

Physics	Tenth Lahore Board 2019	Paper II
Time: 1.45 hrs	Essay type	Marks : 48

Group - I

PART-I

2. Write short answers to any FIVE (5) questions: 10

- i Write down two characteristics of simple harmonic motion.
- ii Prove that: $v = f\lambda$
- iii What do you know about Ripple Tank?
- iv What is tuning fork?
- v Write two uses of ultrasound in medical field.
- vi State Lenz's Law.
- vii What is difference between step up and step down transformer?
- viii What is the function of relay?

3. Write short answers to any FIVE (5) questions: 10

- i Define power of lens and write its unit.
- ii Draw the ray diagram of refracting telescope.
- iii How can you define optical fibre?
- iv What is meant by compact disc?
- v Define telecommunication.
- vi Define piracy and floppy disc.
- vii What do you mean by background radiations?
- viii Write down two uses of radio isotopes.

4. Write short answers to any FIVE (5) questions: 10

- i Describe the construction of electroscopes.
- ii Differentiate between ohmic and non-ohmic material.
- iii Define the S.I unit of capacitance of a capacitor.
- iv What is the difference between conductors and insulators?
- v Define specific resistance of a substance. Also write its S.I unit.
- vi For which purpose circuit breaker is used in circuits?
- vii Describe the function of deflecting plates in cathode ray oscilloscope.
- viii Describe the uses of cathode ray oscilloscope.

PART - II

Note: Attempt any TWO questions.

- 5.(a) State the reflection of light and explain laws of reflection. 4
- (b) A doctor counts 72 heart beats in one minute. Calculate the frequency and period of the heart beats. 5
- 6.(a) Explain parallel combination of resistors. Draw a circuit diagram. 4
- (b) Two point charges $q_1 = +1 \mu C$ and $q_2 = -0.5 \mu C$ are placed at a distance of 10 cm. What will be the Coulomb's force between them? Also find the direction of the force. 5
- 7.(a) What is electron gun? Explain the process of thermionic emission. 4
- (b) Half-life of a radioactive element is 10 minutes. If the initial count rate is 368 counts per minute, find the time by which count rate reaches 23 count per minute? 5