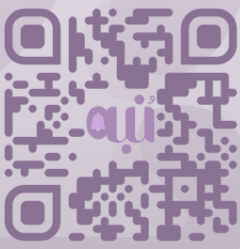


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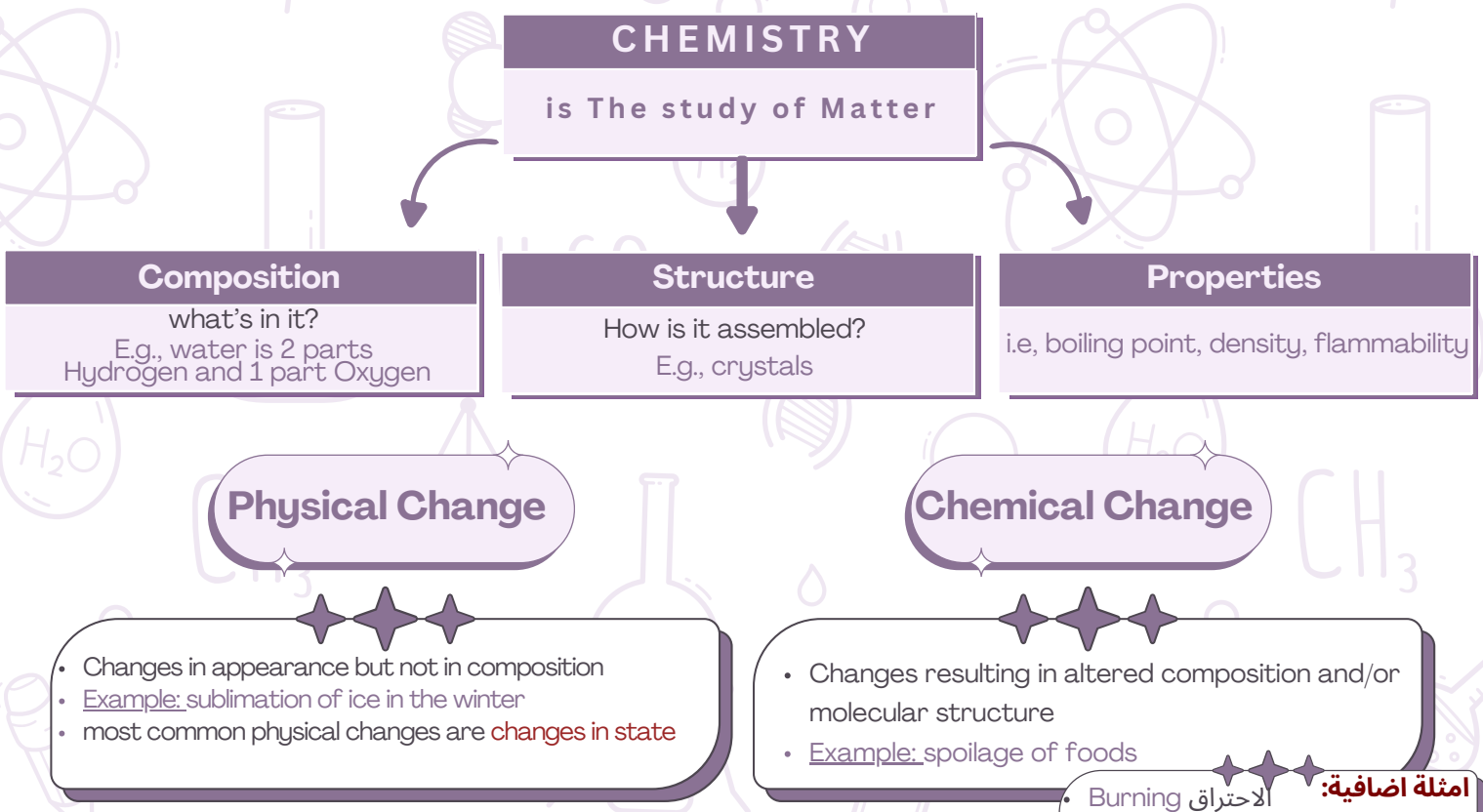
# SUMMARY CHEMISTRY CHAPTER 1

## MATTER, ENERGY AND MEASUREMENT



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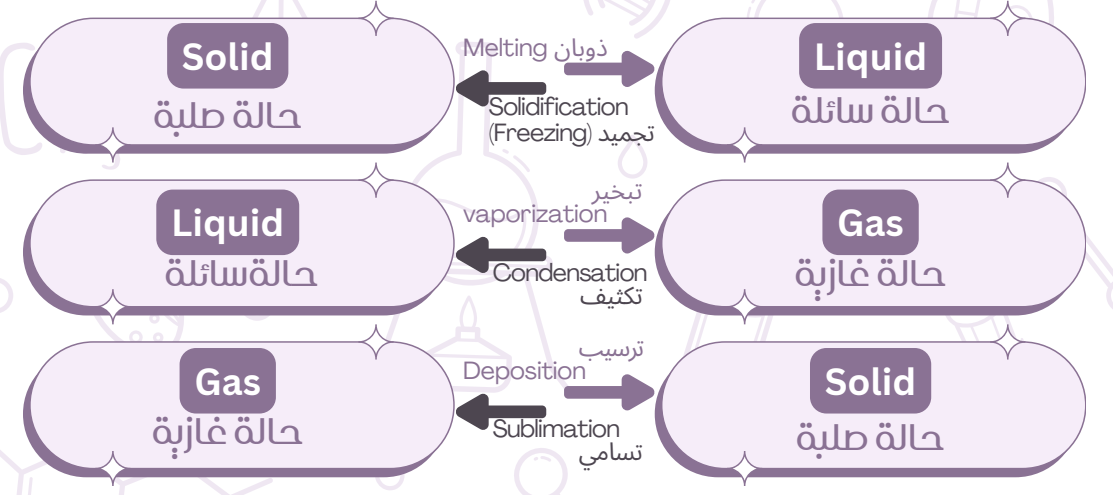


**Matter**

- Is anything that **occupies space** and **has mass**
- Is characterized by its physical properties and chemical properties.

**The states of matter:**

- |   |                          |
|---|--------------------------|
| 1. Sublimation: Change of matter from <b>solid</b> to <u>gas</u>                  | التسامي: من صلب إلى غاز  |
| 2. Deposition: Change of matter from <b>gas</b> to <u>solid</u>                   | الترسيب: من غاز إلى صلب  |
| 3. Vaporization: Change of matter from <b>liquid</b> to <u>gas</u>                | التبخير: من سائل الي غاز |
| 4. Condensation: Change of matter from <b>gas</b> to <u>liquid</u>                | التكثيف: من غاز الي سائل |
| 5. Melting: Change of matter from <b>solid</b> to <u>liquid</u>                   | الذوبان: من صلب الي سائل |
| 6. Solidification (Freezing): Change of matter from <b>liquid</b> to <u>solid</u> | التجميد: من سائل الي صلب |



# CHAPTER 1 QUESTIONS



Q1: which of the following is a physical change?

1. spoilage of food
2. **freezing**
3. burning
4. rusting

Q2: the change from solid state to liquid state is called?

1. boiling
2. condensing
3. **melting**
4. subliming

Q3: the change from gaseous state to solid state is called ?

1. **deposition**
2. sedimentation
3. sublimation
4. solidification

Q4: which of the following is a chemical changes ?

1. burning of wood
2. sublimation
3. melting of an ice cube
4. **evaporation**

Q5: burning wood is an example?

1. physical change
2. **chemical change**
3. chemical property
4. physical property

Q6: which of the following is chemical change?

1. almaking ice cubes
2. boiling oil
3. melting lead
4. **burning gasoline**

Q7: the rusting of iron is a change?

1. **chemical**
2. physical
3. both a and b
4. none of the above

Q8: which of the following is a physical change?

1. spoilage of food
2. Rusting
3. Burning
4. **condensation**

Q9: the change from solid to gaseous state e is called ?

1. **sublimation**
2. sedimentation
3. solidification
4. condensation

Q10: one of the following is chemical change ?

1. **burning of carbon**
2. sublimation of ice
3. freezing of water
4. condensation

# CHAPTER 1 QUESTIONS



Q11: Defined matter?

1. the smallest particle of an element
2. the smallest particle of an compound
3. **anything that has mass and occupies space**
4. a positive charge particle

Q12: all the following are correct except?

1. **chemistry is the study of motion**
2. chemistry is the study of structure
3. chemistry is the study of composition
4. chemistry is the study of properties

Q13: chemistry is the study of .....?

1. properties
2. structure
3. **all the above**
4. composition

Q14: changes in appearance but not composition?

1. none of above
2. **physical change**
3. chemical change

Q15: one of the following is physical change?

1. spoilage food
2. **sublimation**
3. burring
4. resting

Q16: one of the following is chemical change?

1. sublimation
2. **burning**
3. melting
4. condensation

Q17: rotting of meat?

1. **chemical change**
2. none of above
3. physical change

Q18: the following are physical change expect ?

1. **burring**
2. evaporation
3. condensation

Q19: in which of the following pairs of physical changes the final state is the same?

1. condensation and freezing
2. deposition and melting
3. **sublimation and vaporization**
4. deposition and condensation

Q20: the change from gaseous state to liquid state ? is called

1. sublimation
2. sedimentation
3. solidification
4. **condensation**

Q21: the change from solid to gaseous state is called ?

1. sedimentation
2. **sublimation**
3. condensation
4. solidification

Q22: vaporization is the change of matter from ....?

1. **liquid to gas**
2. gas to solid
3. solid to liquid
4. liquid to solid

# CHAPTER 1 QUESTIONS



Q23: condensation is the change from ..... State to ....?

1. gas to liquid
2. liquid to gas
3. solid to liquid
4. liquid to solid

Q24: deposition is the change from ?

1. liquid to gas
2. gas to solid
3. liquid to solid
4. solid to liquid

Q25: Change the material from the gaseous state to the solid state without passing through the liquid ?

1. condensation
2. deposition
3. sublimation

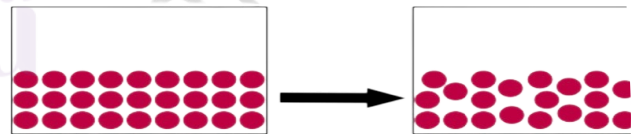
Q26: The diagram shows the changes in state of water (H<sub>2</sub>O). What is the process X called ?

1. freezing
2. evaporation
3. boiling
4. melting



Q27: Which change of state occurs when particles in a solid begin to move slowly past each other?

1. boiling
2. subliming
3. melting
4. condensing



Q28: The diagram shows the changes in state of water (H<sub>2</sub>O). What is the process W called?

1. freezing
2. evaporation
3. boiling
4. Condensation



Q29: dissolving salt in water is a ?

1. physical change
2. chemical change
3. none of the above
4. no change

Q30: which of the change following is an example is an example of physical ?

1. sublimation of ice in winter
2. melting of ice
3. dissolution of salt in water
4. all of these are example of physical change

Q31: all of these are physical changes expect ?

1. dissolution
2. evaporation
3. burning
4. condensation

Q32: all of these are chemical changes expect ?

1. burring
2. rotting of meat
3. sublimation
4. rusting

**Measurement** Is finding a **number** that shows the size or amount of something.

Are routine for healthcare professionals who use:

1. Weight
2. Blood pressure
3. Pulse
4. Height
5. Temperature

Any measurement consists **two** parts:

**Number**

**Unit**

- Reporting the value of a measurement is meaningless **without its unit**. لا يتضح الرقم المقاس الا اذا كان متبوع بوحدته
- For example, if you were told to give a patient an aspirin dosage of 325

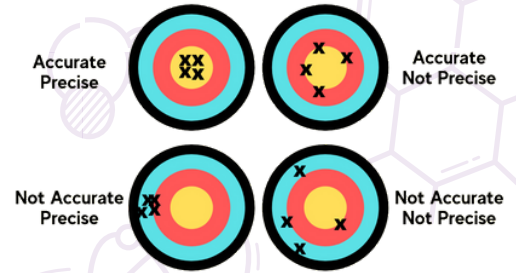
- The basic quantity of **mass, volume, time**, or whatever quantity is being measured.
- must also specify the units of that measurement.

## Precise

How close a set of measurements are to each other  
لتحقيقه يجب أن تكون جميع النتائج قريبة لبعضها البعض لكن ما يشترط  
تكون قريبة للقيمة الصحيحة

## Accuracy

How close a measurement is to the true value  
لتحقيقه يجب أن تكون جميع النتائج تكون للقيمة الحقيقية





# CHAPTER 1 QUESTIONS



Q1: if the actual results is 200 the results (199, 201, 501 and 98) are?

1. **not accurate and not precise**
2. accurate
3. accurate and precise
4. precise

Q2: if the actual results is 100 the obtained results (99/64/37/15)?

1. accurate
2. precise
3. accurate and precise
4. **none of the above**

Q3: if a measurement was precise, but not accurate, it was ?

1. **repeatable, but not close to the true value**
2. close to the true value, but not repeatable
3. repeatable, and close to the true value

Q4: accuracy is ?

1. the line on measuring device
2. how close measurements are to each other
3. **how close measurements is to a right answer**
4. anything with mass and volume

Q5: The diagram shows?

1. **good precision and good accurate**
2. good precise and poor accurate
3. poor precise and poor accurate
4. poor precise and good accurate



Q6: if the actual results is 150 the results (100, 99, 98 and 101) are?

1. accurate
2. not accurate and not precise
3. accurate and precise
4. **precise**

Q7: if the actual results is 25 the results (94, 56, 85 and 93) are?

1. accurate
2. **not accurate and not precise**
3. precise
4. accurate and precise

Q8: precise and not accurate?

1. close to each other and to the true value
2. **close to each other and far from the true value**
3. close to the true value, but not near to each other

Q9: if a measurement was precise, but not accurate, it was?

1. **repeatable, but not close to the true value**
2. close to the true value, but not repeatable
3. repeatable, and close to the true value

# CHAPTER 1 QUESTIONS



Q10: if the actual results is 25, the results (94 19695 and 93)?

1. accurate and precise
2. **precise**
3. accurate
4. not accurate and not precise

Q11: the following data were obtained from measuring temperature :  
(30.0, 29.9, 30, 30.2 ,29.8) if the true value was 40.0

1. accurate
2. not accurate and not precise
3. accurate and precise
4. **precise**

Q12: if the true result is 70 the result 100, 10, 160, and 700 are ?

1. **not accurate and not precise**
2. accurate
3. accurate and precise
4. Precise

Q13: if the actual result is 100 the result 100, 99, 97, and 101 are?

1. not accurate and not precise
2. accurate
3. **accurate and precise**
4. Precise

Q14: if the true value is 200 the result 100, 99, 97, and 101 are?

1. accurate
2. not accurate and not precise
3. **Precise**

Q15: if the actual results is 100 the obtained results (99/64/37/15)?

1. **not accurate and not precise**
2. precise
3. accurate
4. not accurate but precise

Q16: measurement that closely agrees with the true value is said to be?

1. significant
2. precise
3. **accurate**



## Differences:

Physical quantity	Metric System	SI
Length	Meter (m)	Meter (m)
Mass	Gram (gm)	Kilogram (kg)
Time	Second (s)	Second (s)
Temperature	Celsius (°C)	Kelvin (k)
Amount of substance	Mole (mol)	Mole (mol)
Energy	Calorie (cal)	Calorie (cal)
Volume	Liter (L)	Liter (L)

### Metric System

It is used to **measure everyday things** such as the mass of a sack of flour, the height of a person, the speed of a car, and the volume of fuel in its tank. It is also used in science, industry and trade.

### International system of units (SI)

SI based on the metric system and uses some of metric units **Metric System** بالشابتر بتركز على **Metric System** اما الSI بس اللي بالأحمر بنذكر.

# Base Units in the Metric System

## Length

- The base unit of length in the metric system is the **meter (m)**.  
بالنظام المتري وحدة الطول الاساسية (المتر)
- The **three most common units** derived from a **meter** are the **kilometer (km)**,  
الوحدات الاكثر شيوعا والمشتقة من المتر: كيلومتر - سنتيمتر - المليمتر
- centimeter (cm)**, and **millimeter (mm)**.

$$1.000 \text{ m} = 1 \text{ km}$$

$$1 \text{ m} = 100 \text{ cm}$$

$$1 \text{ m} = 1.000 \text{ mm}$$

- In the English system we use:

1. Inch
2. Foot
3. Yard
4. Mile.

في النظام الإنجليزي نستخدم:  
1. بوصة  
2. قدم  
3. ياردة  
4. ميل

- Centimeter (cm)**: is a unit of length.

## Volume

- Volume** is the **space occupied** by a substance.
- The basic unit of volume in the metric system is the **liter (L)**
- Liter** is the **volume occupied** by **one** cubic decimeter.
- cubic centimeter (cm<sup>3</sup> or cc)**: is a unit of volume.
- volume = 1 cm × 1 cm × 1 cm = 1 cm<sup>3</sup>
- The Three common units derived from a **liter** used in medicine and laboratory research are the **deciliter (dL)**, **milliliter (mL)**, and **microliter (μL)**.

$$1 \text{ L} = 1 \text{ dm}^3$$

$$1 \text{ L} = 100 \text{ mL}$$

$$1 \text{ L} = 1000 \text{ cm}^3$$

$$1 \text{ mL} = 1 \text{ cm}^3$$

! سم وحدة الطول - سم<sup>3</sup> وحدة الحجم !

# Base Units in the Metric System

## Mass

1. Mass the **quantity of matter** in an **object**

is **independent** of location

$$1 \text{ KG} = 1000 \text{ G}$$

$$1 \text{ G} = 1000 \text{ MG}$$

$$1 \text{ ML} = 0.001 \text{ G}$$

## Weight

Weight:

1. Is the **intensity of the force** imposed on this object by the local gravitational field
2. Is the **result of mass** acted upon by **gravity**
3. Is the **force of a mass** experiences under the pull gravit .

Weight **depends** on location; it depends on the **force of gravity** at the particular location.

**For example** you are weightless in space, and would weigh only 1/6 your earth weight on the moon.

## Time

- The base unit (SI) is the **second**.

$$60 \text{ SEC} = 1 \text{ MIN}$$

$$60 \text{ MIN} = 1 \text{ H}$$

## Tempressure

### 1. Celsius

Is based on the **properties of water**.

**0°C** is the freezing point of water.

**100°C** is the boiling point of water.

Absolute Zero = -273

### 2. Kelvin

Is the **SI** unit of **temperature**.

There are **no negative** Kelvin temperatures.

Absolute Zero = 0

$$K = ^\circ C + 273.15$$

### 3. Fahrenheit

Is **not used** in **scientific measurements**

Absolute Zero = -495

$$^\circ F = 9/5 (^\circ C) + 32$$

$$^\circ C = 5/9 (^\circ F - 32)$$

# CHAPTER 1 QUESTIONS



Q1: the unit of temperature in metric system is .....

1. none of the above
2. kelvin
3. Fahrenheit
4. **Celsius**

Q2: which of the following depend on location?

1. mass
2. **weight**
3. torque

Q3: the normal human body temperature is 37 **C**, in **Fahrenheit** scale it will be?

$$F = 9/5 (c) + 32 \rightarrow = 9/5 \times (37) + 32 = \mathbf{98.6}$$

1. **98.6 F**
2. 22.8 F
3. 62.3 F
4. 52.f F

Q4: the 40 **C** is equal to ?

$$F = 9/5 (c) + 32 \rightarrow = 9/5 \times (40) + 32 = \mathbf{104}$$

1. 73.8 F
2. **104 F**
3. 80 F
4. 54.22 F

Q5: mass is the?

1. **quantity of matter in an object**
2. the intensity of the force
3. the density of substance
4. all of the above

Q6: the weight of a substance is not dependent on its location?

1. all the above
2. true
3. **false**
4. none of the above

Q7: If a person weighs 30 N on earth, then what will be his weight on..... the moon?

1. **5 N**
2. 30 kg
3. 5 kg

Q8: The amount of matter in an object is ?

1. weight
2. **mass**
3. force
4. pressure

Q9: A child has a mass of 30 Kg on Earth. If the gravity on Moon is one sixth that of the Earth what is the mass of the child on Moon? 1

1. 5 Kg
2. **30 Kg**
3. 0 Kg
4. 180 Kg

Q10: If a person mass 30 kg on earth, then what will be his weight on the moon?

1. **50 N**
2. 5 kg
3. 5 N
4. 30 kg

# CHAPTER 1 QUESTIONS



Q11: If an object mass =30 Kg on the Earth, what would be its gravitational force on Earth?

1. 3000N
2. 300 kg
3. 30 N
4. **300 N**

Q12: The mass of a piece of stone on the Earth's surface is smaller than its mass on the moon's surface?

1. Right
2. **Wrong**

Q13: convert 20 hours to second?

1. 0.66
2. **72000**
3. 600

Q14: 20 hour to kilo second ?

1. 0.00005
2. 5.555
3. **72**

Q15: convert 12 kilosecond to hours?

1. 43 \*105 hours
2. 43.2 hours
3. **3.33 hours**

Q16: the temperature of  $-200.0\text{ }^{\circ}\text{C}$  is equal to .....?

$$k = c + 273.15 \rightarrow k = -200 + 273.15 = \mathbf{73.15}$$

1. 137 k
2. 135
3. **73k**

Q17:  $0.00\text{ }^{\circ}\text{K}$  to  $^{\circ}\text{F}$  (coldest temperature possible - also known as absolute zero)? **الصفر المطلق**

1. **-459.67 f**
2. 459.67 f
3. 595 f

Q18: A person with a body temperature of  $36\text{ }^{\circ}\text{C}$ , what is the body temperature in  $^{\circ}\text{F}$ ?

$$F = 9/5(c) + 32 \rightarrow = 9/5 (36) + 32 = \mathbf{96.8}$$

1. 89.6
2. 32.2
3. 8.26
4. **96.8**

Q19: convert 320 **F** to **kelvin** ?

$$c = 5/9 (f-32) \rightarrow c = 5/9 (320-32) = 160\text{ }^{\circ}\text{C}$$

$$k = c + 273.15 \rightarrow k = 160 + 273.15 = \mathbf{433}$$

الخطوة الاولى احول فهرنهايت الى سلفيوس

الخطوة الثانية احول سلفيوس الى كلفن

1. 160
2. 791
3. 518
4. **433**

Q20: if the human body temperature is  $99.5\text{ }^{\circ}\text{F}$ , what is the equivalent temperature on the **Celsius** scale ?

$$C = 5/9 (f-32) \rightarrow 5/9 (99.5 - 32) = \mathbf{37.5}$$

1. 109.48  $^{\circ}\text{C}$
2. 51.2  $^{\circ}\text{C}$
3. 38.0  $^{\circ}\text{C}$
4. **37.5  $^{\circ}\text{C}$**

Q21: what is the standard SI units for volume?

1. cubic centimeter
2. milliliter
3. **liter**

# CHAPTER 1 QUESTIONS



Q22: a child has a temperature of 104 F°, convert this temperature to kelvin  
 $c = 5/9 (f - 32) \rightarrow c = 5/9 (104 - 32) = 40 \text{ C}$  الخطوة الاولى احول فهرنهايت الى سلفيوس  
 $k = c + 273.15 \rightarrow k = 40 + 273.15 = 313.15$  الخطوة الثانية احول سلفيوس الى كلفن

- 1.40.00k
- 2.474.80k
- 3.313.5 k
- 4.299.35k

Q23: Bird with body temperature 30 c what is the body temperature in Fahrenheit?  
 $F = 9/5 (c) + 32 \rightarrow = 9/5 \times (30) + 32 = 86$

- 1.80 F
- 2.67 F
- 3.82 F
- 4.86 F

Q24: convert 150 F to K?

$c = 5/9 (f - 32) \rightarrow c = 5/9 (150 - 32) = 65.5 \text{ C}$  الخطوة الاولى احول فهرنهايت الى سلفيوس  
 $k = c + 273.15 \rightarrow k = 65.5 + 273.15 = 338.7$  الخطوة الثانية احول سلفيوس الى كلفن

- 1.66.4 k
- 2.399.8 K
- 3.338.7 K
- 4.581.4 K

Q25: the base unit of length in the metric system is the?

- 1.kilogram
- 2.liter
- 3.meter
- 4.kelvin

Q26: give the SI units for expensing these: (a) amount of substance, (b) length, (c)mass, (d) temperature ?

- 1.(a) m (b) m<sup>2</sup> (c) g (d) °C
- 2.(a) mol (b) m (c) kg (d) k
- 3.(a) mol (b) m<sup>3</sup> (c) kg (d) °F
- 4.(a) km (b) l (c) g (d) k

Q27: which of the following is not SI base unit ?

- 1.kilogram
- 2.mole
- 3.meter
- 4.degree Celsius

Q28: what is the standard SI unit for mass?

- 1.kilogram
- 2.gram
- 3.pound
- 4.ton

Q29: the SI unit of temperature is.....?

- 1.pound
- 2.kelvin
- 3.Fahrenheit
- 4.Celsius

Q30: the metric unit for mass is .....

- 1.pound
- 2.gram
- 3.kilogram
- 4.ton

Q31: the metric system for temperature ?

- 1.kelvin
- 2.pound
- 3.Celsius
- 4.Fahrenheit

Q32: the basic unit of time according to SI system is .....

- 1.min
- 2.hour
- 3.day
- 4.second

## Prefixes:

In both the **SI** and **metric systems** to convert from **larger or smaller unit** we use 10, 100, 1/10, 1/100 or other power of 10.

البادئات: في كل من النظام الدولي للوحدات والنظام المتري، لتحويل وحدة أكبر أو أصغر نستخدم مضاعفات العدد 10

PREFIX	SYMBOL	MEANING	EXAMPLE
Tera-	T	1,000,000,000,000, or $10^{12}$	1 terameter (Tm) = $1 \times 10^{12}$ m
Giga-	G	1,000,000,000, or $10^9$	1 gigameter (Gm) = $1 \times 10^9$ m
Mega-	M	1,000,000, or $10^6$	1 megameter (Mm) = $1 \times 10^6$ m
Kilo-	k	1,000, or $10^3$	1 kilometer (km) = $1 \times 10^3$ m
Deci-	d	1/10, or $10^{-1}$	1 decimeter (dm) = 0.1 m
Centi-	c	1/100, or $10^{-2}$	1 centimeter (cm) = 0.01 m
Milli-	m	1/1,000, or $10^{-3}$	1 millimeter (mm) = 0.001 m
Micro-	$\mu$	1/1,000,000, or $10^{-6}$	1 micrometer ( $\mu$ m) = $1 \times 10^{-6}$ m
Nano-	n	1/1,000,000,000, or $10^{-9}$	1 nanometer (nm) = $1 \times 10^{-9}$ m
Pico-	p	1/1,000,000,000,000, or $10^{-12}$	1 picometer (pm) = $1 \times 10^{-12}$ m

1 KM= 1000 METERS

1 CM= 0.01 METER

1 NM= 10<sup>-9</sup> METER

**Specific heat** The **amount** of **heat** necessary to **raise** the **temperature** of **1 g** of a substance **by 1°C**.

**Amount of heat** Change when matter is **heated** or **cooled**.

**Amount of heat** = Specific heat (SH) x mass x Chang in temperature ( $T_2 - T_1$ )

كمية الحرارة = الحرارة النوعية × الكتلة × التغير في درجة الحرارة

ملاحظة: 1- الوحدة cal واحول لKcal (اضرب الناتج ب1000)

2- وقت التعويض لازم درجة الحرارة يساويين "يعني لو بالمعطيات كانت درجة الحرارة بالكالفن احوله سلزيوس قبل أعوض".

## DENSITY AND SPECIFIC GRAVITY

### Density

The density of a sample of matter is defined as the **mass per unit volume**

◦ **units** (g/ml)

$$d = \frac{m}{v}$$

### Specific Gravity

Specific gravity: the **density of a substance compared to water** as a standard

◦ it has **no units** (it is dimensionless)

$$\text{Specific gravity} = \frac{\text{density of substance}}{\text{density of water}}$$

## Chemical Connections Drug Dosage and Body Mass

Drug dosage are prescribed on the bases of:

**body mass**

كتلة الجسم

**Age**

العمر

# CHAPTER 1 QUESTIONS



Q1: if 52 ml of liquid has a mass of 11.5 g what is its density?

1. 0.22 g/l
2. **0.22 g/ml**
3. 2.25 g/ml
4. 2.5 cm \ml

Q2: kilo, mega, giga, are example of ?

1. basic unit
2. **prefixed**
3. quantities
4. suffix

Q3: mass, time, weight example of ?

1. suffix
2. prefix
3. unit
4. **quantity**

Q4: how many calories are required to heat 40 g of matter from 130 to 360 C (specific heat = 0.22)?

1. **2.024 Kcal**
2. 3 cal
3. 5 kcal

Q5: convert 1472 f to C ?

1. 518
2. 791
3. 160
4. **800**

Q6: 351 K to F° (coldest temperature possible - also known as absolute zero) ?

1. **172 f**
2. 459.67 f
3. 595 f

Q7: what is the amount of heat required to heat 3040 g of iron from 115 C to 275 C if the specific heat of the iron is 0.11 cal / g.C° ?

1. 76.931 Kcal
2. 53404 Kcal
3. **53.504 Kcal**
4. 76931 Kcal

Q8: Density of water in g/cm<sup>3</sup> is ?

1. 100
2. 1000
3. 10
4. **1**

Q9: convert -174 F to kelvin?

1. **158.7**
2. 160
3. 791
4. 352

Q10: convert Miligram to.....gram ?

1. 0,01
2. **0.001**
3. 0,1
4. 1000

Q11: how many calories are required to raise the temperature of a 50.0 g sample of water from 20 C° to 80 C°, water has a specific heat of 1 cal / c.g ?

1. **3000 cal**
2. 5000 cal
3. 2000 cal
4. 1000 cal

Q12 : convert 0.2 decimeter to millimeter ?

1. 0.0002
2. 2000
3. **20**

Q13: IF 70.4 ml of a liquid has a mass of 40.3g, what is its density in g/ml ?

1. 0.573 ml
2. 0.57m g
3. **0.573 g/ml**
4. 2.833 g/ml



# CHAPTER 1 QUESTIONS



Q14: amount of heat = specific heat \*.....?

1. mass\* change in temperature
2. mass \* temperature
3. mass \* specific graphite
4. mass\* volume

Q15: the specific heat is ?

1. the amount of heat necessary to raise the temperature 1 kg of substance by 1k.
2. the amount of heat necessary to raise the temperature 1 g of substance by 1 c°.
3. the amount of heat necessary to raise the temperature 1 mol of substance by 1 c°.
4. the amount of heat necessary to raise the temperature 1 g of substance by 1 f°.

Q16: how many calories are requires to heat 5.0 g of copper from 20 c to 80 c? ( specific heat of f Cu = 0.092 cal\g.c)

1. 29.3 cal
2. 27.6 cal
3. 25 cal
4. 26.5 cal

Q17: What is the amount of heat required to heat 6.08 kg of iron from 215 C to 295 c, knowing that the specific heat of fe is 0.11 cal\g.c ?

1. 76.931 Kcal
2. 8.360 Kcal
3. 130.416 Kcal
4. 53.504 Kcal

Q18: ..... Is defined as the mass per unite volume ?

1. specific gravity
2. density
3. specific heat
4. weight

Q19: a person with hypothermia has a body temperature of 29.1 c.what is the body temperature in f ?

1. 48.16 f
2. 50 f
3. 84.4 f

Q20: convert 50 C to K ?

1. 500 K
2. -223,15 K
3. 323.15 K

Q21: convert-40 f to c ?

1. 32
2. -40
3. -32
4. 40

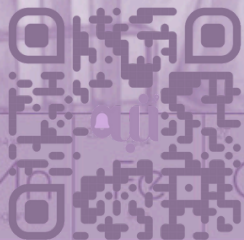
Q22: if the mass of cube were 64 g. and its volume 51 ml, what would its ?  
D mass voulme 64 51 -= 1.25

1. 0.5
2. 1.25
3. 1.0
4. 2.0

Q23: .....is the density of a substance compared to the density of water as a standard?

1. specific heat
2. specific gravity
3. amount of heat
4. hyperthermia

Thank you!



+966 50 894 0371

5	108	12	190	35	4	40026																
B	C	N	O	F	He	Helium																
11	28.09	14	28.09	16	10	2018																
Al	Si	P	S	Cl	Ne	Neon																
Aluminum	Silicon	Phosphorus	Sulfur	Chlorine	Argon	Argon																
25	58.71	28	58.71	29	63.55	30	65.38	31	69.72	32	72.64	33	74.92	34	78.97	35	79.90	36	83.80			
Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Manganese	Iron	Cobalt	Nickel	Copper	Zinc	Gallium	Germanium	Arsenic	Selenium	Bromine	Krypton	Ruthenium	Rhodium	Palladium	Silver	Cadmium	Indium	Tin	Antimony	Tellurium	Iodine	Xenon
43	106.42	47	106.42	48	106.42	49	114.82	50	118.71	51	121.76	52	127.60	53	127.60	54	127.60					
Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe											