

SEQ Writing Practice

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Q001 — Recall of Medicines and Regulatory Action [20 marks]

1.1 Define the term recall of a medicine. [4 marks]

1.2 State four circumstances in which a medicine may need to be recalled from the market. [8 marks]

Q001 continued

1.3 State two responsibilities of a community pharmacist after receiving an authorised recall notice concerning a medicine stocked in the pharmacy. [4 marks]

1.4 State two records or items of information that should be maintained during the recall process. [4 marks]

Q003 — Licensing and Operation of a Community Pharmacy [20 marks]

3.1 State four areas that should be considered when determining whether premises are suitable for operation as a community pharmacy. [4 marks]

3.2 State four requirements or controls important for the lawful and safe operation of a licensed pharmacy. [8 marks]

3.3 State two responsibilities of the pharmacist relating to storage and control of medicines within the pharmacy. [4 marks]

Q004 — Legal Classification and Supply of Medicines [20 marks]

4.1 State the main purpose of legally classifying medicines according to the level of control required for their supply. [4 marks]

4.2 Using the current applicable medicines legislation and regulations, select two classes of medicines subject to different levels of control and differentiate them under four suitable headings. [8 marks]

Q004 continued

4.3 State two responsibilities of a pharmacist when supplying a medicine subjected to prescription control. [4 marks]

4.4 Explain why the legal classification of a medicine should be confirmed from an authorised current source when there is uncertainty. [4 marks]

Q011 — Electronic / Messaging-App Prescription Scenario [20 marks]

A patient arrives at a community pharmacy and displays on a mobile phone an image of a prescription sent through a messaging application.

11.1 State four matters that should be checked before deciding whether the prescription can lawfully and safely be used for dispensing. [4 marks]

11.2 Describe three reasons why an image displayed on a mobile phone may require additional verification. [6 marks]

11.3 Describe three actions the pharmacist should take when authenticity or legal validity cannot be confirmed. [6 marks]

Q036 — Pharmacovigilance and Suspected Adverse Drug Reactions [20 marks]

36.1 Define pharmacovigilance. [4 marks]

36.2 State six items of information that are useful when documenting a suspected adverse drug reaction. [6 marks]

36.3 Describe three actions a pharmacist should take after identifying a clinically important suspected adverse drug reaction. [6 marks]

**Q062 — Pharmacy Inspection, Non-Compliance and Corrective Action
[20 marks]**

62.1 State four areas that may be reviewed during a regulatory or professional inspection of a community pharmacy. [4 marks]

62.2 State four examples of pharmacy non-compliance that may compromise medicine quality, patient safety or lawful operation. [8 marks]

62.3 Describe two immediate actions that should be taken after a significant non-compliance is identified. [4 marks]

Q092 — Registration and Marketing Authorisation of Medicines [20 marks]

92.1 State four purposes of requiring medicines to be registered or otherwise authorised before lawful marketing and supply. [4 marks]

92.2 List four categories of information that a regulatory authority may require when assessing a medicine for registration or marketing authorisation. [8 marks]

92.3 State two responsibilities of a pharmacy when there is uncertainty about whether a marketed medicine is currently authorised for supply. [4 marks]

Q123 — Medicine Samples, Donations and Promotional Supply Controls [20 marks]

123.1 State four risks associated with accepting or supplying medicines solely because they were provided as free samples or donations. [4 marks]

123.2 Describe four checks that should be completed before a donated or promotional medicine is considered suitable for lawful and safe use. [8 marks]

123.3 State two ethical principles that should guide a pharmacist when a commercial promotion conflicts with the patient's best interest. [4 marks]

Q271 — National Medicines Regulatory Authority and National Medicines Quality Assurance Laboratory: Regulatory Roles [20 marks]

271.1 State four broad regulatory functions of the National Medicines Regulatory Authority in relation to therapeutic products. [4 marks]

271.2 State three functions of the National Medicines Quality Assurance Laboratory. [6 marks]

271.3 Explain three situations in which regulatory and laboratory functions must work together. [6 marks]

Q272 — Authorised Officers, Inspection Powers and Evidence Handling [20 marks]

272.1 Define the role of an authorised regulatory officer in general terms. [4 marks]

272.2 State three types of action an authorised officer may be empowered to take during a lawful inspection or investigation, subject to the current Act and regulations. [6 marks]

272.3 Describe three principles for collecting, sealing, documenting or transferring a regulatory sample or other evidence. [6 marks]

Q002 — Authenticity and Legality of a Prescription [20 marks]

A patient presents a prescription for a prescription-only medicine. The pharmacist notices that some information on the prescription is unclear.

2.1 State four basic features that should be checked when assessing the legality and authenticity of a prescription. [4 marks]

2.2 State six additional patient- or medicine-related checks that should be completed before dispensing. [6 marks]

2.3 Describe three actions that should be taken when an important item on the prescription cannot be verified. [6 marks]

Q006 — Professional Ethics in Medicine Supply [20 marks]

6.1 State four ethical principles relevant to professional pharmacy practice. [4 marks]

A regular customer asks the pharmacist to supply a medicine without the documentation normally required. The customer states that the medicine has been used previously and promises to bring the required documentation later.

6.2 Discuss four ethical or professional considerations that should guide the pharmacist's decision. [8 marks]

6.3 State two appropriate actions the pharmacist may take to assist the patient without compromising professional standards. [4 marks]

Q009 — Patient Counselling and Written Medicine Information [20 marks]

9.1 State four objectives of counselling a patient when a medicine is supplied. [4 marks]

9.2 List six important areas of information that should normally be considered when counselling a patient about a newly prescribed medicine. [6 marks]

9.3 State three characteristics of effective written medicine information provided to a patient. [6 marks]

Q010 — Antibiotic Dispensing and Counselling [20 marks]

A patient presents a valid prescription for an oral antibiotic.

10.1 State four items that should be checked before the antibiotic is dispensed. [4 marks]

10.2 Describe six counselling points that should be given to improve safe and effective use of the antibiotic. [6 marks]

10.3 State three practices that contribute to inappropriate antibiotic use and explain briefly why each should be avoided. [6 marks]

Q065 — Dispensing Labels, Auxiliary Labels and Safe Packaging [20 marks]

65.1 State six items of information that should normally be considered for inclusion on a dispensed-medicine label, subject to current applicable requirements. [6 marks]

65.2 Give three examples of auxiliary instructions that may be necessary on medicine labels and state the purpose of each. [6 marks]

Q065 continued

65.3 State two factors that should be considered when selecting a container for a dispensed medicine. [4 marks]

65.4 State two reasons why the final labelled package should be checked against the prescription before supply. [4 marks]

Show all calculations and units.

18.3 Express a 1 in 2000 w/v solution as a percentage strength. [4 marks]

A child weighing 24 kg is prescribed a medicine at 15 mg/kg/day, administered in three equally divided doses. The medicine is available as an oral liquid containing 125 mg in 5 mL.

19.1 Calculate (a) the total daily dose in mg, (b) the amount of drug in mg per dose, and (c) the volume in mL required per dose. [8 marks]

Q019 continued

19.2 Calculate the minimum total volume of medicine required for five complete days of treatment, assuming no wastage. [6 marks]

19.3 State three checks that should be completed before supplying a paediatric liquid medicine based on a calculated dose. [6 marks]

A prescription requires 180 mg of a drug expressed as the active base. The available material is the hydrochloride salt. The molecular weight of the base is 300 and that of the hydrochloride salt is 360.

20.1 Calculate the mass of the hydrochloride salt required to provide 180 mg of active base. [8 marks]

20.2 Calculate the amount of active base present in 300 mg of the hydrochloride salt. [6 marks]

Show all calculations and units.

Q021 continued

21.3 A second infusion of 100 mL must be administered over 30 minutes. Calculate the rate in mL/hour. [6 marks]

21.4 State three factors, other than the mathematical calculation itself, that should be checked before an infusion rate is applied to a patient. [6 marks]

Q022 — pH, pKa and Drug Ionisation [20 marks]

22.1 Define (a) pH and (b) pKa. [4 marks]

22.2 Using the Henderson-Hasselbalch relationship, calculate the ratio of ionised to unionised drug for a weak acid having a pKa of 4.8 at a pH of 6.8. [8 marks]

22.3 Calculate the approximate percentage of the drug that is in the ionised form under the conditions in Question 22.2. [4 marks]

Q023 — Pharmaceutical Buffers [20 marks]

23.1 Define a buffer solution. [4 marks]

23.2 State three reasons for using buffers in pharmaceutical formulations. [6 marks]

23.3 State three factors that influence the pH or buffering performance of a pharmaceutical buffer system. [6 marks]

48.1 Using alligation, calculate the quantities of a 20% w/w ointment and a 2% w/w ointment required to prepare 500 g of an 8% w/w ointment. [10 marks]

Q048 continued

48.2 Verify the final strength by calculating the total mass of active ingredient contributed by the two components. [6 marks]

48.3 State two practical precautions when combining the two ointments to obtain a uniform final product. [4 marks]

Q083 — Reconstituted Oral Antibiotic: Course Quantity Calculation
[20 marks]

83.1 After reconstitution, an oral liquid contains 250 mg in 5 mL and each bottle contains 100 mL. A patient is prescribed 375 mg every 8 hours for 7 days. Calculate the volume required per dose. [4 marks]

83.2 Calculate the total volume required for the complete 7-day course, assuming no wastage. [6 marks]

Q083 continued

83.3 Calculate the minimum number of 100 mL bottles that must be supplied. [4 marks]

83.4 Calculate the total mass of active drug, in mg, administered over the 7-day course. [4 marks]

83.5 State one final check that should be made when interpreting a reconstituted-product label. [2 marks]

12.1 Define the term pharmaceutical excipient. [2 marks]

12.2 For each of the following excipient classes, state its principal function and give one suitable example: (a) diluent/filler, (b) binder, (c) disintegrant, (d) lubricant. [8 marks]

12.3 State three additional properties or functions that excipients may provide in a tablet formulation. Give one suitable example for each. [6 marks]

Q013 — Tablet Manufacturing [20 marks]

13.1 Name two commonly used approaches for producing granules or preparing material before tablet compression. [4 marks]

13.2 Describe the principal stages involved in wet granulation followed by tablet compression. [8 marks]

13.3 State four in-process or finished-tablet properties that may be checked during tablet manufacture. [4 marks]

15.1 Differentiate among a solution, suspension and emulsion with respect to the physical state and distribution of the dispersed material. [6 marks]

15.3 State four desirable properties of a pharmaceutical suspension intended for oral administration. [4 marks]

Q016 — Ointments, Creams and Semisolid Preparations [20 marks]

16.1 Differentiate between an ointment and a cream using four suitable characteristics. [4 marks]

16.2 State three properties of a suitable ointment base and explain briefly why each property is desirable. [6 marks]

16.3 Describe three factors that should be considered when selecting a semisolid base for a particular medicinal product. [6 marks]

Q017 — Pharmaceutical Incompatibilities [20 marks]

17.1 Define pharmaceutical incompatibility. [4 marks]

17.2 Classify pharmaceutical incompatibilities into three major types and give one suitable example for each type. [6 marks]

Q017 continued

17.3 For each observation, state one possible cause and one appropriate corrective or preventive measure: (a) precipitation after two liquids are mixed, (b) liquefaction of a powder mixture, (c) colour change during storage. [6 marks]

17.4 State two actions a pharmacist should take when an incompatibility affecting safety or product quality cannot be resolved. [4 marks]

Q042 — Size Reduction, Trituration and Powder Mixing [20 marks]

42.1 Define trituration and levigation. [4 marks]

42.2 State four reasons for reducing particle size during pharmaceutical compounding or manufacture. [8 marks]

42.3 Describe the principle of geometric dilution when a small quantity of potent powder must be mixed uniformly with a large quantity of diluent. [4 marks]

222.1 State the principle of fluidised-bed drying. [4 marks]

222.3 State three advantages of fluidised-bed drying compared with static tray drying. [6 marks]

Q025 — Storage, Packaging and Protection of Medicines [20 marks]

25.1 State four environmental factors that may cause deterioration of medicines during storage. [4 marks]

25.2 Explain why each of the following may require special packaging or storage: (a) a light-sensitive medicine, (b) a hygroscopic powder, (c) a volatile preparation. [6 marks]

25.3 State three important actions that should be taken when a medicine has been stored outside its specified storage conditions. [6 marks]

Q026 — Sterilisation and Aseptic Processing [20 marks]

26.1 Differentiate between sterilisation and disinfection. [4 marks]

26.2 Compare moist-heat sterilisation and dry-heat sterilisation under four suitable headings. [8 marks]

Q026 continued

26.3 A heat-sensitive aqueous medicine must be rendered sterile without exposing the medicine to a destructive sterilising temperature. State one suitable approach and describe the major steps required to minimise microbial contamination during subsequent handling. [4 marks]

26.4 State four factors that should be considered when selecting a sterilisation method for a pharmaceutical material or product. [4 marks]

Q053 — Quality Assurance, Quality Control and GMP [20 marks]

53.1 Differentiate between quality assurance (QA) and quality control (QC). [4 marks]

53.2 Define Good Manufacturing Practice (GMP) in relation to pharmaceutical production. [4 marks]

53.3 State four GMP controls that help prevent mix-ups, contamination or inconsistent product quality. [8 marks]

55.1 State four controls needed for reliable storage of medicines that require refrigeration. [8 marks]

55.2 A refrigerator is found at 14°C and the duration of the excursion is uncertain. Describe four actions that should be taken before affected medicines are returned to usable stock. [8 marks]

40.1 Describe the main steps for correct use of a pressurised metered-dose inhaler (pMDI) without a spacer. [8 marks]

40.2 State three common technique errors that can reduce lung delivery from a pMDI. [6 marks]

Q057 — Diabetes Medicines and Hypoglycaemia Safety [20 marks]

57.1 State the principal mechanism of action of metformin. [4 marks]

57.2 State two common or important adverse effects/precautions associated with metformin. [4 marks]

Q057 continued

57.3 State four symptoms or signs that may occur during hypoglycaemia. [4 marks]

57.4 Describe four counselling points for a patient using insulin or another glucose-lowering medicine that can cause hypoglycaemia. [8 marks]

58.1 Differentiate between a bronchodilator reliever and an inhaled corticosteroid controller in terms of purpose and pharmacological action. [6 marks]

58.3 State two signs that a patient's asthma control may be inadequate and requires review. [4 marks]

Q088 — Anticoagulant and Antiplatelet Medicine Safety [20 marks]

88.1 Differentiate between an anticoagulant and an antiplatelet medicine in terms of their principal target in haemostasis. [4 marks]

88.2 State four factors that may increase bleeding risk in a patient taking an anticoagulant or antiplatelet medicine. [8 marks]

88.3 State two counselling points that help reduce avoidable bleeding-related harm.
[4 marks]

29.1 Differentiate between (a) active immunity and (b) passive immunity. [4 marks]

29.3 State three ways in which vaccination contributes to prevention or control of communicable diseases. [6 marks]

Q030 — Crude Drugs and Natural Medicinal Products [20 marks]

30.1 Define (a) crude drug and (b) biological source of a crude drug. [4 marks]

30.2 For any four of the following natural medicinal substances, state the biological source and one important pharmacological action or pharmaceutical use: Senna, Digitalis, Atropine, Menthol, Acacia, Cinchona. [8 marks]

30.3 State four factors that may affect the quality of a crude drug between collection and use. [4 marks]