**DAV PUBLIC SCHOOL, CHANDRASEKHARPUR**

**CLASS – X (BIOLOGY)**

**ASSIGNMENT-1**

**CHAPTER- LIFE PROCESSES CONCEPT-NUTRITION IN PLANTS AND IN ANIMALS**

**DATE OF ISSUE: DATE OF SUBMISSION:**

**DATE OF CORRECTION:**

**1.** Name the following

(a)The process in plants that links light energy with chemical energy

(b)The cell organelle where photosynthesis occur

(c) Cells that surround a stomatal pore

(d)Organism that depends on dead and decaying matter

**2**. How do autotrophs obtain CO2 and N2 to make their food?

**3.** How do guard cells regulate opening and closing of stomata?

**4**. Two green plants are kept separately in oxygen free containers, one in the dark and other in the continuous light. Which one will live longer? Give reason.

**5.** If a plant is releasing carbon dioxide and taking oxygen during the day ,does it mean that there is no photosynthesis occurring? Justify your answer.

**6**. State two events of photosynthesis that occur only in light.

**7**. Leaves of a healthy potted plant were coated with Vaseline; Will this plant remain healthy for long? Give reasons for your answer.

**8**. In each of the following situations what happens to the rate of photosynthesis?

(a) Cloudy days

(b) No rainfall in the area

(c) Good manuring in the area

(d)Stomata get blocked due to dust

**9**. How does photosynthesis occur in desert plants?

**10**. Bile juice does not digest any food; still it is required for digestion.How?

**11.** Differentiate between pepsin and trypsin.

**12**. Why is the small intestine of herbivore longer than carnivore?

**13**. How is carbohydrate digested in human alimentary canal?

**14**. What are the end products of food digestion?

**15**. How is the digested food utilised in human body?

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**CLASS-X(BIOLOGY)**

**ASSIGNMENT-2**

**CHAPTER- LIFE PROCESSES CONCEPT-RESPIRATION**

**DATE OF ISSUE: DATE OF SUBMISSION:**

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1. Why is the rate of breathing faster in aquatic organisms than that seen in terrestrial organisms?
2. Explain mechanism of breathing in human being.
3. Schematically show 3 ways breakdown of glucose.
4. Differenciate between breathing in plants and breathing in animals.
5. How are O2 and CO2 transported in human being?
6. Differentiate between fermentation and aerobic respiration.
7. What are the characteristics of respiratory organs of terrestrial organisms?
8. Which is the energy currency of the e cell? How much energy is released when it breaks?

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**CLASS-X (PHYSICS) ASSIGNMENT- 4**

**CHAPTER:LIGHT -REFLECTION AND REFRACTION CONCEPT : *REFRACTION OF LIGHT ,R.I.***

**Date of issue :16.04.2018 Date of submission :20.04.2018Date of correction:**

1. Define (i)refraction of light (ii) absolute refractive index (iii) lateral shift (iv) angle of emergence

2. Find the RI of (i) air w .r .t. diamond (ii) air w. r. t. kerosene (iii) air w. r. t. benzene

3. Find the refractive index of diamond w. r. t. kerosene if RI of kerosene is 1.44 and that of diamond is 2.44 .

4. What is the real depth of a swimming pull if its bottom appears to be 6 m deep from the surface .( $μ\_{w}$=1.33)

5. How much time will light take to cross 2 mm thick glass plate if $μ\_{g}$=1.5 .

6. Write down the factors on which lateral displacement depends on .

7. A ray of light strikes the transparent surface of glass slab at an angle of 30 0 and makes an angle of 45 0 .

with the normal after refraction . What is the refractive index of the second medium ?

8. Find the refractive index of diamond if the refractive index of diamond w. r. t. glass is 1.6 and $μ\_{g}$=1.5 .

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**CLASS-X (PHYSICS) ASSIGNMENT-5**

**CHAPTER:LIGHT –REFLECTION AND REFRACTIONCONCEPT :*CONVEX LENS AND CONCAVE LENS***

**Date of issue :21.04.2018 Date of submission : 26.04.18 Date of correction:**

1. Define the following terms

(i )centre of curvature (ii) aperture (iii)optical centre (iv)principal focus of a concave lens

 2. Draw ray diagrams and show the image formation by a convex lens of focal length f when

(i) the magnification is 1 (ii) the lens is used as a magnifying glass

 3. Draw ray diagrams and show the image formation by a concave lens when an object is placed

 (i) at focus (ii) between F2 and 2F2 (iii) beyond 2F2

 4.State whether the absolute value of magnification produced is **>1** or **<1** (i)for a magnifying glass

(ii)for a corrective lens used for a myopic eye (iii) for a lens used in cinema projector

 5.Write the position of the object/source with respect to the lens and name of the lens used in

(i ) reading glass (ii) astronomical telescope (iii) camera lens (iv) cinema projector

 6. A convex lens of focal length f can produce a magnified virtual as well as real image . Justify the statement by

 drawing one ray diagram for each case and also state the position of the object with respect to lens

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**CLASS-X ASSIGNMENT-6**

**CHAPTER: LIGHT –REFLECTION AND REFRACTIONCONCEPT : *CONVEX LENS AND CONCAVE LENS***

**Date of issue :28.04.2018 Date of submission :3.05.2018 Date of correction:**

1. An object 3 cm high is placed 20 cm from a convex lens of focal length 12cm .Find the nature, position and size of the image .

2. A needle placed 45cm from a lens creates an image on a screen placed 90 cm on the other side of the lens.

 Identify the type of the lens . Determine its focal length and power . Find size of image if object is 5cm tall .

3. An object is kept at a distance of 60 cm from the lens gives a virtual image at distance of 20 cm from the

 lens on the same side of the object . Find the focal length of lens and nature of the image .

4. A student uses lens of focal length 50 cm and another of **-**50 cm .What is the nature of the lens and power of each of the lens used by each of them ?

5. Two thin lenses of focal lengths +10 cm and –5cm are kept in contact . What is the focal length and power of combination of lens ?

6. Calculate the distance at which an object of 10 cm should be placed so that a virtual image of 20 cm is produced if the power of a lens is +10 D .