

# Divisional Education Office - Nallur, Jaffna

## Second Term Examination - 2015

<b>Grade: 09</b>	<b>Science</b>	<b>Time:</b> <b>2 Hours</b>
	<b>Name / Index No. : .....</b>	

### Part - I

Choose the most appropriate answer.

01. Which one of the following is scalar quantity?  
 (1) Displacement                      (2) Velocity                      (3) Weight                      (4) Speed
02. In which step "making hypothesis" used?  
 (1) 2<sup>nd</sup> step                      (2) 3<sup>rd</sup> step                      (3) 4<sup>th</sup> step                      (4) 5<sup>th</sup> step
03. Who advocated strongly the helios centric model and was honoured all over the world?  
 (1) Aristotle                      (2) Aristarcus  
 (3) Nicolaus copernicus                      (4) Gallielio Galili
04. Which type of microorganism contributes to convert ethyl alcohol into vinegar?  
 (1) Bacteria                      (2) Fungus                      (3) Virus                      (4) Yeast
05. What is the minimum amount that could be measured by burette?  
 (1) 0.1 ml                      (2) 0.01 ml                      (3) 1 ml                      (4) 0.5 ml
06. Which type of motion occurs in the pendulum of a clock?  
 (1) Linear motion                      (2) Oscillation  
 (3) circular motion                      (4) rotational motion
07. An ant reaches 25m in 10 seconds. What is the average speed of ant?  
 (1)  $25 \times 10 \text{ ms}^{-1}$                       (2)  $\frac{25}{10} \text{ ms}^{-1}$                       (3)  $\frac{250}{10} \text{ ms}^{-1}$                       (4)  $\frac{10}{25} \text{ ms}^{-1}$
08. Which equipment is used to measure the quantities of current flow, potential difference and resistance?  
 (1) Voltmeter                      (2) Ammeter  
 (3) Ohmmeter                      (4) multimeter
09. Who introduced the type of motion of pendulum at first?  
 (1) Issac Newton                      (2) Ptolemy  
 (3) Gallelio Galili                      (4) Kepler

10. Which lens is used by the repairer of wrist watch?  
 (1) plano concave lens (2) plano convex lens  
 (3) Double concave lens (4) Double convex lens
11. Which components are used in amalgam for filling damaged teeth?  
 (1) Silver and copper (2) Mercury and lead  
 (3) Silver and mercury (4) Mercury and silver
12. Number of protons and relative atomic mass of aluminium are 13 and 27. How many electrons are present in the aluminium atom?  
 (1) 13 (2) 12 (3) 14 (4) 27
13. Which acid is added to copper strips for getting nitrogen dioxide gas?  
 (1) Nitric acid (2) Hydrochloric acid  
 (3) Sulphuric acid (4) Acetic acid
14. Which of the following is not a homogenous mixture?  
 (1) Sugar solution (2) Air (3) Tea (4) Ice cream
15. Who discovered the sub atomic particle "electron" ?  
 (1) Chadwick (2) Earnest Rutherford  
 (3) J.J Thomson (4) Dalton
16. Which one of the following is not a monomer?  
 (1) Styrene (2) Starch (3) Isoprene (4) Ethylene
17. Which is used to dissolve rubber?  
 (1) Acetone (2) Ethyl alcohol  
 (3) Thinner (4) Kerosene
18. The fuel, which is not used in fuel cells is  
 (1) Hydrogen (2) Methanol  
 (3) Petroleum gas (4) Kerosene
19. What is the shape of nano tube?  
 (1) Spherical shape (2) cone shape  
 (3) cylinder shape (4) Hexagon shape
20. How is this year (2015) honored by united nation?  
 (1) Science and Technology year (2) Astronomical year  
 (3) Light year (4) Biodiversity year

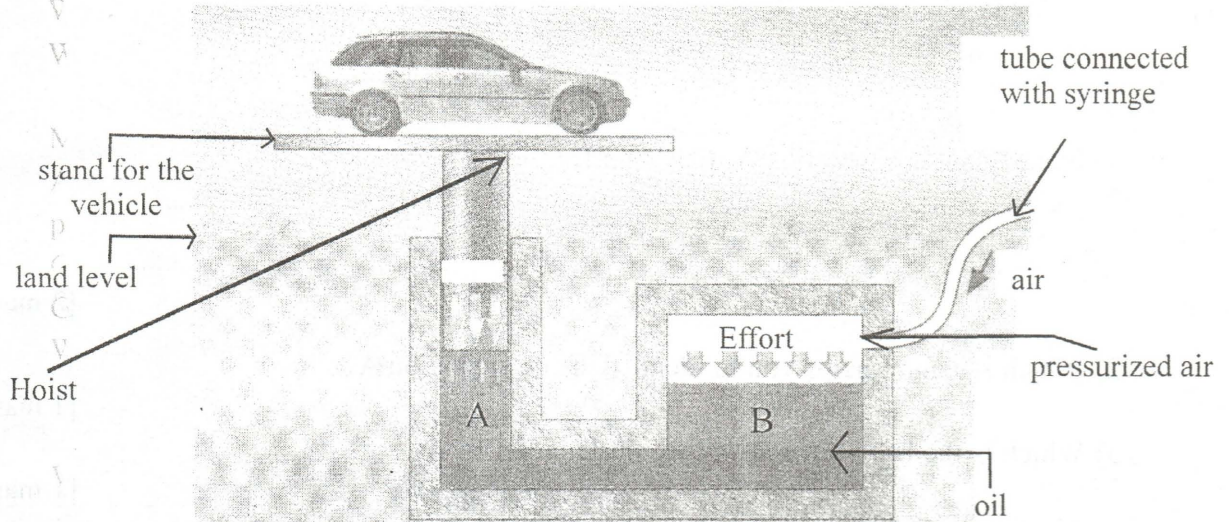
[ 20 x 11/2 = 30 marks]



## Part- II

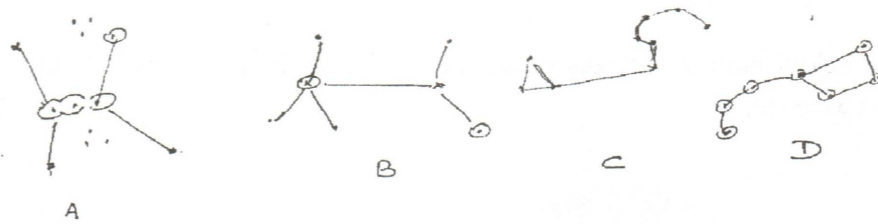
Answer for **Five** questions including the **first** question.

01. The given below equipment was observed by the students of grade 9 in a garage for an assessment purpose.



- 1) What type of assessment is this? [1 mark]
- 2) Which skills are obtained by the students who involved in this assessment? [1 mark]
- 3) Give other equipment with the same function of this equipment? [1 mark]
- 4) What type of simple machine is this? අධිසාපන [1 mark]
- 5) How is the pressure needed to raise the vehicle transmitted? [1 mark]
- 6) What is the reason for decreasing the area of A than B? [1 mark]
- 7) Which elements are present in the crude oil which is used here? [1 mark]
- 8) Is the oil which is given in the question (7) renewable / non renewable? Give reason. [1 mark]
- 9) Which poisonous gas is emitted while using the crude oil for burning? [1 mark]
- 10) What adverse effect is created in the environment by the above mentioned gas? [1 mark]
- 11) Alternative energy sources are mostly used at present for minimizing environmental pollution.
  1. Give two alternative energy sources. [1 mark]
  2. State two benefits of using alternative energy sources. [1 mark]

02. Write answers for the following using the given constellation.



1) Identify the constellation A, B, C and D.

A .....

B .....

C .....

D .....

[2 marks]

2) Which structure helps you to identify the constellation A?

[1 mark]

3) Which is the brightest star in the constellation B?

[1 mark]

4) Which constellation has the brightest star "Regulus"?

[1 mark]

5) Give two differences between stars and planets.

[2 marks]

6) Name the constellation which has indicator stars.

[1 mark]

7) Which unit is used to measure the distance of planets?

[1 mark]

8) Give two galaxies which are visible to our naked eye

[2 marks]

[11 marks]

03. "One day mid meal" given to the students in a school is shown below.

**Rice, Dhal, Pumpkin curry**

**Soya curry, green leaves, Tomato**

1) Which nutrients are present in rice and dhal curry?

[2 marks]

2) Which food shows blue-black when adding iodine drop on to it?

[1 mark]

3) Which food is more suitable for the deficiency of vitamin A?

[1 mark]

4) Which chemical substances must be taken from laboratory for testing the nutrients in the dhal curry?

[1 mark]

- 5) Which components are present in the above mentioned chemical substance? [2 marks]
  - 6) Give two matters that should be concerned when buying soya meat packet? [2 marks]
  - 7) What do you mean by the symbol "SLS"? [1 mark]
  - 8) Give two functions of the nutrients which are present in soya and dhal? [1 mark]
- [11 marks]

04. The following elements were kept on a table to identify the physical and chemical properties of some elements.

**sulphur, Iron, Magnesium, Carbon, Sodium, Zinc**

- 1) Differentiate the elements as metals and non metals. [2 marks]
  - 2) Give two physical properties of metals. [2 marks]
  - 3) What is your observation while burning scratched Mg tape in air? [1 mark]
  - 4) Give the chemical symbol of Iron and sodium [2 marks]
  - 5) Which element melts and forms blue colour flame while burning in air? [1 mark]
  - 6) Which material has allotropes and conducts electricity? [1 mark]
  - 7) Mention two factors which cause rusting of iron. [2 marks]
- [11 marks]

05. Different types of composites are used for constructing buildings, and bridges. Not only cement, sand, stone and water are used but also steel rods and iron mesh are used to build concrete bridges.

- 1) Which components are present in cement mortar? [2 marks]
- 2) Give two advantages of these above mentioned components. [2 marks]
- 3) What do you mean by alloy? [2 marks]



4) Write the components of steel?

[2 marks]

5) Which alloy is made by the alloy the combinations of copper and zinc?

[1 mark]

6) What is the use of the alloy which was mentioned by you for the question no 5.

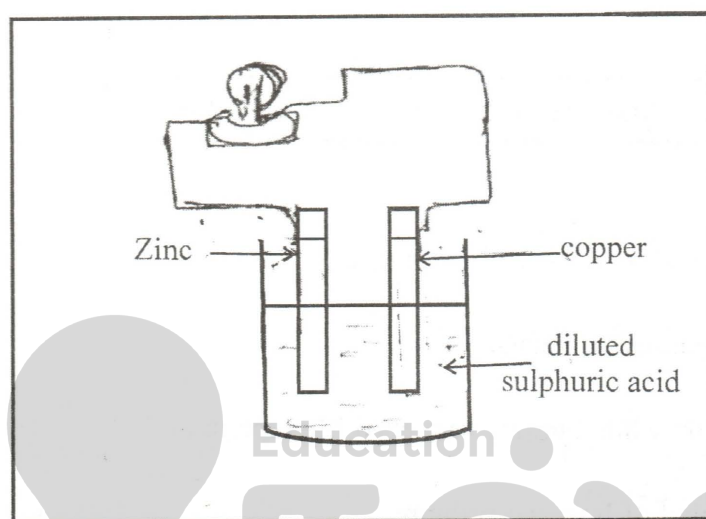
[1 mark]

7) What is the monomer of polythene?

[1 mark]

[11marks]

06.



1) Name the above mentioned setup.

[1 mark]

2) Which electrolyte is used in this setup?

[1 mark]

3) Give two problems that arise when the setup shown above is used.

[2 marks]

**Dry cell was invented to overcome these short comes**

4) Which elements are used to make the positive and negative terminals of dry cell?

[2 marks]

5) Write the energy conversion occurred in a dry cell?

[1 mark]

6) What is the potential difference of a dry cell?

[1 mark]

7) Give two advantages of using dry cell than the above mentioned setup.

[2 marks]

8) Which type of electric cell is used in vehicles?

[1 mark]

[11 marks]