



PAST PAPERS

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Faculty of Health Sciences

Higher diploma in Pharmaceutical & cosmetic sciences

(Year 1 – Semester II)

Document Control & Approving Authority	Senior Director – Quality Management & Administration
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Faculty of Health Sciences
Higher Diploma in Pharmaceutical & Cosmetics Sciences
HD 1223 – Pharmaceutical & Cosmeceutical Microbiology

1st Year 2nd Semester

Batch 01

End Semester SEQ Examination

INDEX NUMBER:

Date : 27.01.2023

Time : 09.00 am – 12.00pm

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.
- You are not allowed to take out the examination papers.

QUESTION 01

(100 marks)

- 1.1 Define Generation time. (15 marks)
- 1.2 Mention two types of asexual reproduction of microbes. (15 marks)
- 1.3 Describe different stages of a growth curve. (30 marks)
- 1.4 State the 5 different sub types of aerobic and anaerobic microorganisms. (20 marks)
- 1.5 Mention differences of a Gram Positive cell wall vs a Gram Negative cell wall. (20 marks)

QUESTION 02

(100 marks)

- 2.1 What is a culture medium? (10 marks)
- 2.2 What are different types of culture methods? (20 marks)
- 2.3 Describe major factors in the development of a microbial infection. (30 marks)

2.4 Differentiate simple and differential staining methods (20 marks)

2.5 State the methods of smear fixation. (20 marks)

QUESTION 03 (100 marks)

Describe the bacterial morphology, identification characteristics and causing diseases.

3.1 *Pseudomonas aeruginosa* (25 marks)

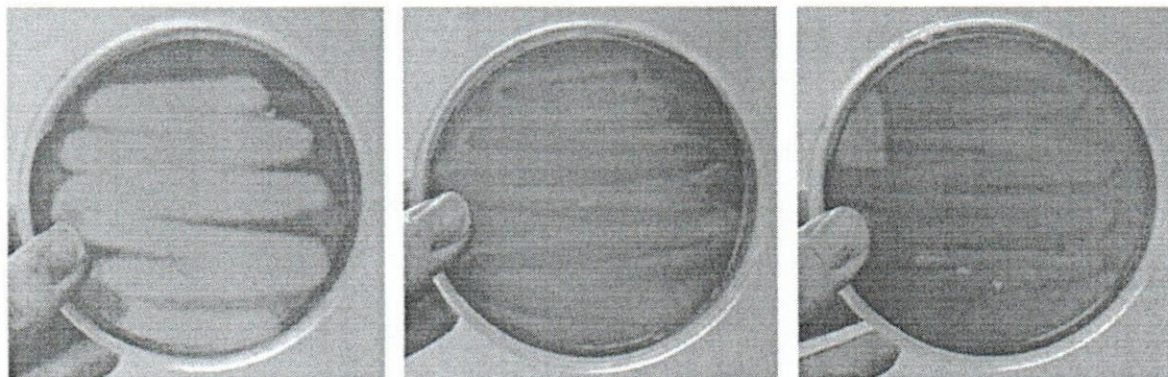
3.2 *Escherichia coli* (25 marks)

3.3 *Salmonella shigella* (25 marks)

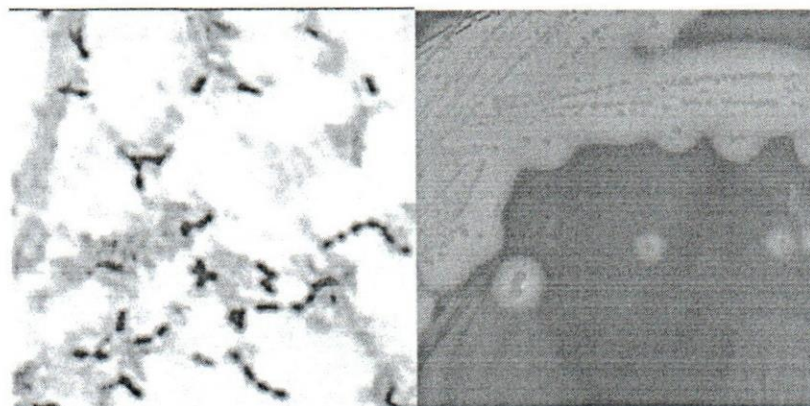
3.4 *Neisseria gonorrhoeae* (25 marks)

QUESTION 04 (100 marks)

4.1 Identify the following types of hemolysis in blood agar and describe their characteristics (20 marks)



4.2 A sample swab from a cosmetic product was cultured on a blood agar media and a gram stain was performed. The results of the gram stain and specimen cultured media are shown below.



- 4.2.1 What is the suspected microorganism? Discuss your answer with the above microscopic and macroscopic results and biochemical identification tests. (50 marks)
- 4.2.2 What are the virulence factors of this organism? (15 marks)
- 4.2.3 What are the two types of spores forming bacilli? (15 marks)

QUESTION 05 (100 marks)

- 5.1 Describe different types of culture media depending on consistency and ingredients of medium. (25 marks)
- 5.2 What is minimum inhibitory concentration (MIC)? (15 marks)
- 5.3 Mention the steps when performing Kirby-Bauer Disk Diffusion Susceptibility Test (35 marks)
- 5.4 What are the differences between an E- test vs a disc diffusion method? (25 marks)

QUESTION 06 (100 marks)

- 6.1 State the difference among transformation, transduction, and conjugation of bacterial DNA. (45 marks)
- 6.2 What are the difference between plasmid DNA vs Chromosomal DNA? (10 marks)
- 6.3 State the differences among transformation, transduction, and conjugation of bacterial DNA. (45 marks)

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Faculty of Health Sciences
Higher Diploma in Pharmaceutical & Cosmetic Sciences
HD 1223– Pharmaceutical & Cosmeceutical Materials & Dispensing
Batch - 01
1st year 2nd semester
Repeat SEQ Examination

Date : 25th January 2023
Time : 9.00 a.m. -12.00p.m (Three hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write the answers in **lined sheets** legibly in black or blue ink.

- Question 01** **(100 marks)**
- 1.1 List **05** of the main steps of a Root Cause Analysis (RCA). (10 Marks)
- 1.2 Brief the rationale of **03** types in defect classification. (20 marks)
- 1.3 Describe the process of developing a refined problem state using Five W1H and Gap analysis approach. (30 marks)
- 1.4 Develop a Root cause analysis for the below problem. (40 marks)

You receive a customer complaint for a wrong label in a syrup product ABC. Instead , a label of product XYZ is pasted. These two products are from the same product group and SKU (Stock keeping unit) size with green color print. Batch 22C3 of Product XYZ has been produced on 3rd March 2022 and Batch 22C7 of Product ABC was produced on the immediate next day (4th March 2022) . Line clearance exercise has been performed by a new employee and records of the morning start up check was not

available when investigating. There has been a shortage of team due to a Covid outbreak in the area. Electronic verification system for label identification was implemented recently, but is not still validated due to performance issues since Jan 22. In warehouse it was also identified that both the label boxes were stored in the same isle as they are from same packing material supplier.

Question 02**(100 marks)**

- 2.1 List **05** instruments you use in a manufacturing plant for the proper handling procedure. (15 marks)
- 2.2 State the technique used in dense phase to transfer the bulk materials (25 marks)
- 2.3 Hundred (100) bulk containers of uniform active pharmaceutical ingredient was purchased from the regular supplier to the ABC pharmaceutical manufacturing company. Develop the sampling plan and calculate the number of samples that are required to collect from the samples for the quality assurance. (40 marks)
- 2.4 Briefly describe the method of in-process sampling in the blending stage (20 marks)

Question 03**(100 Marks)**

- 3.1 What are the Personnel Protective Equipment (PPE) available in pharmaceutical manufacturing facilities? (10 marks)
- 3.2 How PPE increasing the quality of the pharmaceutical products? (10 marks)
- 3.3 Briefly describe the types of labels that are used when storing the bulk containers in the store room of a pharmaceutical manufacturing facility. (25 marks)
- 3.4 Describe the reasons for using different labels mentioned in 3.3. (25 marks)
- 3.5 State the reasons for using Double and cross-check method for the weighing procedure. (30 marks)

Question 04**(100 marks)**

- 4.1 List **05** components of a Purchase Order. (15 marks)
- 4.2 State **04** things discussed/considered in a Supply Review Meeting (SRM). (20 marks)
- 4.3 State the process flow of a requisition process of a batch. (30 marks)
- 4.4 Discuss the changes you propose in the process flow following scenario for the batch.

Note down a sample pick order for the rework batch. Bin size of API A is 2 kg.

(35 marks)

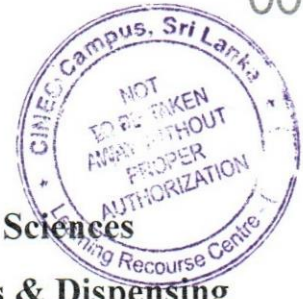
Batch 22C4 of ABC syrup was manufactured on 23rd March and is being identified to have low assay of the API A. Rework procedure is being developed to rework the batch with additional 5kg of A to be included in the batch and process to be repeated from the final mixing stage.

Question 05**(100 Marks)**

- 5.1 What are the WHO guidelines for pharmaceutical storage area? (20 marks)
- 5.2 Briefly describe the pharmaceutical storage conditions should be followed. (25 marks)
- 5.3 Compare the three main strategies (FIFO, FEFO and LIFO) of warehouse management. (45 marks)
- 5.4 What is stock card? (10 marks)

Question 06**(100 marks)**

- 6.1 List **05** factors which is important for proper material management is important. (15 marks)
- 6.2 State **04** Key KPIs monitored in material management. (20 marks)
- 6.3 Briefly describe the key consideration to maintain quality issues during material management. (25 marks)
- 6.4 Categorize and describe the machinery used for handling of materials. (40 marks)


Faculty of Health Sciences
Higher Diploma in Pharmaceutical & Cosmetic Sciences
HD 1223– Pharmaceutical & Cosmeceutical Materials & Dispensing
HD Batch – 01- 1st year 2nd semester- Repeat Assignment

Date : 25th January 2023
Time : 1.30 p.m. - 2.30 p.m (One hour)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **One** question.
- Answer **ALL** questions.
- You should write the answers in **lined sheets** legibly in black or blue in

Question 01
(100 marks)

During the manufacturing process of Ascorbic acid the following weights were obtained. Complete your records according to double and cross check method. (70 marks)

Name of the ingredient		Initial Weight	Final weight
Ascorbic Acid	Bulk Container	5.869 kg	3.578 kg
	Sample	0.000 kg	2.000 kg
Starch	Bulk Container	3.257 kg	0.557 kg
	Sample	0.000 kg	2.500 kg
Hydroxy propylmethyl cellulose (HPMC)	Bulk Container	4.445 kg	3.445 kg
	Sample	0.000 kg	1.000 kg

1.2 Describe the reasons for the weight variation of the bulk containers

(30 marks)



Faculty of Health Sciences

Higher Diploma in Pharmaceutical & Cosmetic Sciences

HD 1213

Anatomy & Physiology II

1st year 2nd Semester

Repeat End Semester SEQ Examination

1st Batch

INDEX NUMBER:

Date : 23rd January 2023
 Time : 9.00 a.m. – 12.00 p.m. (Three hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.
- You are not allowed to take out the examination papers.

- Question 1** (100 marks)
- 1.1 Draw a label diagram of a nephron. (25 marks)
 - 1.2 Write the differences between male and female urethra. (25 marks)
 - 1.3 List the constituents in the glomerular filtrate. (15 marks)
 - 1.4 Describe the process of urine formation. (35 marks)
- Question 2** (100 marks)
- 2.1 List the hormones which are secreted by the anterior pituitary gland. (15 marks)
 - 2.2 List the 03 hormones which are secreted by adrenal cortex. (15 marks)
 - 2.3 Outline the functions of hormones which mentioned in 3.4. (20 marks)
 - 2.4 Write short notes on followings.
 - 2.4.1 Thyroid follicles (25 marks)
 - 2.4.2 Adrenal gland cortex (25 marks)
- Question 3** (100 marks)
- 3.1 Name the three layers of meninges. (15 marks)
 - 3.2 Describe the structure of a neuron. (35 marks)

- 3.3 Name the main 3 components of synapse (15 marks)
3.4 Describe the transmission of nerve impulse at synapse (35 marks)

Question 4 (100 marks)

- 4.1 Names all bones in upper limbs. (20 marks)
4.2 Compare skeletal muscles, cardiac muscles and smooth muscles. (30 marks)
4.3 Name the main contractile proteins in skeletal muscle (20 marks)
4.4 Briefly describe the main steps of contraction of skeletal muscle (30 marks)

Question 5 (100 marks)

- 5.1 Briefly describe the functions of testosterone hormone (25 marks)
5.2 Outline the functions of following structures of male reproductive system. (25 marks)
 5.2.1 Testes
 5.2.2 Epididymis
 5.2.3 Vas deferens
 5.2.4 Urethra
 5.2.5 Prostate gland
5.3 List the organs present in female reproductive system. (20 marks)
5.4 Describe the microscopic view of cortex of human ovary. (30 marks)

Question 6 (100 marks)

- 6.1 Name primary and secondary immune organs present in human body. (20 marks)
6.2 Describe the structure of the lymph nodes. (30 marks)
6.3 Name the main two types of phagocytic cells in human body (20 marks)
6.4 Write short note on tympanic membrane. (30 marks)



Faculty of Health Sciences
Higher Diploma in Pharmaceutical and Cosmetic Science

HD 1253
Dermatology
1st year 2nd Semester

Repeat End Semester SEQ Examination
1st Batch



INDEX NUMBER:

Date : 19th January 2023
Time : 9.00 a.m. – 12.00 p.m. (Three hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.
- You are not allowed to take out the examination papers.

Question 1	(100 marks)
1.1 List main cell layers present in thick skin.	(25 marks)
1.2 Describe the characters of following skin types.	
1.2.1 Dry skin	(25 marks)
1.2.2 Oily skin	(25 marks)
1.3 Show a combination skin on face by a labeled diagram.	(25 marks)
 Question 2	 (100 marks)
2.1 Describe the following stages which are part of hair life cycle.	
2.1.1 Anagan	(30 marks)
2.1.2 Catagen	(30 marks)
2. 2 Describe the structure of human hair	(40 marks)
 Question 3	 (100 marks)
3.1 List four different types of acne scare	(20 marks)
3.2 List five acne scarring treatments.	(20 marks)
3.3 Write a short note on dermal filler.	(30 marks)
3.4 How skin acts as a biological barrier?	(30 marks)

Question 4

4.1 List four principle cells present in the epidermis.

(100 marks)

(20 marks)

4.2 What are the dermal papillae?

(20 marks)

4.3 What are the two primary forms of Melanin.

(20 marks)

4.4 Describe the functions of melanocytes.

(40 marks)

Question 5

5.1 Write a short note on arector pili muscle.

(100 marks)

(30 marks)

5.2 What are the different between eccrine and apocrine sweat glands?

(35 marks)

5.3 Describe the structure of sebaceous glands.

(35 marks)

Question 6

6.1 Describe the functions of nails.

(100 marks)

(35 marks)

6.2 Describe what can you do for nail cuticle caring.

(35 marks)

6.3 Describe haircare tips.

(30 marks)



Faculty of Health Sciences
Higher Diploma in Pharmaceutical and Cosmetic Sciences
HD 1243 Pharmacology
Batch – 01
1st Year 2nd Semester
End Semester SEQ Repeat Examination

Date : 17th of January 2023
Time : 9.00 am. – 12.00 pm (Three Hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.
- You are not allowed to take out the examination papers.

Question 01	(100 marks)
1.1 Briefly describe the,	
1.1.1 First pass metabolism.	(25 marks)
1.1.2 Half-life.	(25 marks)
1.2 Write the mode of action of,	
1.2.1 Insulin.	(25 marks)
1.2.2 Metformin.	(25 marks)

Question 02 (100 marks)

- 2.1 List the examples for,
- 2.1.1 Benzodiazepines. (25 marks)
 - 2.1.2 Antianginal drugs. (25 marks)
- 2.2 What are the drugs used for peptic ulcers? (25 marks)
- 2.3 List two examples of drugs used for constipation. (25 marks)

Question 03 (100 marks)

- 3.1 List the types of antiemetic drugs. (30 marks)
- 3.2 Write short notes on,
- 3.2.1 Oral contraceptive drugs (35 marks)
 - 3.2.2 Clinical trials (35 marks)

Question 04 (100 marks)

- 4.1 What is bronchial asthma? (25 marks)
- 4.2 List the drug groups recommended for the treatment of asthma. (30 marks)
- 4.3 List the steroids administered for asthma. (25 marks)
- 4.4 What are the mode of administration for steroids in asthma? (20 marks)

Question 05 (100 marks)

- 5.1 Write one clinical indication of,
- 5.1.1 Aspirin (20 marks)
 - 5.1.2 Morphine (20 marks)
 - 5.1.3 Streptokinase (20 marks)
 - 5.1.4 Radioactive iodine (20 marks)
 - 5.1.5 Prednisolone (20 marks)

Question 06 (100 marks)

- 6.1 Write short notes on,
- 6.1.1 Anticancer drugs (25 marks)
 - 6.1.2 Antihypertensive drugs (25 marks)
 - 6.1.3 Calcium channel blockers (25 marks)
 - 6.1.4 Heparin (25 marks)



Faculty of Health Sciences
Higher Diploma in Pharmaceutical and Cosmetic Sciences
HD 1243 Pharmacology
Batch - 01
1st Year 2nd Semester
End Semester MCQ Repeat Examination

Date : 17th of January 2023
Time : 01.30 pm – 02.30 pm (One Hour)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **Twenty MCQ** questions.
- Answer **ALL** questions.
- Out of five statements, some statements are true and some statements are false. Please mark true statements in the row of **True** and mark false statements in the row of **False**.
Ex:

True	a	b	c	d	e
False	a	b	c	d	e

- You should mark the answer legibly in black or blue ink.
- You are not allowed to take out the examination papers.

1. Which of the following drug dissolve the intravascular fibrin clot?
 - a. Warfarin
 - b. Heparin
 - c. Aspirin
 - d. Clopidogrel
 - e. Streptokinase

2. What is the drug to reduce the pain in myocardial infarction?
 - a. Aspirin
 - b. Heparin
 - c. Morphine
 - d. Paracetamol
 - e. Diclofenac sodium

3. What is site of drug metabolism?
 - a. skin
 - b. intestine
 - c. blood
 - d. liver
 - e. Kidney

4. What is the best drug absorptive site?
 - a. Stomach
 - b. Transverse colon
 - c. Descending colon
 - d. Ileum
 - e. Jejunum

5. What is Teratogenicity?
 - a. Placental crossing of drugs
 - b. Drugs secretion to the breast milk
 - c. Drug induced fetal damages during pregnancy
 - d. Mothers illness due to drug toxicity
 - e. None of the above

6. Which of the following drug will relieve the pain in Angina pectoris?
 - a. Aspirin
 - b. Clopidogrel
 - c. Beta blockers
 - d. Calcium channel blockers
 - e. Nitrate sublingual

7. What is the best contraceptive method during lactation period?

- a. Combined tablets of contraception
- b. Implants
- c. Minipills
- d. Depo Provera injection
- e. Intrauterine device

8. Regarding Warfarin

- a. Can cause bleeding with overdose
- b. Shows immediate therapeutic action
- c. Use orally
- d. Monitored with INR
- e. Act on clotting factors

9. Adrenaline

- a. is a sympathomimetic
- b. act on beta receptors
- c. act on alfa receptors
- d. can cause tachycardia
- e. can increase blood pressure

10. ADME

- a. Is the pharmacodynamics process
- b. Can vary with the person
- c. Does not vary with age
- d. Process will not be changed in pregnancy
- e. Will not interfere with drug level.

11. Adverse drug reactions

- a. are always unpleasant
- b. are always predictable
- c. occur at therapeutic dose level
- d. of type B is bizarre reactions
- e. type F will end the treatment

12. Drug reactions

- a. can occur outside the body
- b. are always beneficial
- c. do not occur at absorptive level
- d. can modify the effect of another drug
- e. are not dangerous

13. Salbutamol,

- a. is used for bronchial asthma
- b. acts on alfa receptors
- c. can cause bradycardia
- d. is a sympathomimetic
- e. not available for inhalation

14. **Drugs used in gastric ulcers is / are**
- Omeprazole
 - Cimetidine
 - Paracetamol
 - Phenytoin
 - Antacids
15. **Drugs acting on uterus is /are**
- Prednisolone
 - Progesterone
 - Oxytocin
 - Domperidone
 - Estrogen
16. **Which of the drugs are acting on platelets?**
- Warfarin
 - Heparin
 - Aspirin
 - Clopidogrel
 - Streptokinase
17. **Which of the following drugs act on sympathetic system?**
- Adrenaline
 - Atropine
 - Salbutamol
 - Propranolol
 - Domperidone
18. **Which of the drugs are beta blockers?**
- Propranolol
 - Atenolol
 - Streptokinase
 - Alteplase
 - Acebutalol
19. **Which of the drugs are side effects of beta blockers?**
- Bradycardia
 - Heart failure
 - Cardiac block
 - Vomiting
 - Thrombosis
20. **Which of the drugs are vasodilators?**
- Nitrates
 - Calcium channel blockers
 - Beta blockers
 - Lignocaine
 - Adrenaline



Library

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Faculty of Health Sciences
Higher Diploma in Pharmaceutical and Cosmetic Sciences

HD 1243 Pharmacology

Batch – 01

1st Year 2nd Semester

End Semester MCQ Repeat Examination

INDEX NUMBER:

Date : 17th of January 2023
Time : 01.30 pm – 02.30 pm (One Hour)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **Twenty MCQ** questions.
- Answer **ALL** questions.
- Out of five statements, some statements are true and some statements are false. Please mark true statements in the row of **True** and mark false statements in the row of **False**.
Ex:

True	a	b	c	d	e
False	a	b	c	d	e

- You should mark the answer legibly in black or blue ink.
- You are not allowed to take out the examination papers.

1. True

a	b	c	d	e	
False	a	b	c	d	e

2. True

False

a	b	c	d	e
a	b	c	d	e

3. True

False

a	b	c	d	e
a	b	c	d	e

4. True

False

a	b	c	d	e
a	b	c	d	e

5. True

False

a	b	c	d	e
a	b	c	d	e

6. True

False

a	b	c	d	e
a	b	c	d	e

7. True

False

a	b	c	d	e
a	b	c	d	e

8. True

False

a	b	c	d	e
a	b	c	d	e

9. True

False

a	b	c	d	e
a	b	c	d	e

10. True

False

a	b	c	d	e
a	b	c	d	e

11. True

False

a	b	c	d	e
a	b	c	d	e

12. True

a	b	c	d	e
a	b	c	d	e

False

13. True

a	b	c	d	e
a	b	c	d	e

False

14. True

a	b	c	d	e
a	b	c	d	e

False

15. True

a	b	c	d	e
a	b	c	d	e

False

16. True

a	b	c	d	e
a	b	c	d	e

False

17. True

a	b	c	d	e
a	b	c	d	e

False

18. True

a	b	c	d	e
a	b	c	d	e

False

19. True

a	b	c	d	e
a	b	c	d	e

False

20. True

a	b	c	d	e
a	b	c	d	e

False