

UNIVERSITY OF RUHUNA - FACULTY OF ALLIED HEALTH SCIENCES
DEPARTMENT OF PHARMACY
SECOND BPHARM PART II EXAMINATION - NOVEMBER/DECEMBER 2021
PH 2214 PHARMACEUTICS III - SEQ

Index No.:

TIME: THREE HOURS

INSTRUCTIONS

- There are **six** questions in part **A, B** and **C** in this SEQ paper.
- Answer **all** questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

PART A

- 01.**
- 1.1. List five members of the secondary healthcare team in Sri Lanka. (10 marks)
 - 1.2. List four benefits of an effective healthcare teamwork. (20 marks)
 - 1.3. List four services that are delivered by curative primary healthcare service in Sri Lanka. (20 marks)
 - 1.4. Write a brief description on special clinics associated with Sri Lankan public healthcare setting. (30 marks)
 - 1.5. Briefly describe the importance of a National Medicinal Drugs policy in Sri Lanka. (20 marks)

02.

- 2.1. List three criteria which are used to select essential medicines for a country. (15 marks)
- 2.2. Briefly describe four advantages of an Essential Medicines List. (40 marks)
- 2.3. The table given below shows some prescribing indicators in pediatric outpatient unit of a particular hospital. Refer the table and answer the questions.

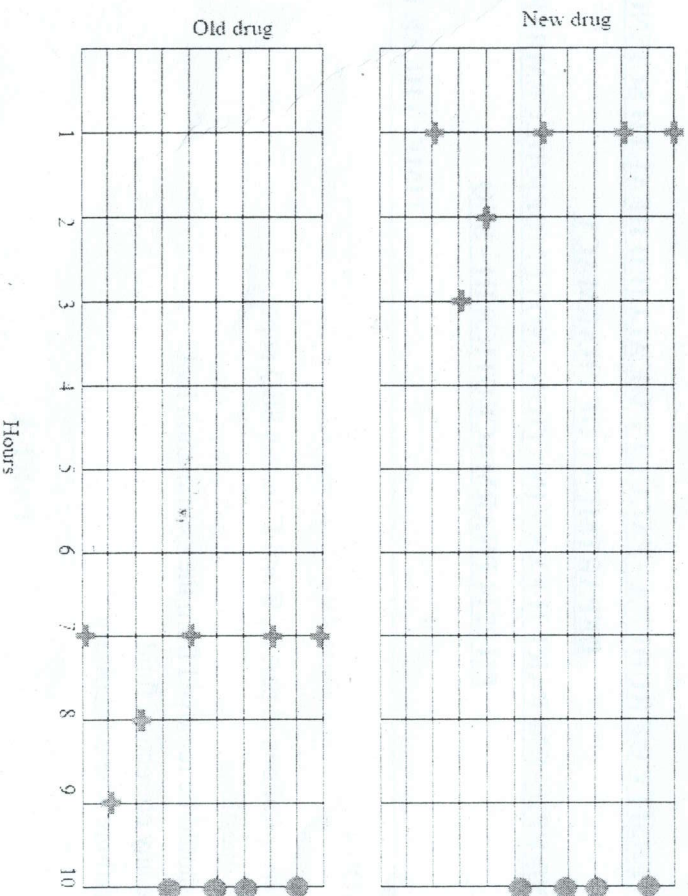
Prescribing indicator (WHO recommended standards)	Mean \pm SD or Number (%)
Average medicines per encounter (1.6–1.8)	3.1 \pm 2.6
Encounters with an antibiotic (%) (20–26.8%)	25 (21.2)
Encounters with an injection (%) (13.4–24.1%)	62 (52.5)
Medicines prescribed in generic name (%) (100%)	328 (89.9)
Medicines prescribed from EML (%) (100%)	316 (86.6)

- 2.3.1. Which of the above prescribing indicators are not complying with the WHO recommended values? (10 marks)
- 2.3.2. Predict three problems which could be emerged due to the prescribing practices you mentioned in 2.3.1. (15 marks)
- 2.3.3. Briefly explain two problems mentioned in 2.3.2. (20 marks)

03.

- 3.1. Define the following terms.
 - 3.1.1. Cumulative incidence (05 marks)
 - 3.1.2. Incidence rate (05 marks)
- 3.2. Suppose you were asked to analyze the data from a small preliminary clinical trial with 20 subjects who had a comparable degree of knee pain due to osteoarthritis. They were being compared with respect to pain relief after receiving a standard pain medication (Drug B) or a new pain medication (Drug A). Each of the 20 patients were randomly assigned to a group (drug A or B), and there were ten subjects in each group. After

administering the medication, the subjects were assessed at hourly intervals to see the relief of pain. For each subject, the time at which the pain relief occurred was recorded. Results are illustrated in the graph below.



The \times indicates when subjects reported pain relief and the \bullet at the end indicates the subjects who did not report the a relief of pain.

3.2.1. Which of the above group appears to have a greater incidence rate of pain relief? Explain how you derived the answer. **(30 marks)**

3.3. 3.3.1. Define the term "Odds Ratio". **(10 marks)**

3.3.2. The table given below shows a hypothetical result of an 8-week randomized controlled trial of Venlafaxine (n=40) vs Placebo (n=36). Use the data in the table and calculate the odds ratio of developing sexual dysfunction due to Venlafaxine. **(20 marks)**

	Developed sexual dysfunction	Did not develop sexual dysfunction	Total
Received Venlafaxine	10	30	40
Received Placebo	3	30	33
Total	13	60	73

3.4. Briefly describe the following study designs by providing a suitable example for each. **(30 marks)**

- 3.4.1. Randomized controlled trials
- 3.4.2. Factorial study design

PART B

04. "Dispensing of a medication refers to the process of preparing and giving medicine to a named person on the basis of a prescription".
- 4.1. List five attributes you should have to be a good dispensing personnel. **(10 marks)**
 - 4.2. Briefly discuss the strategies you can use to minimize dispensing errors. **(20 marks)**
 - 4.3. Describe the requirements of a good dispensing area. **(30 marks)**
 - 4.4. List five advantages of course-of-therapy prepackaging. **(20 marks)**

- 4.5. Briefly describe the approaches to maintain a good stock rotation system in a dispensing facility. (20 marks)

PART C

- 05.
- 5.1. Define the below terms and give two examples each. (10 marks)
- 5.1.1. Recurrent costs (10 marks)
 - 5.1.2. Capital cost (20 marks)
- 5.2. Describe concepts in microeconomics and macroeconomics. (30 marks)
- 5.3. Briefly describe different types of costs mentioned below. Give examples for each type. (10 marks)
- 5.3.1. Indirect costs
 - 5.3.2. Intangible costs
- 5.4. (10 marks)
- 5.4.1. Name four types of evaluation methods in economics. (20 marks)
 - 5.4.2. Describe one evaluation method mentioned in 5.4.1 providing consequences, results and examples. (10 marks)
- 06.
- 6.1. State five criteria of a good research study. (10 marks)
- 6.2. What is the difference between dependent variable and independent variable? (10 marks)
- 6.3. Read the abstract given below and answer the questions. (10 marks)



ORIGINAL ARTICLE

Open Access

Understanding COVID-19 misinformation and vaccine hesitancy in context:

Findings from a qualitative study involving citizens in Bradford, UK

Bridget Lockyer, Shahid Islam, Aannah Rahman, Josie Dickerson, Kate Pickett, Trevor Sheldon, John Wright, Rosemary McEachan, Laura Sheard
First published: 04 May 2021 <https://doi.org/10.1111/hex.13240>

COVID-19 vaccines can offer a route out of the pandemic, yet initial research suggests that many are unwilling to be vaccinated. A rise in the spread of misinformation is thought to have played a significant role in vaccine hesitancy. To maximize uptake, it is important to understand why misinformation has been able to take hold at this time and why it may pose a more significant problem within certain contexts. To understand people's COVID-19 beliefs, their interactions with (mis)information during COVID-19 and attitudes towards a COVID-19 vaccine. Bradford, UK, was chosen as the study site to provide evidence to local decision makers. In-depth phone interviews were carried out with 20 people from different ethnic groups and areas of Bradford during Autumn 2020. Reflexive thematic analysis was conducted. Participants discussed a wide range of COVID-19 misinformation they had encountered, resulting in confusion, distress and mistrust. Vaccine hesitancy could be attributed to three prominent factors: safety concerns, negative stories and personal knowledge. The more confused, distressed and mistrusting participants felt about their social worlds during the pandemic, the less positive they were about a vaccine. COVID-19 vaccine hesitancy needs to be understood in the context of the relationship between the spread of misinformation and associated emotional reactions. Vaccine programmes should provide a focused, localized and empathetic response to counter misinformation.

- 6.3.1. Mention the type of this research study? (10 marks)
- 6.3.2. What is the objective of this research? (10 marks)
- 6.3.3. What is the method used to collect data? (10 marks)
- 6.3.4. State the type of statistical analysis used in the study. (10 marks)
- 6.3.5. Briefly describe the conclusion of this research. (10 marks)
- 6.3.6. Name the authors of the article? (20 marks)
- 6.3.7. What is the journal that the article is published? (10 marks)

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