

## SAGAR MAHAVIDYALAYA

Department : Physics

Session : 2021-22

### Departmental Academic Plan

Teacher Name : Bhishma Dev Bera

Subject: Physics(General) Sem:1<sup>st</sup> sem

SL No	Unit Name(Topic)	Paper	Sub Unit Name	Month	No of Classes
1	Unit 1	CC1/GE1	Vector Algebra	December	5
2	Unit 1	CC1/GE1	Vector Analysis	January	5
3	Unit 1	CC1/GE1	Differential Equation	January	5
4	Newtonian Mechanics	CC1/GE1	Laws of Motion	February	3
5	Newtonian Mechanics	CC1/GE1	Work-energy Theorem	February	2
6	Rotational Motion	CC1/GE1	Rigid Body	February	2
7	Rotational Motion	CC1/GE1	Angular Velocity	February	1
8	Rotational Motion	CC1/GE1	Angular Momentum	March	1
9	Rotational Motion	CC1/GE1	Moment of Inertia	March	3
10	Rotational Motion	CC1/GE1	Torque	March	2
11	Rotational Motion	CC1/GE1	Conservation of angular M	March	1
12	Elasticity	CC1/GE1	Hooks Law	March	2
13	Elasticity	CC1/GE1	Rigidity modulus	April	2
14	Elasticity	CC1/GE1	Work done of wire	April	2
15	Practical	CC1/GE1	Practical Physics	May	4
16	Practical	CC1/GE1	Practical Physics	June	4

Subject: Physics(General) Sem:2<sup>nd</sup> sem

SL no	Unit Name(Topic)	Paper	Sub Unit Name	Month	No of Classes
1	Electricity and Magnetism	CC2/GE2 Unit 1	Essential Vector Analysis	June	5
2	Electricity and Magnetism	CC2/GE2 Unit3	Magnetism	July	15
3	Electricity and Magnetism	CC2/GE2 Unit 4	Electromagnetic Induction	August	5
4	Electricity and Magnetism	CC2/GE2	Practical	September	4

Subject: Physics (General) Sem : 3<sup>rd</sup> sem

SL no	Unit Name(Topic)	Paper	Sub Unit Name	Month	No of Classes
1	Thermal Physics	CC3/GE3 Unit3	Kinetic Theory o Gases	November	5
2	Thermal Physics	CC3/GE3 Unit3	Transport Phenomena	November	5
3	Thermal Physics	CC3/GE3 Unit4	Theory of Radiation	December	8
4	Statistical Mechanics	CC3/GE3 Unit5	Phase space	December	5
5	Statistical Mechanics	CC3/GE3 Unit5	Distribution law	January	5
6	Statistical Mechanics	CC3/GE3 Unit5	Comparison of statistics	January	5
7	Physics and Mechanics	CC3/GE3	Practical	March	5
8	Renewable Energy	SEC A-2 Unit 1	Fossil and sources energy	February	5
9	Renewable Energy	SEC A-2 Unit 2	Solar energy	February	5
10	Renewable Energy	SEC A-2 Unit 4	Ocean energy	February	4
11	Renewable Energy	SEC A -2 Unit 5,6	Geothermal and Hydro erg	February	4

Subject : Physics(General) Sem : 4th sem

SL no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Wave and Optics	CC4/GE4 Unit1	Acoustics SHM	May	5
2	Wave and Optics	CC4/GE4 Unit1	Fourier's Theorem	May	3
3	Wave and Optics	CC4/GE4 Unit1	Intensity	May	2
4	Wave and Optics	CC4/GE4 Unit 2	Superposition of Vibration	June	5
5	Wave and Optics	CC4/GE4 Unit 3	Vibrations in string	June	5

6	Wave and Optics	CC4/GE4 Unit 3	Young's Law	June	3
7	Wave and Optics	CC4/GE4 Unit 4	Introduction o Wave Optics	July	2
8	Polarisation	CC4/GE4 Unit 7	Light Wave	July	5
9	Polarisation	CC4/GE4 Unit 7	Optical Activity	August	5
10	Wave and Optics	CC4/GE4	Practical	September	5
11	Electrical Circuit	SEC B 2 Unit 2	Transformer	September	5
12	Electrical Circuit	SEC B 2 Unit 3	AC Motor	September	3
13	Electrical Circuit Network	SEC B 2 Unit 3	Induction Motor	September	3
14	Electrical Circuit Network	SEC B 2 Unit 4	Phase Power method	November	3
15	Electrical Circuit Network	SEC B 2 Unit 4	Unsymmetrical Faults	November	3
16	Electrical Circuit Network	SEC B 2 Unit 4	Bus bar system	November	3

Subject: Physics(General) Sem:5<sup>th</sup> sem

L no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Analog Electronics	DSE A1 Unit 1	Circuit and network	December	6
2	Semiconductor Devices	DSE A1 Unit 2	Semiconductor Diodes	December	5
3	Semiconductor Devices	DSE A 1Unit 2	Light Emitting Diodes	December	5
4	Semiconductor Devices	DSE A1 Unit 2	Application of Diodes	January	5
5	Semiconductor Devices	DSE A1 Unit 2	Transistor	January	5
6	Analog Electronics	DSE A 1Unit 4	Field effect transistor	February	5
7	Analog Electronics	DSE A 1	Practical	March	4

Subject:Physics(General) Sem:6<sup>th</sup> sem

SL no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Digital Electronics	DSE B1 Unit 1	Integrated Circuits	May	4
2	Digital Electronics	DSE B1 Unit 2	Binary Number	June	3
3	Digital Electronics	DSE B1 Unit 2	Complements Method	June	2
4	Digital Electronics	DSE B1 Unit4	Data Processing circuit	July	5
5	Digital Electronics	DSE B1 Unit 5	Sequential Circuit	July	6
6	Digital Electronics	DSE B1 Unit 5	Flip-Flop	July	6
7	Digital Electronics	DSE B1 Unit 6	Registers	August	6
8	Digital Electronics	DSE B 1 Unit 6	Counters	August	6
9	Digital Electronics	DSE B 1	Practical	September	4

TEACHER NAME:KHUKU HALDER BERA

Subject : Physics(General) SEM: 1<sup>st</sup> sem

SL no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Mechanics	CC1/GE1 Unit 5	Oscillations	December	5
2	Mechanics	CC1/GE1 Unit 4	Central Force	January	5
3	Mechanics	CC1/GE1 Unit 4	Gravitation	January	5
4	Mechanics	CC1/GE1 Unit 7	Surface Tension	January	5
5	Mechanics	CC1/GE1	Practical	March	4

Subject: Physics(General) SEM:2<sup>nd</sup> sem

SL no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Electricity	CC2/GE2 Unit 2	Electrostatics	May	5
2	Electricity	CC2/GE2 Unit 2	Coulombs Law	May	5
3	Electricity	CC2/GE2 Unit 2	Dipole Moment	June	5
4	Electricity	CC2/GE2 Unit 2	Divergence of E Field	June	5
5	Electricity	CC2/GE2 Unit 2	curl of Electrostatics Field	June	5
6	Electricity and Magnetism	CC2/GE2 Unit 5	Electrodynamics	July	5
7	Electricity and Magnetism	CC2/GE2 Unit 5	EM Wave, Poynting Vector	July	5
8	Electricity and Magnetism	GE2/CC2	Practical	September	4

Subject:Physics(General) SEM: 3<sup>rd</sup> sem

SL no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Thermal Physics	CC3/GE3 Unit 1	Laws of Thermodynamics	November	8
2	Thermal Physics	CC3/GE3 Unit 1	2 <sup>nd</sup> Law of thermodynamics	November	6
3	Thermal Physics	CC3/GE3 Unit 1	3 <sup>rd</sup> Law of thermodynamics	December	4
4	Thermal Physics	CC3/GE3 Unit 2	Thermodynamics Potential	January	5
5	Thermal Physics	CC3/GE3 Unit 2	Clausius- Clapeyron	January	2
6	Thermal Physics	CC3/GE3 Unit 2	Tds Equation	January	2

7	Thermal Physics	CC3/GE3	Practical	February	4
8	Energy Harvesting	SEC A-2 UNIT 7	Piezoelectric Energy	April	3
9	Electromagnetic Energy	SEC A-2 UNIT 8	Linear Generators	April	1
10	Electromagnetic Energy	SEC A-2 UNIT 8	Carbon capture technologies	April	1
11	Electromagnetic Energy	SEC A-2 UNIT 8	Environmental issues	May	1
12	Energy Harvesting	SEC A-2 UNIT 9	Fuel cell	May	2

Subject : Physics (General) SEM:4<sup>th</sup> sem

SL no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Waves and Optics	CC4/GE4 Unit 5	Interference	May	5
2	Waves and Optics	CC4/GE4 Unit 5	Young's Double slit expt	May	2
3	Waves and Optics	CC4/GE4 Unit 5	Fresnel's Biprism	June	3
4	Waves and Optics	CC4/GE4 Unit 5	Newton's Rings	June	3
5	Waves and Optics	CC4/GE4 Unit 5	Michelson's Interferometer	June	2
6	Waves and Optics	CC4/GE4 Unit 6	Diffraction	July	10
7	Waves and Optics	CC4/GE4 Unit 7	Polarization	August	10
8	Waves and Optics	CC4/GE4	Practical	August	4
9	Electrical Circuit	SEC B 2Unit 1	DC Generator EMF	September	5
10	Electrical Circuit	SEC B 2Unit 1	Phase Generator	Septembet	5

Subject : Physics (General) SEM:5<sup>th</sup> sem

SL no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Analog Electronics	DSE A 1 Unit4	Feedback Amplifiers	December	5
2	Analog Electronics	DSE A 1 Unit5	Operational amplifiers	January	5
3	Analog Electronics	DSE A 1 Unit5	Inverting amplifiers	February	2
4	Analog Electronics	DSE A 1 Unit5	Non -Inverting amplifiers	February	2
5	Analog Electronics	DSE A 1 Unit5	Inverting Adder	February	2
6	Analog Electronics	DSE A 1 Unit5	Subtractor	February	1
7	Analog Electronics	DSE A 1 Unit5	Differentiator	February	1
8	Analog Electronics	DSE A 1 Unit5	Integrator	February	1
9	Analog Electronics	DSE A 1 Unit5	Zero Crossing Detector	March	1
10	Analog Electronics	DSE A 1 Unit6	Sinusoidal Oscillators	April	5

Subject : Physics (General) SEM:6<sup>th</sup> sem

SL no	Unit Name(Topic)	Paper	Sub unit Name	Month	No of Classes
1	Digital Electronics	DSE B 1 Unit3	Digital Circuits	May	5
2	Digital Electronics	DSE B 1 Unit3	Gates	June	4
3	Digital Electronics	DSE B 1 Unit3	De Morgan's Theorems	June	1
4	Digital Electronics	DSE B 1 Unit3	Switching algebra	July	5
5	Digital Electronics	DSE B 1 Unit3	Karnaugh Map	August	5
6	Digital Electronics	DSE B 1	Practical	September	4