

SUMMER FIELDS SCHOOL, DLF CITY, PHASE-I, GURGAON

SESSION -2018-19

SYLLABUS DISTRIBUTION

Type of Assessment: Revision Test–1 (May-14th) CLASS : XII

SUBJECT :PHYSICS

PRESCRIBED TEXT BOOKS: N.C.E.R.T (1 & 2)

CHAPTERS / UNITS COVERED	TEACHING AIDS USED	ASSOCIATED ACTIVITY	AV REQ. Y/N	VALUE(S) INHERENT IN THE CHAPTERS	LEARNING OUTCOME
1. Electrostatics 2. Current Electricity	Potentiometer, meter-bridge, white board, N.C.E.R.T (1), and other reference books.	(a) Verification of Ohm’s law using resistor wire of Nichrome. (b) Verification of series and parallel combination of resistors using meter-bridge. (c) To assemble a household circuit comprising three bulbs, three switches, a fuse and a power source. (d) Use of multimeter to check continuity of a given circuit. (e) To study variation in potential drop with length of a wire for steady current	Not reqd.	1. Scientific temperament 2. Analytical thinking 3. Desire to learn & improve with general awareness 4. Helpfulness 5. Cooperation and collaborative work. 6. Responsibility and self-reliance 7. Compassion 8. Concern for quality 9. School welfare	a) Drawing simple circuit diagrams showing correct positions of instruments. b) Understanding the implications of using electricity and conserving energy. c) Distinguishing reasons for differentiating various states of solids (conductor, semi-conductor and insulator) on the basis of their resistivity. d) Understanding working of sensitive instruments like potentiometer and galvanometer.

SUMMER FIELDS SCHOOL, DLF CITY, PHASE-I, GURGAON

SESSION -2018-19

SYLLABUS DISTRIBUTION

Type of Assessment: Mid Term Examination (Sept-13th) CLASS : XII

SUBJECT :PHYSICS

PRESCRIBED TEXT BOOKS: N.C.E.R.T (1 & 2)

CHAPTERS / UNITS COVERED	TEACHING AIDS USED	ASSOCIATED ACTIVITY	AV REQ. Y/N	VALUE(S) INHERENT IN THE CHAPTERS	LEARNING OUTCOME
1. Electrostatics 2. Current Electricity 3. Magnetic Effects of Current & Magnetism 4. EMI and A.C 5. EM Waves 7. Dual Nature of Matter and Radiation	Horse-shoe and bar magnets, Solenoid, Transformer, white board, N.C.E.R.T (1,2) and other reference books.	(a) Finding internal resistance of a primary cell using a potentiometer. (b) Comparison of e.m.fs of two cells using a potentiometer. (c) To obtain resistance of a sensitive current detecting instrument like galvanometer. (d) Conversion of a galvanometer into voltmeter. (e) Conversion of a galvanometer into ammeter. (f) To find frequency of an a.c. mains with a sonometer.	Reqd.	1. Promotion of scientific temperament. 2. High degree of general awareness. 3. Presence of mind. 4. Empathy- helping and caring. 5. Law abiding 6. Power of observation 7. Social awareness 8. Perseverance and dutifulness 9. Magnanimity 10. Use of scientific and technological advancement in service to mankind.	a) Understanding of terrestrial magnetism. b) Distinguishing materials on the basis of their magnetic properties. c) Working of an a.c. circuit across passive circuit components like resistor, inductor and capacitor. d) Transformer and their uses in power transmission. e) Mechanism of an a.c.generator. f) Understanding of Electromagnetic waves – their generation, propagation and uses.

SUMMER FIELDS SCHOOL, DLF CITY, PHASE-I, GURGAON

SESSION -2018-19

SYLLABUS DISTRIBUTION

Type of Assessment: Revision Test–2 (Nov 28th) CLASS : XII

SUBJECT :PHYSICS

PRESCRIBED TEXT BOOKS: N.C.E.R.T (1 & 2)

CHAPTERS / UNITS COVERED	TEACHING AIDS USED	ASSOCIATED ACTIVITY	AV REQ. Y/N	VALUE(S) INHERENT IN THE CHAPTERS	LEARNING OUTCOME
6. Optics 8. Atoms and Nuclei	Spherical lenses, glass slab, glass prism, charts, white board, N.C.E.R.T (1,2) and other reference books	a) Determination of focal lengths of spherical mirror (concave) and lens (convex) using optical bench. b) Determination of angle of minimum deviation for the prism. c) Determination of refractive index of material of prism. d) To observe refraction and lateral deviation through a glass slab. e) To observe diffraction of light through a thin slit.	Not Reqd.	1. Caring nature for fellow beings. 2. Non-violence 3. Understanding between nations. 4. Brotherhood 5. Environmental protection. 6. Appreciation of nature. 7. Sharing of knowledge. 8. Critical thinking 9. Awareness & Social responsibility.	a) Understanding one of the strongest forces in nature. b) Binding energy of nucleons and its effect as seen in nuclear fission and fusion. c) Understanding of working of nuclear breeder reactors and nuclear holocaust. d) Identifying examples of reflection and refraction in nature. e) Understanding concept of total internal reflection and its practical applications. f) Understanding construction and working of optical instruments. g) Understanding duality of not just radiation but also matter. h) Conceptual understanding of wave optics as in interference and diffraction. i) Cause of spectral lines in single electron atoms like hydrogen

SUMMER FIELDS SCHOOL, DLF CITY, PHASE-I, GURGAON

SESSION -2018-19

SYLLABUS DISTRIBUTION

Type of Assessment: Pre – Board Examination (Dec 10th) CLASS : XII

SUBJECT :PHYSICS

PRESCRIBED TEXT BOOKS: N.C.E.R.T (1 & 2)

CHAPTERS / UNITS COVERED	TEACHING AIDS USED	ASSOCIATED ACTIVITY	AV REQ. Y/N	VALUE(S) INHERENT IN THE CHAPTERS	LEARNING OUTCOME
9. Semi-conductors 10. Communication Systems and the remaining entire syllabus	Diodes, transistors, LEDs, LDR, white board, N.C.E.R.T (1,2) and other reference books	a) Study of p-n junction diode in forward and reverse bias. b) Study of zener characteristics c) Identification of diode, LED, transistor, IC etc with the help of digital multimeter. d) Use of multimeter to identify the base, emitter and collector regions of a transistor after distinguishing between an n-p-n and p-n-p transistor	Not Reqd.	1. Scientific awareness 2. Creative and Logical thinking 3. Adaptability towards new technology.	a) Understanding developments in semiconductor technology. b) Knowledge of applications of semiconductor devices as in LED, solar cell, voltage regulators, rectifiers etc. c) Understanding of analog and digital circuits. d) Understanding of bandwidth and modulation techniques as in amplitude modulation.