THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF PHARMACY
THE ACADEMIC YEAR 2020/2021 – SEMESETER I/II

BACHELOR OF PHARMACY HONOURS
FME3200- REFRESHER COURSE FOR PHARMACISTS – LEVEL 03
FINAL EXAMINATION
DURATION: TWO (02) HOURS

DATE: 28TH MARCH 2023 **TIME: 1.30 P.M. –3.30 P.M.**

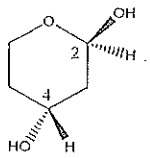
Part B – 06 Short Answer Questions (50 Marks)

Answer all questions.

(50 marks are allocated for each and the total marks of SAQs will be calculated to 50 marks)

1.

1.1 Provide the correct configuration at C2 and C4 of the following molecule. (10 marks)



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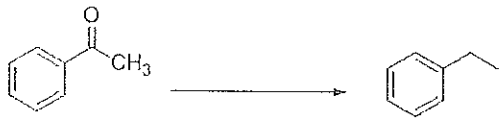
1.2 What reagent/s can be used for the following transformation? (05 marks)



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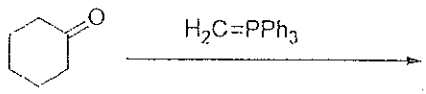
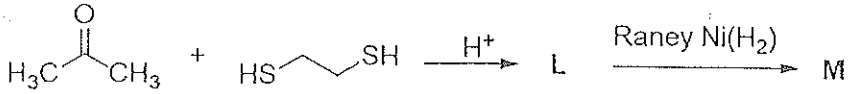
1.3 What is the product/s of the following reaction? (05 marks)

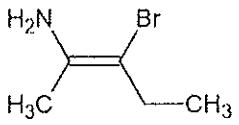


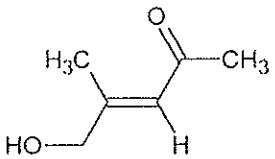
1.4 Identify the products **L** and **M** of the reaction sequence given below. (10 marks)



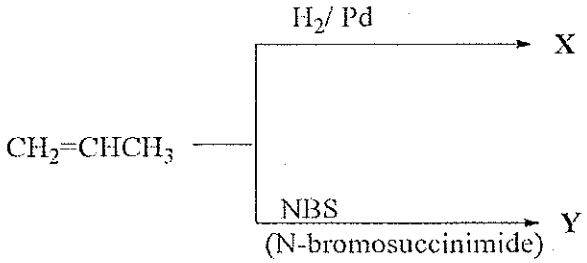
Index No: .....

1.5 Determine the configuration (E or Z) of the double bond in each of the following compounds. (10 marks)



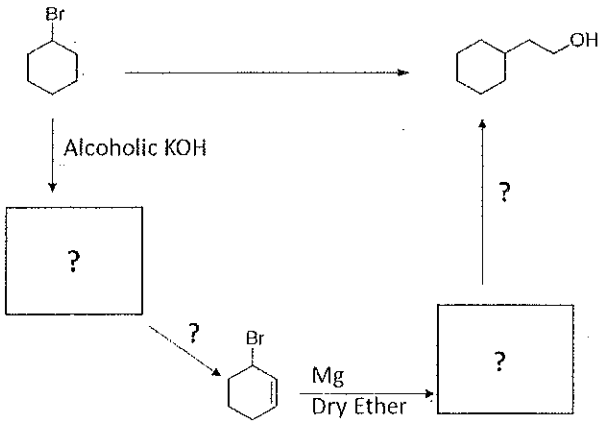


1.6 Identify the structures of the products **X** and **Y** respectively. (10 marks)



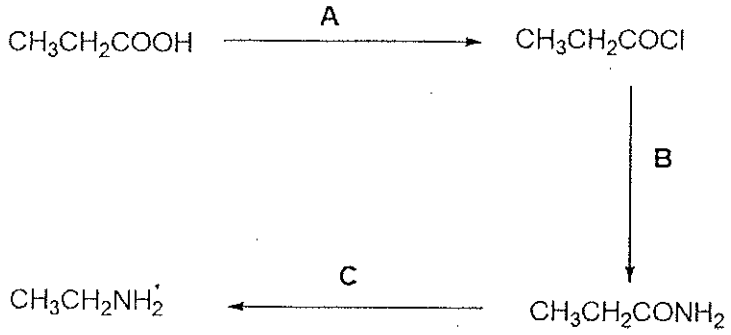
2.

2.1 Complete the following reaction sequences giving structures of missing products, reagents, and conditions. (35 marks)



Index No: .....

2.1 Identify the reagents and conditions (**A -C**) of the reaction sequence given below. (15 marks)



3.

3.1 List three (03) common characteristics of microorganisms. (15 marks)

I. .....

II. .....

III. .....

3.2 Write the three (03) domains which used to categorize microorganisms. (15 marks)

I. .....

II. .....

III. .....

3.3 Write four (04) types of mycoses. (20 marks)

I. .....

II. .....

III. .....

IV. .....

Index No: .....

4.

4.1 List three (03) factors affecting the rate of enzyme activity. (06 marks)

I. .....

II. .....

III. .....

4.2 State four (04) main classes of biomolecules? (08 marks)

I. .....

II. .....

III. .....

IV. .....

4.3 Briefly describe the term "anaerobic glycolysis"? (10 marks)

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4.4 State three (03) types of glycerides classified according to the number of fatty acids. (06 marks)

I. .....

II. .....

III. .....

Index No: .....

4.5 Draw the basic structure of amino acids. (10 marks)

4.6 Fill in the blanks regarding the comparison between DNA and RNA. (10 marks)

Component	DNA	RNA
Nitrogenous bases	Adenine, Guanine, Thymine, Cytosine	....
Sugar	.....	Ribose
Strands	.....	Single
Location	Nucleus, Mitochondria	.....
Function	Store genetic information	.....

Index No: .....

5.

5.1 Define the following terms (10 marks)

i. Tidal volume

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ii. Residual volume

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5.2 List out the factors that influence cardiac output. (10 marks)

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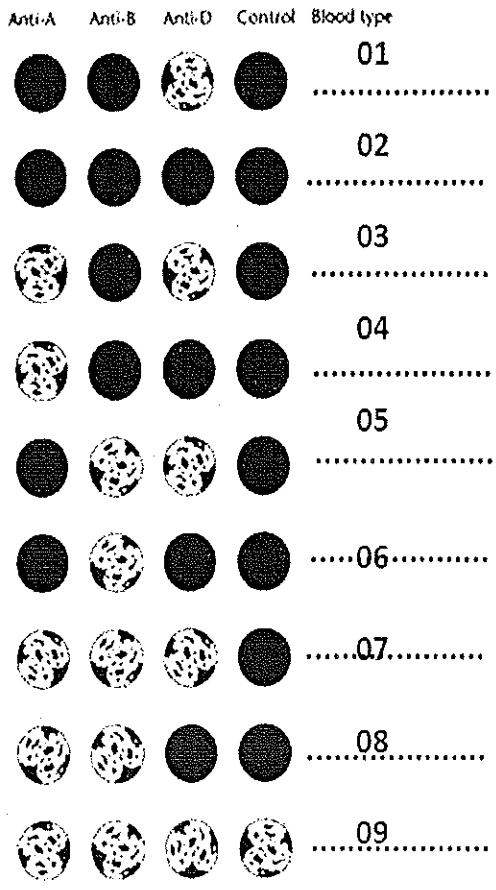
5.3 Identify the blood groups in the given chart below from no **1 to 9** (27 marks)



Index No: .....

5.4 List three (03) hazards of smoking. (03 marks)

I. .....

II. .....

III. .....

6.

6.1 Solve for x, $\log_3 x - \log_3 27 + 1 = 0$ (15 Marks)

6.2 Find $\int (6x - 2)dx$ (15 Marks)

6.3 Evaluate $\int_1^3 (6x - 2)dx$ (20 Marks)