Std- VIII

Bengali Literature

* শিশুপ্রকৃতির নানাদিক
  শব্দার্থ, প্রশ্নের উত্তর লেখা

* বাংলা নববর্ষ
  প্রশ্নের উত্তর লেখা

* কুমার কবিতার মূলভাব লেখা, শব্দার্থ লেখা

Bengali Language

* একটি শব্দের বিপরীতার্থক প্রয়োগ অর্থযুক্ত বাক্য লেখা : হাত, ডান, বুক

* ভাবসম্প্রসারণ লেখ : নীচু পাহাড় কাছে ছাড়িয়া দিঃশ্বাস
  ও পাড়েতে সর্বসুখ আমার বিশ্বাস

* পরিবেশের ভারসাম্য রক্ষার জন্য বনমহোৎসবের গুরুত্ব উল্লেখ করে একটি প্রতিবেদন রচনা করো।

সবকিছু Bengali H.W খাতায় লিখবে।

Worksheet 1
Grade 8
Subject: Chemistry
Unit 4: The structures of the atom

Q1. An element X exists in two isotopic forms as shown in the table. What is its relative atomic mass?

Isotope	Abundances
^{146}X	25%
^{154}X	75%

Q2. Define the following terms:

Proton:

_____

Neutron:

_____

Valence electron:

_____

Isotope:

_____

Q3. Write down the electronic configurations of the following elements:

a. Mg=

b. P=

c. Cl=

Q4. Some elements denoted by the letters A to G

A3, B10, C9, D17, E11, F18, G20

a. Which of these have complete outermost shell?

_____

b. Which of these are in group I periodic tables?

_____

c. Which of these are in group II periodic tables?

_____

d. Which of these are in group VII periodic tables?

_____

e. Which of these are in group 0 periodic tables?

_____

Worksheet 2
Grade 8
Subject: Chemistry
Unit 5: Elements, Compounds and Mixtures

Q1. State four differences between a mixture and compound.

Mixture	Compound

Q2. Define the following terms:

Atom:

_____

Molecule:

_____

Element:

_____

Q3. Classify these naturally occurring substances as elements, mixtures or compounds.

Petroleum	
Common salt	
Oxygen gas	
Sand	
Soil	
Sugar	
Carbon dioxide	
Sea water	
Coal	
Air	

Q4. In the following chemical formulae, state the names of the different present and the number of atoms of each element.

NH_3	
H_2SO_4	
$CaCO_3$	
CH_4	
$Fe_2O_3.H_2O$	
$CuSO_4.5H_2O$	
$Ca(OH)_2$	
$Al(NO_3)_3$	
$Na_2CO_3.10H_2O$	
$Fe_2(SO_4)_3$	

Worksheet 1
Grade 8
Subject: ICT
Chapter 1: Binary number & Hexadecimal

Q1. Convert 100010 to denary number

_____

_____

_____

Q2.Convert 256 to binary number

_____

_____

_____

_____

_____

Q3. Convert 56A9 to binary number

_____

_____

Q4. Convert 1632 to hexadecimal number

_____

_____

_____

_____

Q5. Define the following terms:

MAC address

_____

HTML

_____

Q6. What is assembly language and machine code?

Assembly language

_____

Machine code

_____

Worksheet 2
Grade 8
Subject: ICT
Chapter 2: Data transmission

Q1.What is serial data transmission? Give example.

_____

_____

Q2.What is parallel data transmission? Give example.

_____

_____

Q3. What is half duplex data transmission?

_____

_____

Q4. What is full duplex data transmission?

_____

_____

Q5. What is simplex data transmission?

_____

_____

Q6. What is USB? Write two uses of it.

_____

_____

_____

_____

Q7. What is synchronous data transmission?

_____

_____

Q8. What is asynchronous data transmission?

_____

_____

Std-8
Add Math

Chap-8.2&8.3 all
Math-D
Chap-14(marked)

Orchid International School Dhaka

STD-VIII- Bio (H.W)

Day 1

-The structure of mammalian skin. (Reading)

-Draw fig- 12.4

Day 2

-Name three structure in the skin that are concerned with temperature. State it's function and briefly explain process of temperature regulation. (Written work)

Day 3

-What does our nervous system comprise? What is the structure and function of nervous tissue? (Read)

Day 4

-Explain excretion, metabolism and egestion. Distinguish between anabolic and catabolic activities. (Written)

-Draw a diagram to explain the formation of urine. (fig-11.5)

Day 5

-Write about the structure of Nephron with proper diagram.

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Grade - VIII

Subject - English Language II

Write on the following essays:

- A day you spent in strange surroundings.
- An unusual person I have met recently.
- Write about a time when the illness of someone you know caused great problem.
- Facebook should be banned - Do you agree?

Orchid International School Dhaka

Grade - VIII

Subject - English Literature

Go through the following topics and summarize them.

- The bread eaters
- The next temptation
- The Card player

Orchid International School Dhaka (OISD)

Worksheet

Subject: Physics ***Topic: Heat Capacity*** ***Class: Std. VIII***

Specific latent heat

When a solid is heated, it may melt and change its state from solid to liquid. If ice is heated it becomes water. The opposite process, freezing, occurs when a liquid solidifies.

A pure substance melts at a definite temperature, called the melting point; it solidifies at the same temperature – sometimes then called the freezing point.

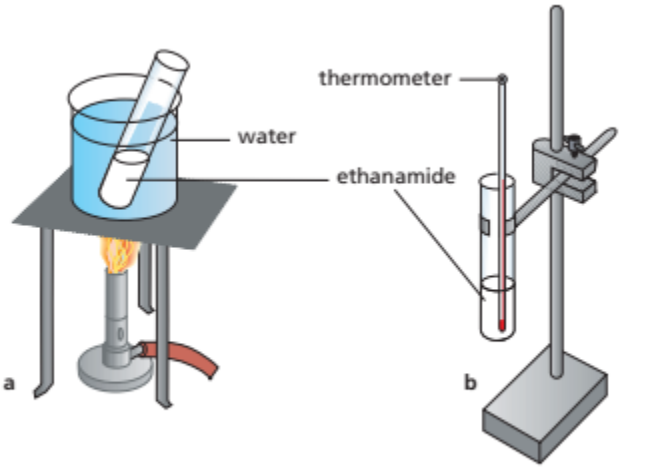

Figure 22.1

Cooling curve of ethanamide

Half fi ll a test tube with ethanamide (acetamide) and place it in a beaker of water (Figure 22.1a). Heat the water until all the ethanamide has melted and its temperature reaches about 90 °C. Remove the test tube and arrange it as in Figure 22.1b, with a thermometer in the liquid ethanamide. Record the temperature every minute until it has fallen to 70 °C. Plot a cooling curve of temperature against time. What is the freezing (melting) point of ethanamide?

●Specific latent heat of fusion

The previous experiment shows that the temperature of liquid ethanamide falls until it starts to solidify (at 82 °C) and remains constant until it has all solidified. The cooling curve in Figure 22.2 is for a pure substance; the fl at part

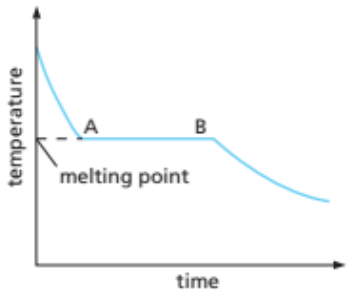

Figure 22.2 Cooling curve

AB occurs at the melting point when the substance is solidifying.

During solidification a substance loses heat to its surroundings but its temperature does not fall. Conversely when a solid is melting, the heat supplied does not cause a temperature rise; heat is added but the substance does not get hotter. For example, the temperature of a well-stirred ice–water mixture remains at 0 °C until all the ice is melted. Heat that is absorbed by a solid during melting or given out by a liquid during solidification is called latent heat of fusion. 'Latent' means hidden and 'fusion' means melting. Latent heat does not cause a temperature change; it seems to disappear.

The specific latent heat of fusion (lf) of a substance is the quantity of heat needed to change unit mass from solid to liquid without temperature change.

Specific latent heat is measured in J/kg or J/g. In general, the quantity of heat Q to change a mass m from solid to liquid is given by

$$Q = m \times l$$

Specific latent heat of vaporisation

Latent heat is also needed to change a liquid into a vapour. The reading of a thermometer placed in water that is boiling remains constant at 100 °C even though heat, called **latent heat of vaporisation**, is still being absorbed by the water from whatever is heating it. When steam condenses to form water, latent heat is given out.

The **specific latent heat of vaporisation** (l_v) of a substance is the quantity of heat needed to change unit mass from liquid to vapour without change of temperature.

Again, the specifi c latent heat is measured in J/kg or J/g. In general, the quantity of heat Q to change a mass m from liquid to vapour is given by

$$Q = m \times l_v$$

Condensation and solidification

In **condensation**, a gas changes to a liquid state and latent heat of vaporisation is released. In **solidification**, a liquid changes to a solid and latent heat of fusion is given out. In each case the potential energy of the molecules decreases. Condensation of steam is easily achieved by contact with a cold surface, for example a cold windowpane. In Figure 22.5, the latent heat released when the steam condenses to water is transferred to the cold water flowing through the condenser.

Worked examples

The values in Table 22.2 are required.

Table 22.2

	Water	Ice	Aluminium
Specific heat capacity/J/(g °C)	4.2	2.0	0.90
Specific latent heat/J/g	2300	340	

Q.1 How much heat is needed to change 20 g of ice at 0 °C to steam at 100 °C?
There are three stages in the change.
Heat to change 20 g **ice at 0 °C** to **water at 0 °C**
= mass of ice × specific latent heat of ice
= 20 × 340 J/g = 6800 J
Heat to change 20 g **water at 0 °C** to **water at 100 °C**
= mass of water × specific heat capacity of water
× temperature rise
= 20 g × 4.2 J/(g °C) × 100 °C = 8400 J
Heat to change 20 g **water at 100 °C** to **steam at 100 °C**
= mass of water × specific latent heat of steam
= 20 g × 2300 J/g = 46 000 J

∴ Total heat supplied = 6800 + 8400 + 46 000 = 61 200 J

Q.2 An aluminium can of mass 100 g contains 200 g of water. Both, initially at 15 °C, are placed in a freezer at -5.0 °C. Calculate the quantity of heat that has to be removed from the water and the can for their temperatures to fall to -5.0 °C.

Heat lost by **can** in falling from 15 °C to -5.0 °C
= mass of can × specific heat capacity of aluminium × temperature fall
= 100 g × 0.90 J/(g °C) × (15-[-5]) °C
= 100 g × 0.90 J/(g °C) × 20 °C
= 1800 J
Heat lost by **water** in falling from 15 °C to 0 °C
= mass of water × specific heat capacity of water × temperature fall
= 200 g × 4.2 J/(g °C) × 15 °C
= 12 600 J
Heat lost by **water** at 0 °C freezing to ice at 0 °C
= mass of water × specific latent heat of ice
= 200 g × 340 J/g

= 68 000 J

Heat lost by **ice** in falling from 0 ^{o}C to -5.0 ^{o}C

= mass of ice × specific heat capacity of ice × temperature fall

= 200 g × 2.0 J/(g ^{o}C) × 5.0 ^{o}C

= 2000 J

∴ Total heat removed = 1800 + 12 600 + 68 000 + 2000 = 84 400 J