Department of Botany

| Name of Programme | Program Outcome(PO) | Program Specific Outcome(PSO) | Course Outcome(CO) |
|-----------------------------------|---|---|--|
| B. Sc. Part- I Subject- Botany | •To study structural organization and economic importance of microbes | Paper-I-General Diversity of Microbes an Cryptogams | Upon completion of this course students will be able : |
| | including Bacteria, Viruses, | •Understanding the basic | •To acquire knowledge |
| | Mycoplasma, | microbial characteristics, | relevant to microbes and |
| | Cyanobacteria. | structure, reproduction | lower plants with practical |
| | •To study the structural, | and economic importance | knowledge. |
| | developmental and | of Bacteria, Virus, | •To make aware the |
| | economic importance of | Mycoplasma and | application of these studies |
| | lower plants including | Cyanobacteria. | to become entrepreneur. |
| | Algae, Fungi, Bryophytes and Pteridophytes with | •Know the classification, characteristic features, life | •To become employee of related industries. |
| | practical knowledge. | history and economic importance of algae with | •To become employee of related scientific industries |
| | | practical knowledge. | such as supplier of |
| | | Know the General | classwork material, slides, |
| | | account, classification, | specimen etc. |
| | | characteristic features, structure, life history and | •To become teacher in educational institute. |
| | | economic importance of | educational institute. |
| | | fungi with practical | |
| | | knowledge. | |
| | | •Know the classification, | |
| | | characteristic features, | |
| | | structure and life cycle of | |
| | | Bryophytes with practical | |
| | | knowledge. | |
| | | •Know the classification, | |
| | | characteristic features, | |
| | | structure and life cycle of Pteridophytes with | |
| | | practical knowledge. | |
| | •To study the structure, | Paper-II-Cell Biology and | Upon completion of this |
| | molecular aspects and | Genetics | course students will be |
| | function of plant cell | • Understand the basics of | able : |
| | including plasma | cell biology. | To acquire knowledge |
| | membrane, cell wall, cell | Understand the structure | relevant to cell biology and |
| | organelles. | and function of plasma | genetics. |
| | •To study the genetics | membrane, cell, and | •To become teacher in |
| | including chromosomal | different cell | educational institute, |
| | organization, DNA, RNA, | organelles. | tutor. |
| | Gene expression, Protein | Know the chromosomal | |
| | synthesis, Proteins, Mutation as well as | organization and variation. | |
| | Mendel's Law | Know the process of cell division with practical | |
| | | division with practical related to it. | |
| | | • Know the genetic | |
| | | | |

| B. Sc. Part- II Subject- Botany | To study the structural, developmental and economic aspects of Gymnosperms as well as Angiosperms. The outcome of this programme as to identify the plants according to taxonomy. To study the anatomical structure and development of flowering plants | code, mitochondrial and cytoplasmic DNA. • Understand the aspects of gene regulation and expression. • Understand the process of protein synthesis with structure of protein. • Understand the knowledge of genetic variation and genetic inheritance as well as Mendel's law. Paper-I- Diversity of Seed Plants and The Systematics •Understanding the characteristics, origin, evolution and diversity of seeded plants. •Know the classification, characteristic features, structure and life cycle of gymnosperms with practical knowledge. •Understand the principles and rules of taxonomy of angiosperms. •Knowing the salient features of classification of | Upon completion of this course students will be able : •To acquire knowledge relevant to gymnosperms and angiosperms with practical knowledge. •To make aware the application of these studies to become entrepreneur. •To become employee of related industries. To become taxonomist. |
|------------------------------------|---|---|--|
| | | •Understanding the diversity of flowering plants of different families. | |
| | To study basic body plan of plant. To study the shoot and root system. To study the structure, development and reproduction in flowering plants | Paper-II- Structure, Development and Reproduction in Flowering Plants Understanding the basic body plan, growth and diversity in plants. Understanding the shoot system and root system in detail with practical knowledge. Knowing the morphological and anatomical structure of leaves according to adaptation with practical knowledge. | Upon completion of this course students will be able : •To acquire knowledge relevant to structure, development and reproduction in flowering plants with practical knowledge. •To become employee of related scientific industries such as supplier of classwork material, slides, specimen etc. |

| | | •Understand the structure, | |
|------------------|--|---|---|
| | | development of flower and | |
| | | reproduction in flowering | |
| | | plants in detail with | |
| | | practical knowledge. | |
| | | Significance of seeds. | |
| B. Sc. Part- III | •To study the physiology of | Paper-I- Plant Physiology, | Upon completion of this |
| Subject- Botany | plants. | Biochemistry and | course students will be |
| | •To study the growth and | Biotechnology | able : |
| | development in plants. | Know the complete | •To acquire complete |
| | •To study the principles, | physiology of plants | knowledge about plant |
| | techniques and application | including plant water | physiology with practical |
| | of genetic engineering and | relationship, transpiration, | knowledge. |
| | biotechnology. | transport of organic | •To make aware the |
| | | substance, respiration, | application of these studies |
| | | photosynthesis.Understand the | to become entrepreneur. |
| | | | •To become employee of |
| | | properties, structure and mechanism of action of | biotechnology and genetic |
| | | enzymes. | engineering related industries. |
| | | • Understand the | industries. |
| | | metabolism of nitrogen | |
| | | and lipids. | |
| | | Knowing the growth and | |
| | | development process in | |
| | | plants including knowledge | |
| | | of structure and function of | |
| | | plant hormone | |
| | | Understanding the | |
| | | principles, techniques and | |
| | | application of genetic | |
| | | engineering and | |
| | | biotechnology. | |
| | To study plant and | Paper-II Ecology and | Upon completion of this |
| | environment. | Utilization of Plants | course students will be |
| | To study the ecology and | Understand the | able : |
| | ecosystem with the | environment along with | To acquire complete |
| | practical Knowledge. | water, light, soil, | knowledge about |
| | •To study the utilization of | temperature. | environment and |
| | plants | Understand the | ecosystem. |
| | | morphological, anatomical | •To become entrepreneur |
| | | and physiological changes | such as supplier of |
| | | in plants responses to | medicinal herbs and spices. |
| | | environment with practical | •To become environment |
| | | knowledge. | conservationist. |
| | | Knowledge of ecology, | •To become teacher in |
| | | ecosystem, ecological | educational institute. |
| | | pyramids, flow of energy with practicals | •To become laboratory |
| | | with practicals.Understand the | technician. |
| | | • Understand the utilization of plants as | •To appear different |
| | | food, fibers, oils, spices, | competitive examination |
| | | ioou, incis, oiis, spices, | conducted at national |

| M. Sc. Semester I Botany | •To study structural organization of plant cell, cell wall and plasma membrane as well as cell organelles. •To study the cell division, cell cycle and. •To study the apoptosis and cytology of cancer. | medicine, beverages and rubber with practical knowledge. Paper-I-Cell Biology of Plants •Understanding structural organization of plant cell. •Understanding structural organization and function of Plasma membrane, cell wall, plasmodesmata. •Understanding structural organization and function of different cell organelles. •Know the process of cell cycle and cell division with practical knowledge. •Know the mechanism of apoptosis and cytology of cancer. | Upon completion of this course students will be able : •To acquire knowledge relevant to cell biology with practical knowledge. •To become teacher of cell biology. |
|-----------------------------|--|---|--|
| | To study structural organization of chromosome. To study the genetics of prokaryotes and eukaryotes. To study the detail of genetic recombination and genetic mapping. To study the molecular basis of DNA. | Paper-II-Cytology, Genetics and Cytogenetics Understanding structural organization of chromosome. Understanding the different types of chromosomal alteration. Understanding the structure of gene and gene expression in prokaryotes and eukaryotes. Knowing the detail of mutation, genetic recombination and genetic mapping. Understanding the molecular basis of DNA. | Upon completion of this course students will be able : •To acquire knowledge relevant to cytogenetics. •To become teacher, researcher, scientist in related organization |
| | I•To study structural organization of DNA and RNA. •To study the molecular basis of protein synthesis. •To study the techniques related to molecular biology •To study structural organization and economic | Paper-III-Molecular Biology of Plants •Understanding structural organization of DNA and RNA. •Understanding the process of protein synthesis in detail. •Understanding the techniques related to molecular biology. Paper-IV-Biology and Diversity of Viruses, | Upon completion of this course students will be able : •To acquire complete knowledge relevant to molecular biology of plants. •To become teacher, researcher, scientist in related organization. Upon completion of this course students will be |

| | importance of viruses | Pactoria Algae and Fur- | |
|--------------------|-------------------------------|---|---|
| | importance of viruses, | Bacteria, Algae and Fungi | able : |
| | bacteria, cyanobacteria | Understanding structural | •To acquire complete |
| | and phytoplasma. | organization and economic | knowledge relevant to |
| | •To study the classification, | importance of viruses, | viruses, bacteria, algae and |
| | structure and reproduction | bacteria, cyanobacteria | fungi. |
| | of algae. | and phytoplasma with | •To become teacher, |
| | •To study the classification, | practical. | researcher, scientist in |
| | structure and reproduction | Understanding | related organization. |
| | of fungi. | classification, structural | To become supplier of |
| | | organization, reproduction | economically important |
| | | and economic importance | algae and fungi |
| | | of algae in detail with | |
| | | practical. | |
| | | Understanding | |
| | | classification, structural | |
| | | organization, reproduction | |
| | | and economic importance | |
| | | of fungi in detail with | |
| | | practical knowledge. | |
| M. Sc. Semester II | To study classification, | Paper-I-Taxonomy and | Upon completion of this |
| Botany | structural organization, | Diversity of Bryophytes, | course students will be |
| | reproduction and | Pteridophytes and | able : |
| | economic importance of | Gymnosperms | To acquire complete |
| | Bryophytes, Pteridophytes | Understanding | knowledge relevant to |
| | and Gymnosperms. | classification, | Bryophytes, Pteridophytes |
| | | structuralorganization, | and Gymnosperms. |
| | | reproduction and | To become teacher, |
| | | economic importance of | researcher, scientist in |
| | | bryophytes with practical. | related organization. |
| | | Understanding | •To become supplier of |
| | | classification, structural | economically important |
| | | organization, reproduction | Bryophytes, Pteridophytes |
| | | and economic importance | and Gymnosperms |
| | | of pteridophytes with | |
| | | practical. | |
| | | Understanding | |
| | | classification, structural | |
| | | organization, reproduction | |
| | | and economic importance | |
| | | of gymnosperms with | |
| | | practical. | |
| | •To study classification of | Paper-II-Taxonomy and | Upon completion of this |
| | angiosperms. | Diversity of Angiosperms | course students will be |
| | •To study the | Understanding different | able : |
| | dicotyledonous families. | system classification of | To acquire complete |
| | •To study the | angiosperms. | knowledge relevant to |
| | monocotyledonous | Understanding taxonomic | angiosperms. |
| | families. | hierarchy, | •To acquire complete |
| | •To study the taxonomic | plantnomenclature and | knowledge of classification |
| | evidences | identification. | systems. |
| | | Understanding the dicot | •To become taxonomist. |
| | | families in detail economic | To become teacher, |
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| | •To study seed germination and seedling growth. •To study the leaf growth and differentiation. •To study the Root System and development. •To study the shoot system and development. •To study reproduction and embryology of angiosperms. •To study the seed development and fruit growth and maturation. •To study the seed | importance with practical knowledge. Understanding the monocot families in detail with economic importance with practical knowledge. Understanding the evidences related to taxonomy. Paper-III-Plant Growth and Development Understanding the details of seed germination and seedling growth with practicals. Understanding the detail of leaf growth and differentiation with practicals Understanding the root system and development with practicals. Understanding the shoot system and development with practicals. Understanding the shoot system and development with practicals. Understanding the details reproduction and embryology of Angiosperms Understanding the details reproduction in angiosperms with practicals. | researcher, scientist in related organization. • To become supplier of economically important angiosperms. Upon completion of this course students will be able : •To acquire complete knowledge relevant to seed germination and seedling growth. •To acquire complete knowledge of leaf, root and shoot growth and development. •To become teacher, researcher, scientist in related organization. Upon completion of this course students will be able : •To acquire complete knowledge relevant to reproduction and embryology of |
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| | system and development. | | . . |
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| | | system and development | |
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| | | system and development | |
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| | dormancy, bud dormancy, | Understanding the detail | angiosperms. |
| | senescence and | of embryology with | •To acquire complete |
| | | of embryology with practicals. | •To acquire complete knowledge of seed and bud |
| | senescence and | of embryology with practicals. •Understanding the seed | •To acquire complete knowledge of seed and bud dormancy, senescence and |
| | senescence and | of embryology with practicals. •Understanding the seed development and fruit growth and maturation | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, |
| | senescence and | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, researcher, scientist in |
| | senescence and | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. •Understanding the | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, |
| | senescence and | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, researcher, scientist in |
| | senescence and | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. •Understanding the process of seed dormancy and bus dormancy •Understanding the | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, researcher, scientist in |
| | senescence and | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. •Understanding the process of seed dormancy and bus dormancy •Understanding the knowledge of senescence | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, researcher, scientist in |
| | senescence and | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. •Understanding the process of seed dormancy and bus dormancy •Understanding the knowledge of senescence and programmed cell | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, researcher, scientist in |
| M. Sc. Semester III | senescence and | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. •Understanding the process of seed dormancy and bus dormancy •Understanding the knowledge of senescence | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, researcher, scientist in |
| M. Sc. Semester III Botany | Senescence and programmed cell death To study ecosystem organization. | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. •Understanding the process of seed dormancy and bus dormancy •Understanding the knowledge of senescence and programmed cell death. Paper-I-Plant Ecology •Understanding the | •To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. •To become teacher, researcher, scientist in related organization. |
| | senescence and programmed cell death | of embryology with practicals. •Understanding the seed development and fruit growth and maturation with practical knowledge. •Understanding the process of seed dormancy and bus dormancy •Understanding the knowledge of senescence and programmed cell death. Paper-I-Plant Ecology | To acquire complete knowledge of seed and bud dormancy, senescence and programme cell death. To become teacher, researcher, scientist in related organization. |

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| • To study the ecology | of vegetation organization | plant ecology including |
| including climatic factors, | and development. | biodiversity and its |
| soil, water and air | •Understanding the | conservation. |
| •To study the biological | different biotic factors and | •To become environment |
| diversity. | climatic factors soil, air and | conservationist. |
| To study the climatic | water related to ecology | To become teacher, |
| changes and ecological | Understanding the | researcher, scientist in |
| stability | biological diversity and its | related organization. |
| | conservation. | |
| | Understanding the | |
| | knowledge of climatic | |
| | changes and ecological | |
| | stability. | |
| To study the plant | Paper-II-Plant Utilization | Upon completion of this |
| diversity and sustainable | and Conservation | course students will be |
| development. | •Understanding the plant | able : |
| To study the origin, | diversity and sustainable | • To acquire complete |
| evolution cultivation of | development. | knowledge relevant to |
| plants with their utilization. | Understanding the detail | Plant utilization and plant |
| •To study the strategies of | of origin, evolution, | diversity with its |
| conservation. | cultivation of plants with | conservation. |
| | their utilization. | To become agriculturist. |
| | Understanding the | To become teacher, |
| | biological diversity and its | researcher, scientist in |
| | conservation techniques | related organization. |
| | and agencies related to it | To become environment |
| | | conservationist |
| To study the plant | Paper-III-Plant Physiology | Upon completion of this |
| physiology. | •Understanding the plant | course students will be |
| To study the stress | physiology including | able : |
| physiology | translocation of water, | •To acquire complete |
| | solutes and membrane | knowledge relevant to |
| | transport. | plant physiology and stress |
| | Understanding the detail | physiology. |
| | of photosynthesis and | To become teacher, |
| | carbon assimilation. | researcher, scientist in |
| | Understanding the | related organization. |
| | sensory photobiology | |
| | Understanding the | |
| | physiology of respiration. | |
| | Knowing the stress | |
| | physiology. | |
| To study the process of | Paper-IV-Plant | Upon completion of this |
| energy production. | Metabolism | course students will be |
| To study the mechanism | Understanding the | able : |
| of signal transduction. | process of energy | To acquire complete |
| To study the biosynthesis | production through ATP. | knowledge relevant to |
| of starch, sucrose and lipid | Understanding the detail | Plant metabolism, signal |
| with its metabolism. | of signal transduction and | transduction, flowering |
| •To study the process of | its mechanism. | regulation and growth |
| • TO study the process of | •Understanding the | regulators. |

| | regulators | hiosynthesis and | To become too at an |
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| | regulators | biosynthesis and | •To become teacher, |
| | | metabolism of starch, | researcher, scientist in |
| | | sucrose and lipids with | related organization. |
| | | practical knowledge. | |
| | | Knowing the process of | |
| | | flowering and its | |
| | | regulation. | |
| | | Understanding the plant | |
| | | growth regulators with | |
| | | mechanism of action with | |
| | | practicals. | |
| M. Sc. Semester IV | To study the | Paper-I-Biotechnology and | Upon completion of this |
| Botany | Biotechnology of plants | Genetic Engineering of | course students will be |
| | and its applications. | Plants | able : |
| | To study the genetic | Understanding the | To acquire complete |
| | engineering of plants and | concepts, principles and | knowledge relevant to |
| | its applications. | application of | biotechnology, plant cell |
| | | biotechnology. | and tissue culture and |
| | | Understanding the plant | genetic engineering of |
| | | cell and tissue culture and | plants with their |
| | | its applications. | application. |
| | | Understanding the | To become teacher, |
| | | concepts, principles and | researcher, |
| | | applications of plant | scientist in related |
| | | genetic engineering. | organization. |
| | •To study the | Paper-II-Biotechnology | Upon completion of this |
| | Biotechnology and genetic | and Genetic Engineering of | course students will be |
| | | • • • | |
| | engineering of microbes | Microbes | able : |
| | and its applications. | •Understanding the | able : •To acquire complete |
| | and its applications. | Understanding the | |
| | and its applications.To study the genetic | | To acquire complete knowledge relevant to |
| | and its applications.To study the genetic engineering of microbes | Understanding the concepts, principles and | To acquire complete knowledge relevant to biotechnology and genetic |
| | and its applications.To study the genetic | Understanding the concepts, principles and application of recombinant | •To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes |
| | and its applications. To study the genetic engineering of microbes and its applications in | •Understanding the concepts, principles and application of recombinant DNA technology and its application. | •To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. |
| | and its applications. To study the genetic engineering of microbes and its applications in | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. |
| | and its applications. •To study the genetic engineering of microbes and its applications in different industries | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. |
| | and its applications. To study the genetic engineering of microbes and its applications in different industries To study the plant | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. Paper-III-Molecular Plant | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. |
| | and its applications. To study the genetic engineering of microbes and its applications in different industries To study the plant pathology including | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. Paper-III-Molecular Plant Pathology | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. |
| | and its applications. To study the genetic engineering of microbes and its applications in different industries To study the plant pathology including different types of | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. Paper-III-Molecular Plant Pathology Understanding the | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. |
| | and its applications. To study the genetic engineering of microbes and its applications in different industries To study the plant pathology including different types of pathogens, plant diseases, | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. Paper-III-Molecular Plant Pathology Understanding the concepts and principles of | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. Upon completion of this course students will be able : |
| | and its applications. To study the genetic engineering of microbes and its applications in different industries To study the plant pathology including different types of pathogens, plant diseases, pathogenesis, defense | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. Paper-III-Molecular Plant Pathology Understanding the concepts and principles of plant pathology including | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. Upon completion of this course students will be able : To acquire complete knowledge regarding to |
| | and its applications. To study the genetic engineering of microbes and its applications in different industries To study the plant pathology including different types of pathogenesis, defense mechanism. | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. Paper-III-Molecular Plant Pathology Understanding the concepts and principles of plant pathology including plant and pathogen | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. Upon completion of this course students will be able : To acquire complete knowledge regarding to plant pathology. |
| | and its applications. To study the genetic engineering of microbes and its applications in different industries To study the plant pathology including different types of pathogens, plant diseases, pathogenesis, defense mechanism. To study the effect of | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. Paper-III-Molecular Plant Pathology Understanding the concepts and principles of plant pathology including plant and pathogen relationship. | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. Upon completion of this course students will be able : To acquire complete knowledge regarding to plant pathology. |
| | and its applications. To study the genetic engineering of microbes and its applications in different industries To study the plant pathology including different types of pathogenesis, defense mechanism. | Understanding the concepts, principles and application of recombinant DNA technology and its application. Understanding the genomics and proteomics. Understanding the concepts, principles of microbial genetic manipulation. Knowing the details of application of genetic improvement of industrial microbes. Paper-III-Molecular Plant Pathology Understanding the concepts and principles of plant pathology including plant and pathogen | To acquire complete knowledge relevant to biotechnology and genetic engineering of microbes with their application. To become teacher, researcher, scientist in related organization. To become Entrepreneur. Upon completion of this course students will be able : To acquire complete knowledge regarding to plant pathology. |

| epidemiology and disease forecasting | with practical knowledge. Understanding the process of pathogenesis and disease symptoms with practical knowledge Knowing the details of defense mechanism. Knowing the details of effect of environment of disease development, epidemiology and disease forecasting. | industries etc. •To become teacher, researcher, scientist in related organization. •To become agricultural adviser. •To become advanced agriculturist. • To become Entrepreneur. |
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| To study the plant diseases due to different types ofpathogens. To study the principles of plant disease control and plant quarantine. | Paper-IV-Plant Disease and Control Mechanism •Understanding the diseases due to fungi and its control with practical knowledge. •Understanding the diseases due to bacteria and its control with practical knowledge. •Understanding the diseases due to viruses and its control with practical knowledge. •Understanding the diseases due to mycoplasma and its control with practical knowledge. •Understanding the diseases due to nematodes and its control with practical knowledge. •Understanding the diseases due to nematodes and its control with practical knowledge. •Understanding the non parasitic disease. • Knowing the principles of plant disease control and plant quarantines | Upon completion of this course students will be able : •To acquire complete knowledge relevant to plant diseases and their control. •To become plant pathologist in different laboratories, research laboratories, industries etc. •To become teacher, researcher, scientist in related organization. •To become agricultural adviser. •To become advanced agriculturist. •To become Entrepreneur. •To become plant quarantine specialist for upcoming seed lots, plants at airport, ship yard from other countries. •To appear and compete different examination like UPSC, PSC, NET/SET, IFS etc conducted for Post Graduate students by taking botany as subject. |