# PHYSICS

# BOOKS - VGS BRILLIANT PHYSICS (TELUGU ENGLISH)

# NEW MODEL PAPER CLASS X - PHYSICAL SCIENCE

## Section I

**1.** Find the focal length of plano convex lens, when its radius of curvature of the surface is R and n is the refractive index of the lens?

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**2.** The most and the least electronegative element paris among the following is :

A. Oxygen, Fluorine

B. Fluorine, Oxygen

C. Fluorine, Cesium

D. Carbon, Fluorine

**Answer: C**

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**3.** Choose the correct statement from the following.

Platinum occurs in free state.

Platinum is a least reactive metal.

Platinum turns into vapour at low temperatures.

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**4.** Choose the suitable answers of section -B, with section - A.

| Section - A | Section - B |
|---|---|
| 1. Formula for refractive index | P) $\frac{V}{C}$ |
| 2. Possible values of refractive index | Q) $\frac{C}{V}$ |
| | R) $> 1$ |
| | S) $< 1$ |

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**5.** A: Magnetic needle in compass deflects when it kept near current carrying wire.

R: Current carrying wire produces magnetic field.

A. Both A and R are corrcet, R is not correct explanation of A.

B. A is correct, R is not correct.

C. Both A and R are correct, R is correct explanation of A.

D. None of these

**Answer: C**

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**6.** In which situation , the value of focal length of the lens is equal to the value of the image distance ?

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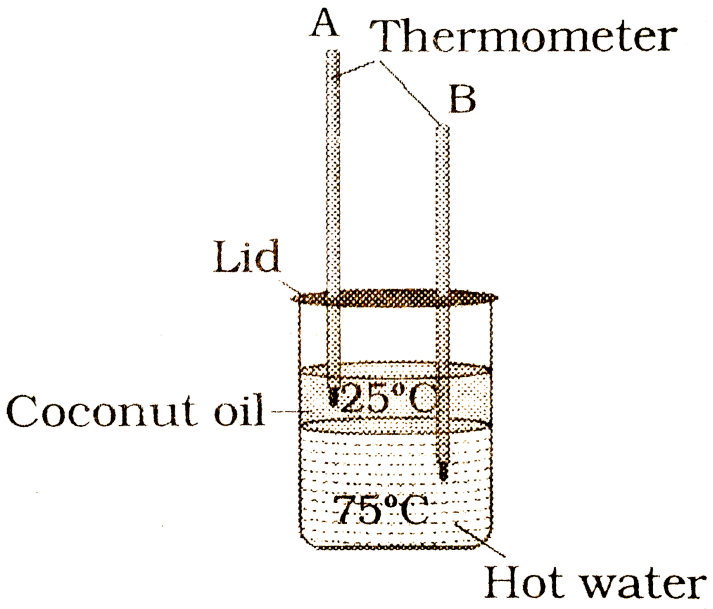
**7.** From the given figure, in which the thermometer (A or B) mercury level increases?

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**8.** Take 2 ml of NaOH in a test tube, add two drops of phenolphthalein solution and then add few drops of dil. HCl to it. What is your observation with respect to colour?

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**9.** Name the above compound.

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**10.** Write the isomer of the above compound.

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## Section Ii

**1.** Convert $25^{\circ} C$ into Kelvin scale.

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**2.** Name the phenomenon involved in the function of optical fibre.

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**3.** Write the reason for Sun appears red during the Sun-rise and Sun-set.

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**4.** What is the difference in the approach between the Mendeleev's periodic law and the modern periodic law?

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**5.** Why do elements form chemical bonds ?

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**6.** Thanish added acetic acid along with concentrated sulphuric acid to ethanol what would be his observation during the experiment ?

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**7.** Draw the direction of magnetic lines force, assuming that the current is flowing into the page?

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**8.** Mention the application of thermite process in daily life?

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Section Iii

**1.** Give two examples of each to ionic and covalent compounds?

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**2.** When Mohan viewed white light through a transparent scale, he observed some colors. Predict and write the phenomenon involved in his observation.

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**3.** Your friend is unable to understand $nl^x$ . What questions will you ask him to understand $nl^x$ method ?

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**4.** Write the experimental procedure to test carbon dioxide gas.

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**5.** A boy who is suffering from eye defect has been given a prescription as -2D. Based on the information given, answer the question.

Identify the eye defect he is suffering .

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**6.** A boy who is suffering from eye defect has been given a prescription as -2D. Based on the information given, answer the question.

Write the nature and focal length of the lens.

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**7.** A house has 3 tube lights of 20 watts each, On the average, all the tube lights are kept on for five hours. Find the energy consumed in 130 days.

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**8.** Write the application of lenses in day to day life?

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**9.** Why do valency electrons involve in bond formation , than electrons of inner shells ?

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## Section Iv

**1.** Write the differences between evaporation and boiling?

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**2.** Explain Faraday's law of induction with the help of an activity?

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**3.** The acidity of acids is attributed to the $H^+$. ions produced by thein in solution explain the above statement with an activity.

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**4.** Explain the significance of three quantum numbers in predicting the positions of an electron in an orbit .

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**5.** Write an experimental procedure to obtain the relation between angle of incidence and angle of refratction?

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**6.** Draw the experimental set-up to verify $V/I$ is constant for a conductor.

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**7.** Answer the following question based on the values of the atomic radii of the elements of one of the periods in modern periodic table

$Li(152), Be(111)B, (88), C(77), N(74), o(66)$ and $F(64)$

What is the trend of atomic radii of given elements ?

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**8.** Answer the following question based on the values of the atomic radii of the elements of one of the periods in modern periodic table

$Li(152), Be(111)B, (88), C(77), N(74), o(66)$ and $F(64)$

In the numerical listing of periods in the modern

periodic table , what number was given to above elements ?

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**9.** Answer the following question based on the values of the atomic radii of the elements of one of the periods in modern periodic table

$Li(152), Be(111)B, (88), C(77), N(74), o(66)$ and $F(64)$

Mention the unit of atomic radius .

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**10.** Answer the following question based on the values of the atomic radii of the elements of one of the periods in modern periodic table

$Li(152), Be(111)B, (88), C(77), N(74), o(66)$ and $F(64)$

Why the values of atomic radius varied along the period ?

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**11.** Complete the following table based on functional groups of organic compounds, their structural

formulas and respective suffixes?

| Functional grou | Structural Formula | Example | Suffixes |
|---|---|---|---|
| Alcohol | R-OH | $CH_3$–$CH_2$–OH | -ol |
| Aldehyde | | $CH_3$–CHO | |
| Ether | R-O-R | | |
| Amines | | | Amine |
| | R-COOH | | -oic acid |

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**12.** Draw the ray diagrams for the following positions of objects in front of a convex lens mention the characteristics of the image

Object is placed beyond $2F_2$.

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**13.** Draw the ray diagrams for the following positions of objects in front of a convex lens mention the characteristics of the image

Object is placed between focal point and optic center?

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**14.** Draw the neat diagram of froth floatation process for the concentration for sulphide ore why we add pine oil to the mixture in this process?

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