

# 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 4 printed pages in Part-A and also in 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. We can hear some sounds only. Write the frequency range of sounds that we can hear.
  2. Classify the following as thermo plastics and thermo setting plastics.  
Electric switch  
Plastic bottle  
Copper handle  
Polythene bag
  3. Give two examples for fossil fuels.
  4. Sailaja dropped a fruit from the top of a tree. The height of the tree is 10 m. Assume that which force acts on the fruit ?

#### Section - II

5 x 2 = 10 Marks

#### Note :

1. Answer all the questions.
  2. Each question carries Two marks.
5. Write the differences between contact forces and field forces.
  6. Which metals are used in making jewellery ? Why ?
  7. Imagine friction less world. What are your feelings ? Write them.
  8. Observe the following table.

Resin code	Type	Recyclable	Resin code	Type	Recyclable
1	PET	√	4	LDPE	X
2	HDPE	√	5	PP	X
3	PVC	X	6	PS	X

Answer the following questions.

- (i) Are the pipes used for water supply in houses recycled ?
- (ii) Flexi banners made with Polystyrene. Are they recycled ?

9. Observe the following table.

Fuel	Calorific value	Fuel	Calorific value
Petrol	45000 KJ/Kg	LPG	55000 KJ/Kg
Diesel	45000 KJ/Kg	Biogas	35000 - 40000 KJ/Kg
CNG	50000 KJ/Kg	Hydrogen	150000 KJ/Kg

Answer the following questions.

- (i) Which fuel is best to produce energy ?
- (ii) How much energy released when 200 grams of Diesel burnt ?

### 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 any eight situations where friction is useful in our daily life.



Write the reasons for Sound pollution. What are the effects ? What should we do to reduce sound pollution ?

11. Explain the process of formation of petroleum in Earth.

(OR)

Distinguish between rapid combustible substances and spontaneous combustible substances.

12. Write the relation between shrillness of sound and frequency of vibrations.

Suggest an activity to prove this relation.

(OR)

Write the procedure to be followed to prove that Sound is a form of energy.

(Sound has energy)

13. Burning of coal liberates a gas that can burn. Draw a diagram for this activity.

Label the parts.

(OR)

Oxygen gas is essential for burning. Draw a neat diagram for this Lab activity.

Label the parts.

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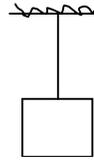
18. Assertion (A) : Sound can't travel through vacuum.  
Reason (R) : Sound needs material medium to travel  
Identify the correct answer : [     ]
- (A) A is true and R is true. R is the correct explanation of A.  
(B) A is true and R is true. R is not the correct explanation of A.  
(C) A is true and R is false.  
(D) A is false and R is true.
19. Fake fur [     ]
- (A) Rayon (B) Nylon  
(C) Acrylic (D) Bakelite
20. Rayon is manufactured with ..... [     ]
- (A) Coal (B) Oxygen  
(C) Wool (D) Cellulose
21. Metal but not solid [     ]
- (A) Zinc (B) Platinum  
(C) Mercury (D) Lead
22. The property of drawing fine wires from metals is ..... [     ]
- (A) Malleability (B) Sonarity  
(C) Luster (D) Ductility
23. Liquid gold [     ]
- (A) Coal (B) Coal tar  
(C) Water (D) Petroleum
24. Kalavathi said, "Sound can be produced with out vibrations".  
This statement is ..... [     ]
- (A) True (B) False  
(C) We can't say (D) It may true as per situation
25. Cotton fiber : Trees :: Wool fiber : \_\_\_\_\_ [     ]
- (A) Plant (B) Animal  
(C) Petroleum (D) Silk worm
26. P : The number of vibrations of scale having 20 cm length in air.  
Q : The number of vibrations of scale having 5 cm length in air. [     ]
- (A)  $P = Q$  (B)  $P > Q$   
(C)  $P < Q$  (D)  $P \leq Q$
27. Material needed for making toy telephone [     ]
- (A) Two paper cups, Needle  
(B) Three paper cups, Thread  
(C) Two paper cups, Needle, Thread  
(D) Four paper cups, Rubber piece, Balloon



28. Which gas released due to reaction of acids on metals ? [     ]  
 (A) Oxygen (B) Nitrogen  
 (C) Carbon dioxide (D) Hydrogen

29. We can burn a paper by using Magnifying lens.  
 What is your observation from that activity ? [     ]  
 (A) Burning needs fire to ignition  
 (B) Burning needs lighting  
 (C) Burning needs Magnifying lens  
 (D) Burning needs sufficient temperature

30. Observe the given FBD.  
 How many forces acting on the wooden block ? [     ]  
 (A) 4 (B) 3  
 (C) 2 (D) 1



31. Increasing order of Pitch of sounds of some living beings is given below.  
 Lion < Man < Woman < Child < Insect  
 Which of the following has high Pitch ? [     ]

- (A) 30 Years Woman (B) 6 Years Boy  
 (C) 9 Years Girl (D) Cockroach



32. Terylene is blended with cotton to produce Terricott.  
 Terylene is blended with wool to produce Terriwool.  
 Which is common component in Terriwool and Terricott ? [     ]  
 (A) Wool (B) Cotton  
 (C) Terylene (D) Polyester

33. Observe the following table.

Substance	Metal / Non metal	Has ductility property ?
Mercury	Matal	No
Sulphur	Non metal	No
Magnesium	Metal	Yes
Copper	Metal	Yes

- Which metal hasn't follow ductility property ? [     ]  
 (A) Mercury (B) Sulphur  
 (C) Magnesium (D) Copper