DATE: 15TH SEPTEMBER 2023 **TIME: 09.30 A.M. – 12.30 P.M.**

Part B – Short Answer Question (20 Marks)

1.

1.1 State three (03) solvents that can be used for solubility determination of drug substance. (03 marks)

i.....

ii.....

iii.....

1.2 State three (03) types of incompatibilities tested in a drug-excipient compatibility study. (03 marks)

i.....

ii.....

iii.....

1.3 Write four (04) types of pharmacopeial tests carried out for tablets. (04 marks)

i.....

ii.....

iii.....

iv.....

2.

2.1 State two (02) methods that can be used to produce suspensions. (02 marks)

i.....

ii.....

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Part C – Structured Essay Questions (60 Marks)

1.

1.1. List three (03) advantages of gels as a pharmaceutical dosage form. (03 marks)

1.2. Categorize the three (03) types of gelling agents and give examples for each type. (06 marks)

1.3. Briefly discuss six (06) properties of an ideal suppository base. (06 marks)

2.

2.1. List four (04) tests used in the evaluation of transdermal patches. (04 marks)

2.2. List the four (04) types of transdermal patches. (04 marks)

2.3 Briefly discuss the seven (07) Basic components of the transdermal drug delivery system. (07 marks)

3.

3.1. State three (03) physicochemical factors affecting drug absorption in the nasal cavity. (03 marks)

3.2. Classify cosmetics according to their physical nature. Give an example for each. (06 marks)

3.3. Briefly describe the use of three (03) nutraceuticals in maintaining cardiovascular health. (06 marks)

4.

4.1. State three (03) types of rubber used in the pharmaceutical machineries. (03 marks)

4.2. What are the four (04) types of layouts in a pharmaceutical plant? (04 marks)

4.3. Briefly describe the four (04) methods to control air pollution pharmaceutical industry. (04 marks)

4.4. Briefly describe the four (04) main categories of risk control measures that are followed in a pharmaceutical manufacturing plant. (04 marks)

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2.2 List four (04) types of agitators that can be used in manufacturing of emulsions.
(04 marks)

i.....

ii.....

iii.....

iv.....

2.3 State four (04) physical tests used in evaluation of ointments and creams.
(04 marks)

i.....

ii.....

iii.....

iv.....