Alternate Education Program For Teaching And Learning In November Month For 2021-2022.

Alternate Academic Calendar

Class:10 **Subject: Science** **Month: November.**

Chapter:Chapter-7-Control and co-ordination.

Sl no	Month/ week	Main learning abilities	Learning activities	Evaluation
01	November -2021 First Week.	1. Know about the sense organs like skin, nose, ears and eyes grasp the information. 2. Explain about the	1. Knowing about the sense organs after the discussion with students. 2. With the help of the image they shall know about the structure .They shall know about the different parts and functions of a neuron .You tube link https://youtu.be/2fI0dsEEVo8 You tube link of the Samveda class https://youtu.be/N9BdUlMl9r0	1. Draw a neat diagram of neuron and label the parts. 2. Differentiate between locomotion and reflex action.

		structure and functions of a nerve cell. **3. Identify the differences between reflex action and reflex arc.** **4. Understand about the different parts human brain and their functions.** **5. Explain about the nervous tissue.**	**3. Listing out the situations in which sharp objects are accidentally touched. Understanding the concept of reflex action.** **You tube link** **https://youtu.be/TRQow3BhoXs** **You tube link of Samveda class.** **https://youtu.be/EF6AhoG7QHw** **4. Activity listed in text book 7.1** **You tube link of the samveda class** **https://youtu.be/JCWHvQip4wA** **5. Preparing a table comprising of parts of human brain and their functions.** **You tube link** **https://youtu.be/U0RfwxNRZmk** **6. Observing the movement of the touch me not plant (*Mimosa pudica*) when touched Activity- Observing the movement of sunflower.** **7. Observing the movement of roots and stem in a plant (Performing 7.2 activity) Observing the movement of pollen grains under the microscope.**	**3. Which part brings about reflex action?** **4. Draw the sectional view of human brain and label the parts.** **5. List out the functions performed by different parts of human brain.** **6. List out different types of movements happening in plants.** **7. What do you mean by phototropism?** **8. Why do the roots of the plants grow**

02	**November-2021 Second week.**	**6. Co-ordination in plants- Response to a stimulus.** **6. Analyze different types of movement found in plants and they give the reasons.** **8. Know about the plant hormones and their functions.** **9. Understand the role of hormones in the regulation of**	**Activity- Observing the growth of onion roots towards the water .** **You tube link of samveda class https://youtu.be/0PAtUpZ275A** **8. Preparing a table comprising of plant hormones and their functions. Demonstrate the different examples showing length of the stem, growth of bud, falling of leaves, ripening of the fruit.** **You tube link https://youtu.be/U1uX-40SJUw.** **9. Preparing a table depicting different hormones secreted in animals, secreting gland and functions performed by them. (Table- 7.4) and discussing about the functions.** **Youtube link https://youtu.be/1Z2bnJpDCxU.**	**towards the earth?** **9. Explain the meaning of chemotropism.** **10. What are plant hormones?** **11. What is the role of auxin hormone in plants?** **12.What are the hormones secreted by thyroid gland and state its functions.** **13. List out the effects of pituitary hormone deficiency.**

		biological activities of the animals.		

You tube video link depicting simple method of drawing the human brain picture
https://youtu.be/CbC44qfJimY

https://www.youtube.com/watch?v=3sqCwF98Pgg.

Chapter-10- Light, reflection and refraction.

Sl no	Month/ week	Main learning abilities	Learning activities.	Evaluation
03.	November-2021 Third week.	1. Understanding the meaning of reflection of light and laws of reflection. 2. Explain about the types of spherical mirrors and Images formed by spherical mirrors. 3. Drawing the images formed by spherical mirrors using ray diagrams And listing the characters and	1. They shall know about reflection of light and laws governing it by conducting the experiments. You tube links on laws of reflection. https://youtu.be/vt-SG7Pn8UU. You tube link of samveda class. https://www.youtube.com/watch?v=KV4b-6gNhXg. 2. By using the ray diagrams they shall list out nature and write down the images formed by mirrors. Activity 10.1 (Page number 89). Activity 10.4 (Page number 96). Activity 10.5 (Page number 97). You tube link of samveda class https://www.youtube.com/watch?v=S74bOq9B0OE. 3. Uses of concave and convex mirrors. You tube link of uses of mirrors https://youtu.be/N1DmDyemzVw.	1. State the laws of reflection of light. 2. Name the mirrors used in the following contexts, (a) Headlights of a car. (b) Solar furnaces. 3. Activity sheet -1 (Practice book page numbers 47 and 48)

		knowing the sign convention. **4. Calculate the results using the mirror formulae and magnification formulae.**		**4. Activity sheet- 2** **(Practice book page numbers 48 and 49).**
04	**November-2021 Fourth week.**	**5. Refraction of light, Laws of refraction of light, the extent of the change in direction that takes place in a given pair of media is expressed in terms of the refractive index.**	**4. Activity 10.7 (Page number 104).** **5. Activity number 10.8 (Page number 104).** **6. Activity 10.10 (Page number 105).** **You tube link of refraction of light through a rectangular glass slab.** **https://youtu.be/el8AUeZaljw.** **You tube link of samveda class** **https://www.youtube.com/watch?v=PO9SRb8E4rI.**	**5. What do you mean by refractive index? Write down the formula to calculate it.** **6. The refractive index of diamond is 2.42.** **What is the meaning of this statement**

		6. Refraction by spherical lens- concave and convex lens. **7. Images formed by lens.** **8. Sign convention for spherical lenses, lens formula and magnification.** **9. Power of a lens.**	**7. Activity 10.11 (Page number 110).** **You tube link of refraction https://youtu.be/jQqF76ZkSLU.** **8. Describing through the activity about the image and nature of the image formed by a concave lens and convex lens for various positions of the object.** **You tube link of samveda class https://www.youtube.com/watch?v=gtZZXKXCUpY.** **You tube link https://youtu.be/DRwcpUZbvFk.** **Sign convention for mirrors and lens, mirror formula, lens formula, Samveda YouTube link for solving formulae based calculations. https://www.youtube.com/watch?v=kTJH-s_lIMw.**	**8.If an object is placed on the principal focus of convex lens list out the nature of the images formed.** **9. What do you mean by power of lens?**

YouTube link with complete information about light https://youtu.be/12KdSq5t3VY.

Practice sheet / Activity sheet-1

Class : 10 **Subject : Science.**

Chapter-7 Control and coordination.

I Four alternatives are given for each question. Choose the most appropriate one and write down the answer with the serial number:-

1. The structural and functional unit of nervous system is

a) Lymph b) Nerve cell c) Muscle cell d) Brain.

Ans:_____

2. The smallest part of brain is

a) Spinal cord b) Cerebellum c) Cerebrum d) Mid brain.

Ans:_____

3. Reflex action is controlled by

a) Brain b) Spinal cord c) Cerebellum d) Cerebrum

Ans:_____

4. The number of nerves leaving the spinal cord is

a) 21 pairs b) 31 pairs c) 41 pairs d) 12 pairs

Ans:_____

5. Which one of the following is not correctly matched?

a) Receptors-Sense organs

b) Conductor- Nerve cell

c) Exocrine glands- Hormones.

d) Effector- Muscles and tissues.

Ans:_____

II Answer the following in 1 or 2 sentences each:-

1) How are dendrites in neuron different from axons in its functions?

Ans:_____
_____
_____

2) Draw the diagram depicting the line diagram of reflex arc.

Ans:

3) What is synapse?

Ans:_____
_____
_____

4) If right side of the brain is damaged, which part of the body does not function. Give reasons.

Ans:_____
_____
_____

5) Goitre disease is not found in people dwelling in coastal areas. Why?

Ans:_____
_____
_____

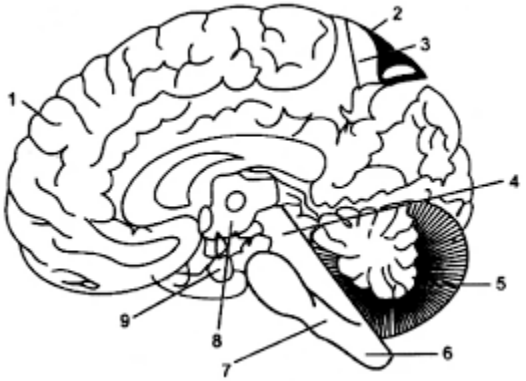
Practice sheet / Activity sheet-2

Class : 10 **Subject : Science.**

Chapter-7 Control and coordination.

I Answer the following questions (Practice book page number 33 and 34)

Label the parts and state any one function,



1._____

2._____

3._____

4._____

5._____

6._____

7._____

8._____

9._____

II Name the following:-

Sl no	Explanation	Parts of the brain
1.	The part comprising of medulla and pons	
2.	The part which controls balance of our body and movement	
3.	The center of sense organs	
4.	The part which controls responding to a stimulus	
5.	The part which connects hindbrain and forebrain	

III Identify the hormones given in the following word square and state one function of the same:-

Sample- The hormone which stimulates the cell division in plants-Cytokinin.

e	**d**	**e**	**v**	**g**	**o**	**p**	**si**	**m**	**a**
s	**n**	**m**	**l**	**r**	**h**	**l**	**j**	**e**	**d**
t	**h**	**y**	**r**	**o**	**x**	**i**	**n**	**e**	**r**
r	**o**	**a**	**u**	**x**	**i**	**n**	**m**	**t**	**e**
o	**s**	**g**	**r**	**o**	**w**	**t**	**b**	**a**	**n**
g	**l**	**u**	**c**	**a**	**g**	**o**	**n**	**b**	**a**
e	**b**	**g**	**r**	**o**	**w**	**t**	**h**	**n**	**li**
n	**e**	**s**	**t**	**r**	**o**	**g**	**e**	**n**	**n**

1. The hormone responsible for increase in the height of the organism is_____.

2. Regulation of glucose in the blood is brought about by_____

3. The onset of menstrual cycle in females is brought by_____.

4. Development of body and control of metabolism is brought by_____

5. The hormone which prepares our body to face fear, and anxiety situation is_____.

6. Deficiency of this hormone causes goitre is _____.

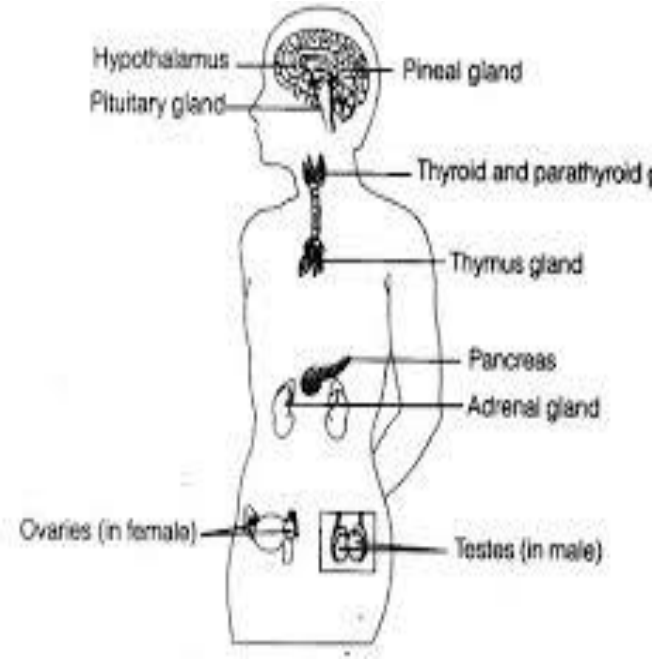
Practice sheet / Activity sheet-3

Class : 10 **Subject : Science.**

Chapter-7 Control and coordination.

In relation to the hormones secreted in man, observe the given picture below , Complete the table furnished below, label the glands. State one function performed by hormones secreted by them and

Deficiency disease caused by them,



Sl no	Name of the gland	Hormone secreted	Function of the hormone	Deficiency disease

Practice sheet / Activity sheet-4

Class : 10 **Subject : Science.**

Chapter-7 Control and coordination.

1.Identify the parts by answering the following and then label the parts in the given picture below :-

a) The part of the brain which maintains hearing, smell, sight and so on.

Ans:_____

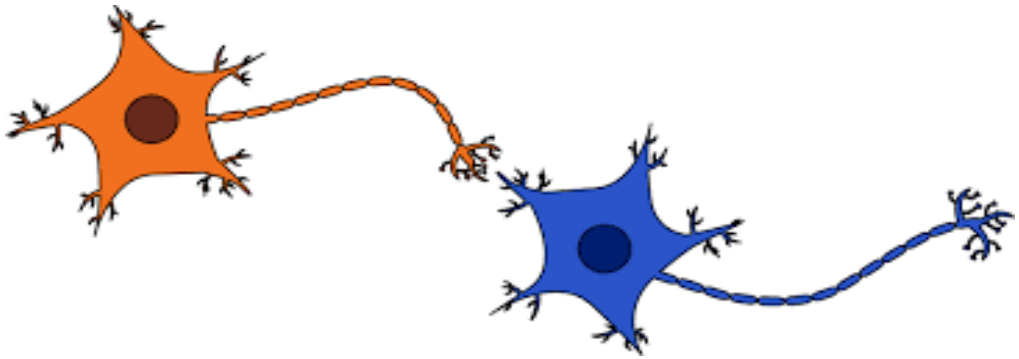
b) The part of the brain which controls blood pressure, salivation, vomiting is

Ans:_____.

c) The part of the brain which helps in maintaining the precision of voluntary actions and maintaining the posture and balance of the body is

Ans:_____.

<u>2. Identify the parts in the picture by answering the questions given below :-</u>



a) The part where information is acquired.

Ans:_____

b) The part through which information travels as an electrical impulse

Ans:_____

c) The part in which this impulse must be converted into a chemical signal for onward transmission

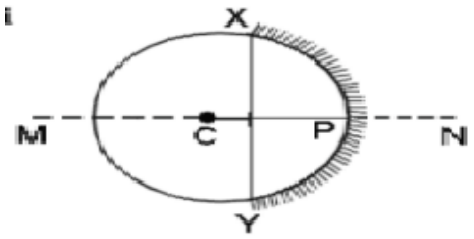
Ans:_____

Practice sheet / Activity sheet-1

Class : 10 **Subject : Science.**

Chapter-10- Light, reflection and refraction.

I Observe the picture of spherical mirror given below and fill in the blanks. (Practice book page number 47 and 48).



1. Type of the mirror_____

2. C=_____

3. P=_____

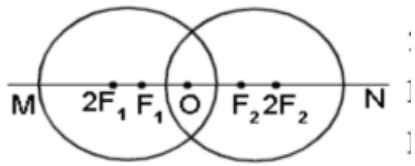
4. Distance between CP_____

5. XY_____

6. MN_____

II Observe the picture of lens given below and fill up the blanks:-

ii



1. Type of the lens_____

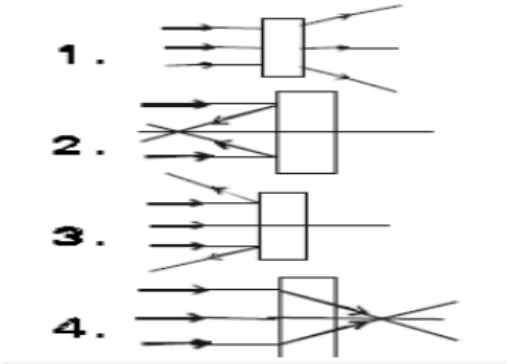
2. $2F_1$ and $2F_2$=_____

3. F_1 and F_2=_____

4. MN=_____

5. Distance between OF_1=_____

III Match the following to adjust mirrors and lenses to fit in the rectangular shaped ray diagrams given below:-



a. Convex mirror. Ans:_____

b. Concave lens. Ans:_____

c. Convex lens. Ans:_____

d. Concave mirror. Ans:_____

IV Complete the following table with respect to the mirrors:-

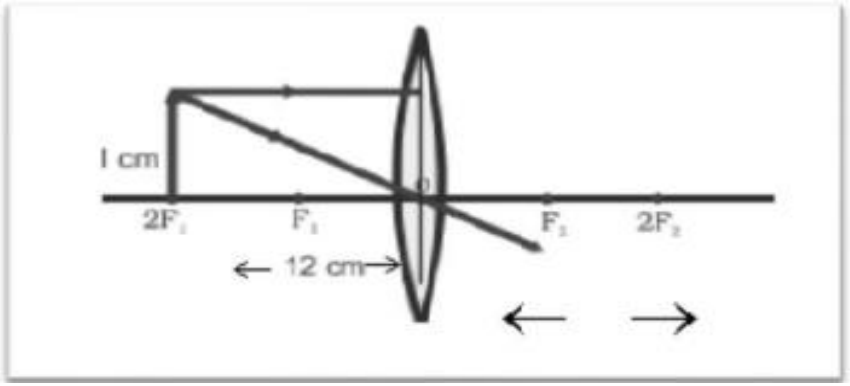
Type of the mirror	Position of the object	Object distance u	Image distance v	Focal length f	Height of the object h	Height of the image h^1
Concave	Beyond C	-ve	-ve	-ve	+ve	-ve
Concave	At C					
Concave	Between F and C					
Concave	Between P and F					
Concave	Between C and P					

Practice sheet / Activity sheet-2

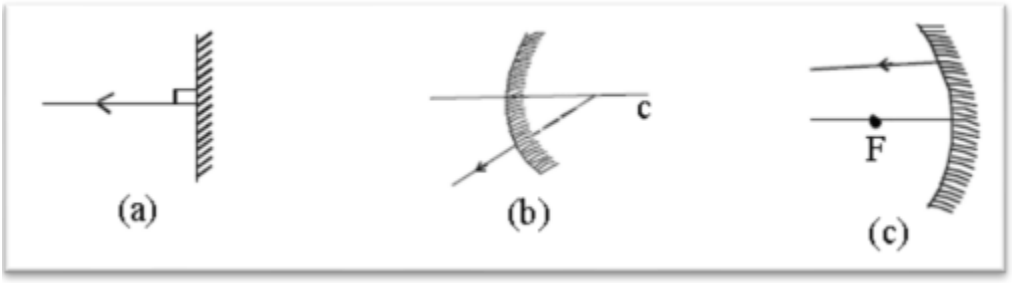
Class : 10 **Subject : Science.**

Chapter-10- Light, reflection and refraction.

I Complete the following ray diagram , Find out the position of the object, image, nature, and height.



II Observe the following pictures and answer the following questions:-



I Name the mirrors a, b, and c.

Ans:_____

II Write down any two uses of the mirrors a, b, and c.

Ans:_____

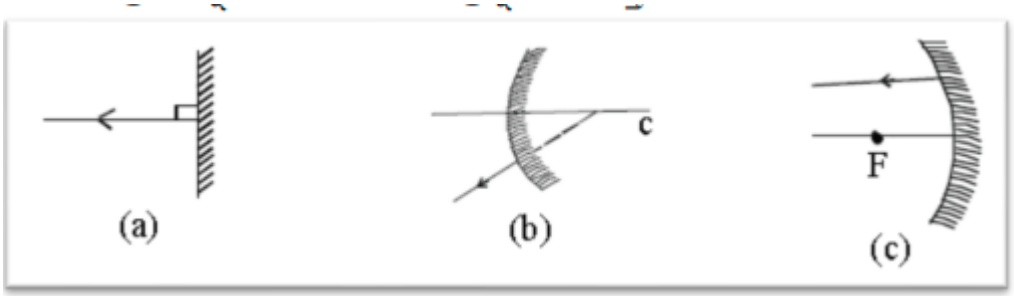
_____

_____

_____

III Draw the incident rays in this diagram to satisfy the reflected rays in the mirror a, b, and c.

Ans:



IV List out any two characteeristics of the images created by the mirror a, b, and c.

Ans:_____

_____

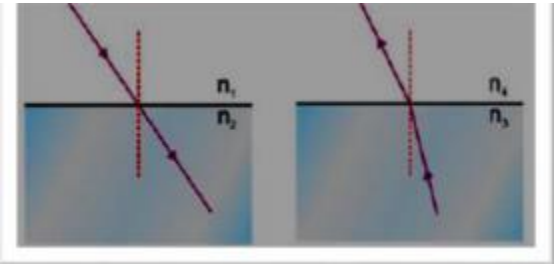
_____

_____

3. A concave mirror creates a real image of size three times its original. When the object is at a distance of 10cm from the mirror. Find the distance of image from the mirror.

Ans:

4. According to the given pictures which statements are true ?



a) $n_1=n_2$ and $n_3>n_4$ b)$n_1>n_2$ and $n_3>n_4$ c) $n_1=n_2$ and $n_3<n_4$ d) $n_1=n_2$ and $n_3=n_4$

Ans:_____

5. If f ‘f ‘ is the focal length and ‘ r ‘ is the center of curvature, it is equal to f=r/2 is for

a) Convex mirror not for concave mirror.

B) Only for concave mirror.

c) Both for convex and concave mirror

d) Only for concave lens.

Ans:_____

Practice sheet / Activity sheet-3

Class : 10 **Subject : Science.**

Chapter-10- Light, reflection and refraction.

I complete the following table with respect to nature, position, and relative size of the image formed by convex lens for various positions:-

Position of the object	Position of the image	Relative size of the image	Nature of the image
At infinity			
Beyond $2F_1$			Real and inverted
At $2F_1$	At $2F_2$		
Between F_1 and $2F_1$			Real and inverted
At focus F_1		Infinitely large or highly enlarged	
Between focus F_1 and optical centre O	On the same side of the lens as the object		

II complete the following table with respect to nature, position, and relative size of the image formed by concave lens for various positions:-

Position of the object	Position of the image	Relative size of the image	Nature of the image
At infinity			Virtual and erect
Between infinity and optical centre O	Between focus F_1 and optical centre O.		

Practice sheet / Activity sheet-4

Class : 10 **Subject : Science.**

Chapter-10- Light, reflection and refraction.

1) A convex mirror used for rear view on an automobile has a radius of curvature of 3.00m. If a bus is located at 5.00m from the mirror. Find the position, nature and size of the image.

Ans:

2) Light enters a glass from air. The refractive index of glass being 1.50. What is the speed of light in glass

Speed of light in vacuum is ($3x10^8 ms^{-1}$)

Ans:

3) The focal length of a convex lens is 15cm. To form an image at a distance of 10cm at what distance the object should be placed from the lens and find out the magnification.

Ans:

4) Two lens of focal length +10cm and -5cm are joined together. Find out the net focal length of this pair.

Ans:

5) An object of height 5cm is placed in front of convex mirror of focal length 15cm. Find out the position of the image , its size and the nature of the image.

Ans: