

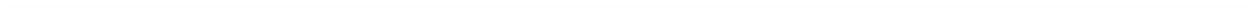


The College of  
Family Physicians  
of Canada

Le Collège des  
médecins de famille  
du Canada

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# Short Answer Management Problems (SAMPS)





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# SHORT ANSWER MANAGEMENT PROBLEMS (SAMPS)

## A. INTRODUCTION

The Short Answer Management Problems (SAMPs) are intended to measure a candidate's problem solving skills and knowledge in the context of a clinical situation. Basic information regarding the presentation of the patient will be provided and a series of three or four questions will follow for each scenario. When answering questions in this examination please read the question carefully and provide only the information that is requested. For the most part, each question will require a single word, short phrase or short list as a response. This portion of the examination will be six hours in length.

In an effort to give candidates more help preparing for the family medicine examination the Committee on Examinations has authorized the release of some SAMPs used on previous examinations. The purpose is to give candidates some sense of the format and content they can expect to meet at the time of the exam, and to demonstrate the correct way to answer questions. They are not intended to be study aids.

The evaluation objectives, including topics and key features which guide the College's Committee on Examinations in the development of the test items for the Certification Examination in Family Medicine, is available on the CFPC website, [www.cfpc.ca](http://www.cfpc.ca) in the Exams and Certification section. They will serve to ensure that the examination maintains acceptable validity and reliability. To do this the evaluation objectives have been designed to clearly describe the domain of competence to be tested within each topic area. The majority of cases will be based on these evaluation objectives.

## B. INSTRUCTIONS

For each case, the setting in which you are practicing will be described (i.e., hospital emergency department, family medicine clinic, physician's office).

You can answer most questions in ten words or fewer.

When ordering laboratory investigations be SPECIFIC. For example, CBC, or electrolytes are not acceptable, you must list the specific indices/test you would like for that question.

- (i.e.,
1. hemoglobin
  2. white blood cell count
  3. potassium)

When ordering other investigations, be SPECIFIC. For example, ultrasound is not acceptable, you must specify abdominal ultrasound.

When listing medications, generic names or trade names will be accepted.

Give details about procedures **ONLY IF DIRECTED TO DO SO.**

When providing values or measures only Systeme Internationale (SI) units will be accepted.

Avoid abbreviations which are not commonly used and which may not be clear to an examiner.

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You will be scored only on the number of answers required – 1 point per answer (e.g., if you are asked to provide three responses and put down five, only the first three will be scored).

Put one answer per line, subsequent answers on the same line will not be considered.

Your answers must be listed VERTICALLY in the space provided per item. For example, the following is acceptable (a point is counted for each item listed):

In addition to a routine urinalysis and an abdominal x-ray, what other investigations would be appropriate in investigating this patient? List **FIVE**

1. Urine culture
2. Intravenous pyelogram (IVP)
3. 24-hour measurement of urinary urate
4. Blood urea nitrogen (BUN)
5. Creatinine

The following answers would NOT be acceptable:

**Urine culture, intravenous pyelogram (IPV), 24-hour measurement of urinary urate**

Reason: more than one answer per line, only urine culture would be considered for a point.

**CBC**

Reason: is a series of tests, you must specify the desired parameter (i.e. hemoglobin)

**SMA 7 (electrolytes)**

Reason: is a series of tests, you must specify the desired parameter (i.e. potassium)

## **C. SAMPLES**

A total of 12 sample SAMPs have been provided along with an answer key for each case. These answers are among the responses that would be acceptable to the committee. For many of the questions, there are other acceptable answers that are not listed. Please note that these cases have been released from previous examinations and may not contain current information. They should not be used as a study aid. The purpose of providing these sample answers is to demonstrate the correct manner in which to provide answers. It is imperative that you follow the directions carefully so that you receive full credit for your responses. The examination is very clear about the manner in which candidates are expected to list or write their responses. Deviation from instructions can result in lower scores.

Please use these cases to familiarize yourself with the examination format. If you have any questions or concerns about this component of the examination, please do not hesitate to contact our office.

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## Sample Case #1

Jill Brien, age 20, is a university student. She is a non-smoker who has asthma. She has had infrequent asthma symptoms over the years, and uses her medication once or twice a week. You consider her to have mild asthma.

1. What class of medication should be the mainstay of her pharmacological therapy? Be specific.

State **ONE**.

2. Ms. Brien starts a part-time job at a construction site. Over the next few weeks she notices that her asthma symptoms are occurring more frequently, and require her to use the medication in question 1 at least once daily. What is the most likely cause of her asthma exacerbation?

State **ONE**.

3. What class of medication should be the mainstay of Ms. Brien's pharmacological therapy at this point?

State **ONE**.

4. Ms. Brien would like to be able to manage her own asthma therapy. What device would you recommend she purchase?

State **ONE**.

## Sample Case #1 Answers

### Question 1 – 1 point

A short-acting beta-agonist

### Question 2 – 1 point

Dust/An environmental allergen

### Question 3 – 1 point (any 1)

An anti-inflammatory/A steroidal metered-dose inhaler (MDI)/A nonsteroidal metered-dose inhaler (MDI)/Long-acting

An inhaled glucocorticoid

An inhaled glucocorticoid combined with a long-acting beta-agonist

### Question 4 – 1 point

A peak-flow meter

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## Sample Case #2

Anne Sullivan, age 29, is a schoolteacher who comes to your office complaining of 10 to 12 loose bowel movements a day for the past three to four weeks. The stools are sometimes bloody and often contain mucus.

Ms. Sullivan feels fatigued and has lost about 3 kg in weight. She has not been febrile. She has no history of previous similar episodes.

You examine Ms. Sullivan. She has a few small, ulcerated lesions on her buccal mucosa; her abdomen is diffusely tender, with no guarding or rebound and no masses. The rectal examination is very painful. She has some small ulcerations just inside the anal canal, and there is fresh blood on your glove.

1. What is the most likely diagnosis?

State **ONE**.

2. What initial laboratory investigations would you order?

List **FOUR**.

3. What is the most appropriate diagnostic investigation to do next? Be specific.

State **ONE**.

4. The investigation in question 3 confirms the diagnosis in question 1. What are the possible future gastrointestinal complications of Ms. Sullivan's condition?

List **THREE**.

## Sample Case #2 Answers

### Question 1 – 1 point

Crohn's disease/Inflammatory bowel disease (IBD)/Ulcerative colitis/Colitis \*Do NOT accept "irritable bowel syndrome (IBS)"\*

### Question 2 – 4 points (1 point each – any 4)

Stool culture testing

Stool testing for ova and parasites (O&P)

Hemoglobin testing/Hematocrit testing

White blood cell count (WBC)

Erythrocyte sedimentation rate (ESR) testing

C-reactive protein (CRP) testing

Albumin testing

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**Question 3 – 1 point (either)**

Colonoscopy/Sigmoidoscopy

Endoscopy with biopsy testing

\*Do NOT accept “barium enema”\*

**QUESTION 4 – 3 points (1 point each – any 3)**

Strictures

Abscesses

Fistulae

Bowel obstruction

Toxic megacolon

Malabsorption/Malnutrition

Intestinal malignancy

Bile malabsorption

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### Sample Case #3

Jamie Buchman, age 35, gave birth to a 4.1-kg girl six weeks ago. Ms. Buchman is here today for her postpartum checkup. You are aware that she was diagnosed with gestational diabetes. Ms. Buchman attended a diabetes education centre and saw a nutritionist after the diagnosis was made, and her blood sugar levels were reasonably controlled with dietary changes.

You have read the Canadian Medical Association guidelines for diabetes management, and you know that Ms. Buchman is at increased risk for subsequently developing diabetes or glucose intolerance.

1. When in the postpartum period should you test Ms. Buchman for diabetes or glucose intolerance?

Give **ONE** answer.

2. What test should Ms. Buchman have to confirm diabetes or glucose intolerance?

State **ONE**.

3. Testing confirms that Ms. Buchman has diabetes. You review the results with her and discuss the implications of having diabetes. In the course of your discussion, you review certain complications. For what microvascular complications of diabetes is Ms. Buchman at risk?

List **THREE**.

4. What are the recommended screening methods/referrals for each of the three complications in question 3?

List **THREE**. (One for each complication)

### Sample Case #3 Answers

#### Question 1 – 1 point

At six weeks to six months postpartum

\*Accept any answer within this range, including “now.” Do NOT accept answers outside this range.

#### Question 2 – 1 point

An oral glucose tolerance test (OGTT)\*

\*Award 1 point if the answer specifies plasma glucose (PG) testing two hours after a 75-g glucose load.

#### Question 3 – 3 points (1 point each – any 3)

Nephropathy

Neuropathy/Foot problems

Retinopathy

\*Do NOT accept “renal insufficiency.”

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**Question 4 – 3 points (1 point each – any 3)**

Urine testing for albumin-to-creatinine ratio (ACR)

Neurological examination/Ankle reflex testing/Vibration testing/Proprioception testing/Sensation testing/Monofilament testing

Ophthalmoscopy/Ophthalmoscopy referral/Optomtrist/Optomtrist referral/Ophthalmologist/Ophthalmologist referral

Foot examination/Examination/Referral to a podiatrist

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#### Sample Case #4

Rachelle, age 16, presents at the after-hours clinic on Sunday afternoon. She had unprotected intercourse and a friend told her she could prevent pregnancy with a pill. She has no allergies and is taking no medications.

1. As you consider prescribing the morning-after pill, what is the most important question to ask Rachelle?  
State **ONE**.
2. What is the most common side effect of oral post-coital contraception?  
State **ONE**.
3. Excluding allergy, what is an absolute contraindication to treatment with oral post-coital contraception?  
State **ONE**.
4. Rachelle is concerned about the possible side effects of oral post-coital contraception. What other option exists for morning-after contraception?  
State **ONE**.
5. What other subjects do you discuss with Rachelle?  
List **THREE**.

#### Sample Case #4 Answers

##### Question 1 – 2 points

When did you have intercourse?/How long ago did you have sex?

##### Question 2 – 1 point (either)

Nausea  
Vomiting

##### Question 3 – 1 point

Pregnancy—known

**References:** *SOGC—Guidelines 2003-2004/WHO information*

##### Question 4 – 1 point

Insertion of a copper intrauterine device (IUD) up to seven days post-coitally

\*Do NOT accept “insertion of a progesterone intrauterine device (IUD)” or “insertion of a levonorgestrel-releasing intrauterine system (Mirena).” They are not approved for use in this situation.\*

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**Question 5 – 3 points (1 point each – any 3)**

Contraceptive use/Condoms/The birth control pill (BCP)/Norelgestromin and ethinyl estradiol transdermal system (Evra)/Any contraception

Sexually transmitted infections (STIs)/Human immunodeficiency virus (HIV) infection

Cervical cancer testing/A Pap test

Human papillomavirus (HPV) vaccine

Following up if she has no menses/Doing beta-human chorionic gonadotropin ( $\beta$ -hCG) testing if she has no menses/Possible failure of the morning-after pill

Whether sexual intercourse was consensual

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## Sample Case #5

Dee Francis, age 20, is a salesclerk who is brought to you by her mother, Mrs. Francis, who says that Dee has been acting very strangely lately. Mrs. Francis states that Dee has not been able to go to work for the past week because she fears walking through crowds at the mall where she works. Dee says that during the last week when she went to work, she felt her heart pounding, her hands shaking, a choking sensation, nausea, and lightheadedness. Various combinations of these symptoms came in waves that lasted 15 minutes.

When you ask Dee about her “heart symptoms,” she states that she feels her heart is racing and beats very fast and irregularly. She denies using any alcohol, or street drugs, or prescribed drugs. She drinks two cups of regular coffee or the equivalent in terms of caffeinated beverages each day. She is a non-smoker.

Dee's physical examination reveals an anxious-appearing young woman with a blood pressure measurement of 110/80 mm Hg and a regular heart rate of 110 bpm. Results of the respiratory and cardiovascular examination are otherwise unremarkable. You send her for electrocardiography, and the following tracing is produced.

1. What does the electrocardiogram reveal?

Give **ONE** answer.

2. Excluding blood tests, what other investigation would you order for Dee so that you can assess her palpitations?

State **ONE**.

3. What feature of Dee's history suggests that she suffers from agoraphobia?

State **ONE**.

4. What specific features of Dee's presentation suggest that she suffers from panic attacks?

List **FIVE**.

## Sample Case #5 Answers

### Question 1 – 1 point

Sinus tachycardia

### Question 2 – 1 point

24-/48-hour Holter monitoring/Holter monitoring

### Question 3 – 1 point

Her fear of walking through crowds/Her fear of crowds/Avoiding going to work

\*Do NOT accept “pounding heart/palpitations,” “shaking of her hands/tremors,” “feeling of choking,” “nausea,” or “lightheadedness.”\*

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**Question 4 – 5 points**

Pounding heart/Palpitations/Racing heartbeat

Shaking of her hands/Tremors

Feeling of choking

Nausea

Lightheadedness

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## Sample Case #6

Darlene, age 46, visits your office with a complaint of “feeling awful.” She is tired, and recently she noted that she becomes very short of breath when she climbs a flight of stairs. She also becomes lightheaded when she stands too quickly. She has no other complaints.

On examination, her blood pressure measurement is 110/60 mm Hg lying and 90/60 mm Hg standing. Her pulse rate is 130 bpm and regular at rest. She is extremely pale. A cardiovascular examination reveals normal heart sounds with a murmur at the left sternal border. Results of abdominal and pelvic examinations are normal. Her last menstrual period was 18 days ago and very heavy. Her past medical history is unremarkable.

Today you send Darlene to the hospital laboratory for investigations. You order a complete blood count (CBC), blood urea nitrogen (BUN) testing, creatinine testing, and a pregnancy test. A preliminary CBC report is faxed to you. The indices are as follows:

WBC	7.51 X 10 <sup>9</sup> /L	(3.50-10.00)
RBC	2.98 X 10 <sup>12</sup> /L	(3.77-4.90)
Hgb	42 g/L	(115-150)
HCT	0.197 L/L	(0.338-0.427)
MCV	66 fL	(82.7-97.6)
MCH	20.8 pg	(27.8-34.1)
MCHC	327 g/L	(332-356)
RDW-CV	20.8%	(12.0-15.2)
PLT	314 X 10 <sup>9</sup> /L	(147-347)
MPV	8.0 fL	(7.0-10.8)

1. What is the hematological abnormality? Be specific.  
State **ONE**.
2. What is your next management step? Be specific.  
State **ONE**.
3. What are the most common causes of Darlene’s condition?  
State **TWO**.

## Sample Case #6 Answers

### Question 1 – 2 points

Microcytic hypochromic anemia

\*Do NOT accept “anemia” alone.\*

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**Question 2 – 2 points**

Transfusion of red blood cells (RBCs)/packed cells

\*Award only 1 point if “transfusion” alone is stated.\*

**Question 3 – 2 points**

Menorrhagia

Gastrointestinal (GI) bleeding/Cancer (CA) of the bowel/Peptic ulcer

\*Do NOT accept “dietary deficiency.”\*

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## Sample Case #7

Jonathan, age two years, presents at your office with his dad for assessment of a new cough. Jonathan's parents have become concerned in the past two days because his breathing seems laboured and occasionally he makes a high-pitched noise when he breathes. You know that Jonathan was born at term after a normal pregnancy and has had the recommended childhood immunizations for his age. On further questioning, you find there have been no recent upper respiratory infections and no new pets in the home. You examine Jonathan and find that he is afebrile with a respiratory rate of 30/min. On auscultation of the chest, air entry appears diminished on the right side, with a few inspiratory and expiratory wheezes. The left side has good air entry.

1. What diagnosis must you rule out as a cause of Jonathan's symptoms?

State **ONE**.

2. What initial diagnostic test would you order to confirm your clinical suspicion?

State **ONE**.

3. Two months later, Jonathan's five-month-old sister, Betty, is brought to your office by her mom, who is worried about Betty's cough. Like Jonathan, Betty was born at term after an uncomplicated pregnancy, and has received the appropriate immunizations for an infant her age. Betty has been unwell for three days, with a runny nose, decreased appetite, and worsening cough. On examination, you find that Betty has a rectal temperature of 37.5 degrees C, a heart rate of 160 bpm, and a respiratory rate of 60/min. She seems less active than usual, has subcostal and suprasternal indrawing, and has expiratory wheezes on auscultation.

What diagnosis most likely is responsible for Betty's symptoms?

State **ONE**.

4. What is the most appropriate next step in managing Betty's condition?

State **ONE**.

## Sample Case #7 Answers

### Question 1 – 2 points

Foreign body aspiration

### Question 2 – 1 point

Chest X-ray examination

### Question 3 – 1 point

Bronchiolitis/Respiratory syncytial virus (RSV) infection

\*Do NOT accept "respiratory distress" (it is not a diagnosis) or "viral upper respiratory tract infection (URTI)."

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**Question 4 – 1 or 2 points (either)**

Transfer to the hospital/Transfer to the emergency department (ED)/emergency room (ER) **(2 points)**

Giving oxygen **(1 point)**

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## Sample Case #8

Mrs. Smith, age 56, is a teacher who presents at your office complaining of a sore throat. She describes a sudden onset of symptoms, beginning with some throat scratchiness this morning; this scratchiness progressed to more discomfort. She also notes that her lips feel a bit “puffy.” A slight dry cough started about a week ago. She denies any fever. Her past medical history is significant for polycythemia vera, gastroesophageal reflux disease, and hypertension diagnosed two weeks ago. Her medications include hydroxyurea, esomeprazole, and lisinopril, which she started taking two weeks ago.

A physical examination reveals a temperature of 37 degrees C. The back of her throat and the floor of her mouth and soft palate seem quite edematous, and slightly inflamed with no exudate. Her tongue also is slightly swollen. Her blood pressure measurement is 120/80 mm Hg, her heart rate is 90 bpm, her respiratory rate is 16/min, and oxygen saturation is 99%.

1. What is the most likely diagnosis?

State **ONE**.

2. What is the most likely cause of the diagnosis in question 1?

State **ONE**.

3. What treatments would you prescribe for Mrs. Smith?

List **THREE**.

## Sample Case #8 Answers

### Question 1 – 2 points

Angioedema

### Question 2 – 1 point

Lisinopril use

### Question 3 – 3 points

Discontinue lisinopril

Use corticosteroids

Use antihistamines

\*Do NOT accept “use epinephrine.” (This is a mild case.)\*

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### Sample Case #9

Annie, age 28, presents at the office with a two-day history of intermittent dizziness. She complains of “the room spinning in circles,” a sensation that lasts for three to four seconds, particularly when she stands up or turns her head. She feels mild nausea but has no vomiting during her episodes. Annie takes no medications and denies the use of alcohol or cigarettes. She has no chest pain or palpitations. She has never passed out with any of these episodes.

1. What symptoms would you ask Annie about to verify that she does not have a central cause for vertigo?  
List **FOUR**.

2. Her answers reassure you that she has no central cause for vertigo. What diagnostic physical examination manoeuvre is appropriate for Annie?  
State **ONE**.

3. What physical finding on this examination manoeuvre would suggest vertigo?  
State **ONE**.

### Sample Case #9 Answers

#### Question 1 - 4 points (any 4)

Diplopia  
Dysarthria  
Paresthesia/Numbness  
Ataxic gait/Imbalance  
Focal weakness

#### Question 2 - 1 point

Dix-Hallpike manoeuvre/Bárány manoeuvre/Nylen manoeuvre/Nylen-Bárány manoeuvre/Drop test/Hallpike manoeuvre  
Accept a description of how the manoeuvre is performed.

#### Question 3 - 1 point

Nystagmus

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## Sample Case #10

Julie Stocks brings her seven month-old daughter, Jessie, to your office. For two days Jessie has been unwell and irritable, with a decreased appetite. She is drinking fluids well, and has a normal number of wet diapers. She has had a low-grade temperature (37.9° C), and has been pulling at her left ear. Jessie was previously well, and is taking no medications. She had one episode of otitis media (OM) at age four months. This episode resolved with a course of amoxicillin. Her immunizations are up to date. On examination, Jessie is febrile, with a temperature of 38.1° C. She cries when you examine her, but seems to settle well with her mom. Her right tympanic membrane is normal, but the left is quite erythematous. The remainder of the examination, including an assessment of her hydration status, is normal.

1. What modifiable risk factors for OM would be helpful to ask Mrs. Stocks about?

List **THREE**.

2. Mrs. Stocks is worried that Jessie may need ventilation tubes, as the child's brother required them at age three years. What indications for an ear, nose, and throat referral for ventilation tubes (tympanostomy) would you discuss with Mrs. Stocks?

List **THREE**.

## Sample Case #10 Answers

### Question 1 – 3 points (any 3)

Exposure to second-hand smoke  
Bottle-feeding/Not breast-feeding  
Crowded living conditions  
Daycare  
Any type of feeding in a supine/flat position

### Question 2 – 3 points (any 3)

Persistent effusion  
Hearing loss  
Speech delay/Speech problems  
Atelectasis/Retraction of the tympanic membrane  
Recurrent episodes of (acute) otitis media (AOM)

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## Sample Case #11

Clara Antebes, a previously well four year-old, presents to your office with her mother and father. Clara's parents report that she has been complaining of diffuse abdominal pain for two days. Her appetite is diminished but she is willing to drink a normal amount of fluids when prompted. She is not vomiting or having diarrhea. Clara's initial vital signs are as follows:

Temperature: 38° C

Heart rate: 120 bpm

Respiratory rate: 40/min

You examine Clara and find that the abdomen is soft and non-tender.

1. What important common diagnoses (excluding gastrointestinal problems) must you consider and treat urgently, if they are confirmed in a child with Clara's symptoms?

List **THREE**.

2. On further history-taking, you discover that Clara has had a "cold" for a few days, with a fever and a cough becoming more intense since yesterday. After completing the physical examination, you decide that a diagnostic test should be carried out. What would be the most useful diagnostic test at this point?

State **ONE**.

3. Clara benefits from your appropriate treatment and recovers uneventfully. A year later, Clara's 18 month-old brother, Gabriel, is brought in by his mother for influenza immunization. Gabriel is healthy except for a suspected egg allergy and has never had a flu shot before. She asks if Gabriel can have the flu shot. What do you suggest?

State **ONE**.

## Sample Case #11 Answers

### Question 1 – 3 points

Pneumonia

Diabetic ketoacidosis

Urinary tract infection

### Question 2 – 1 point

Chest X-ray examination

### Question 3 – 1 point

Egg allergy is not a contra-indication to the newer flu shots. (2011)

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## Sample Case #12

Sally Towedo, age 35, comes to see you following a recent migraine.

Her migraines began several years ago, and have always been the same. She has had four in the past month, which have caused her to miss work and seek medical attention in the emergency department. She received intravenous metoclopramide (Maxeran) with a good result.

Aside from migraine headaches and asthma, Ms. Towedo is in good health. Her only medications are fluticasone (Flovent) and salbutamol (Ventolin) prn. One year ago, a computed tomography scan of the brain was normal. Results of a neurological examination are normal.

1. What features of Ms. Towedo's history would make you consider prophylaxis for her headaches?

Name **TWO**.

2. Certain classes of medication have been shown to be effective for migraine prophylaxis.

List **FOUR** of these classes that would be appropriate for Ms. Towedo.

## Sample Case #12 Answers

### Question 1 - 2 points

Severity/Impaired quality of life/Missing work/Emergency department (ED) visits

Frequency/Four migraines a month

### Question 2 – 4 points (any 4)

Calcium-channel blockers

Tricyclic antidepressants (TCAs)/Tricyclic analgesics

Anticonvulsants/Antiepileptics

Nonsteroidal anti-inflammatory drugs (NSAIDs)

Serotonin-receptor antagonists