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CEYLON MEDICAL COLLEGE COUNCIL

EXAMINATION FOR CERTIFICATE OF EFFICIENCY AS PHARMACIST

JANUARY 2026

Part 2 – Structured Essay Questions (SEQ)

Date 31.01.2026 **Time: x.xx p.m. – x.xx p.m**

ANSWER ALL FIVE (5) QUESTIONS WITHIN THE SPACE PROVIDED

Write your index number on all the pages.

Duration is 3 hours for both Part 1, the Multiple Choice Question (MCQ) Paper, and Part 2, the Structured Essay Question (SEQ) Paper. (Spend 150 minutes for the MCQ Paper and 30 minutes for the SEQ Paper.)

PART 2

Question 01

Answer the following as per the National Medicines Regulatory Authority Act No. 05 of 2015 and its Regulations.

1.1 Define a 'recall of medicines'. *(04 marks)*

A recall of medicines is the process by which the **Authority removes a medicine from circulation** when it **does not meet required standards,** or its **continued use would cause serious health problems**, and such recall is **carried out after issuing a notice to ban or withdraw the product** under Section 108 of the Act.

1.2 State four (04) circumstances under which the National Medicines Regulatory Authority may recall a medicine.

(12 marks)

1. based on a **report/certificate from an approved analyst** or additional approved analyst
2. on the **recommendation of the Medicines Evaluation Committee**
3. on the **recommendation of the Safety of Medicines and Risk Evaluation Subcommittee**
4. based on **safety alerts issued by the World Health Organization or any other national**

1.3 Briefly explain two (02) conditions under which suspension of a product registration may be revoked.

(04 marks)

- the **manufacturer implements adequate corrective and preventive actions**
- adequacy is confirmed through a **GMP inspection of the manufacturing plant**
- the Authority is satisfied that risks have been controlled

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Question 02.

When you work as a community pharmacist the medicines are to be provided to patients in accordance with legal requirements, professional standards, and ethical principles to ensure the safe and effective use of them.

2.1 Classify medicines based on legal control.

(04 marks)

1. Prescription-only medicines (POM) – supplied only with a valid prescription
2. Over-the-counter (OTC) medicines – supplied without prescription
3. Controlled drugs – subject to strict regulations due to abuse potential
4. Hospital-only medicines – restricted to institutional use

2.2 State four (04) ethical principles involved in the supply of medicines.

(04 marks)

1. Beneficence – acting in the patient's best interest
2. Non-maleficence – avoiding harm
3. Autonomy – respecting patient decisions
4. Justice – fair and equal access to medicines

or. Same explanation ✓

2.3 State six (06) criteria a pharmacist should assess to verify the authenticity of a prescription.

(06 marks)

- **Prescriber Information**
  - Name, qualifications, registration/license number, signature.
  - Contact details to confirm legitimacy.
- **Patient Information**
  - Full name, age, sex, address, medical record number if available.
- **Date of Prescription**
  - Ensure it is current and valid; some drugs have legal time limits.
- **Medication Details**
  - Correct drug name (generic or brand).
  - Strength/concentration.
  - Dosage form (tablet, injection, syrup, etc.).
  - Dose, frequency, route of administration.
  - Quantity prescribed.
- **Legibility and Clarity**
  - Prescription must be readable, without ambiguous abbreviations.
- **Signature of Prescriber**
  - Should be original; check for authenticity.

any other relevant answers. ✓

2.4 Explain the patient instructions for the following prescription abbreviations.

i) b.i.d
.....
.....

- **b.i.d. (bis in die – twice a day)**

Instruction: Take one dose in the morning and one dose in the evening, roughly 12 hours apart.

ii) t.i.d
.....
.....

- **t.i.d. (ter in die – three times a day)**

Instruction: Take one dose in the morning, one at midday, and one in the evening, evenly spaced throughout the day.

iii) q.h
.....
.....

- **q.h. (quaque hora – every hour)**

Instruction: Take one dose every hour **as** prescribed, maintaining the schedule strictly.

iv) PRN
.....
.....

- **PRN (pro re nata – as needed)**

Instruction: Take only when needed for symptoms (e.g., pain, fever), not on a fixed schedule.

v) STAT
.....
.....

- **stat (immediately/at once)**

Instruction: Take this dose immediately—do not delay.

vi) PO
.....

- **PO (per os – by mouth)**

Instruction: Take **the medicine by mouth**, swallowing with water unless otherwise

1/2 mark for point
1/2 mark for - Explanation

(06 marks)

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Question 03

3.1 Define the term 'incompatibility of pharmaceuticals'.

(04 marks)

*When **two or more ingredients** of a preparation are **mixed or interact together** the **undesired changes** take place in the **physical, chemical or therapeutic properties** of the medicament.*

3.2 List 03 (three) types of pharmaceutical incompatibilities with 02 (two) examples for each type.

(06 marks)

Physical incompatibility -any 2
- *Changes in colour , taste, viscosity, insolubility, immiscibility*

ii. Chemical incompatibility - any 2
- *Oxidation , hydrolysis, polymerization, isomerization, decarboxylation absorption of Co_2*

iii. Therapeutic incompatibility - any 2
- *Drug- drug interaction, drug- excipients interactions , drug- food interaction*

(3 types 3 marks + each 6 examples 0.5 mark = 6marks)

3.3 Define the term 'pharmaceutical excipients'.

(02 marks)

*These are pharmacologically **inactive substances** used in the **formulation of drug products** for long term **stabilization,** providing bulk, masking taste, ensuring consistent drug release.*

3.4 List four (04) commonly used pharmaceutical excipients, stating the role of each, and providing one (01) example.

(08 marks)

Type of excipients	Function	Examples (Any 1)
Diluents/fillers	Increase the bulk/volume	Lactose ,manitol, microcrystalline cellulose
Binders	Mechanical strength, binding	Gelatin, starch, hydroxyl propyl cellulose
Disitegrant	Breakup or dispersion of tablets/capsules into granular particles	Sodium starch glycolate
Lubricant	Reduce friction	Magnesium stearate, talc, sodium stearyl fumarate
Glidant	Promote the flowability of a powder mixture	Colloidal silicon dioxide, tale, corn starch
Coating agent	Protection mask unpleasant taste or odors	Sucrose, ethyl cellulose
Preservatives	Prevent microbial growth	Methyl paraben, benzoic acid, sodium benzoate
Antioxident	Inhibit oxidation	Ascorbic acid, sodium bisulphate

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Question 04

4.1 A paediatric patient weighing 18 kg is prescribed a drug that is recommended at a dose of 12 mg/kg/day, to be administered in three divided doses. The drug is available as a syrup containing 120 mg in 5 mL.

Calculate the volume of syrup (in mL) to be administered per dose.

(10 marks)

total daily dose
Dose = 12 mg/kg/day
12×18=216 mg

dose per administration
Given in 3 divided doses:
216÷3=72 mg per dose

Calculate volume per dose
Given:
120 mg → 5 mL

Required: 72 mg → ? mL
5/120=x/72

X=3 mL

4.2 A prescription requires 150 mg of the active drug (base). The pharmacy stock contains the drug as a sulfate salt, with a molecular weight of 300 (base = 250).

Calculate the amount of the salt (in mg) that must be dispensed to provide the required 150 mg of active drug.

(05 marks)

300/250 = x/150

X = 180

4.3 State the main reasons why drugs are often formulated as salts.

(05 marks)

- **Better solubility** of salt form.

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(факс: 18-34)

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Question 05

5.1 Define the following terms.

a) Trituration

Trituration is the process of **grinding, rubbing, or crushing a substance into a fine powder**, usually using a mortar and pestle.

b) Mixing

Mixing is the process of **blending two or more substances together to obtain a uniform and homogeneous mixture**.

(06 marks)

5.2 List three (03) equipment used for trituration and mixing in a community pharmacy.

(06 marks)

Mortar and pestle
Spatula
Glass slab

5.3 A pharmacist needs to prepare 50 g of a powder mixture containing 0.5 g of a very potent drug and 49.5 g of lactose. Describe the step-by-step method to mix the drug uniformly with the diluent.

(08 marks)

1. Weigh the ingredients carefully: - 2
- Potent drug: 0.5 g
- Diluent (lactose): 49.5 g

2. Start with a small portion of diluent: - 2
   - Take a small amount of lactose, roughly equal in weight to the drug (e.g., 0.5 g).
3. Mix the drug with the small portion of lactose: 2
   - Place the drug and the small portion of lactose on a clean, dry mixing surface (mortar or glass plate).
   - Blend thoroughly using a spatula in a geometric dilution manner:
     - Spread and fold the powder repeatedly.
     - Rotate the mixture to ensure uniformity.
4. Gradually add more diluent in portions: 2
   - Add another equal portion of lactose (e.g., 1 g), and mix thoroughly.
   - Continue adding lactose in increasing amounts, mixing well after each addition, until all 49.5 g of lactose is incorporated.

THE END

18 – ✓
20 – ✓
26 – ✓
19 – ✓
30 – ✓
27 – ✓
29 – ✓
28 – ✓
34 – ✓
33 – ✓

32 – ✓
31 – ✓
21 – ✓
23 – ✓
22 – ✓
24 – ✓
25 – ✓