<u>CHAPTER 4 – SORTING MATERAL INTO GROUPS</u>

ACTIVITIES: QUESTION-ANSWERS

Question 1- What is matter?

Answer- Anything that has mass and occupies space is known as matter.

Question 2- The density of an object is slightly less than that of water, will it sink or float in water?

Answer- Float.

Question 3- Is clear water opaque, transparent or translucent?

Answer- Transparent.

<u>EXERCISE</u>

Question 1- Fill In The Blanks.

a). Name five objects which can be made from wood.

Table, chair, door, desk and pencil.

b). Sugar is **soluble** in water.

Question 2- Write True Or False.

- a). Stone is transparent. (False)
- b). A piece of wood floats on water. (True)
- c). A windowpane is opaque. (False)
- d). Oil mixes with water. (False)
- e). Vinegar dissolves in water (True)

Question 3- Match The Column 'A' With Column 'B'.



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(iii). Which of the following	g is transparent?					
a) wood	b) glass (🗸)	c) paper	d) plastic			
Question 5- Very Short	Answer Type Ques	tions.				
(i) What is an atom ?	(i) What is an atom ?					
Answer- Atom is the smalle	st piece of matter, which	may or may not exist in	dependently.			
(ii) Define density.						
Answer- The mass per unit volume of substance is known as density.						
(iii) What are transparent objects?						
Answer- If most of the light can pass through an object, it is known as transparent object.						
(iv) What are opaque objects?						
Answer- If no light can pass through an object, it is known as opaque object.						
(v) What are translucent objects?						
Answer- If light can pass through an object partially, it is known as translucent object.						
Question 6- Short Answer Type Questions.						

(i) What is the difference between transparent and translucent objects? Give examples. Answer-

Transparent Objects	Translucent Objects		
1. If most of the light can pass through a	1. If light can pass through an object partially, it is known		
object, it is known as transparent object.	translucent object.		
2. Examples – Glass and clear water.	3. Examples – Frosted glass and wax paper.		

(ii) Select the objects from the following which shine. Glass bowl, plastic mug, steel chair, cotton shirt, gold chain and silver ring.

Answer- Glass bowl, steel chair, gold chain and silver ring.

Question 7- Long Answer Type Questions.

(i) Are all liquids soluble in water?

Answer- No, all liquids are not soluble in water. Oil like substances are not soluble in water, they make layer on water.

(ii) List any four items that can float on water and five items that cannot float on water.

Answer- Items that can float on water- Wood, dry leaf, plastic, dry paper, rubber and empty earthen pot.

Items that cannot float on water- Iron nail, stone, aluminium sheet, copper wire, a piece of glass and filled pot.

CHAPTER 5 – SEPARATION OF SUBTANCES

ACTIVITY-1: To demonstrate handpicking.	(Page No 41)
Question 1- How will you separate rotten tomatoes from a basket of tomatoes?	
Answer- By hand picking.	
Question 2- How will you separate green grapes from black grapes?	
Answer- By hand picking.	
ACTIVITY-2: To demonstrate winnowing.	(Page No 42, 43)
Question 1- What is the role of wind in winnowing?	
Answer- Lighter particles of mixture are blown away by air in winnowing.	
Question 2- Can you separate mixture of channa dal and moong dal by winnowing?	
Answer- No.	
ACTIVITY-3: To demonstrate sieving.	(Page No 43)
Question 1- Can you separate a mixture of salt and flour with sieve? Why or Why not	?
Answer- No, because both have almost same size particles.	
ACTIVITY-4: To demonstrate sedimentation & decantation.	(Page No 44, 45)
Question 1- You are provided with a solution of chalk powder and water in a beake	r. Keep the beaker
undisturbed for some time. What will you observe? Name the process.	
Answer- On keeping the beaker undisturbed chalk powder settles down at the bottom of	beaker. This process
is known as sedimentation.	
ACTIVITY-5: To demonstrate filtration.	(Page No 45, 46)
Question 1- Your father asked you to bring fresh orange juice from market. Do you o	bserve the strainer
used to separate pulp and seeds from the juice? Which strainer is best for this pur	pose? Whether tea
strainer, filter paper, muslin cloth or strainer with large holes can be used for this pur	rpose.
Answer- Yes. Tea strainer is best for separating pulp and seeds from the juice.	
ACTIVITY-6: To separate salt from salt solution.	(Page No 46, 47)
Question 1- Name the process involved in preparation of "Khoya" from milk?	
Answer- Evaporation.	
ACTIVITY-7: Separation of salt, sand and water from the mixture.	(Page No 48)
Question 1- Name the process by which water changes to vapours.	
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Answer- Evaporation.

Question 2- Name the process by which vapours changes to water?

Answer- Condensation.

EXERCISE

Ouestion 1- Fill In The Blanks.

- a). Filtration process is helpful in separating an insoluble solid from a liquid.
- b). Small pieces of stones can be removed from rice by hand picking method.
- c). <u>A strainer</u> is used to remove husk from flour.
- d). The method in which stalks are beaten to separate the grains is called *threshing*.

Decantation is the process of pouring out the liquid present on top layer without disturbing the sediments e). below.

Question 2- Write True Or False.

a).	Sieving is used when the component of mixture has different sizes.	(True)
b).	Process of converting liquid to vapours is called condensation.	(False)
c).	A mixture of salt and flour is separated by handpicking.	(False)
d).	Threshing is a process of separating grains from stalks.	(True)

Question 3- Match The Column 'A' With Column 'B'.

Column A	Column B	
a. Separating salt from water <	a. condensation	
b. Heavier particles settle down	b. winnowing	
c. Separating different components	\times	
by blowing wind or air	c. evaporation	
d. Conversion of vapour into liquid	d. sedimentation	
Question 4. Choose The Correct Ans	wer.	
(i). Which method is used to separate heavi	ier and lighter components in a mixture by wind?	
a) Hand picking b) Threshing	c) Sieving d) Winnowing	(✔)
(ii). Formation of water droplets on the out	ter surface of glass containing ice cold water is because of	:
a) Evaporation of water from glass	b) Condensation of atmospheric water vapours.	(√)
c) Water that seeped out from glass	d) Evaporation of atmospheric water vapours.	
(iii). You must have seen your mother tak	ting out fine gravels from rice. Which method can be use	d to
separate pebbles from rice?		

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a) Handpicking (🗸)	6 th SCIENC b) Decantation	E, ENGLISH MEDIUM, OCTOBER_N c) Evaporation	DVEMBER SYLLABUS (2021-22) d) Sedimentation	
(iv). We need to separate o	ne substance from mixtur	e because :	,	
a) To separate two differen	nt but useful components	b) To remov	e undesirable substances	
a) to separate two unities	n out useful components	0) 10 101100		
c) To remove harmful sub	stances	d) All the abov	ve (✓)	
Question 5- Very Shor	t Answer Type Questio	ns.		
(i) Define sedimentation.				
Answer- Process of settling	down heavy particles of an	insoluble solid in a liquid is	known as sedimentation.	
(ii) What is evaporation?				
Answer- Evaporation is a process of converting a liquid into its vapour form.				
(iii) For what purpose combine machine is used for?				
Answer- For harvesting and threshing.				
Question 6- Short Answer Type Questions.				
(i) Give difference between evaporation and condensation.				
Answer- Evaporation- Evaporation is a process of converting a liquid into its vapour form. For example:				
converting water into vapours.				
Condensation - Condensation is a process of converting vapours into liquid form. For example:				
Formation of water droplets on the outer surface of glass containing ice cold water				
(ii) Give difference between saturated solution and unsaturated solution.				
Answer- Saturated solution- The solution in which no more solute (salt, sugar etc.) can be dissolved at a				

given temperature is called saturated solution.

<u>Unsaturated solution</u>- The solution in which more of solute can be dissolved at a given temperature is called unsaturated solution.

(iii) Explain different types of threshing.

Answer- (1) Manual threshing- By beating the stalks with sticks etc.

(2) Threshing by animals.

(3) Threshing by machines like combine.

Question 7- Long Answer Type Questions.

(i) Explain the following methods of separation.

- a). Threshing.
- b). Winnowing.
- c). Sieving.

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Answer- (a). <u>Threshing</u>- Threshing is a process of separation of grains from stalks. Threshing can be done manually, by animals or with machines like combine.

(b). <u>Winnowing</u>- Winnowing is a method to separate heavier and lighter components of a mixture by wind or by blowing air.

(c). <u>Sieving</u>- Sieving is a method to separate larger substance from smaller substances.

(ii) What is separation? Why do we need to separate different components of a mixture?

Answer- Separation is a process of separating different components of a mixture. Separation is done to remove undesirable and harmful substances and to obtain desirable components of mixture.

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CHAPTER 11 LIGHT, SHADOWS AND REFLECTION

ACTIVITY-1: To distinguish transparent, opaque and translucent objects.

(Page No.- 108, 109)

Question 1- Classify different objects depending on whether an object allows light to pass through it completely, partially or not at all.

Answer- Transparent, translucent and opaque objects.

Question 2- Classify the objects given in following table as transparent, opaque or translucent.

Object/ Material	Transparent/ Opaque/ Translucent		
Water	Transparent		
Tissue Paper	Translucent		
Stone	Opaque		
Air	Transparent		
Book	Opaque		
Mirror	Opaque		
Thin Cloth Translucent			

ACTIVITY-2: To show that light travels in a straight line.

Question 1- Light travels in line path

Answer- Straight.

Question 2- Light cannot pass through material.

Answer- Opaque.

ACTIVITY- 3 : To show that screen is compulsory for the formation of

shadow.

(Page No.- 110, 111)

Question 1- For shadow formation, how many things are required?

Answer- Three i.e. a source of light, an opaque object and a screen.

Question 2- A shadow is observed, on a screen, when an	object comes in-between screen and a
source of light.	

Answer- Opaque.

6 th SCIENCE, ENGLISH MEDIUM, OCTOBER_NOVEN ACTIVITY- 4 : To study factors on which size and colour of	IBER SYLLABUS (2021-22) shadow depends.
	(Page No 111, 112)
Question 1- The size of shadow of a given opaque object depends on relative	of source of light and
the opaque object.	
Answer- Position.	
Question 2- What may be the colour of opaque object, shadow will always be	(black/ white)
Answer- Black.	
ACTIVITY-5: To construct a pinhole camera.	(Page No 113-115)
Question 1- Pin hole camera is based on the fact that in ordinary conditions light the	ravel in path.
Answer- Straight line.	
Question 2- The images formed by pin hole camera is and	
Answer- Inverted and smaller in size.	
ACTIVITY-6: To observe reflection of lght.	(Page No 115, 116)
Question 1- A mirror does not change the direction of light that falls on it. (true/ fa	llse)
Answer- False.	
	a

 Question 2- A polished or shining surface like plane mirror produces ______ reflection.

 Answer- Regular.

EXERCISE

Question 1- Fill In The Blanks.

- a). An object that allow light to pass through them partially are known as **translucent** objects.
- b). Light source like the Sun that emit light of their own are called **<u>luminous</u>** objects.
- c). Never ever look directly at the Sun because it could be extremely <u>dangerous</u> for the eyes.
- d). The change in direction of propagation of light when light allowed to fall on polished surface is called **reflection** of light.
- e). Due to <u>reflection</u> phenomena rooms are lighted up in day time though no direct sunlight enters the room.

Question 2- Write True Or False.

- a). Moon is a luminous object. (False)
- b). We can clearly see through transparent material. (True)
- c). Shadow of opaque object is always black. (True)
- d). Light doesn't travel in straight line path. (False)

e). Due to reflection of light, rooms are lighted up	SCIENCE, ENGLISH MEDIUM, DCTDBER_NOVEMBER o during day time though no direct sunlig	SYLLABUS (2021-22) ght enters the room.	
	(True)	, ,	
Question 3- Match The Column 'A' With	ı Column 'B'.		
Α	В		
1. Natural source of light	_a. Light moves along a straight path		
2. CFL, LED and tube light	b. Opaque object		
3. Rectilinear propagation of light	c. Shadow cast by a heavenly body		
4. Eclipse	d. Man-made source of light		
5. Cardboard, wood and metal	e. Sun, stars and firefly		
Question 4. Choose The Correct Answer.	,		
(i). Objects, like moon, which do not emit light o	of their own, are called		
a) Luminous objects	b) Absorbers of light		
c) Non-luminous objects (✓)	d) Reflectors of light		
(ii). An object, through which we can see partial	lly, but not very clearly, is		
a) A rubber ball	b) A sheet of plane glass		
c) A sheet of tracing paper (\checkmark)	d) A compact disc		
(iii). When Sun (during evening) is behind an o	bject, the size of its shadow in compar	rison to that of the	
object would be			
a) Smaller b) Larger (✓)	c) Almost zero	d) Equal	
(iv). The image, formed by a pin hole camera, is			
a) Inverted and diminished (\checkmark)	b) Inverted and enlarged		
c) Erect and enlarged	d) Erect and diminished		
(v). For shadow formation, we require :			
a) An opaque object	b) A source of light		
c) The screen to obtain the shadow	d) All of the above (\checkmark)		
Question 5- Very Short Answer Type Qu	estions.		
(i) State the type of path that light ordinarily follows while going from one point to another.			
Answer- Straight line path.			
(ii) Fishes do not cast shadow in water. Why?			
Answer- Due to absence of a screen at proper distance.			
(iii) State the relative position of Sun, Earth and the Moon during solar eclipse.			
Answer- During solar eclipse moon is between sun and earth.			
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(iv) In a completely dark room, if you hold a mirror in front of you, will you see a reflection of yourself in the mirror?

Answer- No.

(v) Two identical bed sheets, of pink and grey colour are hanging on a rope under the Sun. What would be the colour of shadow of these two bed sheets?

Answer- Black.

Question 6- Short Answer Type Questions.

(i) What is regular reflection?

Answer-When light fall on polished or shining surface like plane mirror, these surfaces reflect light in a well defined regular manner, this is called regular reflection. Sometimes regular reflection also forms images.

(ii) Why shadow in afternoon is smaller than shadow formed in the morning?

Answer- In afternoon the Sun is above the object, So forms a smaller shadow. In morning sunlight falls obliquely and forms larger shadow.

Question 7- Long Answer Type Questions.

(i) Using suitable diagrams show that size of shadow formed, depends on relative position of the source of light and the opaque object.

Answer-



(ii) Using diagram, show the formation of image by pinhole camera.

Answer-



CHAPTER 14 - WATER

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ACTIVITY-1: To estimate the quantity	ity of water used.	(Page No 144, 145)
Ouestion 1- Does every person use same quantity	of water every day?	
Answer- No.	<i>. .</i>	
ACTIVITY- 2: Inter-conversion of the second secon	rree states of water.	(Page No 146)
Question 1- What happens to ice-cream when it is	taken out of the refrigerato	r?
Answer- Ice-cream melts and converts into liquid fo	rm.	
Question 2- What is the state of ice-cream?		
Answer- Solid.		
ACTIVITY- 3: Evaporation of water	· in clothes.	(Page No 147)
Question 1- What happens when you spill water o	n the floor in hot summer da	nys?
Answer- Water evaporates in the air.		
Question 2- Why cow dung cakes are kept in sunl	ight?	
Answer- To evaporate the water content in cow dung	g cakes, so that they dry up.	
ACTIVITY- 4: To understand conde	nsation of water.	(Page No 148)
Question 1- Why do we observe water droplets ou	tside water bottle when take	en out from a refrigerator?
Answer- Due to condensation of atmospheric water	vapours on touching cool wate	er bottle.
EX	ERCISE	
Question 1- Fill In The Blanks.		
a). The process of changing of water into its vapour	is called evaporation .	
b). The process of changing water vapour into water	is called <u>condensation</u> .	
c). No rainfall for a year or more may be lead to dro	ught in that region.	
d). Excessive rains may cause <u>flood</u> .		
e). Three states of water are solid , liquid and gas .		
f). In plants, transpiration takes place through stoma	<u>ita</u> .	
Question 2- Write True Or False.		
a). Ice on cooling changes to steam.	(False)	
b). Evaporation of water takes place in sunlight.	(True)	
c). We should not repair the pipe having leakage.	(False)	
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d). Water in ocean is fit for drinking. (False)				
e). Drip irrigation method is us	seful for farming. (True	e)		
Question 3- Match The C	Column:-			
1. Water conservation	a. Solid form	of water		
2. Snow	b. Sunny day			
3. Precipitation	c. Rainwater	harvesting		
4. Evaporation	d. Ground wa	ater		
5. Fresh water —	e. Rain from	clouds		
Question 4. Choose The	Correct Answer.			
(i). How much part of earth i	s covered with water?			
a) Two third (🗸)	b) Half	c) One third		d) Three fourth
(ii). Fog appearing on a cold	winter morning is the result	t of:		
a) Condensation (✓)	b) Evaporation	c) Precipitati	on	d) None
(iii). Which of the source of w	vater is not used for drinkin	g:		
a) River	b) Ocean (✓)	c) Dam		d) Lake
(iv). Process of conversion of	gas to liquid is called:			
a) Evaporation	b) Melting	c) Condensat	tion (🗸)	d) Boiling
(v). About how much percent	tage of water is present in h	uman body:		
a) 60%	b) 70% (🗸)	c) 80%		d) 90%
Question 5- Very Short Answer Type Questions.				
(i) What are the main source	es of water?			
Answer- Rain, rivers and grou	nd water.			
(ii) What is the advantage of drip irrigation?				
Answer- With drip irrigation water is saved.				
(iii) What is the effect of temperature on evaporation?				
Answer- Rate of evaporation increases with rise in temperature.				
(iv) Differentiate between ground water and surface water.				
Answer- Surface water exists in lakes, rivers and other water bodies. But ground water exists under the surface				
of earth.				
(v) What is transpiration?				
Answer- Transpiration is the process of releasing excess water by plants into air.				

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Question 6- Short Answer Type Questions.

(i) Explain floods and its effects.

Answer- An overflow of large amount of water due to heavy rain is known as flood.

Effects of floods- (1). Many people and animals die during floods.

(2). Water supply and electricity are disrupted.

- (3). Wide spread of communicable diseases.
- (4). Roads, bridges, houses and automobiles are destroyed.

(ii) Define condensation. Give two examples?

Answer- The process of changing vapours into liquid form is called **condensation**. Examples: Formation of clouds and fog appearing on a cold winter morning.

(iii) Explain formation of clouds.

Answer- When the air moves up, it gets cooler and cooler. After reaching sufficient heights, the air becomes so cool that the water vapours present in it condenses to form tiny drops of water called droplets which remain floating in air and thus clouds are formed.

(iv) Write three ways to conserve water.

Answer- (1) Use drip irrigation method.

- (2). Rain water harvesting.
- (3). Stopping the leakage of water pipes and taps as soon as possible.

(v) What is drought and what are its effects?

Answer- Very low rainfall over a prolonged period is called drought.

Effects of drought- (1). It leads to the death of many animals.

(2). Plant life is affected.

(3). It leads to shortage of water and food.

Question 7- Long Answer Type Questions.

(i) Explain the uses of water.

Answer- (1). About 70% of human body consists of water.

- (2). Water helps to control our body temperature.
- (3). Water helps to excrete waste products from our body.
- (4). Water is important for growth of plants.
- (5). Water maintains the temperature of earth.
- (6). Water is essential for our many daily life activities.

(ii) Explain water cycle with diagram.

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Answer- Water cycle is a cyclic process in which water is circulated between the earth and the atmosphere. In the presence of sunlight, water from water bodies like ocean, lakes, rivers etc. evaporates. This process is known as evaporation. These water vapours make clouds at heights by condensation. From clouds water falls back to earth in form of rain and snow.



(iii) Why there is need to conserve water? Write techniques of rain water harvesting.

Answer- Fresh clean water is available in limited amount. With rising population, the demand of water is increasing day by day. So it is the need to conserve water and use it carefully.

Techniques of rain water harvesting- (1). Rain water is collected on the roof of the house or building. It is then stored in storage tanks. This water can be used as per requirement.

(2). Rainwater is allowed to go into the ground directly to recharge ground water.