17.13 QUESTIONS FROM PAST PAPERS:

Transformation and Relativistic Theory:

Year 2006:

Q. What are the postulates of the Special Theory of Relativity?

Year 2005:

Q. What do you understand by the Frame of Reference and Inertial Frame of Reference? Give one example of each from daily life. Briefly discuss the three basic equations from relativity predicting the relativistic changes.

Year 2002 (P.E):

Q. Give the postulates of the Special Theory of Relativity and discuss the important result obtained by Einstein.

Year 2002 (P.M):

Q. Give the postulates and explain the consequences of Special Theory of Relativity.

Black body:

Year 2007:

Q. What are Black Body and Black body Radiation? State the laws governing the Black Body Radiation. Give their mathematical expression.

Photo Electric Effect:

Year 2008, 2011, 2013:

Q. What is Photoelectric Effect? Discuss some of the important results with help of graph of this theory. Derive Einstein's photoelectric effect equation.

Year 2005:

Q. What do you understand by Photoelectric Effect? Write down the definition of Work Function, Stopping Potential and Threshold Frequency. Establish the relation between the work function and the threshold frequency.

Year 2003 (P.E):

Q. Define Threshold Frequency and Stopping Potential and derive Einstein's Photoelectric Effect Equation.

Year 2001:

Q. Define Photo-electric Effect. Explain it on the basis of the Quantum Theory of light and obtain Einstein's Photo-electric Equation.

Compton Effect:

Year 2004, 2007, 2012:

Q. Describe Compton's Effect. Derive the formula for the Compton's shift.

Year 2009:

Q. What is Compton Effect? Explain it on the basis of Quantum Theory. Derive a relation for the Compton Shift.

Year 2003 (P.M):

Q. Explain the phenomenon of Compton Effect and obtain an expression for the increase in the wavelength of the scattered photon.

Pair Production and Annihilation:

Year 2009:

Q. Explain the process of Pair Production briefly.