

11. Islamic Economic System:

- 1) Basic Concepts of Islamic Economic System
- 2) Means of Distribution of wealth in Islamic Economics
- 3) Islamic Concept of Riba
- 4) Islamic Ways of Trade & Commerce

12. Political System of Islam:

- 1) Basic Concepts of Islamic Political System
- 2) Islamic Concept of Sovereignty
- 3) Basic Institutions of Govt. in Islam

13. Islamic History:

- 1) Period of Khlaft-e-Rashida
- 2) Period of Umayyads
- 3) Period of Abbasids

14. Social System of Islam:

- 1) Basic Concepts of Social System of Islam
- 2) Elements of Family
- 3) Ethical Values of Islam

PHARMACY PRACTICE-I (PHARM. MATHEMATICS AND BIostatISTICS) (Theory)

Paper 6

Marks 100

PART A: (PHARMACEUTICAL MATHEMATICS)

(40 MARKS)

1. ALGEBRA:

- (a) Solution of Linear and Quadratic Equations: Equations reducible to Quadratic Form. Solution of simultaneous Equations.
- (b) Arithmetic, Geometric and Harmonic Progressions: Arithmetic, Geometric and Harmonic Means.
- (c) Permutations and Combinations:
- (d) Binomial Theorem: Simple application.

2. TRIGONOMETRY: Measurement of Angles in Radian and Degrees. Definitions of circular functions. Derivation of circular function for simple cases.

3. ANALYTICAL GEOMETRY: Coordinates of point in a plane. Distance between two points in a plane. Locus, Equations of straight line, Equation of Parabola, Circle and Ellips.

4. DIFFERENTIAL CALCULUS: Functions, variations in functions, limits, differential coefficient, differentiation of algebraic, trigonometric, exponential and logarithmic functions, partial derivatives. Maxima and minima values. Points of inflexion.

5. **INTEGRAL CALCULUS:** Concept of integration, Rules of integration, Integration of algebraic, exponential, logarithmic and trigonometric functions by using different techniques and numerical integration.

PART B: (BIOSTATISTICS)

(60 MARKS)

1. **DESCRIPTION OF STATISTICS:** Descriptive Statistics: What is Statistics? Importance of Statistics. What is Biostatistics? Application of Statistics in Biological and Pharmaceutical Sciences. How samples are selected?
2. **ORGANIZING and DISPLAYING DATA:** Variables, Quantitative and Qualitative Variables, Univariate Data, Bivariate Data, Random Variables, Frequency Table, Diagrams, Pictograms, Simple Bar Charts, Multiple Bar Charts, Histograms.
3. **SUMMARIZING DATA and VARIATION:** The Mean, The Median, The Mode, The Mean Deviation, The Variance and Standard Deviation, Coefficient of Variation.
4. **CURVE FITTING:** Fitting a Straight Line. Fitting of Parabolic or High Degree Curve.
5. **PROBABILITY:** Definitions, Probability Rules, Probability Distributions (Binomial & Normal Distributions).
6. **SIMPLE REGRESSION AND CORRELATION:** Introduction. Simple Linear Regression Model. Correlation co-efficient.
7. **TEST OF HYPOTHESIS AND SIGNIFICANCE:** Statistical Hypothesis. Level of Significance. Test of Significance. Confidence Intervals, Test involving Binomial and Normal Distributions.
8. **STUDENT “t”, “F” and Chi-Square Distributions:** Test of Significance based on “t”, “F” and Chi-Square distributions.
9. **ANALYSIS OF VARIANCE:** One-way Classification, Two-way Classification, Partitioning of Sum of Squares and Degrees of Freedom, Multiple Comparison Tests such as LSD, The analysis of Variance Models.
10. **STATISTICAL PACKAGE:** An understanding of data analysis by using different statistical tests using various statistical software’s like SPSS, Minitab, Statistica etc.