

076



Sl.No. 33322

Seal

S.S.L.C. EXAMINATION, MARCH - 2013
PHYSICS (English)

Time : 1 ½ Hours

Total Score : 40

Instructions :

- 1) Fifteen minutes are given as 'cool off time'.
- 2) This time is given to read and understand the questions well.
- 3) For choice questions only one of them need to be answered.
- 4) The score of each question is given along with it.

[SCORE]

Q1) Choose the correct answer.

[1]

Colour of a star depends upon its T .

- a) radius
- b) distance from the earth
- c) temperature
- d) mass

Q2) Which of the following is not a fossil fuel.

[1]

- a) Coal
- b) Petroleum
- c) Natural gas
- d) Hydrogen



Q3) Match Suitably.

[2]

A

B

A.C. Generator

Self Induction

Transformer

Slip rings

D.C. Generator

Mutual Induction

Inductor

Split rings.

Q4) Analyse the first pair and complete the second pair

[1]

Frequency : Hertz

Intensity of Sound : —

Q5) Given below are a few characteristics of ultraviolet and infrared rays. Classify them as those belonging to ultraviolet and infrared rays.

[2]

- a) Excess radiation causes skin cancer.
- b) Helps to take photograph of distant objects.
- c) Has wavelength greater than that of visible light.
- d) Produces vitamin D in our body.



Q6) Which has greater resistance? [2]

A 1 kW heater or 100 W tungsten bulb. Why?

(Both are marked for 230 V)

Q7) In a distribution transformer, wires are connected in star connection in the secondary.

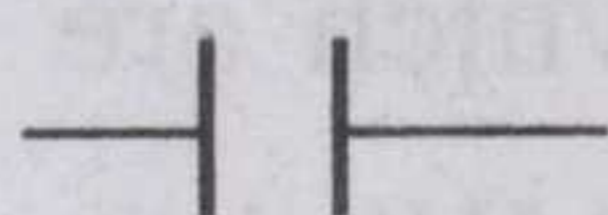
a) How many lines come out of a distribution transformer? [1]

b) How many of them are phase lines? How many are neutral lines? [1]

c) What is the potential difference between the neutral line and earth? [1]

Q8) Depict a typical graph representing the displacement of the particles of the medium, with distance when a sound wave advances. [1]

Q9) a) Write what is indicated by the symbol given below. [1]



b) Write its function in a circuit. [1]



Q10) L.P.G is commonly used as a domestic fuel.

a) What are its main constituents?

b) Write the expanded form of L.P.G.

c) L.P.G is a colourless, odourless gas. However LPG used for domestic purposes has an odour. What is the reason?

Q11) The primary voltage of a transformer is 6V and its secondary voltage is 240 V.

a) What type of transformer is this?

b) Which coil has greater number of turns.

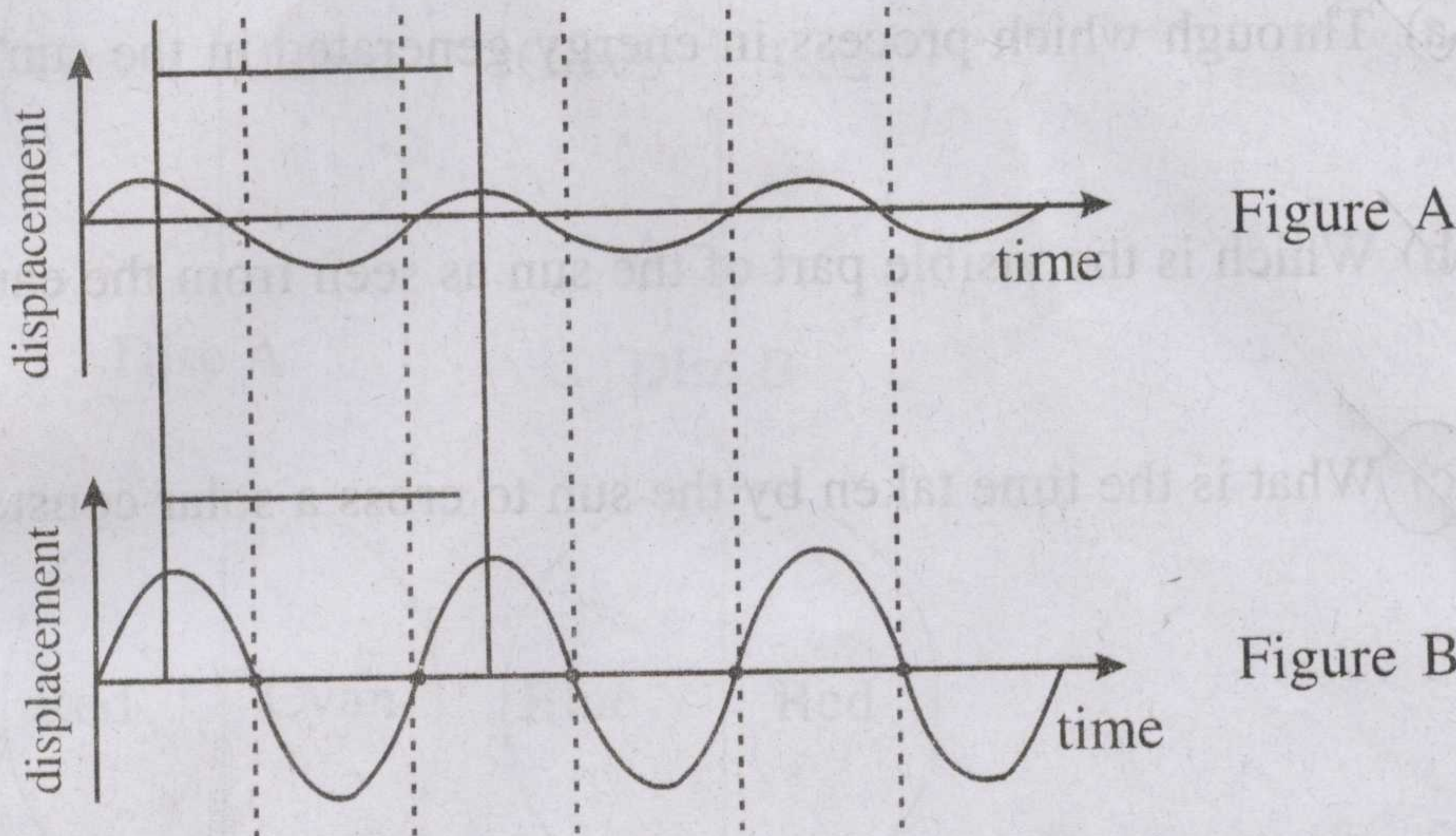
c) In which coil will the current be greater.

d) What is the relationship between the power in the primary and secondary coils.

Q12) In a house there are five 100 W bulbs, which are used daily for 5 hours. Calculate the energy consumed in kWh in a day.



Q13) The graphic representation of two sound waves are given below.



- a) Which graph represents sound of higher loudness? [1]
- b) Which has got greater amplitude? [1]
- c) Which characteristic of sound is the same for both waves. [1]
- d) What happens to the energy of a sound wave when its amplitude increases? [1]

Q14) A diode, a torch cell a torch bulb, and a switch are connected in series. Draw the circuit diagram, if they are connected in such a way that no current passes through the circuit. [2]



Q15) The sun is the centre of the solar system.

a) Through which process is energy generated in the sun? [1]

b) Which is the visible part of the sun as seen from the earth? [1]

c) What is the time taken by the sun to cross a solar constellation? [1]

Answer 16 (I) OR 16 (II)

Q16) (I) a) How is the deviation of white light into its constituent colours related to its wavelength? [1]

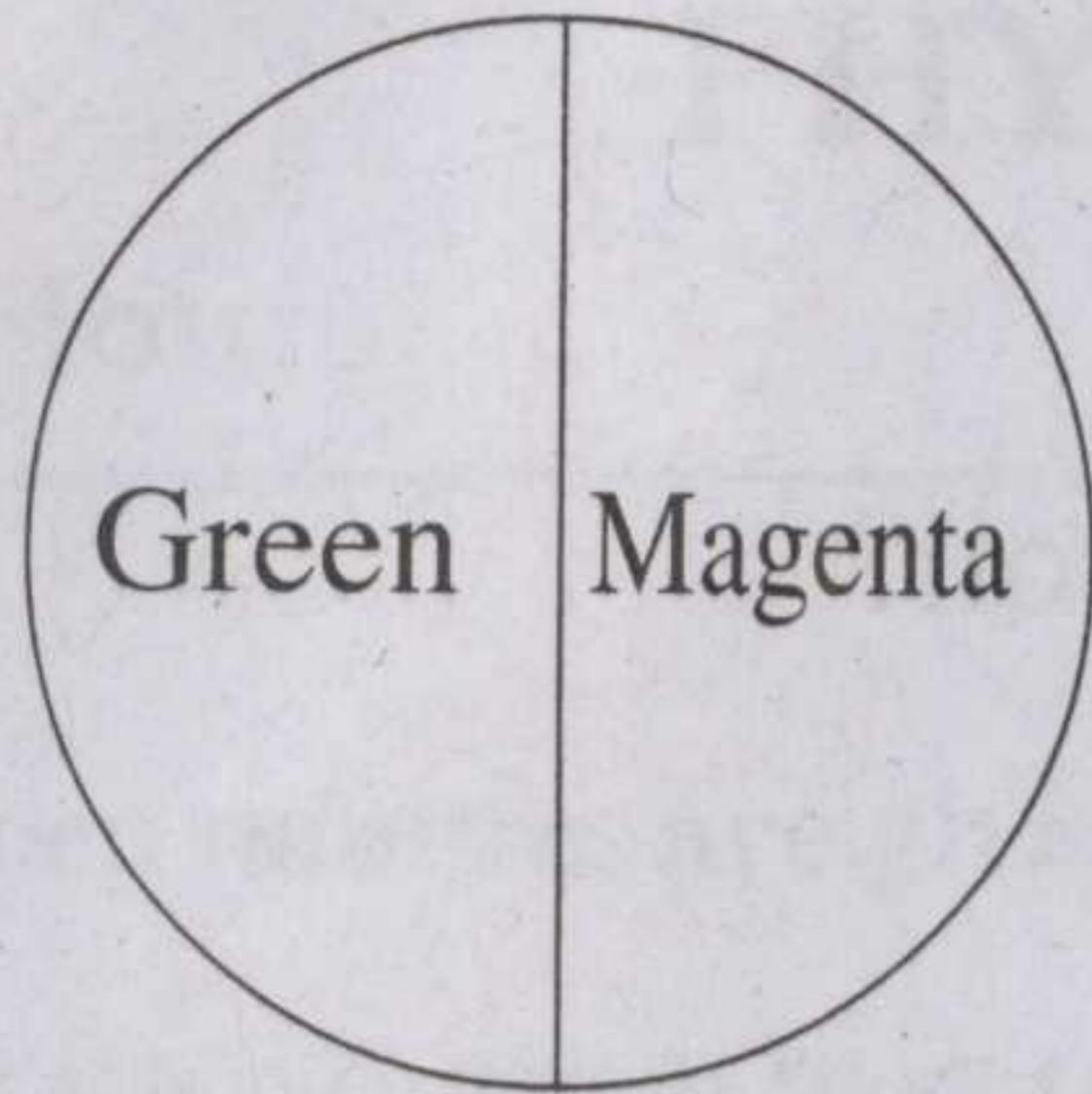
b) Write the colours Green, Red, and Indigo in the order of decreasing wavelength. [1]

c) Sun light and laser beam are incident obliquely on an equilateral glass prism. Represent diagrammatically what happens to the beam in the 2 laser. [2]

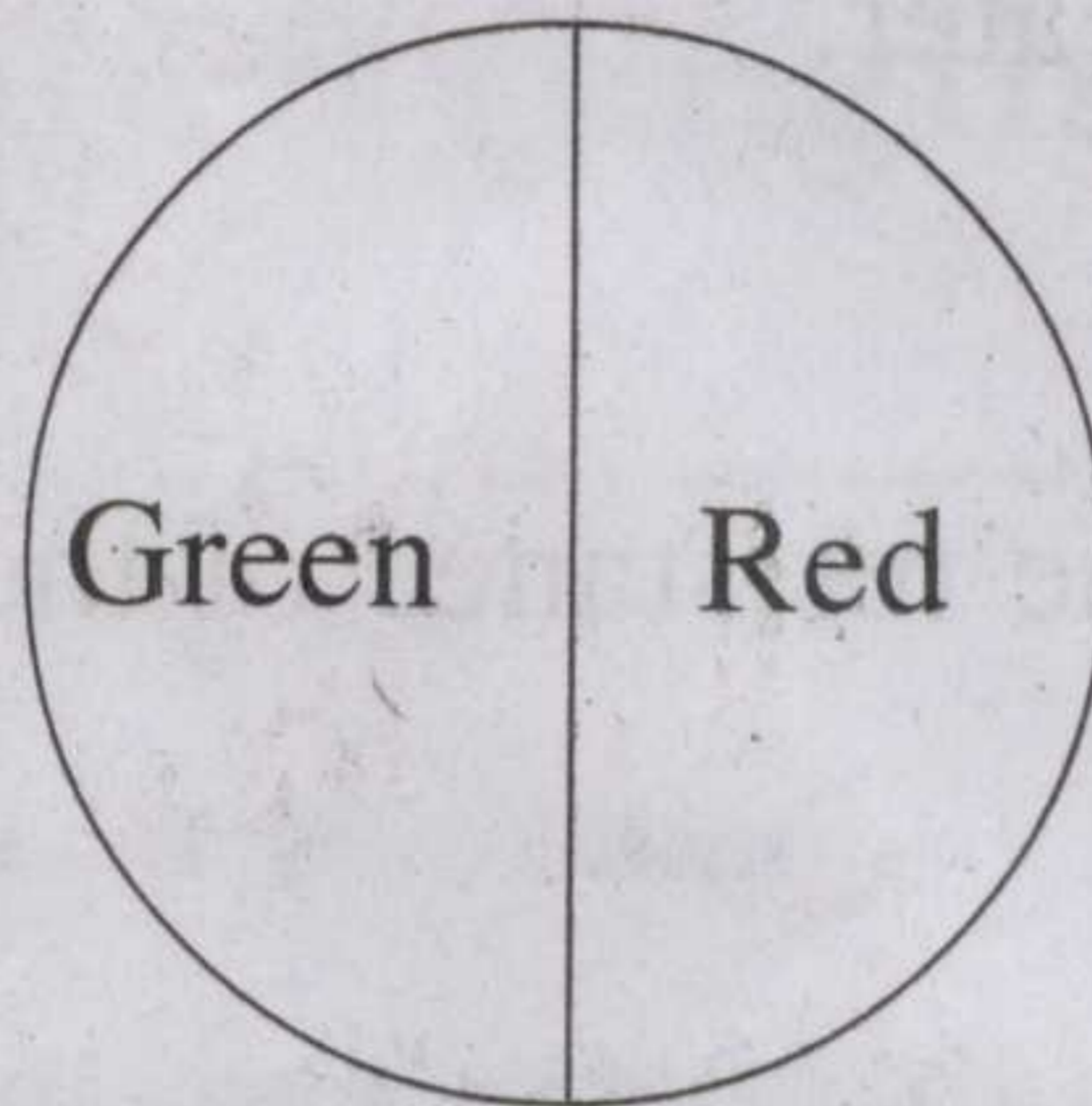
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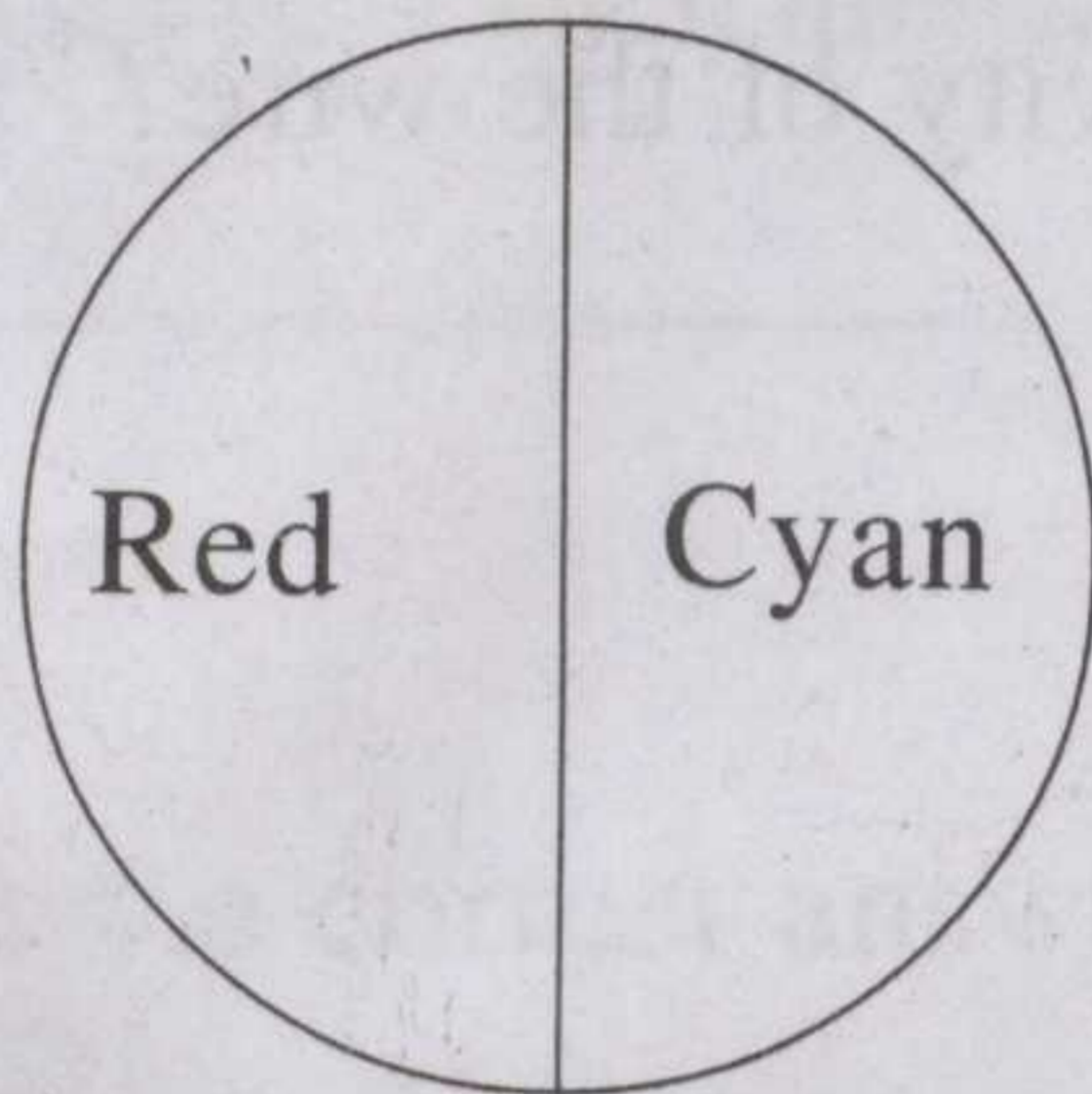
Q16) (II)



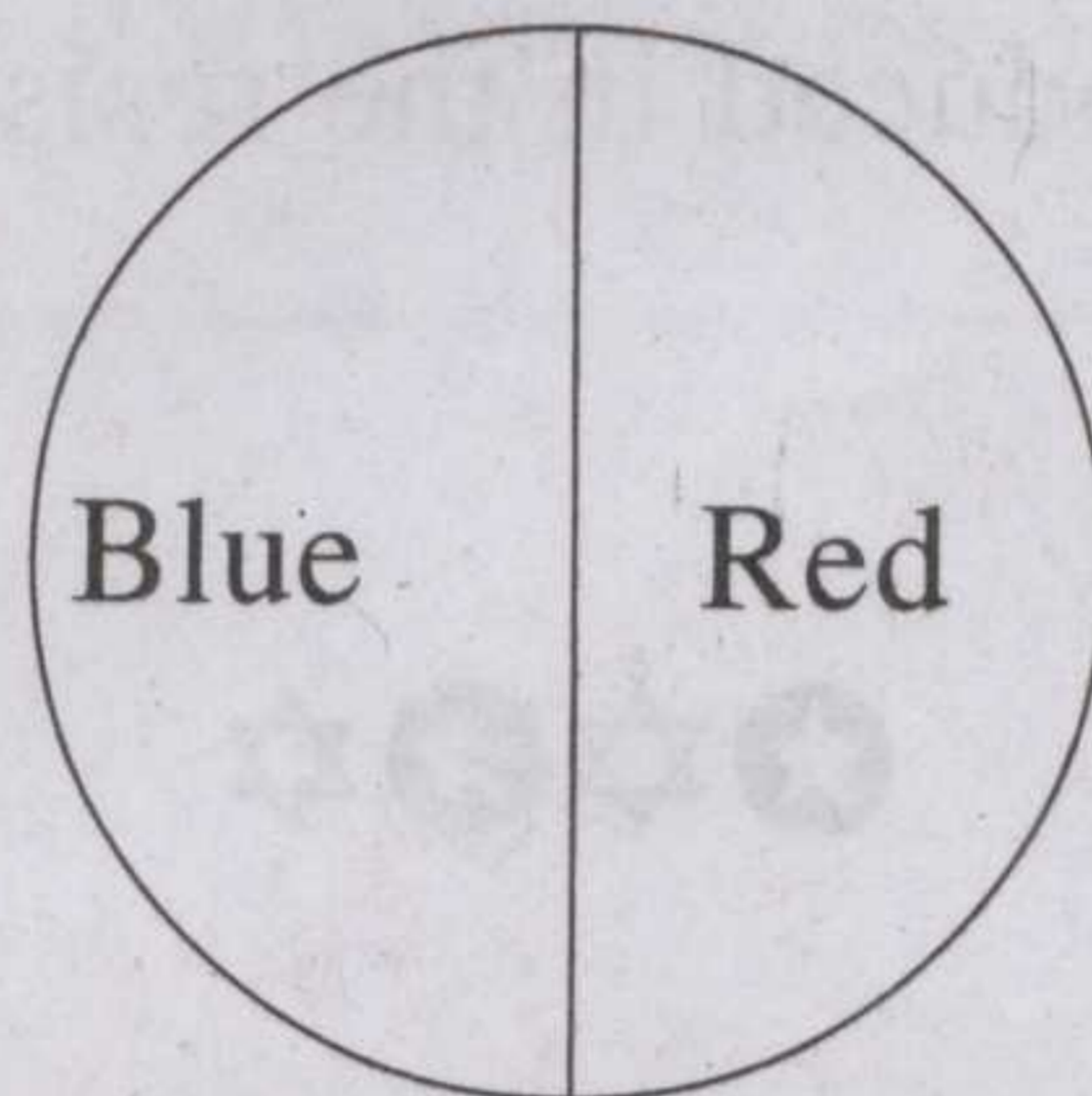
Disc A



Disc B



Disc C



Disc D

Red Magenta Blue
Yellow Cyan
Green

Given above are 4 discs ABCD with different colours painted on it.

- a) Which are the discs having only complimentary colours? [1]
- b) Which are the discs having only primary colours? [1]
- c) The discs are row rotated very fast. What will be the colour obtained in the four discs? [2]



[SCORE]

Q17) A heater coil is cut into two equal parts. One of them is then used as the coil in the same heater.

a) What happens to the resistance of the coil? [1]

b) What happens to the heat produced? [1]

c) What change is produced in the resistivity of the wire? [1]

