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Faculty of Health Sciences
Bachelor of Science Honours in Industrial Pharmaceutical Science
IPS 4233 – Pharmacognosy II
Batch – 02 & 03
4th year 2nd semester
End Semester SEQ Examination

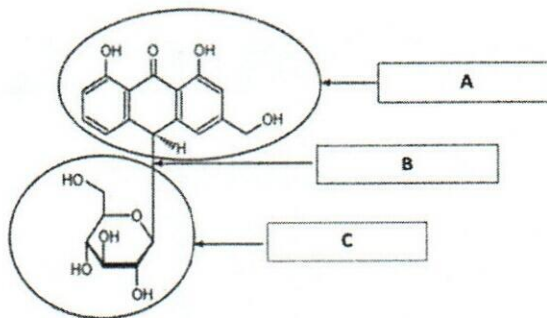
INDEX NUMBER:

Date : 30th August 2024
Time : 09.00 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.

Question 01



(100 marks)

1.1. Identify the A, B, and C parts of a glycoside molecule. (30 marks)

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1.2. State **two (02)** chemical tests for the identification of saponin glycosides in the laboratory. (20 marks)

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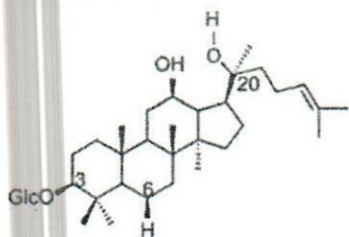
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1.3. Write **two (02)** plant-based enzymes and mention their sources with scientific names. (20 marks)

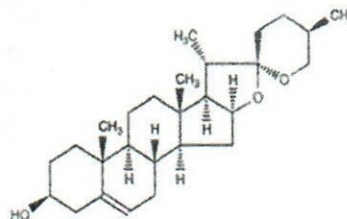
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1.4. Identify follow given glycosides are steroidal or triterpenoidal. (30 marks)



1.4.1

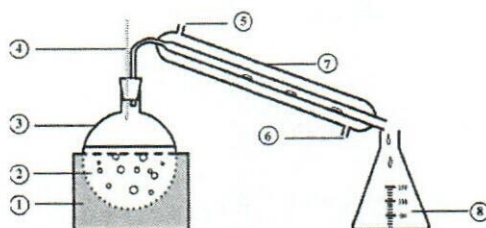


1.4.2.

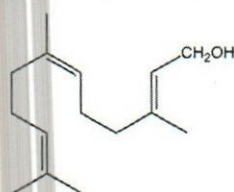
Question 02

(100 marks)

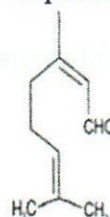
2.1. Identify the follow given extraction method of volatile oils. (10 marks)



2.2. Identify the types of terpenoids given below according to the isoprene rule. (30 marks)

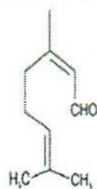


2.2.1.....

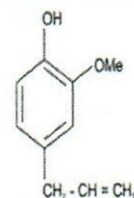


2.2.2.....

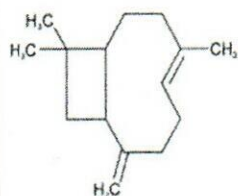
2.3. Identify the chemical structures given below and give a plant source containing these constituents. (40 marks)



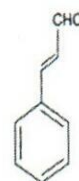
2.3.1.....



2.3.2.....



2.3.4.....



2.3.3.....

2.4. State how you would store volatile oils.

(20 marks)

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Question 03

(100 marks)

3.1. State the importance of aromatic polyketides.

(25 marks)

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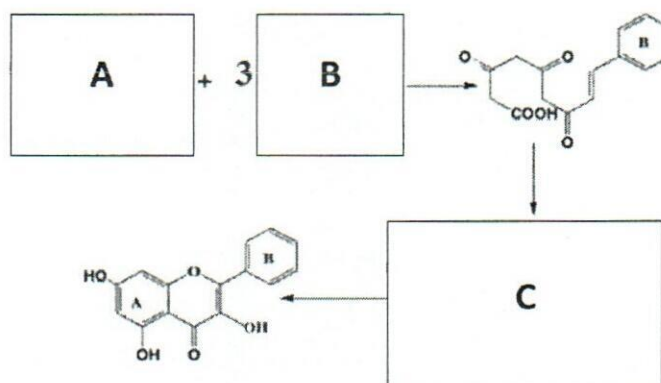
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3.2. Given below is the synthesis pathway of flavonoids. Identify the compounds A, B and C in the given pathway. (30 marks)



A

B

C

3.3. Name the synthesis pathway of compound you mentioned in A in the above figure.

(10 marks)

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3.4. Briefly describe the biosynthesis pathway of mevalonic acid.

(35 marks)

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Question 04**(100 marks)**

4.1. Define the following terms.

(10 marks x 3)

4.1.1. True alkaloids

4.1.2. Proto alkaloids

4.1.3. Pseudo alkaloids

4.2. Draw the chemical structures of following alkaloids.

(05 marks x 4)

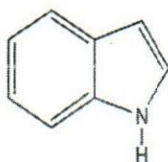
4.2.1. Piperidine

4.2.2. Quinoline

4.2.3. Imidazole

4.2.4. Purine

4.3.



4.3.1. Identify the above mentioned alkaloid ring structure. (05 marks)

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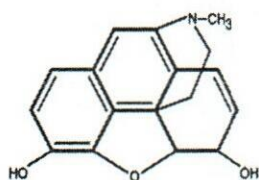
4.3.2. State **three (03)** types of plant alkaloids derived from the alkaloid ring mentioned in 4.3.1. (15 marks)

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4.4.

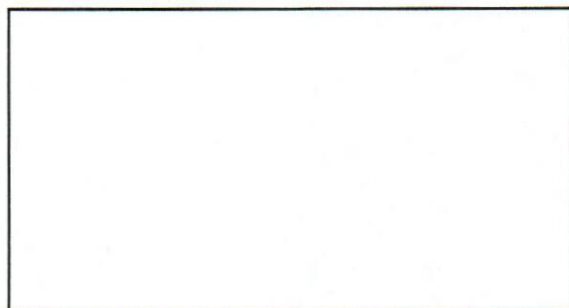


4.4.1. Identify the above mentioned plant alkaloid. (10 marks)

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4.4.2. Draw the main ring structure present in the alkaloid mentioned in 4.4.1.

(10 marks)



4.4.3. State the scientific name of the plant found with the mentioned alkaloid in 4.4.1

(05 marks)

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4.4.4. Mention one clinical use of the alkaloid mentioned in 4.4.1.

(05 marks)

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Question 05

(100 marks)

5.1. State the classification of pharmaceutical dyes according to their natural sources with an example for each. (20 marks)

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 5.2. Briefly describe how a spectrum of beautiful natural colours ranging from yellow to black exist in plants. (15 marks)

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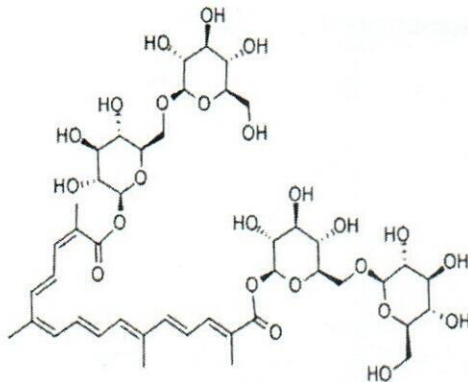
5.3. Draw the chemical structures of following pharmaceutical dyes. (10 marks x 3)

5.3.1. Lawsone

5.3.2. Curcumin

5.3.3. Lutein

5.4.



5.4.1. Identify the above mention chemical structure found in a plant that is responsible for golden yellow-orange colour pigment. (10 marks)

5.4.2. Write the scientific name of the plant that consists the above pharmaceutical dye. (05 marks)

5.4.3. State **two (02)** other constituents found in the same plant mentioned in 5.4.2. along with their main function. (20 marks)

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Question 06

(100 marks)

6.1. Name the starting compound/s in the biosynthesis of each of the following substances. (30 marks)

6.1.1. Piperidines

6.1.2. β Carotene

6.1.3. Gallitanins

6.2. Outline the biosynthetic pathway of tyrosine starting from chorismic acid. (40 marks)

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6.3. Briefly describe the pathway to prepare absorbent cotton wool to be used in the pharmaceutical industry from raw cotton. (30 marks)

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Faculty of Health Sciences
Bachelor of Science Honours in Industrial Pharmaceutical Science
IPS 4222 – Pharmaceutical Jurisprudence
Batch – 04
4th year 2nd semester
End Semester SEQ Examination

INDEX NUMBER:

Date : 26th August 2024
 Time : 09.00 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.

01 **(100 marks)**

1.1 State the requirement of establishing national medicines policy in a country. (20 marks)

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1.2 Mention the main **three (03)** objectives in national medicines drug policy (NMDP) Sri Lanka.

(30 marks)

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1.3 Outline **two (02)** elements in NMDP Sri Lanka. (50 marks)

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02 (100 marks)

2.1. State **three (03)** legislations related to pharmacy practice in Sri Lanka. (30 marks)

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2.2. Mention **two (02)** ethical issues in pharmaceutical industry relating to selling of drugs. (20 marks)

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2.2. What are the educational qualifications recognized for registration as pharmacists under the Sri Lanka Medical Council? (50 marks)

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3.4. State **five (05)** sub divisions of the National Advisory Committee. (30 marks)

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04 (100 marks)

4.1. State **five (05)** basic information that you must submit with the application for registration of medicine to the NMRA. (30 marks)

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4.2. Write the basic steps of a medicine registration procedure. (30 marks)

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4.3. What is a schedule III medicine? (20 marks)

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4.4. State **two (02)** powers of an authorized officer. (20 marks)

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05 (100 marks)

5.1. State **two (02)** office members in the constituent of Sri Lanka Ceylon Medical College Council (CMCC). (20 marks)

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5.2. Write **five (05)** people who can handle poisons. (30 marks)

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5.3. State the difference between raw opium and prepared opium. (20 marks)

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5.4. Write how arsenic should sale to a person. (30 marks)

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06 (100 marks)

6.1. List the duties of food advisory committee as mentioned in the Food act No.26-of-1980. (20 marks)

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6.2. Write **two (02)** main objectives of consumer affairs authority. (20 marks)

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6.3. State **four (04)** circumstances that is granted with provisional registration for cosmetic products. (20 marks)

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6.4. Outline the **four (04)** categories of nutraceuticals. (40 marks)

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