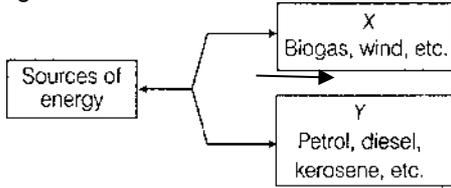


## Olympiad Aptitude Test Science- Grade VIII

1. Sources of energy are classified into two categories X and Y as shown below:



Which of these will go in Y?

- a Liquefied Petroleum Gas
- b Tides
- c Coke
- d All of the above

2. Rama took an unknown substance X. When she heated it in absence of air, she got a tough, porous and black substance.

(Carbon rich) X      Tough, porous and black  
(Carbon rich) Y

X and Y respectively are

- a coal, coke
- b petroleum, petrol
- c coal, coal tar
- d petroleum, diesel

3. Read the following information and answer the question that follows:

When some bacteria enter the body and reproduce, they cause an infection.

There are four phases in the growth of the bacterial population. The phases are listed below but are not in the correct order.

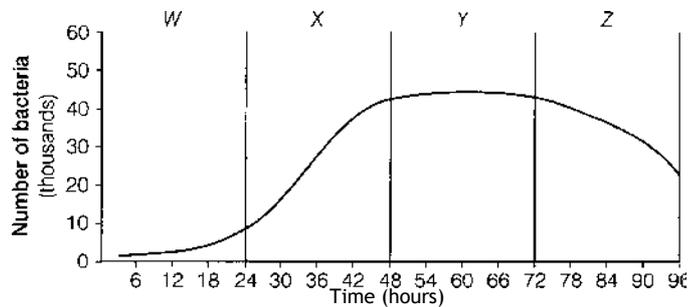
**Log phase** bacteria reproduce rapidly.

**Lag phase** bacteria reproduce slowly after entering the body.

**Death phase** bacteria die rapidly due to antibiotics and the immune response.

**Stationary phase** bacterial growth slows due to build up of toxins and nutrient depletion.

The graph shows the change in the bacterial population in a person who was carrying an infection.



Which section of the graph matches each phase?

	Section of graph			
	w	X	Y	Z
a	Stationary phase	Log phase	Death phase	Lag phase
b	Log phase	Lag phase	Stationary phase	Death phase
c	Lag phase	Log phase	Stationary phase	Death phase
d	Lag phase	Death phase	Log phase	Stationary phase

4. The teacher asked the children to make a statement about friction. Which students spoke correctly?

**Alan** Friction holds a nail in a wall.

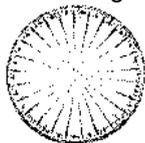
**Ayush** Ball bearing helps to increase friction.

**Kavita** We can reduce friction.

**Anjana** Life would be easy without friction

- a. Alan and Ayush
- b. Alan and Kavita
- c. Ayush and Kavita
- d. Anjana and Ayush

5. The microorganism in the given figure is



- a Bread mould                      b Penicillin  
c Diatom                                d *Volvox*

6. Match the following columns.

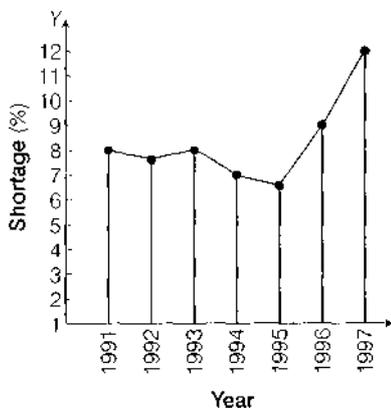
Column I	Column II
Sun	1. Red phosphorus, powdered glass
Rubbing surface of match box	2. kJ/kg
Head of matchstick	3. Nuclear reactions
Combustion	4. Reaction with oxygen
	5. Antimony trisulphide and potassium chlorate

Codes				
	A	B	C	D
a	3	5	1	4
b	3	5	4	1
c	3	4	5	1
d	3	1	5	4

7. Lightning can be seen, the moment it occurs. Aditi observes lightning in her area. She hears the sound 5 s after she observed lightning. How far is she from the place, where lightning occurs? [speed of sound = 330 m/s]

- a 1000m  
b 1550 m  
c 1650 m  
d 1750 m

8. The following graph shows the total power shortage in India from 1991-1997.



In which year, the shortage reported is minimum?

- a. 1991  
b. 1994  
c. 1995  
d. 1997

9. Two bottles are shown below. Both are made up of polyethylene. They differ in that the bottle on the left is made up of (i) and the one on the right is made up of (ii).



- a. (i) flexible, lower density, linear polyethylene; (ii) rigid, higher density branched polyethylene  
b. (i) flexible, higher density, branched polyethylene; (ii) rigid, lower density, linear polyethylene  
c. (i) flexible, lower density, branched polyethylene; (ii) rigid, higher density linear polyethylene  
d. (i) flexible, higher density linear polyethylene; (ii) rigid, lower density branched polyethylene

10. A pendulum oscillates 50 times in 5s. Find its time period,

- a. 10 s  
b. 1/10s  
c. 20 s  
d. 1/20s

