



LESSON PLAN BIOLOGY

CLASS - XIIth OCTOBER, 2015

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| CLASSES REQUIRED | 15 LECTURES (Class Duration of 1 hour) |
| TOPIC | Biotechnology I) Principles and process II) Applications of biotechnology |
| CONCEPT & SKILLS | Meaning and history of biotechnology, tools, process, principles, applications and its world scenario. Important issues related to genetic engineering like IPR, bio-piracy, bio-wars and ELSI(Ethical, legal and social issues) |
| LEARNING OUTCOMES | Learning Outcomes of this lesson include the following: I) Awareness about the definition of biotechnology according to various foundations like US National science foundation and EFBT (European Federation of Biotechnology) II) Awareness about the history, present and future of biotechnology. III) Tools and techniques required for biotechnology with special emphasis on genetic engineering and chemical engineering. IV) Applications in agriculture, human health care, forensic sciences, formation of GMO's or Transgenic organisms V) world scenario of biotechnology and issues related to it like exploitation of animal rights, release of GMO's, biosafety, etc. |
| INSTRUCTIONAL TOOLS & REFERENCES | I) Text book for both the topics. II) Online links for practise and concept reinforcement. III) Board and laptops IV) References from various books. |
| PEDAGOGY | i) Reflective discussion ii) Random questioning iii) HOTS iv) Text-book questions v) Sample board papers. |
| ACTIVITY / ASSIGNMENT / RESEARCH | i) Class assignments based on questions from the text book. ii) In-text books questions extracted from each topic |
| ASSESSMENT | i) random questioning. ii) Discussion of questions from previous years board papers |

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| | and questions from magazines. |
| SYLLABUS FOR FORMATIVE & SUMMATIVE ASSESSMENT | To be tested in the pre-boards and class tests. |