

1. (a) (i) What is meant by term light as used in Physics. (1mark)
(ii) Distinguish between luminous and non-luminous sources of light. Give two examples of each. (4marks)
- (b) With the aid of a labelled diagram, describe what is meant by the term umbra. (3marks)
- (c) Describe an experiment to show that light travels in a straight line. (4marks)
- (d) With the aid of a diagram, describe how total eclipse and partial eclipse of the moon occur. (6marks)
- (e) (i) State the principle of reversibility of light. (1mark)
(ii) Name two natural occurring phenomena that proves that light travels in a straight. (1mark)
- (f) Describe an experiment to verify the principle of reversibility. (5marks)
2. (a) (i) Distinguish between temperature and heat. (2marks)
(ii) State the SI unit of the quantities in (i). (2marks)
(iii) When the bulb of mercury in glass thermometer is dipped in hot water, the mercury level first drops and then rises. Explain the observation. (2marks)
- (b) (i) Define the three modes of heat transfer (3marks)
(ii) Describe an experiment to show that water is a poor conductor. (5marks)
(iii) State two applications of convection. (2marks)
- (c) (i) Define moment of a force and state its SI unit. (2marks)
(ii) State the factors that affect moment of a force. (2marks)
- (d) Describe an experiment to determine mass of a meter rule using a known mass. (5marks)

END.