Grade 6 Separation of Substances Worksheets

A. Answer the following questions in short:

1. Why do we need to separate different components of a mixture ? Give two examples.
2. What is winnowing? Where is it used?
3. How will you separate husk or dirt particles from a given sample of pulses before cooking?
4. What is sieving? Where is it used?
5. How will you separate sand and water from their mixture?
6. Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?
7. How would you obtain clean water from a sample of muddy water?
8. Lemonade is prepared by mixing lemon juice and sugar in water. You wish to add ice to cool it. Should you add ice to the lemonade before or after dissolving sugar? In which case would it be possible to dissolve more sugar?
9. Why do we need water filters at our homes?
10. Why do our wet clothes dry faster during summer than winter?

B. Fill in the Blanks:

1. The method of separating seeds of paddy from its stalks is called …… .
2. When milk, cooled after boiling, is poured onto a piece of cloth the cream (malai) is left behind on it. This process of separating cream from milk is an example of …… .
3. Salt is obtained from seawater by the process of …… .
4. Impurities settled at the bottom when muddy water was kept overnight in a bucket. The clean water was then poured off from the top. The process of separation used in this example is called …….. .
5. Mist is a …… mixture.

C. State True or False:

1. A mixture of milk and water can be separated by filtration. …….
2. A mixture of powdered salt and sugar can be separated by the process of winnowing. ……..
3. Separation of sugar from tea can be done with filtration. ……
4. Grain and husk can be separated with the process of decantation. ……
5. Winnowing is used to separate grain from stalks by hitting them against any hard surface. ……..

D. Tick (✓) the Correct Option:

1. The method of separating seeds of paddy from their stalks is called:
(a) sieving
(b) winnowing
(c) threshing
(d) magnetic separation

2. …….. is used to separate a mixture of wheat and husk.
(a) Magnetic separation
(b) Threshing
(c) Winnowing
(d) Sieving

3. Which of the following is a homogeneous mixture?
(a) An oil-water mixture
(b) A sand-water
(c) Mist
(d) A nitrogen-oxygen mixture

4. Which of the following is a heterogeneous mixture?
(a) Air
(b) A fizzy drink
(c) A salt solution
(d) A salt-pepper mixture

5. Which of the following method is used to separate butter from curd?
(a) Evaporation
(b) Centrifugation
(c) Filtration
(d) Condensation

E. Classify the following under the correct category:
gold, copper sulphate, cold drinks, mango juice, water, sugar solution, pond water, common salt, air

Pure Substances	Mixtures

F. Match the following:

'A'	'B'
1. A chalk-water mixture	a. A gaseous mixture
2. A glucose solution	b. A solid-gas mixture
3. A fizzy drink	c. A homogeneous solid-liquid mixture
4. Smoke	d. A heterogeneous solid-liquid mixture
5. Air	e. A gas-liquid mixture

G. Observe the diagram(s) given below and name the process used:

(a) 

(b) 

(c) 

(d) 

H. In Column I of Table are given a few processes of separation. The purpose of separation and the way separated components are used is mentioned in Column II and III respectively. However, the information given in Columns II and III is jumbled up. Can you match each process with its purpose and the way separated components are used?

I. Separation process	II. Purpose for which we do the separation	III. What do we do with the separated components?
(1) Separate stones from rice	(a) To separate two different, but useful components.	(i) We throw away the soild component.
(2) Churning milk to obtain butter	(b) To remove non-useful components.	(ii) We throw away the impurities.
(3) Separate tea leaves	(c) To remove impurities or harmful components.	(iii) We use both the components.