

Google for Education



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Giving teachers and families the tools they need to help keep students learning

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In this technological world that we live in, their students who are actively browsing their own IT abilities. Every teacher has their students. What are the benefits of e-learning attitude, set goals, and establish high expectations

## Info Message

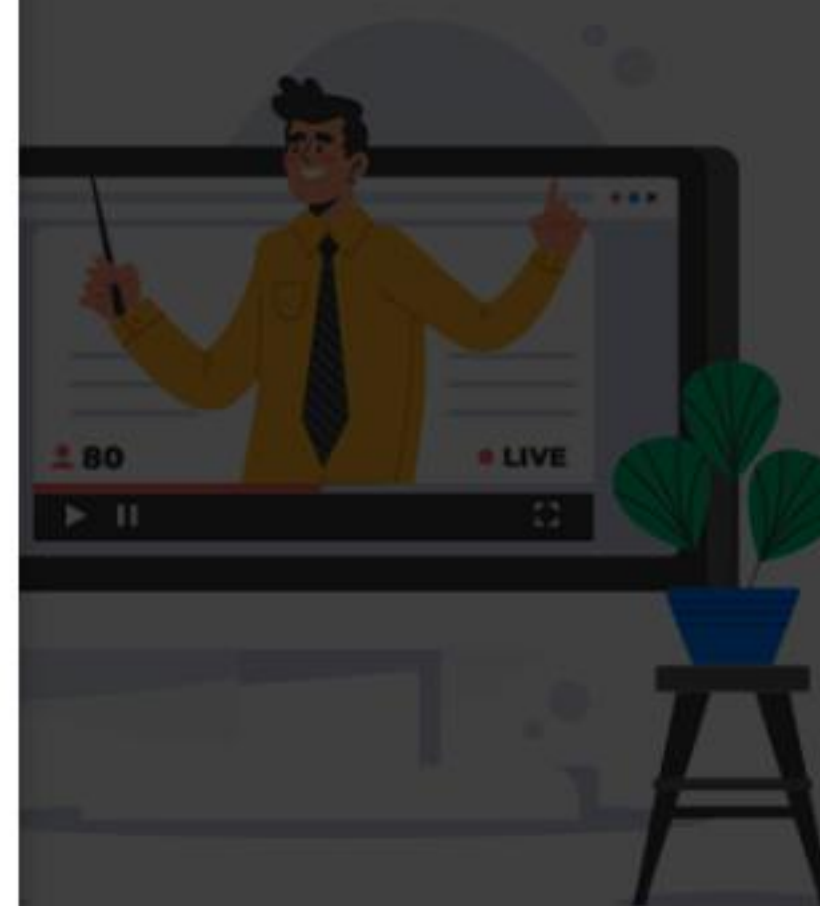
Congratulations! You have successfully enrolled for training.

### Google For Education Training Guideline

1. Teachers are requested to have their domain id issued by the school to login to the portal for attending training program
2. Teacher are requested to join the training before 5 minutes ahead of training schedule
3. Teacher are requested to keep themselves on mute and ask questions in chat box
4. Teachers can also switch off their cameras to avoid data problems
5. Teachers are requested to not press the Present Now button in Google Meet window
6. Teachers are requested to fill the pre training and post training survey forms; these are mandatory to obtain training certification
7. Teacher are requested to provide the feedback on the trainers and training quality after completion of training program
8. Teachers are requested to have a device (laptop or desktop) while attending the training sessions. If you are joining from a mobile, then please make sure **you have 2 phones as this is a hands-on training and you will be logging into Google Classroom while the training is ongoing.**

Login

adding dimensions  
ENHANCING TEACHING FOR TOMORROW



this will allow them to better understand learners' needs and they will improve their depending on the learning needs of their style, it is important to develop a positive



(1)

Section - A (Physics - 10 Marks)

Ques-1

(a) Between <sup>the</sup> pole and the focus of the mirror ☒

Ques-2

$$P = -1.5D.$$

$$P = \frac{1}{f}$$

$$-1.5 = \frac{1}{f}$$

$$f = \frac{1}{-1.5}$$

$$f = \frac{10^{-2}}{-1.5}$$

$$f = -\frac{2}{3} \text{ m.}$$

$$f = -\frac{2}{3} \times 100 \text{ cm.}$$

$$f = -66.6 \text{ cm.}$$

it is a concave lens.

(c) -66.6 cm, concave lens ☒

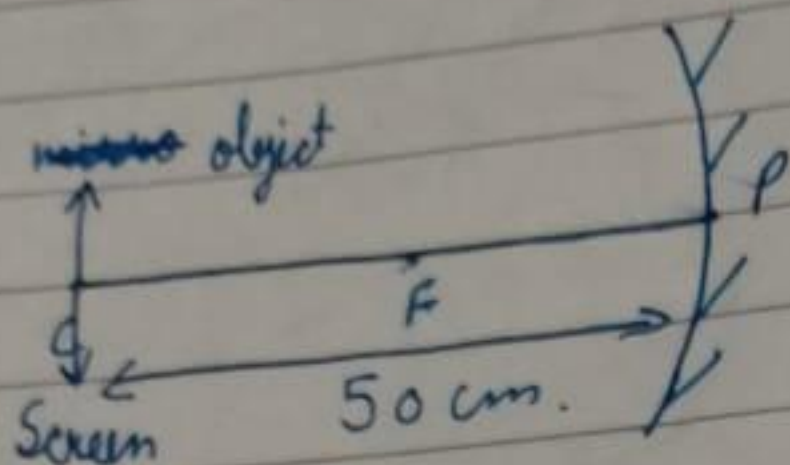
Ques-3

Ans-(a)

The mirror is concave because the image of object produced by the mirror is taken on screen which means that the image is real, and no real image is formed by convex mirror.



(b)



$$\text{magnification of image} = -1 = \frac{h'}{h}$$

$$\Rightarrow \frac{h'}{h} = -1$$

$$\Rightarrow h' = -h \quad \text{--- (1)}$$

By equation (1) we can say that the size of the object is same but the ~~object is inverted~~ ' - ' shows that the image is inverted and we know that the object and the image are of same size and the image is real and inverted and this situation only occurs when the object is placed at centre of curvature of the mirror.

$$\Rightarrow PC = 50 \text{ cm.}$$

$$\Rightarrow \text{C} = 50 \text{ cm.} \Rightarrow v = u \quad \left\{ \text{as } h' = -h \quad \& \quad \frac{h'}{h} = \frac{-v}{u} \right\}$$

the object is

$\Rightarrow$  the distance of image and the object is 0 cm as  $v = u$ .

(c) we know that focal length of the mirror is  $\frac{1}{2}$  of centre of curvature.

$$= \frac{1}{2} \times 50 \text{ cm} = 25 \text{ cm.}$$

Ques-4.  
Ans-



25 cm is the focal length of the image.

Ques-4.

Ans- ~~to~~ According To The Question:-

The image of the object made by the mirror is real and inverted and real and inverted images are only formed in case of a concave lens.

The magnification is -1

$$\Rightarrow m = \frac{h'}{h} = -1$$

$$\Rightarrow -h = h'$$

$\Rightarrow$  The object and the image are of same size and the '-' sign shows that the image is inverted.

$$\Rightarrow v = u \quad \left\{ \text{as the } \frac{h'}{h} = \frac{-v}{u} \text{ and } -h = h' \right\}$$

(i) distance of image from mirror = 40 cm.

$$\Rightarrow v = 40 \text{ cm.}$$

but ~~v~~  $v = u$  (proved above).

$\Rightarrow$  distance of ~~image~~ object from mirror is also 40 cm.

(ii) if the object is moved to 20 cm then the image would be formed at infinity.

(iii) Because radius of ~~spherical~~ spherical mirror = ~~40~~ 40 cm and focal length =  $\frac{1}{2} \times \text{radius} = \frac{1}{2} \times 40 = 20 \text{ cm.}$

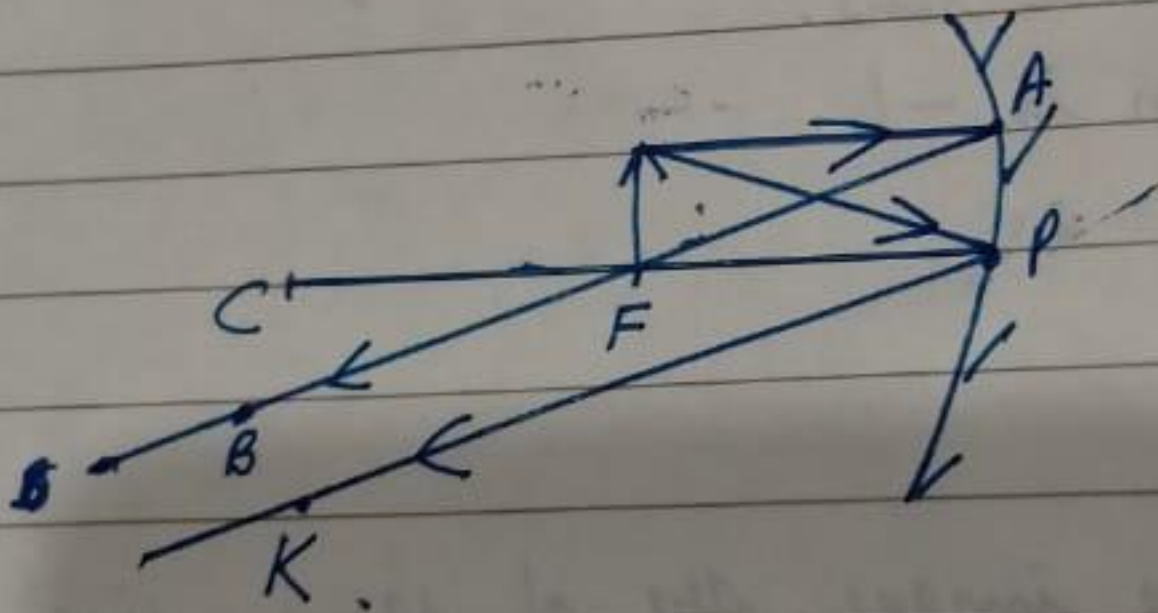
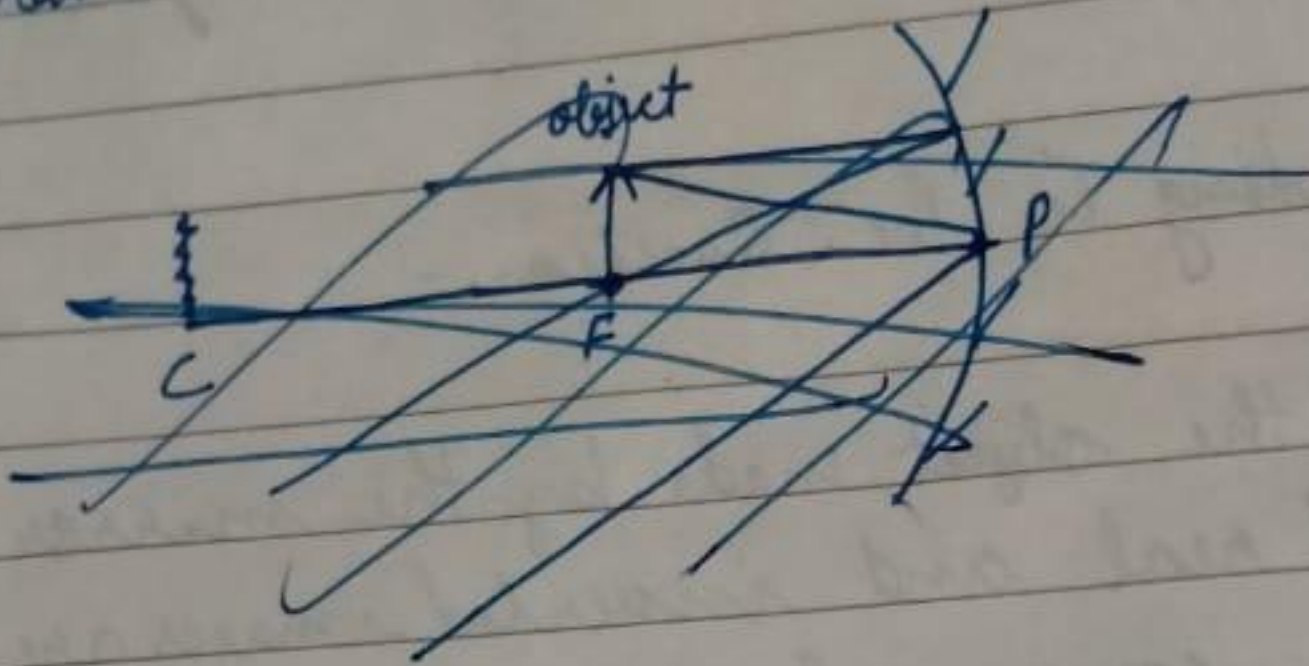
$\Rightarrow$  Focus is at a distance of 20 cm from the mirror.

$\Rightarrow$  The object is placed at the focus of the mirror and we know that when object is placed on the focus of a concave mirror the image is formed at infinity.



(w)

Diagram.



$AB \parallel PK$ .



5

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Section - B (Chemistry) - 10 marks.

Ques-1

(d) (i) and (iv) ☒

Ques-2

(c) A is true but R is false ☒

Ques-3

(a) (i) only.

Ques-4

(a) the nature of  $\text{SO}_2$  is acidic and when dissolved in water there will be a formation of a dilute and weak sulphurous acid ( $\text{H}_2\text{SO}_3$ ).

(b)  $\text{Na}_2\text{O}$  is basic in nature and when dissolved in water there will be formation of a very strong base  $\text{NaOH}$  or Sodium Hydroxide.

Ques-5

(a) (i) ~~to~~ corrosion:- when a metal is exposed to humid climate or water, there is a black-brownish layer on the metal, this layer is that metal's oxide formed due to the reaction between them, this process is called corrosion and the metal is said ~~to be~~ corroded. It weakens the metal.

the chemical ~~process~~ equation of corrosion of iron is:-





⑥

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(ii) Rusting of iron.

(b) (i) When food, containing oil or fats, is exposed to humid climate and the food reacts with the oxygen present in the atmosphere resulting in chemical reaction ~~due to which this~~ this is called rancidity.

Damage caused by rancidity is :-

(i) change in smell

(ii) ~~can~~ change in taste and it becomes ~~unusable~~ not eatable.

(11) Two methods for preventing rancidity are :-

(i) keeping food in air-tight containers.

(ii) ~~use of~~ ~~filling nitrogen gas in~~  
use of nitrogen gas in filling ~~parcels~~ packets.



①

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Section - A (Physics - 10 marks).

Ques-1

Ans- (a) If both Assertion and Reason are true and Reason is correct explanation of Assertion.

Ques-2

Ans- (c) blue ☒

Ques-3

Ans- ~~(a) Angle of incidence and angle of incidence~~ ☒  
(c) both (a) and (b) ☒

Ques-4

Ans- (a) violet and red respectively ☒

Ques-5

Ans- (d) ~~internal~~ atmospheric refraction of light by different layers of atmosphere of varying refractive indices

Ques-6

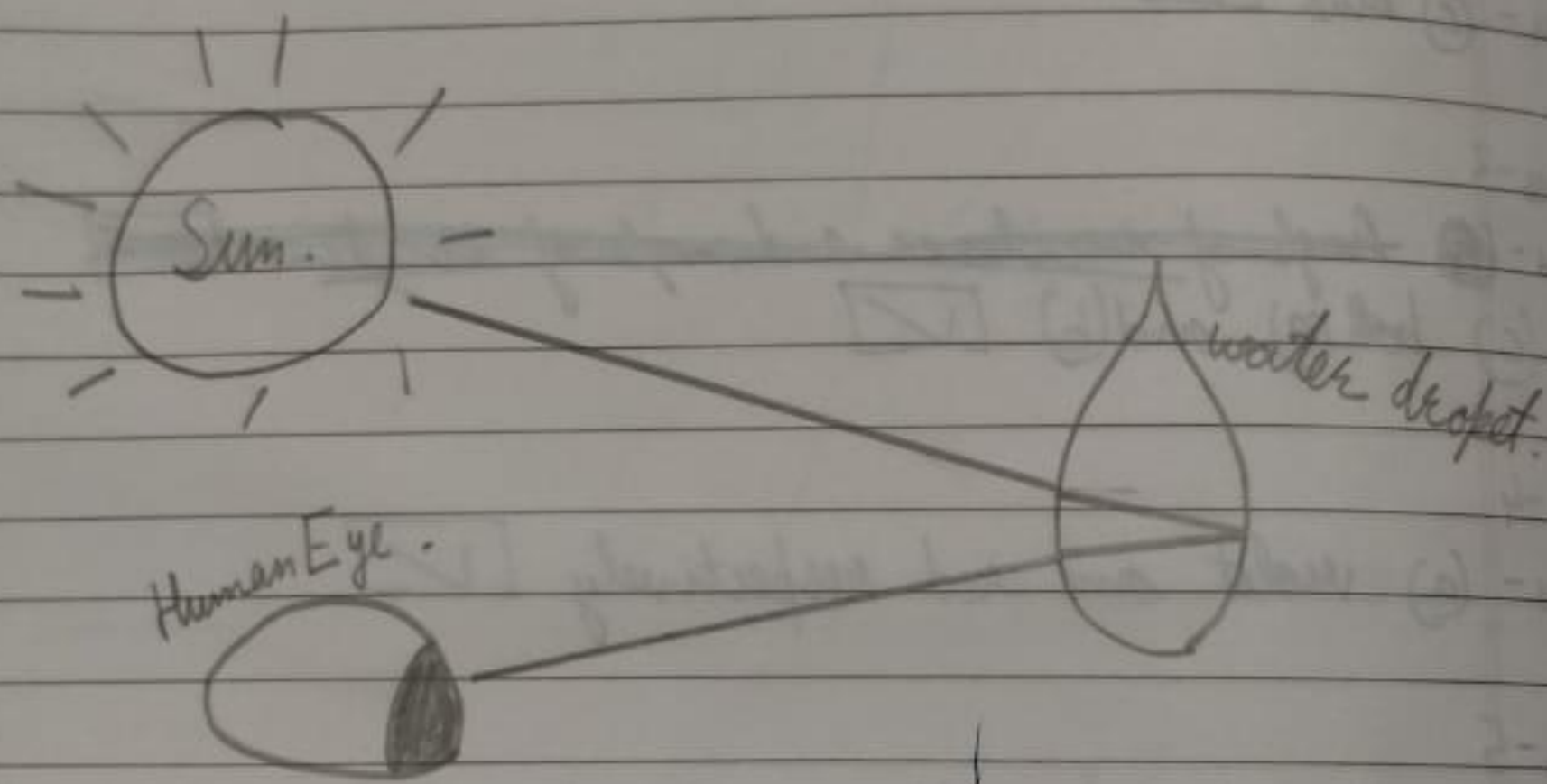
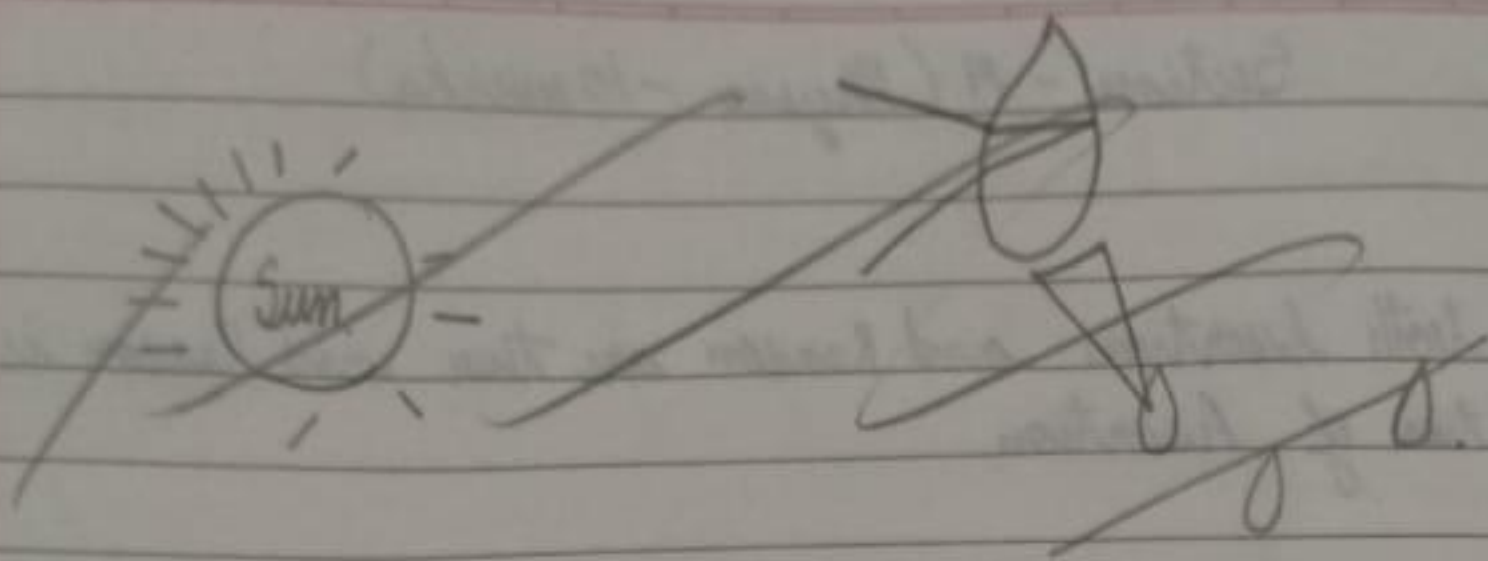
Ans- ~~Two~~ Two conditions essential for total internal reflection are:

- (i) The light must travel from a denser medium to a rarer medium.
- (ii) The angle of incidence must be greater than the critical angle for a pair of medium.



②

Ques-7  
Ans:-



Formation of rainbow :-

After rainfall we can see a beautiful band of seven colour, ~~that~~ this is because when the white light from the sun enter a water droplet then the light refracts because of variation in refractive index ~~the light~~ and the water droplet acts as a ~~the~~ glass prism. ~~the~~ The white light is then reflected internally and reaches our eye as a band of seven colour. This is the process involved in the formation of rainbow. ~~that is~~ we can see a rainbow on a sunny day if we stand in front of a fountain in opposite direction to the sun.

Ques-1  
Ans-(d) weak

Ques-2  
Ans-(a) (i)

Ques-3  
Ans-(a)

Ques-4  
Ans- The  
che  
by

Ques-5  
Ans-(a) Ca

(b) M  
w

(c) P

(d) M

(e) I



(3)

Section - B (Chemistry - 10 marks).

Ques-1

Ans-(d) weak acid and strong base ☒

Ques-2

Ans-(a) (i) and (ii) ☒

Ques-3

Ans-(a) less than 7 ☒

Ques-4

Ans- The acid present in ant sting is Formic acid and its chemical formula is  $\text{CH}_2\text{O}_2$ . The method to get relief is by using an antacid.

Ques-5

Ans-(a)  $\text{Ca}(\text{OH})_2$  combines with ~~chlorine~~  $\text{Cl}_2$  to form bleaching powder.

(b)  $\text{NaCl}$ ,  $\text{NH}_3$ ,  $\text{H}_2\text{O}$  and  $\text{CO}_2$  are the four substances utilized in the production of washing soda.

(c)  $2\text{CaSO}_4 \cdot \text{H}_2\text{O}$  is the compound which represents Plaster of Paris.

(d)  $\text{NaHCO}_3$  is the compound ~~soda~~ that is a part of baking ~~soda~~ powder.

(e)  $\text{NaHCO}_3$  is the compound that is used as ~~an~~ an antacid.



Ques-4 its kx.

Name - Kushagor

Class - X C

Section - A

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Ques-1

Ans-

$$\begin{array}{r|rrrrr} 5 & 5 & 0 & 0 & 5 & \\ \hline & 1 & 1 & 0 & 0 & 1 \\ \hline & 13 & & 9 & 1 & \\ \hline & 7 & & 7 & & \\ \hline & & & 1 & & \end{array}$$

(b) 4 ☒

Ques-2

Ans- (c)  $(2 \times 5)^n$

Ques-3

Ans-  $3x^3 - 5x^2 + 8x - 12$ .

$$\alpha + \beta + \gamma = -$$

$$\alpha \times \beta \times \gamma = -\frac{d}{a}$$

$$= \frac{12}{3} = 4$$

(a) 4 ☒

Ques-4

Ans- one of the zero = -3.

$$\Rightarrow (k-1)x(-3)^2 + kx - 3 + 1 = 0$$

$$\Rightarrow (k-1)9 - 3k + 1 = 0$$



5

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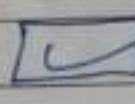
$$\Rightarrow 9k - a - 3k + 1 = 0$$

$$\Rightarrow 6k - a = 0$$

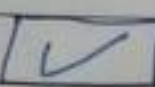
$$\Rightarrow k = \frac{a}{6}$$

(b)  $\frac{4}{3}$  

Ques-5

Ans- (c) intersecting or coincident 

Ques-6

Ans- (d) 2 or 5 

Ques-7

Ans-  $\alpha + \beta = \frac{-(c-a)}{b-c}$   
 $= 2\beta$

$\alpha \times \beta = \frac{a-b}{b-c}$   
 $= \beta^2$

$\beta = \frac{-(c-a)}{2(b-c)}$

$\left( \frac{-(c-a)}{2(b-c)} \right)^2 =$

B  $(b-c)x^2 + (c-a)x + (a-b)$

We know that 2 roots are equal when  $(b-4ac)$  is 0

$(c-a) + 4(b-c)(a-b) = 0$

$c-a + 4[ab - b^2 - ac + bc] = 0$

$c-a + 4ab - 4b^2 - 4ac + 4bc = 0$