Open Book Questions (answers on page 15)

Simple completion questions

Each of the questions or statements in this section is followed by five suggested answers. Select the best answer in each situation.

1. Gingival hyperplasia is a side-effect of which of the following drugs?
   A. adenosine
   B. benzydamine hydrochloride
   C. flurbiprofen
   D. nystatin
   E. phenytoin

2. Sanjay is an immunocompromised 7 year old weighing 24 kg with chickenpox and herpes zoster infection who needs an IV dose of aciclovir. What is the **MOST** appropriate total daily dose for him?
   A. 450mg
   B. 900mg
   C. 1350mg
   D. 1600mg
   E. 6750mg

3. Which of the following Protease inhibitors is **LEAST** likely to impair glucose tolerance?
   A. darunavir
   B. fosamprenavir
   C. indinavir
   D. saquinavir
   E. tipranavir

4. Which of the following drugs is **MOST** likely to be safe in acute porphyrias?
   A. tamsulosin
   B. tamoxifen
   C. tibolone
   D. topiramate
   E. trimethoprim

Multiple completion questions

Each one of the questions or incomplete statements in this section is followed by three responses. For each question, **ONE or MORE** of the responses is/are correct. Decide which of the responses is/are correct, then choose:

A. if 1, 2 and 3 are correct
B. if 1 and 2 only are correct
C. if 2 and 3 only are correct
D. if 1 only is correct
E. if 3 only is correct

5. Which of the following statements about methylphenidate preparations are **FALSE**?
   1. Concerta XL tablets consist of an immediate-release [IR] component (32% of the dose) and a modified-release [MR] component (68% of the dose)
   2. Equasym capsules consist of an IR component (40% of the dose) and a MR component (60% of the dose)
   3. Medikinet XL capsules consist of an IR component (50% of the dose) and an MR component (50% of the dose)
6. Anisa is 6 years old and is suffering from pruritus. Which of the following would be suitable for her?
   1. alimemazine 5mg TDS
   2. hydroxyzine hydrochloride 15mg ON
   3. promethazine hydrochloride 25mg BD

7. Which of the following drugs is (are) classed as highly emotogenic treatment?
   1. cisplatin
   2. doxorubicin
   3. fluorouracil

8. MHRA advised in 2013 that patients on certain anti-epileptics should be maintained on the same specific manufacturer’s product. Which of the following drugs are in Category 3?
   1. carbamazepine
   2. lamotrigine
   3. vigabatrin

Classification questions

In this section, for each numbered question, select the one lettered option that most closely corresponds to the answer. Within each group of questions each lettered option may be used once, more than once or not at all.

Questions 9–12 concern the following vaccines:
   A. anthrax
   B. cholera
   C. hepatitis B
   D. rabies
   E. yellow fever

Which of the above:
   9. is an oral vaccine?
   10. is administered subcutaneously?
   11. has neomycin as an excipient?
   12. is only available at designated vaccinated centres?

Statement questions

The questions in this section consist of a statement in the top row followed by a second statement beneath.

You need to:
   decide whether the first statement is true or false
   decide whether the second statement is true or false

Then choose:

   A. if both statements are true and the second statement is a correct explanation of the first statement
   B. if both statements are true but the second statement is NOT a correct explanation of the first statement
   C. if the first statement is true but the second statement is false
   D. if the first statement is false but the second statement is true
   E. if both statements are false
13  **First statement**  
Local anaesthetics should not be applied to the middle ear  

**Second statement**  
Local anaesthetics can cause ototoxicity

14  **First statement**  
Dairy products increase the absorption of norfloxacin  

**Second statement**  
Norfloxacin is safe to use in pregnancy

15  **First statement**  
Symptom control in palliative care is unnecessary  

**Second statement**  
The pain of muscle spasm in palliative care can be helped by baclofen 5–10mg TDS
Calculations Questions (answers on page 17)

1. A local GP is asking your advice on switching a patient from a daily dose of oral opioid to 72hr fentanyl patches. The patient is currently stable on oxycodone 20mg mr tablets every 12hrs and 5mg immediate release capsules four times a day for breakthrough pain.

What strength and how many patches would need to be prescribed for 15 days pain relief?

A 10 × fentanyl ‘12’ patches
B 5 × fentanyl ‘12’ patches and 5 × fentanyl ‘25’
C 5 × fentanyl ‘25’ patches and 5 × fentanyl ‘50’
D 5 × fentanyl ‘25’ patches
E 10 × fentanyl ‘25’ patches

2. You receive a prescription asking you to provide a 6 year old child with colecalciferol liquid 2000 units/ml at a dose of 200 units daily, to be taken continuously for 6 months. 20ml dropper bottle of colecalciferol liquid should be used within 3 months once opened.

How many drops per day have to be given and how many bottles do you need to supply for the full course?

A 2 drops daily, 2 bottles
B 2 drops daily, 1 bottle
C 1 drop daily, 1 bottle
D 1 drop daily, 2 bottles
E 4 drops daily, 2 bottles

3. A patient is receiving 20 mL of a midazolam 0.18% (w/v) solution via a syringe driver over 24 hours.

What hourly dose of midazolam in mg is the patient receiving?

A 0.36mg/hr
B 0.036mg/hr
C 0.018mg/hr
D 1.5mg/hr
E 0.15mg/hr

4. You receive a prescription in your pharmacy for hydrocortisone 1% cream, 20g. The product is currently not available so the prescriber asks you to prepare it using creams in available strengths.

How much 2.5% cream and 0.5% cream will you need to prepare 20g of 1% hydrocortisone cream?

A 5g of 2.5% cream and 15g of 0.5% cream
B 15g of 2.5% cream and 5g of 0.5% cream
C 10g of 2.5% cream and 10g of 0.5% cream
D 12.5g of 2.5% cream and 7.5g of 0.5% cream
E 8g of 2.5% cream and 12g of 0.5% cream
A dental prescription is asking for $3 \times 51g$ 1.1% w/w sodium fluoride toothpaste containing 5000ppm fluoride. Calculate the mg amount of fluoride in one 51g tube.

A  255mg  
B  0.0255mg  
C  5.61mg  
D  0.06mg  
E  1100mg
Closed Book Questions (answers on page 19)

Simple completion questions

Each of the questions or statements in this section is followed by five suggested answers. Select the best answer in each situation.

1. Judy brings in her 47 month old son Jack who has a temperature of 38°C. He has no other symptoms.

   What is the most suitable dose of paracetamol 120mg/5ml suspension QDS for Jack?
   A. 2.5ml
   B. 5ml
   C. 7.5ml
   D. 10ml
   E. 12.5ml

2. You are a locum working in a community pharmacy in Leeds for the first time.

   What should you NOT do if a patient indicates that there has been a dispensing error?
   A. ask to establish the incorrect medicine
   B. establish their expectations
   C. establish if the patient has taken any of the incorrect medicine
   D. make a supply of the correct medicine if appropriate
   E. tell them to come back tomorrow when the regular pharmacist is back as she made the mistake

3. You are supervising a substance misuser whose dose is 60ml methadone 1mg/ml daily. You notice that there is at least 5ml in the bottle when they hand it back.

   What should you do with the excess liquid?
   A. discard down the sink
   B. force the client to drink all the methadone including every last drop as the prescription states 60ml and supervised
   C. it should be classed as a patient return and denatured
   D. pour back into the stock bottle
   E. throw in waste bin

4. Mrs Smith wants a word in private. She has started to feel drowsy lately and can’t understand why. You ask about her medication history and she says that she is only on a cream which was prescribed recently.

   Which of the following creams can cause drowsiness?
   A. calamine
   B. crotamiton
   C. doxepin
   D. tacalcitol
   E. tretinoin

Multiple completion questions

Each one of the questions or incomplete statements in this section is followed by three responses. For each question, ONE or MORE of the responses is/are correct. Decide which of the responses is/are correct, then choose:

   A. if 1, 2 and 3 are correct
   B. if 1 and 2 only are correct
   C. if 2 and 3 only are correct
   D. if 1 only is correct
   E. if 3 only is correct
5 Which of the following is (are) principle of medicines optimisation?
1 develop your professional knowledge and competence
2 ensure medicines use is as safe as possible
3 evidence based choice of medicines

6 Which of the following patients would be eligible for a targeted MUR?
1 a 34 year old patient on 4 items one of which is tolbutamide
2 a 15 year old patient on salbutamol and Clenil MDI inhalers
3 a 72 year old patient on paracetamol and sulindac tablets

7 Which of the following statements about controlled drugs are true?
1 the address of a prescriber for a Schedule 4 Part 1 drug has to be in the UK
2 EEA & Swiss prescribers can legally prescribe a Schedule 3 drug
3 invoices for a Schedule 3 drug need to be retained for two years

8 Which of the following statements about veterinary prescriptions are false?
1 the expiry date of the product must always be included on the label
2 records and documents must be kept for two years
3 a veterinary CD prescription should be sent to the relevant NHS agency

Classification questions

In this section, for each numbered question, select the one lettered option that most closely corresponds to the answer. Within each group of questions each lettered option may be used once, more than once or not at all.

Questions 9–12 concern the following recommendations:
A no action is needed
B recommend an appropriate product
C recommend appropriate lifestyle advice
D refer to A & E
E refer to GP

9 A 56 year old woman who wants something for conjunctivitis. On examination her left eye is red and cloudy with watery discharge. She has severe eye pain, her vision is blurred and feels sick. She does not wear contact lenses and is not on any other medication.

10 A 44 year old man who needs to get up to urinate several times at night. He has had the symptoms for four months and is on Ramipril.

11 A 26 year old non-smoker who is on lansoprazole who has not had sumatriptan before. He has an established pattern of migraines without aura. Simple analgesia with anti-emetics have not helped.

12 A 28 year old lady with a BMI of 26 who has a poor diet, drinks 28 units of alcohol a week and is asking for orlistat.

Statement questions

The questions in this section consist of a statement in the top row followed by a second statement beneath. You need to:

- decide whether the first statement is true or false
- decide whether the second statement is true or false

Then choose:
<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>if both statements are true and the second statement is a correct explanation of the first statement</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>if both statements are true but the second statement is NOT a correct explanation of the first statement</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>if the first statement is true but the second statement is false</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>if the first statement is false but the second statement is true</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>if both statements are false</td>
<td></td>
</tr>
</tbody>
</table>

13  **First statement**
MXL® 30mg capsules should be prescribed at a BD 12 hourly dose

**Second statement**
It is a modified-release oral preparation

14  **First statement**
Mr Smith informs you that he has started gambling since starting his Parkinson’s disease medication. You inform him that this may be due to his rasagiline.

**Second statement**
Treatment with dopamine-receptor agonists and levodopa is associated with impulse control disorders including pathological gambling.

15  **First statement**
Glycopyrronium is a long acting beta agonist

**Second statement**
Glycopyrronium is used in asthma at step 3 of the BTS guidelines

16  **First statement**
Some oral iron preparations contain ascorbic acid to aid absorption of iron

**Second statement**
Iron preparations are an important cause of accidental overdose in children
Mixed Questions (answers on page 21)

Open Book/Calculations questions

1 Mr SW is a 63 year old homeless man who is under your hospital’s palliative care pathway. He has been complaining this morning of feeling nauseous and being in pain. During his stay in hospital Mr SW has not been eating well and is underweight. Which ONE of the following pieces of advice is NOT correct?

A Helping Mr SW with his social issues is an important aspect of palliative care which should be considered prior to discharge

B Mr SW can be prescribed some dexamethasone if appropriate to help build up his appetite in order to help him gain some weight

C Initiation of an opioid analgesic in Mr SW should be delayed if there is concern over a theoretical likelihood of addiction

D There are three broad classes of analgesics which can be used alone or in combination to help control Mr SW’s pain

E The cause of Mr SW’s nausea should ideally be determined before deciding to prescribe any anti-emetic therapy

2 Master K, a 9 year old with ADHD is suspected of having an adverse drug reaction (ADR) to his Straterra® 10mg capsules (which he takes at a dose of 1 capsule twice daily). Master K has been complaining of abdominal pain since starting the medication and is also unable to sleep at night. Which ONE of the following statements is correct regarding this situation?

A Straterra® 10mg capsules is an intensively monitored drug

B All ADRs to medication in children must be reported to the MHRA

C A ‘yellow card’ does not necessarily need to be completed for this ADR

D The timing of Master K’s last dose is unlikely to impact on his sleep

E Straterra® is a CNS depressant and is likely to cause sleep disturbances

3 Regarding beta-adrenoceptor antagonists, which ONE of the following statements is false?

A Carvedilol is not licensed for use in children under 18

B Labetalol is safe to use for hypertension in pregnant women

C Sotalol is known to prolong the cardiac QT interval

D Atenolol has a short duration of action and can be given up to twice daily

E Metoprolol is a relatively cardioselective beta-adrenoceptor antagonist
Questions 4 to 5 concern the following categories of safety pertaining to drug use in patients with glucose-6-phosphate dehydrogenase deficiency:

A  This drug can be safely used in patients with this condition
B  This drug has a possible risk of haemolysis in such patients
C  This drug has a definite risk and should not be used in such patients
D  This drug carries a dose related risk but may be used at low doses
E  This drug carries a possible risk but may be used in certain conditions

Select, from A to E, which ONE of the above statements best matches the drugs below:

4  Nitrofurantoin

5  Quinine

Questions 6 and 7 concern the following:

A  Benzyl alcohol
B  Carmellose sodium
C  Compound tragacanth
D  Mannitol
E  Sucrose

Select, from A to E, which ONE of the above excipients best matches the statement below:

6  An excipient that is found in ‘sugar free’ preparations

7  An excipient that is contra-indicated in neonates

<table>
<thead>
<tr>
<th>Directions Summarised</th>
</tr>
</thead>
<tbody>
<tr>
<td>A  1, 2, 3</td>
</tr>
<tr>
<td>B  1, 2 only</td>
</tr>
<tr>
<td>C  2, 3 only</td>
</tr>
<tr>
<td>D  1 only</td>
</tr>
<tr>
<td>E  3 only</td>
</tr>
</tbody>
</table>

8  You receive a prescription for Dermovate® in Unguentum Merk. You note that this is a ‘special’ product. Which of the following is/are true regarding this prescription?

1  This prescription is for an unlicensed product and will carry extra liability on both the prescriber and supplying pharmacist

2  You may dispense this product extemporaneously if there is no suitable licensed marketed product
If ordering this product externally, you should source it from a reputable source that is licensed to make extemporaneous products.

Mr Smith has been admitted to hospital with cholestatic jaundice. Which of the following medications that he is currently taking may be the possible culprit(s)?
1. Co-amoxiclav
2. Ramipril
3. Senna

Mrs Davies has been admitted to hospital following a suspected NSTEMI. Which of the following medication will she need at some point in her overall treatment plan?
1. Aspirin
2. Atorvastatin
3. Clopidogrel

Directions for Questions 11 and 12. The following questions consist of a first statement in the left-hand column followed by a second statement in the right-hand column.

- Decide whether the first statement is true or false.
- Decide whether the second statement is true or false.

Then choose:

A if both statements are true and the second statement is a correct explanation of the first statement
B if both statements are true but the second statement is NOT a correct explanation of the first statement
C if the first statement is true but the second statement is false
D if the first statement is false but the second statement is true
E if both statements are false

Questions 11–12 concern Master MJ, a 10 year old boy weighing 30 kg, who has been admitted unconscious to your high dependency unit for suspected acute severe asthma.

11 FIRST STATEMENT
Master MJ should receive a dose of 120mg, intravenous hydrocortisone

SECOND STATEMENT
Hydrocortisone is preferred as Master MJ will not be able to swallow prednisolone tablets

After further treatment it is decided to start Master MJ on aminophylline infusion as he has not fully responded.

12 FIRST STATEMENT
Potassium levels need to be taken whilst Master MJ is on aminophylline therapy

SECOND STATEMENT
Aminophylline when used with other medications in acute severe asthma can cause hypokalaemia
13 (Calc) The ward nurse rings for your advice; she has made a syringe containing 200mg of dopamine in 50ml of sodium chloride 0.9%. At what rate should she infuse the dopamine as it is not clear from the drug chart?

Upon asking you find out that the doctor has prescribed a rate of 5 microgram/kg/min and that the patient weighs 60 kg.

A 0.075 ml/hr
B 0.45 ml/hr
C 0.75 ml/hr
D 4.5 ml/hr
E 9 ml/hr

Directions for Questions 14 (Calc) to 15 (Calc). For each numbered question select from the list above it the one lettered option which is most closely related to it. Within the group of questions each lettered option may be used once, more than once, or not at all.

A 0.002 micrograms
B 0.02 micrograms
C 0.2 micrograms
D 2 micrograms
E 2 milligrams

14 (Calc) Is the initial dose per minute of epoprostenol for persistent pulmonary hypertension that should be administered by continuous intravenous infusion to a neonate who weighs 1 kg

15 (Calc) Is the initial maximum dose per minute of noradrenaline (norepinephrine) that should be administered by continuous intravenous infusion for septic shock in a 6 year old child weighing 20 kg

Question 16 (Calc) Concerns a 14 year old girl weighing 50 kg who has been admitted into hospital with burns. She is prescribed her total daily fluid to be given intravenously.

16

FIRST STATEMENT
This child should receive 2 litres of fluid as her total daily replacement

SECOND STATEMENT
Baseline fluid requirements should be adjusted based on factors such as burns

Closed Book questions
17 You are working as a locum community pharmacist late on a Saturday night when you are asked to make an emergency supply by a patient. Which ONE of the following statements is false in relation to this emergency supply?

A You can charge the patient for the emergency supply
B You must legally make a register entry for this supply
C You must personally interview the patient prior to supply
D There does not need to be an immediate need for the medication
E You can choose to either supply or not supply as long as you can justify your actions

18 Which ONE of the following statements about anti-infective agents is true?

A Tetracycline antibiotics are known to stain teeth in adults
B Cefalosporins are not structurally related to penicillin type antibiotics
C Clindamycin can cause diarrhoea which necessitates cessation of treatment
D Aciclovir suspension can be used orally in neonates for herpes based infection
E Echinocandin antifungal agents are effective against fungal CNS infections

19 Which ONE of the following in relation to pharmacy enhanced services is false?

A EHC provided via a patient group directive (PGD) is classed as an enhanced service
B Stop smoking services when commissioned by a pharmacy contractor are classed as an enhanced service
C Minor ailments schemes provided from a chemist are an enhanced service
D A flu vaccination service cannot be delivered as part of an enhanced service
E Medicines use reviews are useful in ensuring medication compliance and help to prevent wastage of medication

Directions for Questions 20–21. For each numbered question select from the list above it the one lettered option which is most closely related to it. Within each group of questions each lettered option may be used once, more than once, or not at all.

Questions 20–21 concern the following:

<table>
<thead>
<tr>
<th>Prescription requirement – Total quantity in words and figures</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Safe custody required</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Select, from A to E, which ONE of the above applies to the following medications as from 1 June 2015:

20  Zolpidem 5mg tablets
21  Temazepam 10mg tablets

Directions Summarised

<table>
<thead>
<tr>
<th>A 1, 2, 3</th>
<th>B only</th>
<th>C 2, 3 only</th>
<th>D 1 only</th>
<th>E 3 only</th>
</tr>
</thead>
</table>

22  Mr Sullivan is experiencing some nausea and dizziness, whilst also suffering from oral candidiasis. Looking at his record you note that he has been recently supplied medications as listed below; which of these may predispose Mr Sullivan to oral candidiasis?

1  Amoxicillin 250mg/5ml suspension
2  Dexamethasone 2mg/5ml oral solution
3  Ondansetron 4mg tablets

23  Your CPD entries have been called for submission by the GPhC. Which of the following apply?

1  A minimum of nine entries per year are needed as evidence
2  At least four of these entries must start at the point of ‘reflection’
3  At least three of these entries must start at the point of ‘action’

Question 24 relates to a community pharmacy where you are working as the responsible pharmacist.

FIRST STATEMENT
You can legally request changes to the
Standard Operating Procedures (SOPs) if you feel
these are needed to ensure a suitable level of service

SECOND STATEMENT
The responsible pharmacist legislation
enables you to request changes to SOPs if you
feel these are needed to ensure safe practice
Answers to Open Book Questions

1 E
BNF Guidance on prescribing: adverse reactions to drugs: oral side-effects of drugs: periodontium

2 C
BNFC 5.3.2.1 Herpes simplex and varicella-zoster infection: aciclovir
500mg/m^2 every 8 hours for 5 days
BSA = 24 kg = 0.9m^2
500 × 0.9 = 450 × 3 = 1350mg

3 D
BNF 5.3.1 HIV infection: Lipodystrophy syndrome

4 A
BNF 9.8.2 Acute porphyrias

5 B
First and second are false
Concerta XL 22/78
Equasym XL 30/70

6 B
BNFC 3.4.1 Antihistamines
Only 1 and 2 are correct
Promethazine Child 6-10, 5-10mg BD or 10-25mg ON

7 D
BNF 8.1 Cytotoxic drugs: side effects of cytotoxic drugs
Doxorubicin is moderately emetogenic
Fluorouracil is mildly emetogenic

8 E
BNF 4.8.1 Control of the epilepsies
Carbamazepine is Category 1
Lamotrigine is Category 2

9 B
BNF 14.4 Vaccines and antisera

10 E
BNF 14.4 Vaccines and antisera

11 D
BNF 14.4 Vaccines and antisera

12 E
BNF 14.4 Vaccines and antisera

13 A
BNF 15.2 Local anaesthesia
True, true

14 E
False, false
BNF A1 Interactions and 5.1.12 Quinolones
Dairy products decrease the absorption of norfloxacin
Quinolones should be avoided in pregnancy because they have been shown to cause arthropyathy in animal studies.

15 D
BNF Prescribing in Palliative Care
Answers to Calculations Questions

1 B
A total daily dose of oral oxycodone is 20mg × 2 + 5mg × 4 = 60mg
BNF provides information on approximate equivalent strengths of 72-hour fentanyl patches and oral morphine salts.
Firstly the total daily dose of oxycodone has to be converted to the equivalent dose of oral morphine
As per BNF conversion table 6.6mg of oxycodone is equivalent to 10mg of oral morphine so
60mg of oxycodone is about 90mg
morphine salt 30mg daily = fentanyl '12' patch
morphine salt 60mg daily = fentanyl '25' patch
To provide 15 days pain relief 5× fentanyl '12' patch and 5× fentanyl '25' patch should be prescribed.

2 A
1ml of solution contains 20 drops
2000IU:20 drops = 200IU:2 drops per day
2 drops × 180 days = 360 drops for the full course
20 ml bottle contains 20 × 20 drops = 400 drops but has to be discarded 3 months of opening so 2 bottles will need to be supplied.

3 D
0.18% (w/v) means 0.18g midazolam in 100ml of the solution
0.18g in 100ml
0.018g in 10ml
0.036g in 20ml
0.036g = 36mg
36mg / 24hrs
6mg / 3hrs
1.5mg / hr

4 A

2.5 → 0.5 part of 2.5% cream

1.0 → 1.5 part of 0.5% cream

0.5

Relative amounts 0.5 : 1.5
Or 1 : 3 parts, with a total of 4 parts
20g tube so 20/4 = 5g per part
1 part = 5g
3 parts = 15g
5g of 2.5% cream and 15g of 0.5% cream will be needed
5 A
5000ppm means 5000g in 1000 000g
5000g = 5000 000mg
5000 000mg in 1000 000g
500mg in 100g
250mg in 50g
5mg in 1g
250+5 = 255mg in 51g
Answers to Closed Book Questions

1 C
BNFC 4.7.1 Non-opioid analgesics and compound analgesic preparations
Child 2-4 years 180mg every 4–6 hours (max. 4 doses in 24 hours)

2 E
MEP: Appendix II: GPhC Guidance on responding to complaints and concerns: what to do in the event

3 C
MEP:3.7.12 Practice issues: Disposing of spent methadone bottles

4 C
BNF 13.3 Topical local anaesthetics and antipruritics
A topical preparation containing doxepin 5% is licensed for the relief of pruritus in eczema; it can cause drowsiness and there may be a risk of sensitisation.

5 C
MEP: 2.2 Medicines optimisation and pharmaceutical care
First statement is one of the Seven Principles. See Appendix I: GPhC standards of conducts, ethics and performance. Other two statements are part of medicines optimisation.

6 A
PSNC website
Tolbutamide can be classed as a cardiovascular risk MUR
Salbutamol and Clenil inhalers are eligible for a respiratory MUR
Sulindac is an NSAID and eligible for a high-risk MUR

7 E
MEP Table 9: Summary of various characteristics of CDs
First statement is false
Second statement is false
Third statement is true

8 C
MEP 3.6
First statement is true
Second statement is false. It is 5 years
Third statement is false

9 D
RPS chloramphenicol guidance/Patient UK
Symptoms suggest that this is not conjunctivitis and could be acute glaucoma. Urgent referral

10 E
RPS tamsulosin guidance
While his symptoms suggest BPH, tamsulosin is only licensed from 45 years of age

11 B
RPS sumatriptan guidance
Sumatriptan could be supplied. No reasons to suggest referral

12 C
RPS orlistat guidance
Her BMI is not high enough to recommend orlistat. She is at the low end of the overweight category. Recommend a reduction in units of alcohol and advice on healthy eating
13 D
BNF 4.7.2 Opioid analgesics
MXL® is the only MR 24-hourly oral preparation. Other MR oral preparations are 12-hourly

14 D
BNF 4.9.1 Dopaminergic drugs used in Parkinson’s disease
Rasagiline is a monoamine-oxidase-B inhibitor

15 E
BNF 3.1.2 Antimuscarinic bronchodilators
Glycopyrronium is a long acting muscarinic agonist. It is indicated for maintenance treatment of COPD

16 B
BNFC 9.1.1.1 Oral iron
Answers to Mixed Questions

1 C
See BNF ‘Prescribing in palliative care’ which advises that initiation should not be delayed on the basis of a theoretical risk of addiction.

2 C
Straterra® is not a black triangle drug; it is classed as a CNS stimulant and the timing of the last dose will impact on sleep (especially if it is given late in the evening). The MHRA now advises that common reactions in children to medications not carrying the black triangle symbol do not need to be reported. [https://www.gov.uk/drug-safety-update/new-guidance-on-reporting-suspected-adverse-drug-reactions-in-children#yellow-card-reporting-guidelines-for-adrs-in-adults-or-children.]

3 D
See BNF section 2.4 which states that atenolol has an intrinsically longer duration of action.

4 C
See BNF section 9.1.5

5 E
See BNF section 9.1.5, quinine can be used in cases of malaria where clinically appropriate.

6 D
See BNFC section titled ‘How to use the BNF for children’ which states that preparations containing hydrogenated glucose syrup, mannitol, maltitol, sorbitol, or xylitol can be marked as ‘sugar free’.

7 A
Benzyl alcohol is not suitable for use in neonates due to issues in metabolism and handling that can lead to toxicity.

8 A

9 B
See individual BNF monographs and prescribing information section for ACEIs to deduce the side effect profiles fully.

10 A
See individual BNF monographs as well as section 2.10.1 and NICE guidance on this topic area.

11 D
Refer to the management of acute asthma in the BNFC; the maximum dose of hydrocortisone is 100mg.

12 A
See BNFC 3.1.3

13 D
Rate = 5mcg × 60 = 300mcg/min
300 × 60 = 3000 × 6 = 18,000mcg = 18mg/hr
200mg/50ml = 20mg/5ml = 2mg/0.5ml
Hence 18mg = 4.5ml/hr
14 A
See monograph in section 2.5.1 of BNFC. Initial dose is 2 nanograms/kg/min.

15 D
See monograph in section 2.7.2 of BNFC. Initial dose is 20–100 nanograms/kg/min. Hence maximum is $100 \times 20 = 2000$ nanograms = 2 micrograms.

16 B
See BNF 9.2.2

Fluid volume = $(100 \times 10) + (50 \times 10) + (20 \times 30) = 1000 + 500 + 600 = 2100$ml (2.1L)

The maximum volume in a female should not exceed 2L of fluid/day.

17 D

18 C
See individual BNF monographs and prescribing information.

19 D

20 A

21 E

22 B

23 D

24 A