

REGISTRATION ASSESSMENT SITTINGS 2016

Part 2

Questions 1 to 10 are examples of single best answer type questions (SBA).

Questions 11 to 15 are examples of extended matching questions (EMQ).

No references other than those provided in the assessment can be used.

No electronic calculating devices can be used in this paper.

Select the single best answer in each question.

Answers are on page 12.

1. Mr B, who is 62 years old, is suffering from an acute attack of gout. Mr B had a myocardial infarction 3 years ago and suffers from mild osteoarthritis, but is otherwise well. He is on the following medication:
- aspirin 75 mg once daily
 - atorvastatin 40 mg once daily
 - ramipril 10 mg once daily
 - co-codamol 30/500 mg two tablets up to four times a day as required
- He has no known drug allergies.

What is the most suitable drug treatment for his acute attack of gout?

- A allopurinol
- B colchicine
- C diclofenac
- D etoricoxib
- E febuxostat

2. Mrs C is 54 years old and has been commenced on pioglitazone 30 mg once daily by her GP one month ago, alongside the metformin 500 mg three times a day that she has been taking for the past 2 years. When collecting her repeat prescription she complains of having dark urine and some nausea and fatigue for the last 2 weeks. She wonders if her new tablet is to blame.

Which is the most appropriate advice for this patient?

- A the symptoms described are **not** known to be caused by pioglitazone
- B she should see her GP as the dose of pioglitazone may need to be increased
- C she should see her GP as the dose of pioglitazone may need to be reduced
- D she is experiencing a side-effect of pioglitazone, and whilst safe to continue taking it, she may wish to see her GP for an alternative
- E stop taking pioglitazone straight away and see her GP as soon as possible

- 3.** Mrs C, a 42-year-old woman, comes into the pharmacy seeking advice about her left eye. She first noticed her symptoms yesterday morning. She reports no pain or change in vision. She has no medical conditions and is not on any regular medication. The appearance of her eye is shown below.



Which of the following is the most likely cause of Mrs C's symptoms?

- A** acute angle-closure glaucoma
- B** allergic conjunctivitis
- C** bacterial conjunctivitis
- D** blepharitis
- E** subconjunctival haemorrhage

4. A man is receiving MST Continus (morphine sulfate m/r) tablets 60 mg every 12 hours. In addition, he is taking morphine sulfate oral solution 10 mg/5mL, 7.5 mL four times a day. Although his pain is controlled on this regime, he is now unable to take medicines by mouth. He is converting to fentanyl transdermal patches. The information below is from the BNF.

72-hour Fentanyl patches are *approximately* equivalent to the following 24-hour doses of oral morphine

morphine salt 30 mg daily	≡ fentanyl '12' patch
morphine salt 60 mg daily	≡ fentanyl '25' patch
morphine salt 120 mg daily	≡ fentanyl '50' patch
morphine salt 180 mg daily	≡ fentanyl '75' patch
morphine salt 240 mg daily	≡ fentanyl '100' patch

"Joint Formulary Committee. *British National Formulary 68th* ed. London: BMJ Group and Pharmaceutical Press; 2014; p21"

What dose of fentanyl transdermal patch is approximately equivalent to the daily dose of morphine sulfate taken by this patient?

- A fentanyl '12' patch every 72 hours
- B fentanyl '25' patch every 72 hours
- C fentanyl '50' patch every 72 hours
- D fentanyl '75' patch every 72 hours
- E fentanyl '100' patch every 72 hours

Questions 5 to 7 relate to Mr F, a 78-year-old man with chronic obstructive pulmonary disease and ischaemic heart disease. He is admitted to hospital from home with a lower respiratory tract infection. He began taking antibiotics the day before admission. His blood pressure on admission is 98/58 mmHg. Mr F has no known drug allergies. His current medication is listed below on his hospital inpatient prescription chart.

Drug name	Dose	Route	Frequency
clarithromycin	500 mg	oral	12-hourly
Relvar Ellipta (fluticasone furoate 92 micrograms/vilanterol 22 micrograms/ inhalation)	1 puff daily	inhaled	daily
isosorbide mononitrate m/r	60 mg	oral	daily
ramipril	10 mg	oral	daily
aspirin	75 mg	oral	daily
enoxaparin	40 mg	sc	daily
salbutamol 100 micrograms/ inhalation	2 puffs	inhaled	prn

5. Mr F is awaiting microbiology results on his sputum but an atypical pathogen is **not** suspected.

Which of the following is the most likely cause of the respiratory tract infection?

- A *Chlamydia psittaci*
- B *Legionella pneumophila*
- C *Mycoplasma pneumoniae*
- D *Pneumocystis jirovecii*
- E *Streptococcus pneumoniae*

6. Mr F has complained for several weeks that he has a sore mouth.

Which of the following drugs is the most likely cause of Mr F's sore mouth?

- A aspirin
- B isosorbide mononitrate m/r
- C ramipril
- D Relvar Ellipta
- E salbutamol

7. **Which of the following drugs is it most important to withhold temporarily in view of Mr F's blood pressure?**

- A aspirin
- B enoxaparin
- C ramipril
- D Relvar Ellipta
- E salbutamol

8. Psorin ointment contains the following active ingredients:

salicylic acid 1.6%

coal tar 1%

dithranol 0.11%

Which of the following gives the correct weights of active ingredient required to make 350 g of the ointment?

- A** 56 g salicylic acid; 35 g coal tar; 3.85 g dithranol
- B** 56 g salicylic acid; 3.5 g coal tar; 38.5 g dithranol
- C** 5.6 g salicylic acid; 3.5 g coal tar; 0.385 g dithranol
- D** 5.6 g salicylic acid; 3.5 g coal tar; 3.85 g dithranol
- E** 0.56 g salicylic acid; 0.35 g coal tar; 0.385 g dithranol
9. A 59-year-old man presents his prescription for oxycodone 40 mg m/r tablets.
- Which of the following is the maximum recommended duration of supply on a single prescription for this medicine?**
- A** 7 days
- B** 28 days
- C** 30 days
- D** 3 months
- E** 6 months

Question 10 relates to Mr F, who is 69 years old and whose most recent biochemistry results are shown below. Mr F previously had normal biochemistry results.

Test	Result	Units	Reference Range
Serum sodium	139	mmol/L	137 - 145
Serum potassium	5.1	mmol/L	3.5 - 5.1
Serum urea	6.2	mmol/L	2.5 - 7.5
Serum creatinine	132	micromol/L	46 - 92
Estimated GFR	41	mL/min/1.73m ²	>60

Mr F had an elective hip replacement two weeks ago. He has a history of hypertension which is treated with amlodipine 5 mg daily and lisinopril 10 mg daily. There have been complications due to an infection.

10. Which of the following drugs started in hospital is the most likely cause of Mr F's abnormal laboratory results?

- A co-codamol
- B enoxaparin
- C flucloxacillin
- D fusidic acid
- E naproxen

Analgesics

- A** codeine phosphate liquid
- B** diclofenac suppositories
- C** ibuprofen liquid
- D** morphine sulfate tablets
- E** oxycodone injection
- F** paracetamol tablets
- G** pethidine injection
- H** tramadol tablets

For the patients described, select the most suitable analgesic from the list above. Each option may be used once, more than once, or not at all.

- 11.** A 4-year-old boy who has no long-term medical conditions has sprained his ankle earlier in the day and is experiencing mild pain. An ice pack was used immediately after the injury and the ankle is slightly swollen. The boy is allergic to penicillins.
- 12.** A 66-year-old woman has chronic pain from ovarian cancer. She is prescribed levothyroxine sodium for hypothyroidism and solifenacin succinate for urge incontinence. She has no known allergies. She has been using co-codamol 30/500 mg at the maximum recommended dose but this is no longer controlling her pain.

Drug interactions

- A bleeding risk increased
- B bradycardia
- C drowsiness
- D hypertensive crisis
- E myopathy
- F QT interval prolongation
- G reduced eGFR
- H thrombosis

For the patients described, select the most likely possible consequence of the drug interaction. Each option may be used once, more than once, or not at all.

- 13.** A 49-year-old woman has bipolar disorder and has taken lithium carbonate 800 mg daily for five years. She has been newly prescribed ramipril 2.5 mg daily for hypertension.
- 14.** An 83-year-old woman is on the following medication:
- isosorbide mononitrate 50 mg m/r daily
 - aspirin 75 mg daily
 - amlodipine 10 mg daily
- She has been newly prescribed simvastatin 40 mg at night.
- 15.** A 64-year-old man uses escitalopram 20 mg daily for generalised anxiety disorder. He had a transient ischaemic attack 12 years ago and has recently been diagnosed with non-valvular atrial fibrillation. He has been newly prescribed dabigatran 150 mg daily.

Answers

Question	Answer
1	B
2	E
3	E
4	D
5	E
6	D
7	C
8	C
9	C
10	E
11	C
12	D
13	G
14	E
15	A