

# GENERAL SCIENCE , Paper – I

(Physical Sciences)

(English Version)

**Time: 2 Hours 45 Min.**

**Parts A and B**

**Maximum Marks : 40**

## Instructions :

1. The Question paper contains Part-A and also Part-B.
2. 15 Min. is allotted for reading the question paper.
3. Answer the questions under Part-A on a separate answer booklet.
4. Write the answers to the questions under Part-B on the question paper itself and attach it to the answer booklet of Part-A.
5. Answer all the questions.

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### PART-A

**Max. Marks : 30**

#### Section - I

4 x 1 = 4 Marks

#### Note :

1. Answer all the questions.
2. Each question carries One mark.

1. If cooker handles were made with PET material, What happened ?
2. Make a list of material needed to observe Static electricity in your class room.
3. The audible frequency range of human beings is 20 – 20000 Vibrations/second.  
The frequency of sound produced by a living being is 10 Vibrations/second.  
Can you hear the sound ?
4. Petrol and Diesel are valuable and important fuels. Write any two methods to save such energy resources.

#### Section - II

5 x 2 = 10 Marks

#### Note :

1. Answer all the questions.
  2. Each question carries Two marks.
5. How can sound produced ? Give two examples.
  6. Why the alternative fuels (Solar energy, Wind energy) are more useful than petroleum fuels (Petrol, Diesel) ? Write your opinion.
  7. We should not spray water on Oil fires. Why ?
  8. Vasundhara projected a ball in to air. It reached the ground.  
Answer the following questions.
    - (i) Which forces act on the ball when it was in air ?
    - (ii) Which forces act on it when it reached the ground ?

9. Name four articles that were made with Melamine or Bakelite and useful in our daily life.

**Section - III**

4 x 4 = 16 Marks

**Note :**

1. Answer all the questions.
2. Each question carries Four marks.
3. Internal choice is given in questions.

10. Mention the names of any four musical instruments and how they produce sound.

(OR)

Explain the following.

- (i) Relation between shrillness and frequency.
- (ii) Relation between Length of scale and frequency.
- (iii) Amplitude
- (iv) Frequency

11. A wooden block is kept on an inclined plane. Draw FBD of Wooden block.

(OR)

Draw the neat diagrams of any two musical instruments.

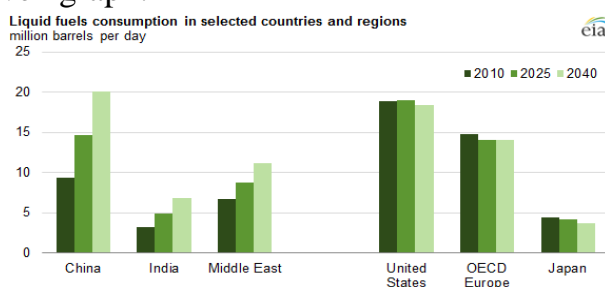
12. Write an activity to observe the electric conductivity of metals.

(OR)

How can you prove that Oxygen is essential need for burning ?

Explain the procedure to be followed.

13. Observe the given graph.

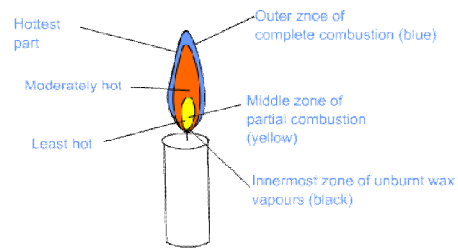


Answer the following questions.

- (i) Which country will consume more fuel in 2040 ?
- (ii) Which country used less amount of fuel in 2010 ?
- (iii) Write a note about the fuel consumption in India ?
- (iv) What happened if the fuel consumption is going in this ratio ?

(OR)

Observe the diagram given below.



Answer the following questions.

- (i) Which is outer zone in the candle flame ?
- (ii) In which zone oxygen is available in less quantity ?
- (iii) How many colour zones are there in candle flame ?
- (iv) Compare the temperatures of Outer zone and Inner zone ?

**NAGA MURTHY- 9441786635**  
Contact at : [nagamurthysir@gmail.com](mailto:nagamurthysir@gmail.com)  
Visit at : [ignitephysics.weebly.com](http://ignitephysics.weebly.com)



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(English Version)

**Time: 2 Hours 45 Min.**

**Parts A and B**

**Maximum Marks : 40**

## **PART-B**

**Maximum Marks : 10**

This Question paper contains 4 printed pages.

### **Instructions :**

1. Answer all the questions.
2. Each question carries  $\frac{1}{2}$  Mark.
3. Marks will not be awarded in case of any overwriting and rewriting or erased answers.
4. Write the answers to the questions under Part-B on the question paper itself and attach it to the answer booklet of Part-A.
5. Write the 'CAPITAL LETTER' showing the correct answer for the following questions in the brackets provided against them.

### **Section - IV**

**20 x  $\frac{1}{2}$  = 10 Marks**

14. Units of Pressure [     ]  
(A) Newton (B) Newton/meter  
(C) Newton-meter<sup>2</sup> (D) \* Newton/meter<sup>2</sup>
15. The substances used to reduce friction between machine parts are called ..... [     ]  
(A) Powders (B) Lubricants  
(C) Spikes (D) Springs
16. Decibel is the unit for ..... [     ]  
(A) Amplitude of sound (B) Frequency of sound  
(C) Shrillness of sound (D) Intensity of Sound
17. Materials :  
i) Iron ii) Glass iii) Vacuum iv) Air  
Which of the above allow the sound to travel through them ? [     ]  
(A) (i) only (B) (i) and (ii) only  
(C) (i) , (ii) and (iv) (D) (i), (ii), (iii) and (iv)
18. This is not a part in Voice box [     ]  
(A) Tongue (B) Vocal cord  
(C) Trachea (D) Cochlea
19. Vibrating component in Flute [     ]  
(A) String (B) Stretched Membrane  
(C) Air (D) String and Air



