Shree M.P.Shah Arts & Science College, Surendranagar
Physics Department
Semester:-5(501) Assignments – 2019

Assignment:-1

1. Explain the uncertainary principle.
2. Drive the Schrodinger equation for free particle.
3. Explain the theory of Compton Effect.

Assignment submitted on 20/07/2019 in your lecture time

Assignment:-2

1. Obtain the Schrodinger wave equation for oscillator.
2. Explain the properties of ket vector.
3. Derive the solution of the Eigen value problem for harmonic oscillator.

Assignment submitted may be on 03/08/2019 in your lecture time

Assignment:-3

1. Obtain the Fourier series for an odd function.
2. Derive the Fourier series in complex form.
3. Write the Fourier series and evaluate their coefficient.

Assignment submitted may be on 21/08/2019 in your lecture time

Assignment:-4

1. Explain holonomic and non-holonomic constraints.
2. Obtain the equation of motion of simple pendulum.
3. Deduce Lagrange's equation from D'Alembert principle.

Assignment submitted may be on 14/09/2019 in your lecture time

Shree M.P.Shah Arts & Science College, Surendranagar
Physics Department

Semester:-5(502) Assignments 2019

Assignment:-1

1. Give Maxwell's equations before Maxwell's.
2. Prove Neumann's formula.
3. Explain poynting theorems

Assignment submitted on 20/07/2019 in your lecture time

Assignment:-2

1. Explain Maxwell's stress tensor.
2. Describe Faradays law.
3. $f(z,t) = g(z - vt)$ Prove wave equation.

Assignment submitted may be on 03/08/2019 in your lecture time

Assignment:-3

1. Derive wave equations.
2. Write theory on sinusoidal wave.
3. Describe polarization.

Assignment submitted may be on 21/08/2019 in your lecture time

Assignment:-4

1. Explain retarded potentials.
2. Derive jefimenko's equation.
3. Explain Lorenz gauge.

Assignment submitted may be on 14/09/2019 in your lecture time

Shree M.P.Shah Arts & Science College, Surendranagar
Physics Department

Semester:-5(503) Assignments 2019

Assignment:-1

4. Define: Gain and Bandwidth.
5. Give the comparison of different types of coupling.
6. Write a short note on the role of capacitor in transistor amplifier.

Assignment submitted on 20/07/2019 in your lecture time

Assignment:-2

4. Define: Thermal runway and Heat sinks.
5. Derive the maximum collector efficiency of series - fed class A power amplifier.
6. Explain the CRO. (With CRT).

Assignment submitted may be on 03/08/2019 in your lecture time

Assignment:-3

1. Write the difference between multiplexer and demultiplexer.
2. Explain BCD to decimal decoders.
3. Draw the neat circuit diagram of a astable multivibrator and explain it's working.

Assignment submitted may be on 21/08/2019 in your lecture time

Assignment:-4

1. Define: Line regulation and Load regulation.
2. Explain the types of voltage regulator.
3. Explain construction and working of LVDT.

Assignment submitted may be on 14/09/2019 in your lecture time