

Total No. of Printed Pages—3

**5 SEM TDC DSE BOT (CBCS) 3 (H)**

**2 0 2 3**

( November )

**BOTANY**

( Discipline Specific Elective )

( For Honours )

Paper : DSE-3

( **Research Methodology** )

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. (a) Fill in the blanks : 1×3=3
- (i) \_\_\_\_\_ is the moles of a solute per litre of a solution.
- (ii) The legal right to control the reproduction of any original work is called \_\_\_\_\_.
- (iii) \_\_\_\_\_ is used as clearing agent for permanent slide preparation.



( 2 )

(b) Choose the correct answer :  $1 \times 2 = 2$

(i) Basic stains are used to stain positively / negatively / both positively and negatively charged cells and cellular components.

(ii) Maceration / Peel mount / Dehydration is used for separation of individual cells from tissue.

2. Differentiate between any *three* of the following :  $4 \times 3 = 12$

(a) Applied and Fundamental Research

(b) Molarity and Normality

(c) Genomics and Proteomics

(d) Thin and Ultrathin Sections

3. Write short notes on any *four* of the following :  $4 \times 4 = 16$

(a) Library research

(b) Squash preparation

(c) Field photography

(d) Plastic infiltration

(e) Fluorochromes

24P/182

( Continued )

( 3 )

4. Write an account on the toxic chemicals and explain the safety measures in handling these chemicals.  $5+5=10$

Or

Write an account on the maintenance of laboratory records, tabulation and generation of graphs.  $5+5=10$

5. Write an explanatory note on scientific writing along with procedure of writing references.  $5+5=10$

Or

Write explanatory notes on the following :  $5+5=10$

(a) Cytogenetic techniques

(b) Model organisms in biology

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24P—1000/182 5 SEM TDC DSE BOT (CBCS) 3 (H)