11/635/2016

SECOND TERMINAL EVALUATION 2016

B

PHYSICS

Standard : IX

Score : 40
Time : 1½ hour

Instructions

1. 15 minute is given as cool off time. This time is to be used for reading and understanding the questions.
2. Write down answers for all questions.
3. For questions having choices, only one need to be answered.
4. The score for each question is given along with the question.

1. Findout the relation from the first pair and complete the second (1)

   power : watt :: energy: .....

2. Choose the correct figure. (1)

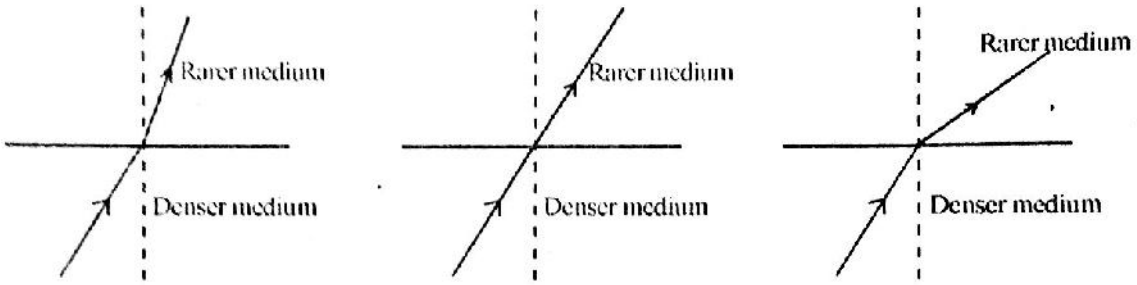


Fig (1) Fig (2) Fig (3)

3. A plastic ball and an iron ball of the same size are dropped from the same height. Which among them has greater kinetic energy just before they touch the ground? Why ? (1)

4. Observe the table and answer the questions given below.

Medium	Refractive index
A	1.52
B	1.47
C	1

   a. Find out the medium through which light passes with minimum speed. (1)

   b. What is the velocity of light in the medium having refractive index 1? (1)

5.

   a. Which of the following can be measured using a spring balance? (1)
   (Mass, weight, centre of gravity)

   b. At which part of the earth should a body be placed so that it will experience the maximum gravitational force of attraction? Why? (2)

   c. What will be the weight of an object at the centre of the earth? (1)

6. Find the odd one and give reason.

   a. A stretched bow, a compressed spring, water stored in a reservoir, flowing water. (1)

   b. Write down the energy transformation in the following. (2)

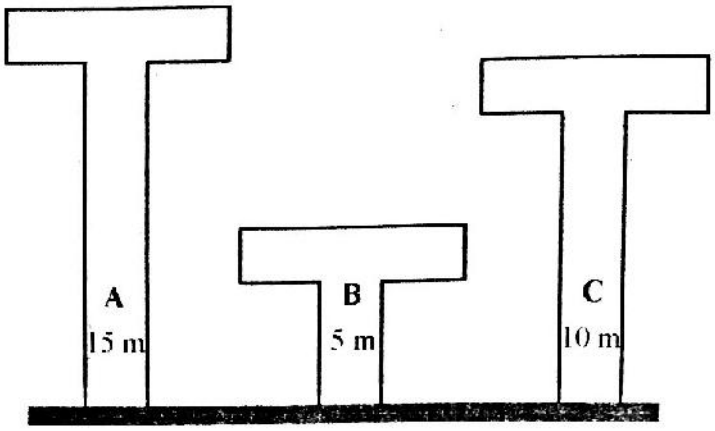
   - In a working generator
   - In a glowing bulb

7. In the prescription of an eye specialist, it is written that power of the lense is + 2D

a. What does 'D' denote? (1)

b. Comment on the idea 'eye donation great donation' (1)

8. An iron sphere of mass 10 kg is raised to three platforms A, B and C. Height of the each platform is given in the figure.



a. For raising to which platform more work is to be done? (1)

b. What are the factors affecting work done? (1)

c. What kind of energy is stored when they are raised to these platforms. (1)

9. Optical fibres are used for diagnosing diseases and in the field of telecommunication.

a. Which phenomenon of light is made use in optical fibres? (1)

b. Explain this phenomenon of light. (1)

c. Write down the reason for using optical fibres in the fields of telecommunication. (1)

10.

a. What do you mean by centre of gravity? (1)

b. Which bottle given below has the greatest stability? Why? (2)

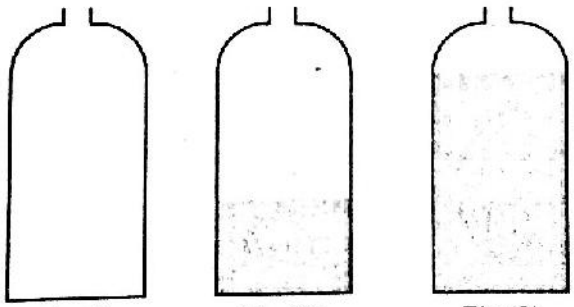


Fig (1) Fig (2) Fig (3)

11. A person can see nearby objects clearly. But he can not see distant objects.

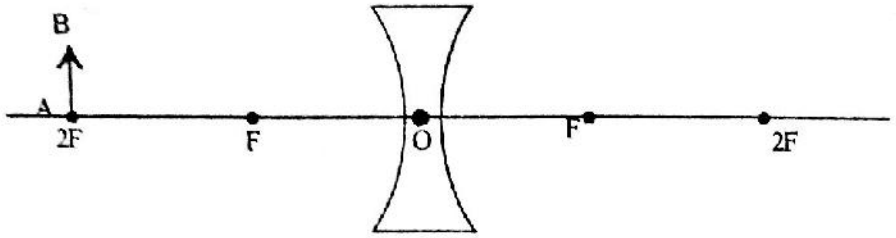
a. What kind of eye defect he is suffering from? (1)

b. Give two reasons for this defect (1)

c. Suggest a method to rectify the defect. (1)

Answer any one of the questions from 12 A and 12 B.

12A. An object AB is placed in front of a lens.



a. Copy the figure and complete the ray diagram of image formation. (2)

b. Complete the following (1)

Position of the image : .....

Nature of the image : .....

c. Can the image be caught on a screen? Why? (1)

OR

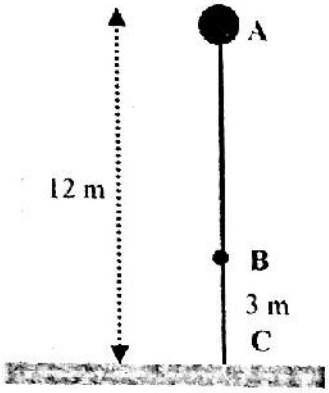
12 B. An object is placed at a distance of 20 cm in front of a concave lens of focal length 30 cm.

a. What is the distance of this image formed? (2)

b. Calculate magnification of the image (2)

13. A child of mass 60 kg is climbing the top of a tower of height 20 m in 4 minute. Calculate his power. ($g = 10\ m/s^2$) (2)

14. An object of mass 5kg is placed at A. It has an energy 600 J



a. While it is falling down, what is the energy change taking place? (2)

b. Calculate the total energy when it reaches B? Calculate the potential energy? (1)

c. What is the kinetic energy just before it touches the ground? (1)

15 There are two stones of masses 2 kg and 20 kg at the same height form the surface of the earth.

a. Which of the stones is experienced greater force of attraction of the earth? (1)

b. If both are allowed to fall freely simultaneously which one will reach the ground first? Why? (2)

c. Compare their weight while they are falling down. (1)