



# Al Sharq Bright International School

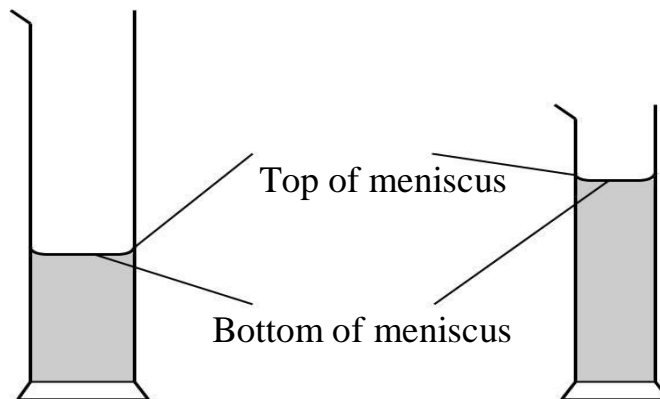
## Model Paper for Final Exam 2017-2018

Name: \_\_\_\_\_ Subject: Physics Class: 10A Date: \_\_\_\_\_

### Paper – 2

#### A. Multiple choice questions:

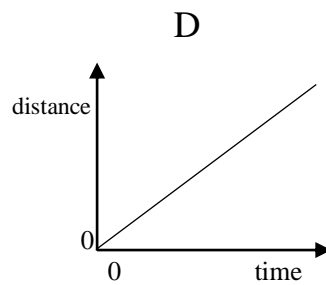
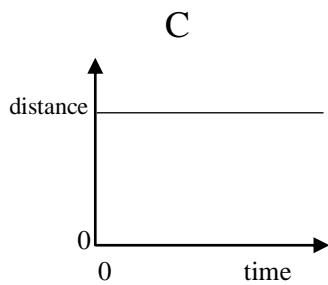
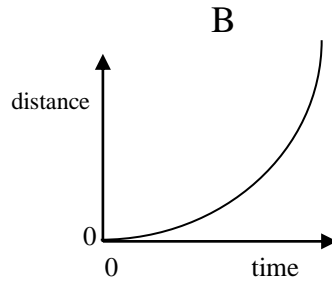
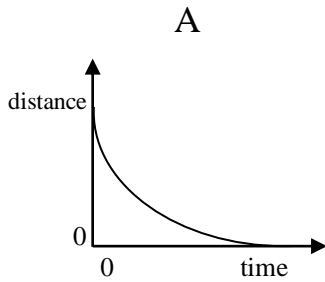
1. A student wishes to measure accurately the volume of approximately  $40 \text{ cm}^3$  of water. She has two measuring cylinders, a larger one that can hold  $100 \text{ cm}^3$ , and a smaller one that can hold  $50 \text{ cm}^3$ . The water forms a meniscus where it touches the glass.



Which cylinder should the student use and which water level should she use to ensure an accurate result?

	cylinder	water level
A	larger one	bottom of meniscus
B	larger one	top of meniscus
C	smaller one	bottom of meniscus
D	smaller one	top of meniscus

2. Which distance / time graph represents the motion of an object moving at constant speed?



3. Which instrument is used to compare the masses of objects?

- a) A balance
- b) A manometer
- c) A barometer
- d) A measuring cylinder

4. Which energy transfer takes place when a matchstick burn?

- a) Chemical to thermal
- b) Chemical to nuclear
- c) Nuclear to chemical
- d) Thermal to chemical

5. In electromagnetic spectrum which wave having shortest wavelength?

- a) Gamma rays
- b) X rays
- c) Ultra violet rays
- d) Radio waves

## Paper – 4

### B. Answer the following questions:

1.

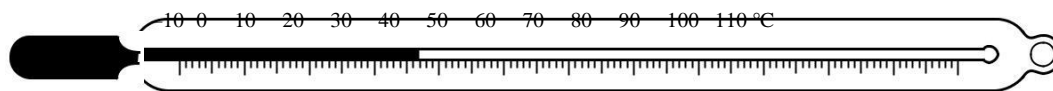


Figure shows a liquid-in-glass thermometer.

a) In the process of making the thermometer, the scale divisions were spaced equally. What assumption was made about the liquid?

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b) The expansion of a liquid is an example of a physical property that may be used to measure temperature.

Define temperature and internal energy.

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2. A student has a large number of coins of different diameters, all made of the same metal. She wishes to find the density of the metal by a method involving placing the coins in water.

a) State the formula needed to calculate the density.

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b) Describe how the measurements of the required quantities are carried out.

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3. The following are three statements about boiling.

- A liquid boils at a fixed temperature.
- During boiling, vapor can form at any point within the liquid.
- Without a supply of thermal energy, boiling stops

Complete the following equivalent statements about evaporation.

A liquid evaporates at \_\_\_\_\_

During evaporation \_\_\_\_\_

Without supply of thermal energy, evaporation \_\_\_\_\_

a) A pan containing water boiling at  $100\text{ }^{\circ}\text{C}$  is standing on an electrically heated hot-plate. In 20 minutes, 0.075 kg of water is lost as steam. The specific latent heat of vaporization of water is  $2.25 \times 10^6\text{ J / kg}$ .

Calculate the energy used in converting 0.075 kg of boiling water to steam.

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## Paper – 6

### C. Alternative to practical:

1. Draw and label a diagram to show how a ray of white light is refracted when it passes from air to water. Mark the incident ray, incident angle, refracted ray, refracted angle and normal.
  
2. Table below shows the results of an experiment in which a long piece of plastic foam was stretched by hanging weights from one end.

Load/N	Length/cm	Extension /cm
0.0	36.0	0.0
5.0	40.0	
10.0	44.0	
15.0	48.0	
20.0	52.0	

- a) Copy and complete the table by filling the third column.
- b) Use your completed table to plot an extension against load graph.

**Note: This is just a model not the exam paper.**