

प्रश्न-पत्र बोर्ड द्वारा निर्धारित पुस्तकों से ही सैट किया जाएगा। कृपया अध्यापकगण बोर्ड द्वारा निर्धारित पुस्तकें ही पढ़ायें।

## **DESIGN** **QUESTION PAPER**

|                |          |                                |                                |
|----------------|----------|--------------------------------|--------------------------------|
| <b>Subject</b> | <b>:</b> | <b>Biotechnology</b>           |                                |
| <b>Paper</b>   | <b>:</b> | <b>1<sup>st</sup> Semester</b> | <b>Annual or Supplementary</b> |
| <b>Class</b>   | <b>:</b> | <b>10+2</b>                    | <b>Year 2012-13</b>            |
| <b>Time</b>    | <b>:</b> | <b>2½ Hrs.</b>                 |                                |
| <b>Marks</b>   | <b>:</b> | <b>60</b>                      |                                |

### 1. Weightage to Objectives:

| Objective           | <b>K</b>  | <b>U</b>  | <b>A</b>  | <b>S</b>  | <b>Total</b> |
|---------------------|-----------|-----------|-----------|-----------|--------------|
| Percentage of marks | <b>40</b> | <b>30</b> | <b>20</b> | <b>10</b> | <b>100%</b>  |
| Marks               | <b>24</b> | <b>18</b> | <b>12</b> | <b>06</b> | <b>60</b>    |

### 2. Weightage to Form of Questions:

| Forms of Questions | <b>E</b>  | <b>SA</b> | <b>VSA</b> | <b>O</b>  | <b>Total</b> |
|--------------------|-----------|-----------|------------|-----------|--------------|
| No. of Questions   | <b>03</b> | <b>05</b> | <b>09</b>  | <b>12</b> | <b>29</b>    |
| Marks Allotted     | <b>15</b> | <b>15</b> | <b>18</b>  | <b>12</b> | <b>60</b>    |
| Estimated Time     | _____     | _____     | _____      | _____     | _____        |

### 3. Weightage to Content:

| <b><u>Units/Sub-Units</u></b> |  | <b><u>Marks</u></b> |
|-------------------------------|--|---------------------|
| 1.                            | Unit-V Chapter-I (Protein Structure and Engineering)     | <b>25</b>           |
| 2.                            | Unit-VI Chapter-I (Microbial Culture and Applications)   | <b>17</b>           |
| 3.                            | Unit-VI Chapter-II (Plant Cell Culture and Applications) | <b>18</b>           |
| 4.                            | _____  | _____               |
| 5.                            | _____  | _____               |
| 6.                            | _____  | _____               |
| 7.                            | _____  | _____               |
| 8.                            | _____  | _____               |
| 9.                            | _____  | _____               |
| <b>Total</b>                  |  | <b><u>60</u></b>    |

4. Scheme of Sections : -X X X X-
5. Scheme of Options : Internal Choice in long answer question i.e. essay type.
6. Difficulty level : Difficult : 10 % marks  
Average : 50 % marks  
Easy : 40 % marks

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Abbreviations: K (Knowledge), U (Understanding), A (Application), S (Skill), E (Essay Type), SA (Short Answer Type), VSA (Very Short Answer Type), O (Objective Type)