through age 5. There is no record of additional vaccinations. Which of the following combinations of preventive services is most appropriate for this patient?
(A) MMR and chlamydia screen
(B) MMR and varicella titer
(C) MMR, chlamydial screening, and HPV vaccine (Gardasil®)
(D) MMR, Pap test, and HPV vaccine (Gardasil®)
(E) varicella vaccine and RPR test
**Item 185**
A 42-year-old female presents for evaluation of a lump in her anterior neck. Physical examination reveals a solitary nodule in her thyroid. Which of the following tests would be the most sensitive and specific in assessing the patient?

(A) CT scan of the neck  
(B) fine-needle aspiration of the nodule  
(C) radionucleotide scanning  
(D) serum carcinoembryonic antigen  
(E) serum thyroglobulin levels

**Item 186**
A 2-year-old female adopted from China is brought to the office for a health maintenance examination. She has only been in the United States for 2 weeks. A review of her medical history reveals that she had jaundice at 3 months of age. She reportedly has been healthy since that time. History and physical examination are normal. Laboratory studies reveal:

- Hepatitis B surface antigen (HBsAg): positive  
- Antibody to hepatitis B surface antigen (anti-HBs): negative  
- Antibody to hepatitis B core antigen (anti-HBc): positive  
- IgM antibody to hepatitis B core (IgM anti-HBc): negative  
- Antibody to hepatitis A (anti-HAV): positive  
- IgM antibody to hepatitis A (IgM anti-HAV): negative  
- Antibody to hepatitis C (anti-HCV): negative  
- Aspartate aminotransferase: 20 U/L (normal = 10-30 U/L)  
- Alanine aminotransferase: 20 U/L (normal = 10-30 U/L)  
- Alkaline phosphatase: 100 U/L (normal = 80-150 U/L)  
- Total bilirubin: 0.9 mg/dL (normal = 0.5-1.5 mg/dL)

Based on this information, which of the following is this child’s hepatitis B status?

(A) chronic hepatitis B virus infection  
(B) immune from previous infection and no evidence of current hepatitis B virus disease  
(C) not immune to hepatitis A  
(D) previous hepatitis B virus infection without immunity and no evidence of current disease  
(E) results are inconclusive

**Item 187**
A 67-year-old male presents with acute persistent pain in the area of a prior herpes zoster infection that healed 4 months ago. The pain has a burning quality, occasionally shoots through the affected area, and is accompanied by pruritus. Physical examination reveals no neurological deficits. The most appropriate initial pharmacologic treatment of his current condition is

(A) amitriptyline (Elavil®)  
(B) corticosteroids  
(C) famciclovir (Famvir®)  
(D) fentanyl (Duragesic®) patch  
(E) sertraline (Zoloft®)
**Item 188**
Which of the following lifestyle modifications would have the greatest impact in decreasing systolic blood pressure?

(A) cessation of alcohol  
(B) cessation of smoking  
(C) DASH diet (low fat, rich in fruits and vegetables)  
(D) reduction of weight by 10 kg (22 lb)  
(E) sodium intake of less than 2 g/day

**Item 189**
A 62-year-old female presents with the complaint of vaginal bleeding. History reveals menopause at age 52. She reports no other episodes of vaginal bleeding since her menses have ceased. She is on no daily medications. A transvaginal ultrasound is normal. The most likely etiology of vaginal bleeding in this patient is

(A) adrenal hyperplasia  
(B) atrophic vaginitis  
(C) Bartholin gland cysts  
(D) endogenous estrogens  
(E) Sertoli gland cancer

**Item 190**
A primigravida female at 22 weeks’ gestation is diagnosed with chlamydial cervicitis. The most appropriate treatment is

(A) azithromycin (Zithromax®)  
(B) cefaclor (Ceclor®)  
(C) ciprofloxacin (Cipro®)  
(D) ceftriaxone (Rocephin®)  
(E) metronidazole (Flagyl®)

**Item 191**
A risk factor for preeclampsia is

(A) obesity  
(B) large-for-gestational-age fetus  
(C) status multiparous  
(D) urinary tract infection  
(E) Alaskan and Pacific Island ethnicity
**Item 192**
A 3-month-old infant is brought to the emergency department with a 3-day history of nasal congestion, fever, and a worsening cough. Vital signs reveal a temperature of 38.3°C (101.0°F), a respiratory rate of 64/min, and an oxygen saturation of 91% on room air. A respiratory syncytial virus nasal wash is noted to be positive. The most appropriate in-patient management includes intravenous fluids, supplemental O₂, and

(A) aerosolized bronchodilators  
(B) aerosolized 3% saline  
(C) azithromycin (Zithromax®)  
(D) intravenous ceftriaxone (Rocephin®)  
(E) intravenous steroids

**Item 193**
A resting ECG is obtained, as shown in the exhibit. The most appropriate interpretation of this ECG is

(A) complete left bundle branch block  
(B) early repolarization  
(C) interventricular re-entry pathway  
(D) myocardial infarction  
(E) normal

**Item 194**
The most appropriate next step for this patient is

(A) electrophysiologic study  
(B) reassurance and check in six months  
(C) referral for coronary angiogram  
(D) stress echocardiogram  
(E) transesophageal echocardiogram
A 15-year-old male hockey player is brought to the office with the complaint of right hip pain. Standing flexion test is positive on the right and seated flexion test is negative. Left PSIS is superior and left ASIS is inferior.

**Item 195**
The most likely diagnosis is
(A) left anterior innominate  
(B) left posterior innominate  
(C) right posterior innominate  
(D) right-on-left sacral torsion  
(E) right-on-right sacral torsion

**Item 196**
Preventing this dysfunction in the future would involve stretching which of the following muscles?
(A) left hamstring  
(B) left quadriceps  
(C) right hamstring  
(D) right piriformis  
(E) right quadriceps

A 30-year-old female presents with the complaint of neck pain. Translation is introduced while she is supine with neck flexed. Resistance is felt at C5-C6 with translation from right to left.

**Item 197**
The somatic dysfunction is described as
(A) extended, rotated left, and sidebent left  
(B) extended, rotated left, and sidebent right  
(C) extended, rotated right, and sidebent right  
(D) flexed, rotated left, and sidebent left  
(E) flexed, rotated right, and sidebent right

**Item 198**
To treat this dysfunction with muscle energy while she is supine, her head should be placed in which of the following positions?
(A) extended, rotated left, and sidebent left  
(B) extended, rotated right, and sidebent right  
(C) flexed, rotated left, and sidebent left  
(D) flexed, rotated right, and sidebent right  
(E) flexed, rotated right, and sidebent left
A corporation has just released a new diagnostic test for early detection of a condition. A study of 1,000 females revealed that 100 patients had a positive test, indicating the suspected condition. All the patients then underwent the standard surgical procedure to diagnose the condition. Only 50 of the 100 patients with a positive test were found to have the condition. No other cases of the condition were detected.

**Item 199**
The specificity of the diagnostic test for this condition is

(A) 25%
(B) 50%
(C) 90%
(D) 95%
(E) 100%

**Item 200**
The negative predictive value of the diagnostic test for this condition is

(A) 25%
(B) 50%
(C) 90%
(D) 95%
(E) 100%

A 30-year-old female presents with a two-day history of hematuria, dysuria, increased urinary frequency, and nocturia. She has no fever, chills, or back pain. On examination she does not appear ill and there is no costovertebral angle tenderness. She has a temperature of 37.5°C (99.5°F).

**Item 201**
The most likely diagnosis is

(A) acute cystitis with concomitant coagulation disorder
(B) acute glomerulonephritis
(C) acute hemorrhagic cystitis
(D) acute hemorrhagic urethritis
(E) immunoglobulin A nephropathy

**Item 202**
The most appropriate treatment is a

(A) single dose of ampicillin (Omnipen®) 3.5 g and probenecid (Benemid®) 1 g
(B) one-day course of trimethoprim-sulfamethoxazole (Bactrim®)
(C) three-day course of trimethoprim-sulfamethoxazole (Bactrim®)
(D) seven-day course of ampicillin (Omnipen®) and probenecid (Benemid®)
(E) ten-day course of ampicillin (Omnipen®) and probenecid (Benemid®)
A 22-year-old female, who has been married for 18 months, has been trying to become pregnant without success. She has a 9-month history of breast secretions, amenorrhea, and decreased libido. No other symptoms are present. Her blood pressure is 140/80 mmHg. Physical examination reveals galactorrhea. The remainder of the examination is unremarkable.

**Item 203**
The most appropriate test to order is serum

(A) estrogen  
(B) follicle-stimulating hormone  
(C) luteinizing hormone  
(D) progesterone  
(E) prolactin

**Item 204**
The most appropriate treatment for this patient’s condition is

(A) bromocriptine (Parlodel®)  
(B) clomiphene (Clomid®)  
(C) lithium carbonate (Eskalith®)  
(D) levothyroxine (Synthroid®)  
(E) transsphenoidal resection

An 18-year-old female gymnast presents 1 hour after awkwardly landing on her dismount from the uneven bars. She reports her knee buckling, hearing a pop, and immediate knee pain. She is able to bear weight on the leg, but it is already swollen and feels loose. Physical examination reveals the presence of an effusion.

**Item 205**
The most likely isolated injury experienced by this patient is

(A) anterior cruciate ligament rupture  
(B) distal quadriceps/patellar tendon rupture  
(C) lateral collateral sprain  
(D) medial collateral sprain  
(E) medial meniscus tear

**Item 206**
The most appropriate test to confirm the diagnosis is

(A) anterior drawer test  
(B) Lachman test  
(C) McMurray test  
(D) plain film radiograph  
(E) posterior drawer test
A 42-year-old male presents to the office with the complaint of left shoulder pain. He denies any specific injury but admits to starting a new tennis class three months ago. It has become difficult for him to reach overhead and behind him, and he is occasionally awakened at night if he rolls onto his shoulder. Physical examination reveals full active range of motion in all planes with obvious discomfort at end ranges of motion for flexion, abduction, and internal rotation. There is significant pain when the shoulder is placed in a position of 90 degrees flexion and then internally rotated. His muscle strength is reduced in abduction and external rotation of the shoulder. The remainder of the musculoskeletal examination is normal.

Item 207
The most likely diagnosis is
(A) acromioclavicular sprain
(B) adhesive capsulitis
(C) cervical radiculopathy
(D) rotator cuff impingement
(E) rotator cuff tear

Item 208
The most appropriate initial treatment is
(A) arthroscopic subacromial decompression
(B) cervical collar
(C) corticosteroid injection
(D) elbow sling
(E) strengthening and range-of-motion exercises

An 87-year-old female admitted to the hospital for acute myocardial infarction is found to be in atrial fibrillation. Following stent placement she is noted to have an ejection fraction of 30%. There are no complications and she is discharged. Three days later she presents to the emergency department with the sudden onset of severe abdominal pain, nausea, and vomiting. On physical examination she complains of severe pain, and her abdomen is slightly tender in the epigastric and periumbilical areas.

Item 209
The most likely cause is
(A) acute mesenteric ischemia
(B) acute pancreatitis
(C) fecal impaction
(D) small bowel obstruction
(E) viral gastroenteritis
Item 210
Following CT scan of the abdomen and pelvis, the confirmatory test for this patient’s diagnosis is

(A) lactate dehydrogenase and amylase
(B) laparoscopy
(C) mesenteric angiography
(D) ultrasonography
(E) upper gastrointestinal series

A 24-year-old volleyball player presents with the complaint of left ankle pain 2 days after coming down on another player’s ankle while attempting a block at the net. She states that no pop was heard but describes immediate pain and swelling on the lateral ankle. She was able to limp off the court. History reveals no previous injury to the ankle. Examination reveals swelling and ecchymosis around the lateral malleolus but no bony tenderness. Anterior draw test reveals increased movement compared to the unaffected ankle. The squeeze test is negative.

Item 211
The most appropriate next step is

(A) CT scan of the ankle
(B) MRI of the ankle
(C) observation
(D) three-view plain films of the ankle
(E) triple-phase bone scan

Item 212
The most appropriate initial treatment is

(A) immediate corticosteroid injection of the anterior talofibular ligament
(B) orthopedic surgery referral
(C) posterior splint with nonweight-bearing on crutches for 3 weeks
(D) rest, ice, compression, and elevation for 48 to 72 hours
(E) short leg cast with nonweight bearing for 6 weeks
A 43-year-old female presents to the office for an annual health maintenance examination. She has no complaints and is otherwise healthy. She has no relevant past medical, social, or family history. Vital signs reveal a blood pressure of 115/72 mmHg, a heart rate of 76/min, and a respiratory rate of 14/min. Body mass index is 23.5 kg/m². Physical examination is unremarkable. Recent laboratory studies performed through her employer reveal:

- Total cholesterol: 97 mg/dL
- Low-density lipoprotein: 75 mg/dL
- Fasting glucose: 88 mg/dL
- Thyroid-stimulating hormone: 7.6 mcU/mL
- Free thyroxine: 1.4 mcg/dL

**Item 213**
The most likely diagnosis is

- (A) essential hypertension
- (B) hyperlipidemia
- (C) impaired fasting glucose
- (D) obesity
- (E) subclinical hypothyroidism

**Item 214**
Pharmacologic therapy should be instituted for this patient if

- (A) body mass index is greater than 29 kg/m²
- (B) fasting glucose is greater than 90 mg/dL
- (C) signs of hypothyroidism develop
- (D) thyroid-stimulating hormone is greater than 8 mcU/mL
- (E) total cholesterol is greater than 120 mg/dL

An otherwise healthy 14-year-old male presents for evaluation of severe left groin and lateral knee pain. He has difficulty with his gait and has recently developed a limp. Physical examination reveals an obese male. Examination of the left knee reveals no swelling, no erythema, and no knee instability. He denies any recent trauma.

**Item 215**
The most likely diagnosis is

- (A) Ewing sarcoma
- (B) growing pains
- (C) Legg-Calvé-Perthes disease
- (D) patellofemoral syndrome
- (E) slipped capital femoral epiphysis
**Item 216**
The most appropriate next step is to
(A) call for an immediate orthopedic consultation  
(B) obtain an MRI of the lumbar spine  
(C) order a radiograph of the left hip, thigh, and knee  
(D) prescribe physical therapy  
(E) recommend diet and exercise

**Item 217**
The most serious condition that may occur with this patient’s condition is
(A) avascular necrosis  
(B) chondrolysis  
(C) degenerative joint disease  
(D) limited activity with braces and casting  
(E) septic arthritis

A 68-year-old male presents with a 2-day history of worsening dyspnea and increased quantity and purulence of sputum. He is a former smoker with a history of chronic obstructive pulmonary disease (non-oxygen-dependent). Physical examination reveals scattered rhonchi in all lung fields and utilization of the accessory muscles of respiration. Vital signs reveal:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>38.3°C (101°F)</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>140/90 mmHg</td>
</tr>
<tr>
<td>Apical heart rate</td>
<td>100/min</td>
</tr>
<tr>
<td>Respiratory rate</td>
<td>24/min</td>
</tr>
<tr>
<td>Oxygen saturation</td>
<td>80% on room air</td>
</tr>
</tbody>
</table>

Laboratory studies reveal the following:

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<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>PCO₂</td>
<td>60 mmHg</td>
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<tr>
<td>PO₂</td>
<td>55 mmHg</td>
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<tr>
<td>HCO₃⁻</td>
<td>28 mEq/L</td>
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<tr>
<td>Leukocyte count</td>
<td>8 x 10³/mcL</td>
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<tr>
<td>Sodium</td>
<td>140 mEq/L</td>
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<tr>
<td>Potassium</td>
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<tr>
<td>Chloride</td>
<td>115 mEq/L</td>
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<tr>
<td>Bicarbonate</td>
<td>22 mEq/L</td>
</tr>
<tr>
<td>BUN</td>
<td>25 mg/dL</td>
</tr>
<tr>
<td>Creatinine</td>
<td>1.5 mg/dL</td>
</tr>
</tbody>
</table>
Item 218
The acid-base status of this patient is
(A) acute respiratory acidosis
(B) compensated metabolic acidosis
(C) compensated metabolic alkalosis
(D) mixed acidosis
(E) respiratory alkalosis

Item 219
Which of the following treatment regimens is most appropriate for this patient?
(A) inpatient treatment with bronchodilators and antibiotics
(B) inpatient treatment with bronchodilators and steroids; antibiotics only if sputum culture is positive
(C) inpatient treatment with bronchodilators, systemic steroids, and antibiotics
(D) outpatient treatment with bronchodilators and oral steroids; antibiotics only if sputum culture is positive
(E) outpatient treatment with bronchodilators, inhaled steroids, and antibiotics

Item 220
Which of the following sets of oxygen orders is most appropriate for this patient?
(A) avoid supplemental oxygen due to CO\textsubscript{2} retention
(B) oxygen as needed for dyspnea
(C) oxygen via non-rebreather mask
(D) titrate oxygen to a pulse oximetry greater than 92%
(E) titrate oxygen to a pulse oximetry greater than 98%