*Total No. of Questions: 3* *Total No. of Printed Pages:3*

**Enrollment No.....**

# Faculty of Pharmacy
## End Sem Examination May-2024
### PY3CO33 Computer Applications in Pharmacy

Programme: B. Pharm. Branch/Specialisation: Pharmacy

**Duration: 3 Hrs.** **Maximum Marks: 50**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. The binary equivalent of the decimal number 10 is. **1**
(a) 0100 (b) 1010 (c) 0101 (d) None of these

ii. What is it called when the data is sourced from the place of origin? **1**
(a) Secondary (b) Primary
(c) Both (a) and (b) (d) None of these

iii. Which of these elements in HTML can be used for making a text bold? **1**
(a) <a> (b) <pre> (c) <br> (d) <b>

iv. "CREATE TABLE" command is used to CREATE which type of table in MYSQL? **1**
(a) Permanent Table (b) Virtual Table
(c) Temporary Table (d) None of these

v. Which of the following is not a mechanism for pharmacokinetic analysis? **1**
(a) Human model
(b) Compartment analysis
(c) Non compartment analysis
(d) Physiologic modeling

vi. In which of the model peripheral compartments are connected to a central compartment? **1**
(a) Compartment model (b) Catenary model
(c) Physiologic model (d) Mammillary model

P.T.O.

vii. Which of the following is an example of Homology and similarity tool? **1**
(a) EMBOSS (b) RasMol (c) BLAST (d) PROSPECT

viii. Which of the following tools is used for the identification of motifs? **1**
(a) BLAST (b) PROSPECT
(c) COPIA (d) Pattern hunter

ix. Chromatography is a physical method that is used to separate and analyse? **1**
(a) Simple mixtures (b) Viscous mixtures
(c) Metals (d) Complex mixtures

x. Liquid chromatography can be performed in which of the following ways? **1**
(a) Only in columns
(b) Either in columns or on plane surfaces
(c) Only on plane surfaces
(d) Neither in columns nor on plane surfaces

Q.2 Attempt any two:

i. Write a note on the binary number system and octal number system with examples of each. **5**

ii. Write a short note on pharmacy drug databases, types and examples of each. **5**

iii. (a) Explain requirement and feasibility analysis of information systems. **2.5**
(b) Explain CSS with examples. **2.5**

Q.3 Attempt any six: Two questions from each section is compulsory.

Section - A

i. Write short note on: (any two) **5**
(a) Hospital and clinical pharmacy
(b) Diagnostic system
(c) Lab-diagnostic system

ii. Write short note on: (any two) **5**
(a) Patient monitoring system
(b) Pharma information system



(c) Mobile technology and adherence monitoring

iii. What is Pharmacokinetics? Discuss all the steps of Pharmacokinetics. **5**

Section - B

iv. What are the concept and objectives of bioinformatics? **5**

v. Explain the impacts of bioinformatics in vaccine discovery. **5**

vi. Discuss about bioinformatics databases, tools and algorithms. **5**

Section - C

vii. Explain the role of computers as data analysis in preclinical development. **5**

viii. Write short note on Laboratory Information management System (LIMS). **5**

ix. Explain about Text Information Management System (TIMS). **5**

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# Marking Scheme

## Computer Applications in Pharmacy -PY3CO33 (T)

Q.1 i) **B.1010** **1**

To get the binary equivalent of any number, we need to divide the number by 2 and obtain the remainders as **We then write the remainders in the reverse order as 1010**

ii) **B. Primary** **1**

iii) **D. <b>** **1**

iv) **A.Permanent Table** **1**

v) **A. Human model** **1**

vi) **D. Mammillary model** **1**

It is the most common compartment model used in pharmacokinetics.

vii) **C. BLAST** **1**

viii) **C. COPIA** **1**

ix) **D. Complex mixtures** **1**

x) **B. Either in columns or on plane surfaces** **1**

Liquid chromatography can be performed either in columns or on plane surfaces. It could be liquid-solid chromatography or liquid-liquid chromatography.

Q.2 Attempt any two:

| | | | |
|---|---|---|---|
| i. | Binary number system. | 2 Marks | **5** |
| | Octal number system. | 2 Marks | |
| | Examples of each. | 1 Marks | |
| ii. | Pharmacy Drug databases | 2 Marks | **5** |
| | Types. | 2 Marks | |
| | Example. | 1 Marks | |
| iii. | (a) Definition | 0.5 Marks | **2.5** |
| | the Explanation of requirement and feasibility analysis of information systems | 2 Marks | |
| | (b) for definition and full form of CSS. | 1 Marks | **2.5** |
| | explanation | 1.5 Marks | |

Q.3 Attempt any six: Two questions from each section is compulsory.

Section - A

| | | | |
|---|---|---|---|
| i. | Each part | 2.5 Marks | **5** |
| ii. | Each part | 2.5 Marks | **5** |
| iii. | definition of Pharmacokinetics | 2 Marks | **5** |
| | all steps of Pharmacokinetics. | 3 Marks | |

Section - B

| | | | |
|---|---|---|---|
| iv. | Concept of Bioinformatics. | 2.5 Marks | **5** |
| | Objectives of Bioinformatics. | 2.5 Marks | |
| v. | Impacts | 3 Marks | **5** |
| | Explanation | 2 Marks | |
| vi. | for Bioinformatics Databases. | 2 Marks | **5** |
| | for tools. | 1 Marks | |
| | for Algorithms. | 2 Marks | |

Section - C

| | | | |
|---|---|---|---|
| vii. | The role of Computers as data analysis in Preclinical development 5 Marks | | **5** |
| viii. | for Laboratory Information management System (LIMS). | 5 Marks | **5** |
| ix. | for Text Information Management System (TIMS). | 5 Marks | **5** |

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