

THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF PHARMACY
ACADEMIC YEAR 2019/2020 – SEMSETER I



0107

BACHELOR OF PHARMACY HONOURS
FMU4501 - PHARMACEUTICS II – LEVEL 4
FINAL EXAMINATION
DURATION: THREE HOURS



DATE: 25th SEPTEMBER 2020

TIME: 2.00 P.M. – 5.00 P.M.

Part B – Short Answer Questions (20 marks)

1.

1.1. List **five (05)** factors affecting transdermal absorption of medicaments from ointments. **(05 Marks)**

- i.
- ii.
- iii.
- iv.
- v.

1.2. State **five (05)** ideal physical properties of semisolid dosage forms **(05 Marks)**

- i.
- ii.
- iii.
- iv.
- v.

2.

2.1. List **five (05)** medical gases used in hospitals. **(05 Marks)**

- i.
- ii.
- iii.
- iv.
- v.

2.2. State **five (05)** safety precautions involved in the use of medical gases. **(05 Marks)**

- i.
- ii.
- iii.
- iv.
- v.

Part C – Structured Essay Questions (60 marks)

1.
 - 1.1. State what is understood by the sodium chloride equivalent of a drug substance.
(02 Marks)
 - 1.2. You are provided with 120 mL of 0.002% w/v solution of sodium bicarbonate. Calculate the amount of sodium chloride which should be added to make the solution isotonic.
Sodium chloride equivalent of sodium bicarbonate = 0.65
0.9 % w/v sodium chloride solution is isotonic with body fluids.
(08 Marks)
 - 1.3. Calculate the concentration in mg/mL of a solution containing 10 mEq/mL of potassium chloride. Molecular weight of potassium chloride is 74.5
(05 Marks)
2.
 - 2.1. State what is meant by a 'laminar' used in pharmaceutical packaging.
(02 Marks)
 - 2.2. Describe the main criteria in the selection of an appropriate pharmaceutical packaging for medicinal products.
(05 Marks)
 - 2.3. Compare 5 characteristics in two of the packaging material glass and plastics.
(08 Marks)
3.
 - 3.1. List **three (03)** reasons as to why medicines are formulated as modified release dosage forms?
(03 Marks)
 - 3.2. Describe the advantages of modified release preparations from a patient's point of view.
(05 Marks)
 - 3.3. Describe 'hydrophilic matrix systems' used in modified release formulation.
(07 Marks)
4.
 - 4.1. List **three (03)** advantages of emulsions as a dosage form.
(03 Marks)
 - 4.2. List **four (04)** criteria for the selection of a suitable emulsifying agent.
(04 Marks)
 - 4.3. Describe the phenomenon of 'phase inversion' in emulsion stability.
(08 Marks)