

## महाराणा प्रताप पी.जी. कॉलेज, जंगल धूसड़, गोरखपुर

| : बी.एस-सी. भाग तीन |           | पाठ्यक्रम योजना : सत्र 2022-23 |            |                            | विषय : वनस्पति विज्ञान               |
|---------------------|-----------|--------------------------------|------------|----------------------------|--------------------------------------|
| दिनांक              | व्याख्यान | प्रध्यापक का नाम               | प्रश्नपत्र | अध्यापन                    | शीर्षक                               |
| 08.07.2022          | 1         | Dr AK Gupta                    | II         | In vitro Culture           | Introduction                         |
| 08.07.2022          | 1         | Dr. A.K.S                      | IV         | Mol Genetics               | Definition & Origin                  |
| 09.07.2022          | 1         | Dr AK Gupta                    | III        | Soil Science               | Introduction                         |
| 09.07.2022          | 2         | Dr. A.K.S.                     | IV         | Mol Genetics               | History and Scope                    |
| 11.07.2022          | 1         | Dr AKS                         | I          | Microbiology               | Introduction                         |
| 12.07.2022          | 2         | Dr AKS                         | I          | Microbiology               | History                              |
| 13.07.2022          |           |                                |            | <b>CLASS TEACHING</b>      |                                      |
| 14.07.2022          | 2         | Dr AK Gupta                    | II         | In vitro Culture Technique | General Principal                    |
| 15.07.2022          | 3         | Dr AK Gupta                    | II         | In vitro Culture Technique | Sterilization                        |
| 15.07.2022          | 3         | Dr. A.K.S.                     | IV         | Biotechnology              | History and Scope                    |
| 16.07.2022          | 4         | Dr AK Gupta                    | II         | In vitro Culture Technique | Introduction, Maintenance of Culture |
| 16.07.2022          | 4         | Dr. A.K.S.                     | IV         | Biotechnology              | History and Scope                    |
| 18.07.2022          | 4         | Dr. A.K.S.                     | I          | Microbiology               | Types of Microbes                    |
| 19.07.2022          | 5         | Dr AKS                         | I          | Microbiology               | Types of Microbes                    |
| 20.07.2022          |           |                                |            | <b>CLASS TEACHING</b>      |                                      |
| 21.07.2022          | 5         | Dr AK Gupta                    | II         | Invitro Culture Technique  | M.S. Medium                          |
| 22.07.2022          | 6         | Dr AK Gupta                    | II         | Invitro Culture Technique  | M.S. Medium                          |
| 22.07.2022          | 5         | Dr. A.K.S.                     | IV         | Nucleic acid               | As a genetic material                |
| 23.07.2022          | 2         | Dr AK Gupta                    | III        | Soil Science               | Lithosphere                          |
| 23.07.2022          | 6         | Dr. A.K.S.                     | IV         | Nucleic Acid               | Structure                            |
| 25.07.2022          | 6         | Dr AKS                         | I          | Microbiology               | Methods of Isolation                 |
| 26.07.2022          | 7         | Dr AKS                         | I          | Microbiology               | Culture of microbes                  |
| 27.07.2022          |           |                                |            | <b>CLASS TEACHING</b>      |                                      |
| 28.07.2022          | 7         | Dr AK Gupta                    | II         | Invitro Culture Technique  | M.S. Medium                          |
| 29.07.2022          | 8         | Dr AKS                         | I          | Micro Biology              | Culture of Microbes                  |
| 29.07.2022          | 7         | Dr. A.K.S.                     | IV         | Nucleic Acid               | Replication                          |
| 30.07.2022          | 8         | Dr AK Gupta                    | II         | Sexual Incompatibility     | Control of Fertilization             |
| 30.07.2022          | 8         | Dr. A.K.S.                     | IV         | Nucleic Acid               | Replication                          |
| 01.08.2022          | 3         | Dr AK GUPTA                    | III        | Soil Science               | Weathering of Rocks                  |
| 03.08.2022          | 9         | Dr AKS                         | I          | Micro Biology              | Micrometry                           |
| 04.08.2022          |           |                                |            | <b>CLASS TEACHING</b>      |                                      |
| 05.08.2022          | 4         | DR AK GUPTA                    | III        | Soil Science               | Weathering of Rocks                  |
| 05.08.2022          | 9         | Dr. A.K.S.                     | IV         | Nucleic Acid               | Forms of DNA                         |
| 06.08.2022          | 9         | Dr AK Gupta                    | II         | Sexual Incompatibility     | Control of Fertilization             |

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|------------|----|-------------|-----|---------------------------|----------------------------------|
| 06.08.2022 | 10 | Dr. A.K.S.  | IV  | Nucleic Acid              | Forms of RNA                     |
| 08.08.2022 | 5  | Dr AKS      | I   | Micro Biology             | Nutrition in Microbes            |
| 10.08.2022 | 10 | Dr AK Gupta | II  | Sexual Incompatibility    | Control of Fertilization         |
| 11.08.2022 | 11 | Dr AKS      | I   | Micro Biology             | Chemoautotrophism                |
| 13.08.2022 |    |             |     | <b>CLASS TEACHING</b>     |                                  |
| 13.08.2022 | 11 | Dr. A.K.S.  | IV  | Genetic Code              | Properties of genetic code       |
| 16.08.2022 | 5  | Dr AK GUPTA | III | Soil Science              | Soil Foring Process              |
| 17.8.2022  | 11 | Dr AK Gupta | II  | Parthenocarp              | Induced pathenocarp              |
| 19.08.2022 | 12 | Dr AKS      | I   | Micro Biology             | Photoautotrophism                |
| 19.08.2022 | 12 | Dr. A.K.S.  | IV  | Genetic Code              | Initiation and Termination codon |
| 20.08.2022 | 12 | Dr AK Gupta | II  | App. of Exp. Embryology   | Anther Culture                   |
| 20.08.2022 | 13 | Dr. A.K.S.  | IV  | Genetic Expression        | Transcription in Prokaryotes     |
| 22.08.2022 |    |             |     | <b>Class teaching</b>     |                                  |
| 23.08.2022 | 6  | Dr AK GUPTA | III | Soil Science              | Soil Forming Process             |
| 24.08.2022 | 13 | Dr AK Gupta | II  | App. of Exp. Embryology   | Anther Culture                   |
| 25.08.2022 | 12 | Dr AKS      | I   | Micro Biology             | Saphrototrophism                 |
| 26.08.2022 | 14 | Dr AK Gupta | II  | App. of Exp. Embryology   | Embryo Culture                   |
| 26.08.2022 | 14 | Dr. A.K.S.  | IV  | Gene Expression           | Translation in Prokaryotes       |
| 27.08.2022 | 15 | Dr AK Gupta | II  | App. of Exp. Embryology   | Protoplast Culture               |
| 27.08.2022 | 15 | Dr. A.K.S.  | IV  | Gene Expression           | Translation in Prokaryotes       |
| 29.08.2022 |    |             |     | <b>Monthly Evaluation</b> |                                  |
| 30.08.2022 | 13 | Dr AKS      | I   | Micro Biology             | Paratrophism                     |
| 01.09.2022 | 14 | Dr AKS      | I   | Microbiology              | Microbes in Air, and Water       |
| 02.09.2022 | 16 | Dr AK Gupta | II  | App. of Exp. Embryology   | Protoplast Culture               |
| 02.09.2022 | 16 | Dr. A.K.S.  | IV  | Gene Expression           | Translation in Prokaryotes       |
| 03.09.2022 | 7  | DR AK GUPTA | III | Soil Science              | Soil Degradation                 |
| 03.09.2022 | 17 | Dr. A.K.S.  | IV  | Gene Regulation           | General Concept                  |
| 05.09.2022 | 15 | Dr AKS      | I   | Micro Biology             | Microbes in Soils                |
| 06.09.2022 |    |             |     | <b>Class Teaching</b>     |                                  |
| 07.09.2022 | 8  | DR AK GUPTA | III | Soil Science              | Soil Degradation                 |
| 10.09.2022 | 17 | Dr AK Gupta | II  | Culture                   | Somatic Hybridization            |
| 10.09.2022 | 18 | Dr. A.K.S.  | IV  | Gene Regulation           | Operon Concept                   |
| 12.09.2022 | 9  | DR AK GUPTA | III | Soil Science              | Soil Conservation                |
| 13.09.2022 | 16 | Dr AKS      | I   | Microbial Application     | In Dairy                         |
| 15.09.2022 | 10 | DR AK GUPTA | III | Soil Science              | Soil Conservation                |
| 16.09.2022 |    |             |     | <b>Class Teaching</b>     |                                  |
| 16.09.2022 | 19 | Dr. A.K.S.  | IV  | Gene Regulation           | LAC Operon                       |
| 19.09.2022 | 17 | Dr. A.K.S.  | I   | Microbial Application     | In Bakery                        |

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|------------|-----------|-------------|-----|---------------------------|----------------------------------------|
| 20.09.2022 | 18        | Dr AKS      | I   | Microbial Application     | In Medicine                            |
| 21.09.2022 | 11        | DR AK GUPTA | III | Soil Science              | Soil Reclamation                       |
| 22.09.2022 | 18        | Dr AK Gupta | II  | Culture                   | Cell Culture                           |
| 23.09.2022 |           |             |     | <b>CLASS TEACHING</b>     |                                        |
| 23.09.2022 | 20        | Dr. A.K.S.  | IV  | Gene Regulation           | LAC Operon                             |
| 24.09.2022 | 19        | Dr AK Gupta | II  | Culture                   | Somatic Hybridization                  |
| 24.09.2022 | 21        | Dr. A.K.S.  | IV  | Gene                      | Chemical Methods of Gene Synthesis     |
| 26.09.2022 | 19        | Dr AKS      | I   | Plant Pathology           | General Principle                      |
| 27.09.2022 | 20        | Dr AKS      | I   | Plant Pathology           | Symptoms of Diseases                   |
| 28.09.2022 | 12        | DR AK GUPTA | III | Soil Science              | Soil Reclamation                       |
| 29.09.2022 |           |             |     | <b>Monthly Evaluation</b> |                                        |
| 30.09.2022 | 20        | Dr AK Gupta | II  | Culture                   | Cell Culture for Metabolite Production |
| 30.09.2022 | 22        | Dr. A.K.S.  | IV  | Gene                      | Chemical Methods of Gene Synthesis     |
| 01.10.2022 | 21        | Dr AK Gupta | II  | Morphogenesis             | Methods of Study                       |
| 01.10.2022 | 23        | Dr. A.KS.   | IV  | Bio-technology            | Recombinant DNA                        |
| 07.10.2022 | 22        | Dr AK Gupta | II  | Morphogenesis             | Aims and Scop                          |
| 07.10.2022 | 24        | Dr. A.KS.   | IV  | Bio-technology            | Recombinant DNA                        |
| 08.10.2022 | 13        | Dr AK Gupta | III | Pollution                 | CO <sub>2</sub> & Ecosystem            |
| 08.10.2022 | 25        | Dr. A.K.S.  | IV  | Biotechnology             | Restriction Endonuclease               |
| 10.10.2022 | 23        | Dr AK Gupta | II  | Morphogenesis             | Measurement of Pt. Growth              |
| 11.10.2022 |           |             |     | <b>Class Teaching</b>     |                                        |
| 12.10.2022 | 14        | Dr AK Gupta | III | Pollution                 | Atmospheric Pollution                  |
| 13.10.2022 | 24        | Dr AK Gupta | II  | Morphogenesis             | Methods of Study                       |
| 14.10.2022 | 15        | Dr AK Gupta | III | Pollution                 | Ozone Depletion                        |
| 14.10.2022 | 26        | Dr. A.K.S.  | IV  | Biotechnology             | Ligase                                 |
| 15.10.2022 | 16        | DR AK GUPTA | III | Pollution                 | Water Pollution                        |
| 15.10.2022 | 27        | Dr. A.K.S.  | IV  | Vector                    | Plasmid                                |
| 17.10.2022 | 21        | Dr. A.K.S.  | I   | Plant Pathology           | Symptoms of Diseases                   |
| 18.10.2022 |           |             |     | <b>Monthly Evaluation</b> |                                        |
| 19.10.2022 | 25        | Dr AK Gupta | II  | Morphogenesis             | Characteristics Feature of Pt. Growth  |
| 20.10.2022 | 17        | DR AK GUPTA | III | Pollution                 | Biosphere                              |
| 28.10.2022 | 18        | Dr AK Gupta | III | Pollution                 | Eutrophication                         |
| 28.10.2022 | <b>28</b> | Dr. A.K.S.  | IV  | Vector                    | Cosmid                                 |
| 29.10.2022 | 26        | Dr AK Gupta | II  | Morphogenetic Phenomena   | Polarity                               |
| 29.10.2022 | <b>29</b> | Dr. A.K.S.  | IV  | Biotechnology             | Vector Bacteriophage                   |
| 01.11.2022 | 27        | Dr AK Gupta | II  | Morphogenesis             | Characteristics Feature of Pt. Growth  |
| 02.11.2022 |           |             |     | <b>CLASS TEACHING</b>     |                                        |
| 03.11.2022 | 28        | Dr AK Gupta | II  | Morphogenetic Phenomena   | Polarity                               |
| 05.11.2022 | 19        | DR AK GUPTA | III | Pollution                 | Pesticide Pollution                    |
| 05.11.2022 | 30        | Dr. A.K.S.  | IV  | Biotechnology             | Gene Cloning                           |

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|------------|----|-------------|-----|---------------------------|---------------------------|
| 07.11.2022 | 20 | DR AK GUPTA | III | Pollution                 | Radio Active Pollution    |
| 09.11.2022 | 29 | Dr AK Gupta | II  | Morphogenetic Phenomena   | Correlation               |
| 10.11.2022 | 30 | Dr AK Gupta | II  | Morphogenetic Phenomena   | Correlation               |
| 11.11.2022 |    |             |     | <b>CLASS TEACHING</b>     |                           |
| 11.11.2022 | 31 | Dr. A.K.S.  | IV  | Biotechnology             | Gene Cloning              |
| 12.11.2022 | 21 | Dr AK Gupta | III | Pollution                 | BOD                       |
| 12.11.2022 | 32 | Dr. A.K.S.  | IV  | Biotechnology             | Gene Cloning              |
| 14.11.2022 | 22 | Dr. A.K.S.  | I   | Plant Pathology           | Disease Resistance        |
| 15.11.2022 | 31 | Dr AK Gupta | II  | Morphogenetic Phenomena   | Symmetry                  |
| 16.11.2022 | 23 | Dr. A.K.S.  | I   | Plant Pathology           | Disease Resistance        |
| 17.11.2022 |    |             |     | <b>CLASS TEACHING</b>     |                           |
| 18.11.2022 | 22 | DR AK GUPTA | III | Pollution                 | Radio Active Pollution    |
| 18.11.2022 | 33 | Dr. A.K.S.  | IV  | Biotechnology             | Application               |
| 19.11.2022 | 32 | Dr AK Gupta | II  | Morphogenetic Phenomena   | Symmetry                  |
| 19.11.2022 | 34 | Dr. A.K.S.  | IV  | Biotechnology             | Application               |
| 21.11.2022 | 24 | Dr. A.K.S.  | I   | Plant Pathology           | Disease Resistance        |
| 22.11.2022 | 25 | Dr. A.K.S.  | I   | Plant Pathology           | Mode of Infection         |
| 23.11.2022 | 23 | DR AK GUPTA | III | Pollution                 | Monitoring and Control    |
| 25.11.2022 |    |             |     | <b>Monthly evaluation</b> |                           |
| 25.11.2022 | 35 | Dr. A.K.S.  | IV  | Biotechnology             | Synthesis of Hormone      |
| 26.11.2022 | 33 | Dr AK Gupta | II  | Morphogenetic Phenomena   | Totipotency               |
| 26.11.2022 | 36 | Dr. A.K.S.  | IV  | Biotechnology             | Synthesis of Hormone      |
| 28.11.2022 | 26 | Dr. A.K.S.  | I   | Disease Management        | Cultural Method           |
| 29.11.2022 | 27 | Dr. A.K.S.  | I   | Disease Management        | Chemical Method           |
| 30.11.2022 | 24 | DR AK GUPTA | III | Conservation              | Biothics and Conservation |
| 01.12.2022 |    |             |     | <b>CLASS TEACHING</b>     |                           |
| 02.12.2022 | 28 | Dr. A.K.S.  | I   | Disease Management        | Biological Method         |
| 03.12.2022 | 25 | DR AK GUPTA | III | Conservation              | Natural Resources         |
| 07.12.2022 | 26 | DR AK GUPTA | III | Pollution                 | Solid Waste Pollution     |
| 08.12.2022 | 34 | Dr AK Gupta | II  | Photomorphogenesis        | Role of Light             |
| 09.12.2022 | 27 | DR AK GUPTA | III | Conservation              | Ecology Vs Econmy         |
| 09.12.2022 | 38 | Dr. A.K.S.  | IV  | Biotechnology             | DNA Finger Printing       |
| 12.12.2022 |    |             |     | <b>CLASS TEACHING</b>     |                           |
| 13.12.2022 | 29 | Dr. A.K.S.  | I   | Plant Disease             | Late Blight of Potato     |
| 14.12.2022 | 28 | DR AK GUPTA | III | Conservation              | Natural Resources         |
| 15.12.2022 | 30 | Dr. A.K.S.  | I   | Plant Disease             | Late Blight of Potato     |
| 02.01.2023 | 29 | DR AK GUPTA | III | Conservation              | Major Indian Biome        |
| 03.01.2023 | 31 | Dr AKS      | I   | Plant Disease             | Linseed Rust              |
| 04.01.2023 |    |             |     | <b>CLASS TEACHING</b>     |                           |
| 05.01.2023 | 32 | Dr. A.K.S.  | I   | Plant Disease             | Bacterial Bligh of Rice   |

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|------------|----|-------------|-----|---------------------------|--------------------------------------------|
| 06.01.2023 | 35 | Dr AK Gupta | II  | Photomorphogenesis        | Role of Light                              |
| 06.01.2023 | 39 | Dr. A.K.S.  | IV  | Biotechnology             | Monoclonal Antibody                        |
| 07.01.2023 | 30 | DR AK GUPTA | III | Conservation              | Major Indian Biome                         |
| 07.01.2023 | 40 | Dr. A.K.S.  | IV  | Biotechnology             | DNA Finger Printing                        |
| 09.01.2023 | 31 | DR AK GUPTA | III | Conservation              | Conservation of Renewable Resource         |
| 10.01.2023 | 32 | DR AK GUPTA | III | Conservation              | Conservation of Renewable Resource         |
| 11.01.2023 |    |             |     | <b>CLASS TEACHING</b>     |                                            |
| 12.01.2023 | 33 | Dr. A.K.S.  | I   | Plant Disease             | Yellow Vein Mosaic of Bhindi               |
| 13.01.2023 | 36 | Dr AK Gupta | II  | Biostatistics             | Introduction, Definition                   |
| 13.01.2023 | 41 | Dr A.K.S.   | IV  | Biotechnology             | Transgenic Plant                           |
| 16.01.2023 | 33 | DR AK GUPTA | III | Conservation              | Causes of Extinction                       |
| 17.01.2023 | 34 | DR AK GUPTA | III | Conservation              | Endangered Indian Flora                    |
| 18.01.2023 | 37 | Dr AK Gupta | II  | Biostatics                | Application in Biology                     |
| 19.01.2023 |    |             |     | <b>CLASS TEACHING</b>     |                                            |
| 20.01.2023 | 35 | DR AK GUPTA | III | Conservation              | Nature Reserve                             |
| 20.01.2023 | 42 | Dr. A.K.S.  | IV  | Biotechnology             | Agro-bacterium as Natural Genetic Engineer |
| 21.01.2023 | 38 | Dr AK Gupta | II  | Biostatistics             | Mean,                                      |
| 21.01.2023 | 43 | Dr AKS      | IV  | Paper I                   | Imp. Question                              |
| 23.01.2023 | 39 | Dr AK Gupta | II  | Biostatistics             | Median,                                    |
| 25.01.2023 | 34 | Dr. A.K.S.  | I   | Plant Disease             | Wilt of Chick Pea                          |
| 27.01.2023 | 40 | Dr AK Gupta | II  | Biostatistics             | Mode                                       |
| 27.01.2023 | 44 | Dr. A.K.S.  | IV  | Biotechnology             | Imp. Question                              |
| 28.01.2023 |    |             |     | <b>Monthly evaluation</b> |                                            |
| 28.01.2023 | 45 | Dr. A.K.S.  | IV  | Paper I                   | Imp. Question                              |
| 30.01.2023 | 36 | DR AK GUPTA | III | Conservation              | Nature Reserve                             |
| 31.01.2023 | 41 | Dr AK Gupta | II  | Biostatistics             | Mode                                       |
| 01.02.2023 | 35 | Dr. A.K.S.  | I   | Plant Disease             | Wilt of Chick Pea                          |
| 02.02.2023 | 37 | DR AK GUPTA | III | Conservation              | Germ Plasm Bank                            |
| 03.02.2023 |    |             |     | <b>CLASS TEACHING</b>     |                                            |
| 03.02.2023 | 46 | Dr. A.K.S.  | IV  | Paper IV                  | Imp. Question                              |
| 06.02.2023 | 36 | Dr. A.K.S.  | I   | Plant Disease             | Little Leaf of Brinjal                     |
| 07.02.2023 | 42 | Dr AK Gupta | II  | Biostatistics             | Standard Deviation                         |
| 08.02.2023 | 43 | Dr AK Gupta | II  | Biostatistics             | Standard Deviation                         |
| 09.02.2023 | 38 | DR AK GUPTA | III | Conservation              | Germ Plasm Bank                            |
| 10.02.2023 |    |             |     | <b>Class Teaching</b>     |                                            |
| 10.02.2023 | 47 | Dr. A.K.S.  | IV  | Paper IV                  | Imp. Question                              |
| 11.02.2023 | 44 | Dr AK Gupta | II  | Biostatistics             | S. E. Mean                                 |
| 11.02.2023 | 48 | Dr. A.K.S.  | IV  | Paper IV                  | Imp. Question                              |
| 13.02.2023 | 37 | Dr. A.K.S.  | I   | Plant Disease             | Imp. Question                              |
| 14.02.2023 | 45 | Dr AK Gupta | II  | Biostatistics             | Imp. Que.                                  |
| 15.02.2023 | 39 | DR AK GUPTA | III | Conservation              | Imp. Que.                                  |