**PM—04—2025**

## FACULTY OF PHARMACEUTICAL SCIENCE & TECHNOLOGY

### B. Pharm. (Fourth Year) (Eighth Semester) EXAMINATION

### APRIL/MAY, 2025

### BIOSTATISTICS AND RESEARCH METHODOLOGY

### BP801T

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| **(Thursday, 8-5-2025)** | **Time : 2.00 p.m. to 5.00 p.m.** |

*Time—3 Hours*                                    *Maximum Marks—75*

N.B. :—   (i)   *All* questions are compulsory.

(ii)   Figures to the right indicate full marks.

(iii)   Write your answer to the point only.

1.   Answer the following :                                    10×2=20

(a)   Define the term Correlation and Regression.

(b)   What is histogram ?

(c)   Calculate geometric mean of the numbers 3, 7, 9.

(d)   List various types of counter plots.

(e)   State various objectives of research.

(f)   Define statistics and biostatistics.

(g)    What is need of curve fitting ?

(h)    What is pie chart ?

(i)    What is DoE ?

(j)    What is software and statistical software.

2.   Answer any *two* of the following :        10×2=20

(a)    Explain in brief about sampling.

(b)    Find mean, mode and median of tablet hardness data obtained for a production batch, and also calculate range and coefficient of range of given following data :

8, 5, 7, 8, 9, 11.

(c)    Discuss designing of various phases of clinical trial.

3.   Attempt any *seven* of the following :        7×5=35

(a)    What is measure of dispersion ? What is its significance ?

(b)    What is one-way ANOVA and what are its requirements ?

(c)    Write a note on research protocol.

(d)    Elaborate in detail observational studies.

(e)    Define graphs. Explain various types of graphs in research tools.

(f)    What is regression modelling ? What are its types ?

(g)    Differentiate between histogram and a bar chart.

(h) What are dependent and independent variables ?

(i) Age of sample of 10 patients from a population of 169 patients is given in below table :

| Patient No. | $X_1$ | $X_2$ | $X_3$ | $X_4$ | $X_5$ | $X_6$ | $X_7$ | $X_8$ | $X_9$ | $X_{10}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| Age Years | 42 | 28 | 28 | 61 | 31 | 23 | 50 | 34 | 32 | 37 |

Determine range and coefficient of range.

## PM—08—2025

## FACULTY OF PHARMACEUTICAL SCIENCES

## B. Pharm. (Fourth Year) (Eighth Semester) EXAMINATION

## APRIL/MAY, 2025

### SOCIAL AND PREVENTIVE PHARMACY

Paper BP-802-T

**(Saturday, 10-5-2025)**                                    **Time : 2.00 p.m. to 5.00 p.m**

*Time—Three Hours*                                    *Maximum Marks—75*

Note :—  (i)   All questions are compulsory.

(ii)   Figures to the right indicate full marks.

(iii)   Answer to the point only.

1.   Answer the following questions :                                    10×2=20

(a)   Define health and disease.

(b)   What do you mean by malnutrition ?

(c)   Enlist specific diagnostic test for influenza.

(d)   Write sign and symptoms of Ebola virus disease.

P.T.O.

(e) Give objectives of national programme for control of blindness.

(f) Enlist school health related problems.

(g) Give causative agents for tuberculosis and leprosy.

(h) Write function of PHC.

(i) Define WHO.

(j) What is drug abuse ?

2. Answer any *two* of the following :            2×10=20

(a) Discuss socio-cultural factors related to health and disease.

(b) Explain universal immunization programme.

(c) Write objectives, functions and outcomes of HIV and AIDS control programme.

3. Solve any *seven* :            7×5=35

(a) Discuss impact of ubranization on health and disease.

(b) Write a note on food in relation to nutrition and health.

(c) Describe prevention and control of hypertension.

(d) Write about transmission, symptoms and treatment of Dengue.

(e) Explain about national tobacco control programme.

(f) Write a note on national health intervention programme for mother and child.

(g) Explain health promotion and education in school.

(h) Discuss role of WHO in Indian national programme.

(i) Write a note on pulse polio programme.

## PM—22—2025

### FACULTY OF SCIENCE AND TECHNOLOGY

### B. Pharm. (Final Year) (Eighth Semester) EXAMINATION

### APRIL/MAY, 2025

### COSMETIC SCIENCE

### BP-809ET

**(Wednesday, 21-5-2025)**          **Time : 2.00 p.m. to 5.00 p.m**

*Time—Three Hours*          *Maximum Marks—75*

*Note* :—   (*i*)   *All* questions are compulsory.

       (*ii*)   Figures to the right indicate full marks.

       (*iii*)   Answer to the point only.

1.   Answer all the following questions :          10×2=20

     (*a*)   Differentiate between shampoo and conditioner.

     (*b*)   Define cosmetics with example.

     (*c*)   What is the role of Neem and Clove in oral care products ?

     (*d*)   What is SPF ? Give any *two* significance of SPF.

     (*e*)   Define and classify surfactants with example.

                                                      P.T.O.

(f) What is the cause of prickly heat ?

(g) How do antiperspirants work ?

(h) Draw neat labelled diagram of verticle section of skin.

(i) What does the term Comedogenic describe ?

(j) Give the applications of face wash.

2. Answer any *two* of the following : 2×10=20

(a) Explain various problems associated with hair and scalp. Describe formulation of antidandruff shampoo.

(b) Outline the working principle and applications of Sebumeter and Corneometer.

(c) Explain in detail the common problems associated with teeth and gums, including their cause, symptoms and treatments.

3. Answer any *seven* of the following : 7×5=35

(a) Write in detail about evolution of cosmeceuticals from cosmetics.

(b) Draw basic structure of hair. Write hair growth cycle.

(c) Discuss the role of rheology modifiers and humactants in cosmetics.

(d)    Write in detail about cosmetics as quasi and OTC drugs.

(e)    Describe formulation principles of cold cream and vanishing cream.

(f)    What is BIS ? Write in detail about BIS standards for shampoo.

(g)    Explain the role of aloe and turmeric in skin care products.

(h)    Describe the following problems associated with skin :

     (i)   Blemishes

     (ii)   Wrinkles

(j)    Write a note on measurement of transepidermal water loss. (TEWL).