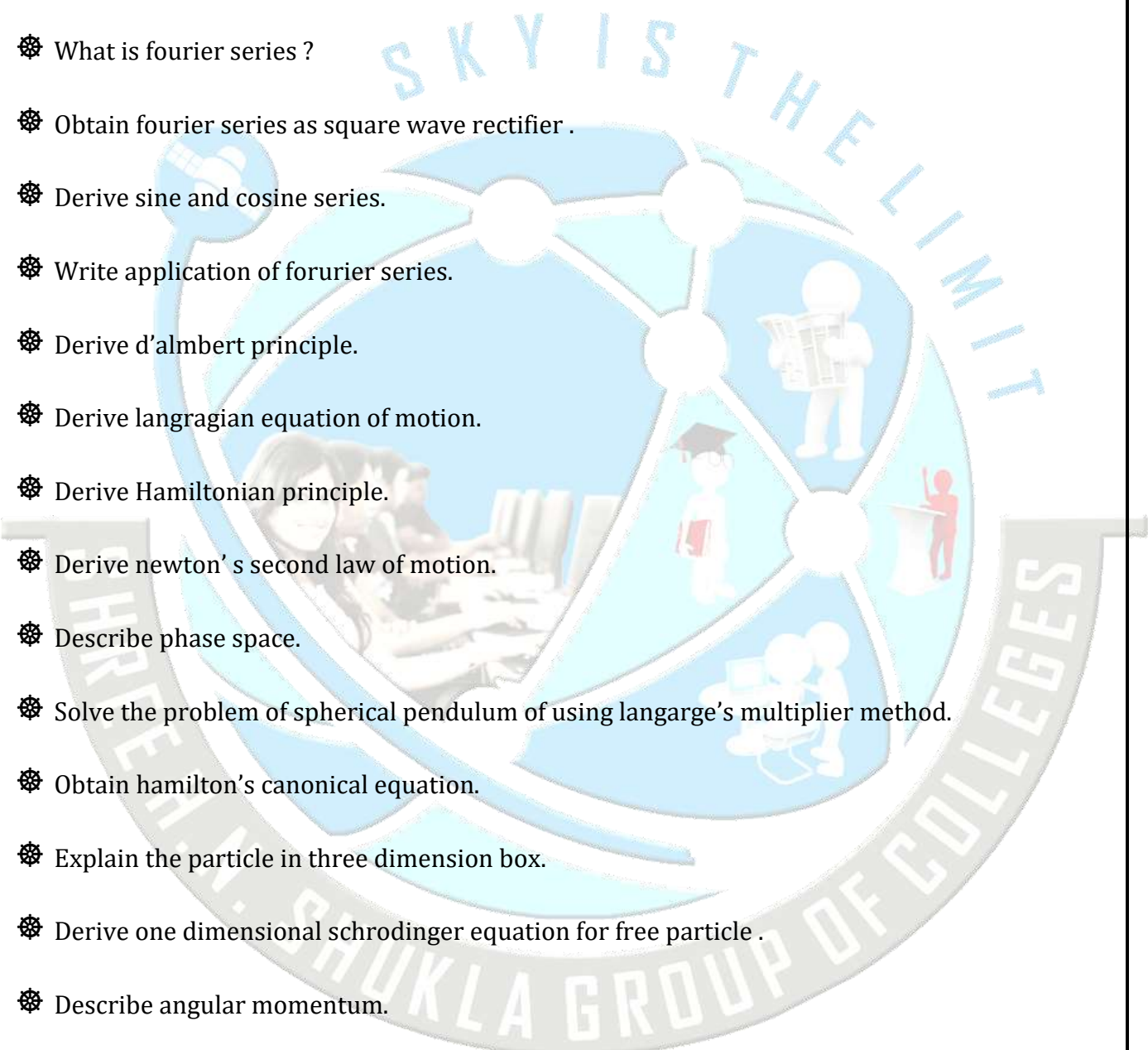


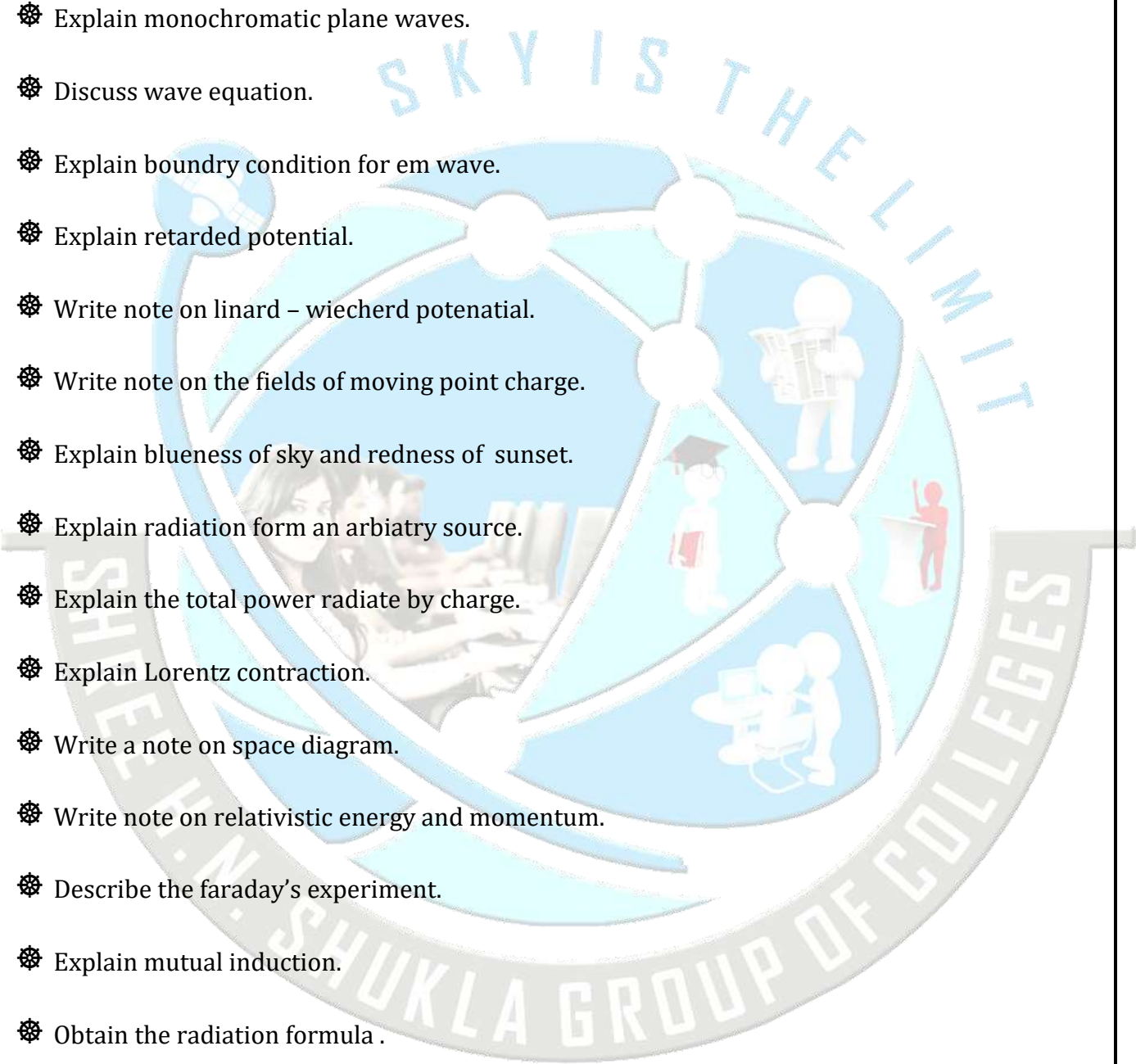
SHREE H N. SHUKLA GROUP OF COLLEGE

Question Bank T.Y.B.Sc. Physics

Physics SEM 5

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- ❁ What is fourier series ?
 - ❁ Obtain fourier series as square wave rectifier .
 - ❁ Derive sine and cosine series.
 - ❁ Write application of forurier series.
 - ❁ Derive d'almbert principle.
 - ❁ Derive langragian equation of motion.
 - ❁ Derive Hamiltonian principle.
 - ❁ Derive newton' s second law of motion.
 - ❁ Describe phase space.
 - ❁ Solve the problem of spherical pendulum of using langarge' s multiplier method.
 - ❁ Obtain hamilton' s canonical equation.
 - ❁ Explain the particle in three dimension box.
 - ❁ Derive one dimensional schrodinger equation for free particle .
 - ❁ Describe angular momentum.
 - ❁ Explain bra and ket vector.
 - ❁ Explain dirac delta function.
 - ❁ Explain rayliegh' s dissipation function.

- ❁ Derive continuity equation.
- ❁ Explain inductance in detail.
- ❁ Derive Poynting's theorem.
- ❁ Explain monochromatic plane waves.
- ❁ Discuss wave equation.
- ❁ Explain boundary condition for em wave.
- ❁ Explain retarded potential.
- ❁ Write note on Larmor - Wiechard potential.
- ❁ Write note on the fields of moving point charge.
- ❁ Explain blueness of sky and redness of sunset.
- ❁ Explain radiation from an arbitrary source.
- ❁ Explain the total power radiated by charge.
- ❁ Explain Lorentz contraction.
- ❁ Write a note on space diagram.
- ❁ Write note on relativistic energy and momentum.
- ❁ Describe the Faraday's experiment.
- ❁ Explain mutual induction.
- ❁ Obtain the radiation formula.
- ❁ Write Einstein postulate for relativity.
- ❁ Explain time dilation.



- ❁ Explain frequency response curve.
- ❁ Explain thermal runaway.
- ❁ Explain Rc couple amplifier .
- ❁ Explain push pull amplifier.
- ❁ Explain complementary symmetry amplifier .
- ❁ Explain bi stable multivibrator .
- ❁ Explain astable multivibrator.
- ❁ Explain clipping and clapping.
- ❁ Explain transistor series regulator.
- ❁ Explain application of op-amp.
- ❁ Explain strain Guage.
- ❁ Describe the carbon microphone.
- ❁ Write a note on classification of microphone.
- ❁ Explain analog and digital instrument.
- ❁ Explain RS flip flop with neat diagram.
- ❁ Explain 1 to 16 decoder.
- ❁ Define RS flip flop.
- ❁ Define half adder.
- ❁ Define full adder.
- ❁ Define : CRO

