

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

| कक्षा : बी.एस-सी. भाग-एक |           |                | पाठ्यक्रम योजना : सत्र 2017-18 |                        | विषय : भौतिक                                                    |
|--------------------------|-----------|----------------|--------------------------------|------------------------|-----------------------------------------------------------------|
| Date                     | Lect. no. | Teachers name  | Papers                         | Topics                 | Title                                                           |
| 15/07/2017               | 01        | Maneeta Singh  | III                            | Introduction           | List of books                                                   |
| 17/07/2017               | 01        | Maneeta Singh  | II                             | Introduction           | List of books                                                   |
| 18/07/2017               | 01        | Abhishek verma | I                              | Introduction           | List of books                                                   |
| 19/07/2017               |           | Abhishek verma |                                |                        | <b>CLASS TEACHING</b>                                           |
| 20/07/2017               | 02        | Maneeta Singh  | III                            | Magneto statics        | Magnetic field due to straight wire, circular coil              |
| 21/07/2017               | 03        | Maneeta Singh  | III                            | Magneto statics        | Magnetic field due to Helmholtz coils, solenoid, toroid         |
| 22/07/2017               | 02        | Maneeta Singh  | II                             | Free Oscillations      | Free Oscillation, differential equation of SHM and its solution |
| 24/07/2017               | 1         | Abhishek verma | II                             | Wave motion            | Wave motion                                                     |
| 25/07/2017               | 02        | Abhishek verma | I                              | Dynamics of Rigid Body | Equation of motion of rigid body                                |
| 26/07/2017               |           | Abhishek verma |                                |                        | <b>CLASS TEACHING</b>                                           |
| 27/07/2017               | 04        | Maneeta Singh  | III                            | Magneto statics        | Lorentz force, magnetization                                    |
| 29/07/2017               | 05        | Maneeta Singh  | III                            | Magneto statics        | Magnetic permeability and susceptibility                        |
| 31/07/2017               | 03        | Maneeta Singh  | II                             | Free Oscillations      | Example of mechanical and electrical system                     |
| 01/08/2017               | 2         | Abhishek verma | II                             | Wave motion            | Properties of wave motion                                       |
| 02/08/2017               | 03        | Abhishek verma | I                              | Dynamics of Rigid Body | M. I and radius of gyration                                     |
| 03/08/2017               |           | Maneeta Singh  |                                |                        | <b>CLASS TEACHING</b>                                           |
| 04/08/2017               | 06        | Maneeta Singh  | III                            | Magneto statics        | Electromagnetic induction, induced electric field               |
| 05/08/2017               | 07        | Maneeta Singh  | III                            | Magneto statics        | Faradays law. Mutual induction                                  |
| 08/08/2017               | 04        | Maneeta Singh  | II                             | Free Oscillations      | Addition of S.H.M                                               |
| 09/08/2017               | 03        | Abhishek verma | II                             | Wave motion            | Stationary waves                                                |
| 10/08/2017               | 03        | Abhishek verma | I                              | Dynamics of Rigid Body | Theorem of parallel axis                                        |
| 11/08/2017               |           |                |                                |                        | <b>MONTHLY EVALUATION</b>                                       |
| 12/08/2017               | 08        | Maneeta Singh  | III                            | Magneto statics        | Integral and differential form of Faradays law                  |
| 13/08/2017               | 09        | Maneeta Singh  | III                            | Magneto statics        | Series and parallel combination of induction                    |
| 16/08/2017               | 05        | Maneeta Singh  | II                             | Free Oscillations      | Lissajous figure                                                |
| 17/08/2017               | 4         | Abhishek verma | II                             | Wave motion            | Wave velocity and group velocity                                |
| 18/08/2017               | 04        | Abhishek verma | I                              | Dynamics of Rigid Body | The perpendicular axis                                          |
| 19/08/2017               |           | Abhishek verma |                                |                        | <b>CLASS TEACHING</b>                                           |
| 21/08/2017               | 10        | Maneeta Singh  | III                            | Magneto statics        | Coupled circuits                                                |
| 22/08/2017               | 11        | Maneeta Singh  | III                            | Magneto statics        | Ideal transformer                                               |

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| 23/08/2017 | 06 | Maneeta Singh  | II  | FREE OSCILLATIONS           | LISSAJOUS FIGURES WITH FREQUENCY RATIO 1: 1 AND 1: 2 |
| 24/08/2017 | 5  | Abhishek verma | II  | ULTRASONIC                  | PRODUCTION                                           |
| 25/08/2017 | 05 | Abhishek verma | I   | DYNAMICS OF RIGID BODY      | M.I OF RING AND DISC                                 |
| 26/08/2017 |    | Abhishek verma |     |                             | <b>MONTHLY EVALUATION</b>                            |
| 28/09/2017 | 12 | Maneeta Singh  | III | ELECTROMAGNETIC WAVES       | MAXWELLS EQUATION                                    |
| 29/08/2017 | 13 | Maneeta Singh  | III | ELECTROMAGNETIC WAVES       | EM WAVES IN VACCUM , E.M FIELD ENERGY DENSITY        |
| 31/08/2017 | 07 | Maneeta Singh  | II  | DAMPED HARMONIC OSCILLATION | MECHANICAL AND ELECTRICAL SYSTEM                     |
| 01/09/2017 | 06 | Abhishek verma | II  | ULTRASONIC                  | PROPERTIES OF ULTRASONIC WAVES                       |
| 02/09/2017 | 06 | Abhishek verma | I   | DYNAMICS OF RIGID BODY      | M.I OF RECTANGULAR BEAM                              |
| 05/09/2017 |    | Abhishek verma |     |                             | <b>CLASS TEACHING</b>                                |
| 06/09/2017 | 14 | Maneeta Singh  | III | ELECTROMAGNETIC WAVES       | DISPLACEMENT CURRENT, POYNTING VECTOR                |
| 07/09/2017 | 15 | Maneeta Singh  | III | AC BRIDGE                   | INTRODUCTION, J-OPERATOR                             |
| 08/09/2017 | 08 | Maneeta Singh  | III | DAMPED HARMONIC OSCILLATION | LOGARATHIMIC DECREMENT , RELAXATION TIME LCR CIRCUIT |
| 09/09/2017 | 07 | Abhishek verma | II  | ULTRASONIC                  | USES OF ULTRASONIC WAVES                             |
| 11/09/2017 | 07 | Abhishek verma | I   | DYNAMICS OF RIGID BODY      | HOLLOW AND SOLID CYLENDERS                           |
| 12/09/2017 |    | Abhishek verma |     |                             | <b>CLASS TEACHING</b>                                |
| 13/09/2017 | 06 | Maneeta Singh  | III | AC BRIDGE                   | ANDERSONS BRIDGE                                     |
| 14/09/2017 | 17 | Maneeta Singh  | III | AC BRIDGE                   | SCHERING AND ROBINSONS BRIDGE                        |
| 15/09/2017 | 09 | Maneeta Singh  | II  | DAMPED HARMONIC OSCILLATION | MOVING COIL GALVENOMETER                             |
| 16/09/2017 | 08 | Abhishek verma | II  | ULTRASONIC                  | ACCOUSTIC GRATING                                    |
| 18/09/2017 | 08 | Abhishek verma | I   | DYNAMICS OF RIGID BODY      | SPHERICAL CELL                                       |
| 19/09/2017 |    | Abhishek verma |     |                             | <b>CLASS TEACHING</b>                                |
| 21/09/2017 | 18 | Maneeta Singh  | III | AC BRIDGE                   | WEINS BRIDGE                                         |
| 22/09/2017 | 19 | Maneeta Singh  | III | NETWORK ANALYSIS            | T AND PI NETWORK                                     |
| 23/09/2017 | 10 | Maneeta Singh  | II  | FORCED OSCILLATION          | FORCED OSCILLATIONS OF MECHANICAL SYSTEM             |
| 25/09/2017 | 09 | Abhishek verma | I   | ACCOUSTICS                  | THE ACCOUSTICS OF HALLS                              |
| 26/09/2017 | 09 | Abhishek verma | I   | DYNAMICS OF RIGID BODY      | SOLID AND HOLLOW SPHERES                             |
| 27/09/2017 |    | Abhishek verma |     |                             | <b>MONTHLY EVALUATION</b>                            |
| 03/10/2017 | 20 | Maneeta Singh  | III | NETWORK ANALYSIS            | EQUIVELANCE OF T AND PI NETWORK                      |
| 04/10/2017 | 21 | Maneeta Singh  | III | NETWORK ANALYSIS            | THEVENINS THEOREM                                    |

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| 06/10/2017 | 11 | Maneeta Singh                    | II  | FORCED OSCILLATION     | FORCED OSCILLATION OF ELECTRICAL SYSTEM                   |
| 07/10/2017 | 10 | Abhishek verma                   | II  | ACCOUSTICS             | Reverberation time                                        |
| 09/10/2017 | 10 | Abhishek verma                   | I   | DYNAMICS OF RIGID BODY | MOMENT OF INERTIA , FLYWHEEL                              |
| 10/10/2017 |    | Abhishek verma                   |     |                        | <b>CLASS TEACHING</b>                                     |
| 11/10/2017 | 22 | Maneeta Singh                    | III | NETWORK ANALYSIS       | NORTONS THEOREM                                           |
| 12/10/2017 | 23 | Maneeta Singh                    | III | NETWORK ANALYSIS       | MAXIMUM POWER TRANSFER THEOREM                            |
| 13/10/2017 | 12 | Maneeta Singh                    | II  | FORCED OSCILLATION     | SHARPNESS OF RESONANCE                                    |
| 14/10/2017 | 11 | Abhishek verma                   | II  | ACCOUSTICS             | Sabine's formula                                          |
| 16/10/2017 | 11 | Abhishek verma                   | I   | DYNAMICS OF RIGID BODY | COMPUND PENDULEM                                          |
| 23/10/2017 |    | Abhishek verma                   |     |                        | <b>CLASS TEACHING</b>                                     |
| 24/10/2017 | 24 | Maneeta Singh                    | III | NETWORK ANALYSIS       | LOW PASS FILTER                                           |
| 25/10/2017 | 25 | Maneeta Singh                    | III | NETWORK ANALYSIS       | HIGH PASS FILTER                                          |
| 26/10/2017 | 13 | Maneeta Singh                    | II  | FORCED OSCILLATION     | QUALITY FACTOR                                            |
| 27/10/2017 | 12 | Abhishek verma                   | II  | Fourier Analysis       | Fourier theorem                                           |
| 28/10/2017 | 12 | Abhishek verma                   | I   | ELASTICITY             | ELESTIC CONSTANT AND THEIR MUTUAL RELATION                |
| 30/10/2017 |    | Maneeta Singh/<br>Abhishek verma |     |                        | <b>MONTHLY EVALUATION</b>                                 |
| 31/10/2017 | 26 | Maneeta Singh                    | III | ELECTROSTATICS         | FIELD DUE TO CHARGE DISTRIBUTION                          |
| 01/11/2017 | 27 | Maneeta Singh                    | III | ELECTROSTATICS         | ELECTRIC FIELD DUE TO UNIFORM DISTRIBUTION OF LINE CHARGE |
| 02/11/2017 | 14 | Maneeta Singh                    | II  | FORCED OSCILLATION     | ELECTRICAL IMPEDANCE                                      |
| 03/11/2017 | 13 | Abhishek verma                   | II  | Fourier Analysis       | evaluation of Fourier coefficients                        |
| 06/11/2017 | 13 | Abhishek verma                   | I   | ELASTICITY             | THEORY OF BENDING OF BEAM                                 |
| 07/11/2017 |    | Abhishek verma                   |     |                        | <b>CLASS TEACHING</b>                                     |
| 08/11/2017 | 28 | Maneeta Singh                    | III | ELECTROSTATICS         | SAET CHARGE AND SPHERICAL CHARGE                          |
| 10/11/2017 | 29 | Maneeta Singh                    | III | ELECTROSTATICS         | GAUSS LAW AND ITS APPLICATION                             |
| 11/11/2017 | 15 | Maneeta Singh                    | II  | FORCED OSCILLATION     | LCR SERIES RESONANCE                                      |
| 13/11/2017 | 14 | Abhishek verma                   | II  | Fourier Analysis       | analysis of (i) square wave,                              |
| 14/11/2017 | 14 | Abhishek verma                   | I   | ELASTICITY             | TORSION OF CYLENDER                                       |
| 15/11/2017 |    | Abhishek verma                   |     |                        | <b>CLASS TEACHING</b>                                     |
| 16/11/2017 | 30 | Maneeta Singh                    | III | ELECTROSTATICS         | MULTIPLE EXPANSION                                        |
| 17/11/2017 | 16 | Maneeta Singh                    | II  | FORCED OSCILLATION     | LCR PARALLEL RESONANCE                                    |

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| 18/11/2017 | 15 | Abhishek verma                  | II  | Fourier Analysis               | sawtooth wave,                                                                             |
| 20/11/2017 | 15 | Abhishek verma                  | I   | PROPERTIES OF LIQUIDS          | STREAMLINE MOTION , REYNOLDS NUMBER                                                        |
| 21/11/2017 | 16 | Abhishek verma                  | I   | PROPERTIES OF LIQUIDS          | POISEUILLES EQUATION                                                                       |
| 22/11/2017 |    | Maneeta Singh                   |     |                                | <b>CLASS TEACHING</b>                                                                      |
| 23/11/2017 | 31 | Maneeta Singh                   | III | ELECTROSTATICS                 | ELECTROSTATIC FIELD ENEREGY, METHOD OF IMAGES                                              |
| 24/11/2017 | 17 | Maneeta Singh                   | II  | FOURIER ANALYSIS               | FOURIER THEOREM, EVALUATION OF FOURIER COEFFECIENT                                         |
| 25/11/2017 | 16 | Abhishek verma                  | II  | Fourier Analysis               | half and full wave rectifiers output                                                       |
| 27/11/2017 | 17 | Abhishek verma                  | I   | PROPERTIES OF LIQUIDS          | SURFACE TENSION                                                                            |
| 28/11/2017 | 18 | Abhishek verma                  | I   | PROPERTIES OF LIQUIDS          | MOLECULAR INTERPRETATION OF SURFACE TENSION                                                |
| 29/11/2017 |    | Maneeta Singh<br>Abhishek verma |     |                                | <b>MONTHLY EVALUATION</b>                                                                  |
| 30/11/2017 | 32 | Maneeta Singh                   | III | ELECTRIC FIELD INSIDE MATTER   | DIELECTRIC, PARALLEL PLATE OF CAPACITOR                                                    |
| 01/12/2017 | 18 | Maneeta Singh                   | II  | FOURIER ANALYSIS               | ANALYSIS OF SQUARE WAVE                                                                    |
| 02/12/2017 | 19 | Abhishek verma                  | I   | PROPERTIES OF LIQUIDS          | PRESSURE OVER CURVED SURFACE                                                               |
| 03/12/2017 | 20 | Abhishek verma                  | I   | PROPERTIES OF LIQUIDS          | PRESSURE OVER CURVED SURFACE                                                               |
| 06/12/2017 | 21 | Abhishek verma                  | I   | PROPERTIES OF LIQUIDS          | CAPILLARITY                                                                                |
| 07/12/2017 |    | Maneeta Singh                   |     |                                | <b>CLASS TEACHING</b>                                                                      |
| 08/12/2017 | 35 | Maneeta Singh                   | III | ELECTRIC FIELD INSIDE MATTER   | PARALLEL PLATE OF CAPACITOR                                                                |
| 09/12/2017 | 19 | Maneeta Singh                   | II  | FOURIER ANALYSIS               | ANALYSIS OF SAW TOOTH WAVE                                                                 |
| 11/12/2017 | 17 | Abhishek verma                  | II  | Oscillation of Coupled Systems | Normal modes of vibration of mechanical and electrical systems with two degrees of freedom |
| 12/12/2017 | 22 | Abhishek verma                  | I   | PROPERTIES OF LIQUIDS          | JAEGERS METHOD                                                                             |
| 13/12/2017 | 23 | Abhishek verma                  | I   | CENTRAL FORCES                 | INVERSE SQUARE LAW                                                                         |
| 14/12/2017 |    | Maneeta Singh                   |     |                                | <b>CLASS TEACHING</b>                                                                      |
| 15/12/2017 | 34 | Maneeta Singh                   | III | ELECTRIC FIELD INSIDE MATTER   | POLARISATION                                                                               |
| 16/12/2017 | 20 | Maneeta Singh                   | II  | FOURIER ANALYSIS               | ANALYSIS OF SAW TOOTH WAVE                                                                 |
| 18/12/2017 | 18 | Abhishek verma                  | II  | Oscillation of Coupled Systems | Vibrations of string and rectangular membrane                                              |
| 19/12/2017 | 24 | Abhishek verma                  | I   | CENTRAL FORCES                 | POTENTIAL FIELD DUE TO SPHERICAL SHELL, SPHERE                                             |
| 20/12/2017 | 25 | Abhishek verma                  | I   | CENTRAL FORCES                 | POTENTIAL FIELD DUE TO SPHERICAL SHELL, SPHERE                                             |
| 21/12/2017 |    |                                 |     |                                | <b>CLASS TEACHING</b>                                                                      |
| 22/12/2017 | 35 | Maneeta Singh                   | III | ELECTRIC FIELD                 | POLARISATION                                                                               |

|            |    |                |     |                                 |                                                                     |
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|            |    |                |     | INSIDE MATTER                   |                                                                     |
| 23/12/2017 | 21 | Maneeta Singh  | II  | FOURIER ANALYSIS                | HALF WAVE RECTIFIER                                                 |
| 26/12/2017 | 19 | Abhishek verma | II  | Oscillation of Coupled Systems  | Vibrations of string and rectangular membrane                       |
| 27/12/2017 | 26 | Abhishek verma | I   | CENTRAL FORCES                  | GRAVITATIONAL SELF ENERGY                                           |
| 28/12/2017 | 27 | Abhishek verma | I   | CENTRAL FORCES                  | TWO BODY PROBLEM AND REDUCED MASS                                   |
| 29/12/2017 |    |                |     |                                 | <b>MONTHLY EVALUATION</b>                                           |
| 30/12/2017 | 36 | Maneeta Singh  | III | ELECTRIC FIELD<br>INSIDE MATTER | DISPLACEMENT VECTOR                                                 |
| 01/01/2018 | 22 | Maneeta Singh  | II  | FOURIER ANALYSIS                | FULL WAVE RECTIFIER                                                 |
| 02/01/2018 | 20 | Abhishek verma | II  | Oscillation of Coupled Systems  | Forced oscillation of coupled system.                               |
| 03/01/2018 | 28 | Abhishek verma | I   | CENTRAL FORCES                  | KEPLERS LAW                                                         |
| 04/01/2018 | 29 | Abhishek verma | I   | CENTRAL FORCES                  | MOTION OF SATELLITE                                                 |
| 05/01/2018 |    |                |     |                                 | <b>CLASS TEACHING</b>                                               |
| 06/01/2018 | 37 | Maneeta Singh  | III | ELECTRIC FIELD<br>INSIDE MATTER | POLARISATION                                                        |
| 08/01/2018 | 23 | Maneeta Singh  | II  |                                 | REVISION                                                            |
| 09/01/2018 | 21 | Abhishek verma | II  |                                 | REVISION                                                            |
| 10/01/2018 | 30 | Abhishek verma | I   | CENTRAL FORCES                  | GEOSTATIONARY SATELLITE                                             |
| 11/01/2018 | 31 | Abhishek verma | I   | NEWTONIAN MECHANICS             | INERTIAL AND NON INERTIAL FRAME OF REFERENCE                        |
| 12/01/2018 |    |                |     |                                 | <b>CLASS TEACHING</b>                                               |
| 16/01/2018 | 38 | Maneeta Singh  | III |                                 | REVISION                                                            |
| 17/01/2018 | 32 | Abhishek verma | I   | NEWTONIAN MECHANICS             | GALELIAN TRANSFORMATION OF VELOCITY AND ACCELERATION                |
| 18/01/2018 | 33 | Abhishek verma | I   | NEWTONIAN MECHANICS             | CORIOLOIS FORCE                                                     |
| 19/01/2018 | 34 | Abhishek verma | I   | SPECIAL THEORY OF RELATIVITY    | MICHELSON MORLEY EXPERIMENT                                         |
| 20/01/2018 | 35 | Abhishek verma |     | SPECIAL THEORY OF RELATIVITY    | ADDIDTION OF VELOCITY<br>LORENTZ TRANSFORMATION, LENGTH CONTRACTION |
| 22/01/2018 |    |                |     |                                 | <b>CLASS TEACHING</b>                                               |
| 23/01/2018 | 36 | Abhishek verma | I   | RELATIVISTIC DYNAMICS           | RELATIVISTIC MOMENTUM<br>VARIATION OF MASS WITH VELOCITY            |
| 24/01/2018 | 37 | Abhishek verma | I   | RELATIVISTIC DYNAMICS           | MASS ENERGY EQUIVELANCE , RELATIVISTIC ENERGY                       |
| 25/01/2018 | 24 | Maneeta Singh  | II  |                                 | REVISION                                                            |
| 27/01/2018 | 39 | Maneeta Singh  | III |                                 | REVISION                                                            |
| 29/01/2018 | 38 | Abhishek verma | I   |                                 | REVISION                                                            |
| 30/01/2018 |    | Maneeta Singh  |     |                                 | <b>MONTHLY EVALUATION</b>                                           |
| 31/01/2018 | 22 | Abhishek verma | II  |                                 | REVISION                                                            |
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