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**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA, GUNUPUR
(GIET UNIVERSITY)**



Ph.D. (Second Semester-Winter) Examinations, April – 2026
AGRON-604 – Recent Trends in Weed Management
(Agronomy)

Time: 3 hrs

Maximum: 70 Marks

The figures in the right hand margin indicate marks.

Answer ANY FIVE Questions.

(14 x 5 = 70 Marks) Marks

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| 1.a. Explain crop–weed competition and its critical period. | 8 |
| b. Discuss different methods of weed management in details. | 6 |
| 2. a. Explain invasive weeds and factors influencing weed invasion. | 6 |
| b. Describe in details about the absorption and translocation of herbicides in plants. | 8 |
| 3.a. Explain mode of action of herbicide with examples and write down in details about selectivity of herbicides. | 7 |
| b. Give a brief description about the fate of herbicides in soil and factors affecting it. | 7 |
| 4. Discuss recent advances in non-chemical weed management. | 14 |
| 5.a. Describe herbicide resistance and its management strategies. | 7 |
| b. Explain bioherbicides and allelopathy in weed management. | 7 |
| 6.a. Explain degradation of herbicides and residue management. | 7 |
| b. Discuss advances in herbicide application techniques. | 7 |
| 7. a. Describe role of adjuvants in herbicide application. What are herbicide safeners and their importance? | 8 |
| b. Explain about the development of transgenic herbicide-resistant crops. | 6 |
| 8.a. Explain relationship of herbicides with agronomic practices. | 7 |
| b. Discuss compatibility of herbicides with other pesticides. | 7 |

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