



School of Pharmaceutical Management

MBA Pharmaceutical Management

Batch-15th (2023-2025)

First Year, Term 1 End Term Examinations, November 2023

CC – 617 Essentials of Pharmaco-epidemiology

Time - 3 Hour

Maximum Marks: 50 (Minimum Marks: 20)

Instructions to students:

- This question paper contains two printed page/s.
- Don't write anything on the Question Paper except writing your Enrolment No.

Part A

(Maximum Marks: 5)

Q1. Fill in the blanks:

- (a) Pharmacoepidemiology is the study of interactions between _____ and _____, investigating, in real conditions of life, benefits, risks and use of drugs. (1)
- (b) Prescription Event Monitoring (PEM) is used in tracking the _____ of new medications. (1)
- (c) Drug utilization studies investigate how medicines are _____ in everyday clinical practice. (1)
- (d) Key methods used in pharmaco-economics, includes _____, _____, _____ and _____. (1)
- (e) A form used to be stated and agreed upon, before a field survey initiation is called _____ form. (1)

Part B

(Maximum Marks: 15)

Answer the following questions:

- Q2.** Define Pharmacoepidemiology and discuss its role and contribution to healthcare research and patient safety. (5)
- Q3.** Identify and describe various sources of data used in pharmaco-epidemiological studies, with specific examples. (5)
- Q4.** Compare and contrast cross-sectional, case-control, and cohort study designs, highlighting their specific applications. (5)

Part C**(Maximum Marks: 30)****Answer the following, in detail:**

- Q5.** A clinical trial was conducted to assess the efficacy of a new antihypertensive drug. During the study in 550 patients, it was observed that out of 300 patients who received the new drug, 200 experienced a significant reduction in blood pressure. Calculate the Odd's ratio (OR), risk ratio (RR), absolute risk reduction (ARR) and relative risk reduction (RRR) if the control group had 50 patients with reduced blood pressure. Provide an interpretation of the results.
- (15)
- Q6.** A new diabetes testing kit with a sensitivity of 80% and specificity of 80% was tested with a sample of 400 persons from a population. Among the tested individuals, 40 were found to be positive using the kit. These individuals were then sent to a hospital for a confirmatory test, which had a sensitivity of 90% and specificity of 90%. The assumption was made that the prevalence of diabetes in the population is 10%.
Calculate the following:
- (a). Positive Predictive Value (PPV)
 - (b). Negative Predictive Value (NPV)
 - (c). Efficiency of the tests
 - (d). Efficiency of strategy for testing sequence (2 stage screening)

Provide your analysis and interpretation of the results, addressing the effectiveness of the testing strategy in identifying individuals with diabetes.

(15)