



# Young Scholars Foundation

**Prizes**

**SCIENCE**

**GRADE  
5**

<p><b>1st Rank</b> <b>₹ 50000</b></p> <p>+</p> <p>Gold Medal + Certificate of Excellence</p>	<p><b>2nd Rank</b> <b>₹ 25000</b></p> <p>+</p> <p>Silver Medal + Certificate of Excellence</p>	<p><b>3rd Rank</b> <b>₹ 10000</b></p> <p>+</p> <p>Bronze Medal + Certificate of Excellence</p>
--	--	--

**4<sup>th</sup> TO 10<sup>th</sup>  
Rank  
Rs 1100**

+ Certificate of Excellence

**11<sup>th</sup> TO 50<sup>th</sup>  
Rank  
Wrist Watch**

+ Certificate of Excellence



## Instructions

**Time : 1 hour**

**Maximum Marks : 50**

- Maximum Time is 1 hour & You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
- Write your **Name, School Code, Class, Roll No.** and **Mobile Number** clearly on the **OMR Sheet** and do not forget to sign it.
- The Question Paper comprises four sections: **Scientific Reasoning** (13 Questions), **General Science** (12 Questions), **Logical Reasoning** (5 Questions) and **Wise Wizard** (5 Questions). Each question in Wise Wizard carries two marks each, whereas all other questions carry one mark each.
- All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
- To mark your choice of answers by darkening the circles on the OMR Sheet, use **HB Pencil** or **Blue / Black ball point pen** only.

Roll No

Student Name

Father's Name

## SECTION - A (SCIENTIFIC REASONING)

- Q1. Aquarium keepers are typically advised to remove dead fish from an aquarium the moment they are discovered. Otherwise, the water may soon become cloudy due to a bacterial bloom. Which of the following best explains why a bacterial bloom should be avoided?
- The bacteria acting on the dead organism may infect other fish and aquatic organisms, causing an aquarium plague.
  - The cloudiness in the tank prevents the fish keepers from properly observing their pets.
  - The bacteria may become airborne with the evaporation of water from the aquarium and cause diseases in the external environment.
  - The sudden spike in bacterial population may result in insufficient dissolved oxygen for the other aquatic organisms, causing more aquatic life to die.

- Q2. Rinni was asked to write some involuntary actions. She has written some voluntary actions also as shown in the list.

- |                        |                                |
|------------------------|--------------------------------|
| i) Chewing food        | ii) sitting upright on a table |
| iii) Digestion of food | iv) beating of heart           |
| v) singing a song      | vii) breathing                 |
| vi) dancing            | viii) writing a letter         |

Select the option that contains only involuntary actions.

- (i),(iii), (vii) and (viii)
  - (ii), (vi) and (vii)
  - (iii), (iv) and (vii)
  - (ii), (v), (vi) and (vii)
- Q3. Earthquakes are caused due to the collision of \_\_\_\_\_
- Tectonic plates
  - Crust
  - Core
  - Mantle

- Q4. Milky Way galaxy was first seen by
- Galileo
  - Martin Schmidt
  - Marconi
  - Newton
- Q5. The radiant energy of the sun is transmitted in the form of
- Short waves
  - Long waves
  - Particles
  - All of these
- Q6. Sarthak's three friends are suffering from some diseases. Ritika has rickets, Samyak has anaemia and Mayak has measles. Which of them can communicate?
- Sarthak
  - Ritika
  - Samyak
  - Mayank
- Q7. The comet catches fire due to \_\_\_\_\_
- Friction of air and comet
  - Sun
  - Its own temperatures
  - All of these
- Q8. When sound travels through air, the air particles:-
- Vibrate along the direction of wave propagation
  - Vibrate but not in any fixed direction
  - Vibrate perpendicular to the direction of wave propagation
  - Do not vibrate
- Q9. Which of the following is the S.I. unit of work?
- Newton
  - Metre
  - Joule
  - Kilogram
- Q10. We sprinkle powder on the carrom board. Why?
- To increase friction
  - To get pleasant smell
  - To decrease friction
  - To make the source white so that it looks beautiful



- Q11. When we eat rice or chapatti we get a sweet taste after chewing them for some time. What is the reason behind it?
- This is because rice and chapatti are sweet in taste .
  - This is because both rice and chapatti are white in colour.
  - This is because rice and chapatti contain proteins which is converted to sugar with the action of gastric juices.
  - This is because rice and chapatti contain starch which is converted to sugar with the action of saliva.
- Q12. In physical changes, the state changes but the main thing remains the same. This change can be converted back to its original form and thus it is called\_\_\_\_
- Reversible
  - Irreversible
  - Proportionate
  - Un-proportionate
- Q13. Why does the sun rise in the east everyday?
- Because earth rotates from east to west.
  - Because earth rotates from west to east.
  - Because sun rotates from east to west.
  - Because sun rotates from west to east.

### SECTION - B (GENERAL SCIENCE)

- Q14. I am triangular in shape. I have 5 faces and 4 verticals. I can disperse a white light into seven beautiful colours. I am used to study phenomenon of light. Who am I?
- Pyramid
  - Cone
  - Prism
  - Triangle
- Q15. In solar eclipse:-
- Sun comes between earth and moon
  - Moon comes between earth and sun
  - Earth comes between sun and moon
  - None of these
- Q16. Which of the following is called 'universal solvent'?
- Milk
  - Oil
  - Water
  - Petrol

- Q17. When a mixture of salt + sugar + vinegar + lemon juice + soda was added into water, it resulted in the formation of a :
- Soluble mixture
  - Layers of different mixtures
  - Mixture in which all ingredients are mixed except soda that forms a separate layer
  - None of these
- Q18. Which is the hardest bone in the human body?
- Jawbone
  - Tibia
  - Ribs
  - Humerus
- Q19. Rahul loves music player so his father gifted him a music player on his birthday. He started listening songs through earphones at very high volume. As his elder brother what will you suggest him?
- Stop listening music
  - Listening music at higher volume can damage ears.
  - Take away his music players
  - Listening music is not good for health.
- Q20. Which of the following types of energy can be converted easily into mechanical energy , sound energy, heat energy and light energy?
- Kinetic energy
  - Potential energy
  - Electrical energy
  - Magnetic energy
- Q21. Which layer of the soil has bacteria and fungi?
- Top soil
  - Sub soil
  - Parent material
  - Bed rock
- Q22. Satellite that helps to see live telecast of cricket match.
- Navigation satellite
  - Astronomical satellite
  - Communication satellite
  - Weather satellite
- Q23. Which of the following is a root that we eat?
- Potato
  - Sweet potato
  - Ginger
  - Brinjal

Q24. Which among the following is incorrect for the nitrogen gas?

- a. Nitrogen constitutes about 78% of air.
- b. Nitrogen is used in fertilizers.
- c. Nitrogen is used in burning process.
- d. Nitrogen is used by plants with the help of bacteria.

Q25. Which among the following is an effect of global warming?

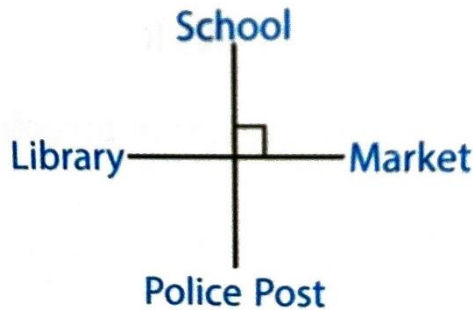
- a. Melting of polar ice caps
- b. Rise in water levels of oceans
- c. Flooding of places near the sea.
- d. All of these

**SECTION - C (LOGICAL REASONING)**

Q26. If INDIA is coded as 23426 and GREED is coded as 78994, then how will DEAR be coded?

- a. 2396
- b. 9468
- c. 4968
- d. 4986

Q27. I am facing the market now. If I make  $270^\circ$  turn to the right, I will be facing the



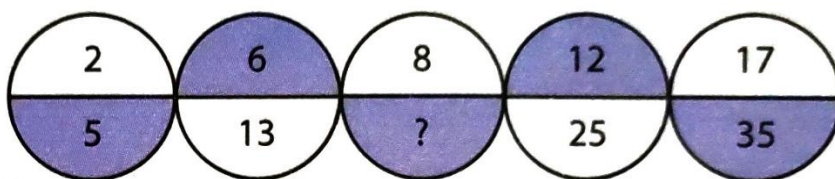
- a. School
- b. Library
- c. Police post
- d. Market

Q28. Find the mirror image of the given figure (X), if mirror is placed along dotted line.

Figure (X)

**REASON** (A) **NOSVER** (B) **NOZAEY** (C) **KEVZON** (D) **NOZAEY**

Q29. What is the missing number in the series given below?



- a. 17
- b. 27
- c. 35
- d. 41

Q30. I am brother of Hemant and Neha is my sister, Mr. Jayant is my father's father. How is Neha related to Mr. Jayant?

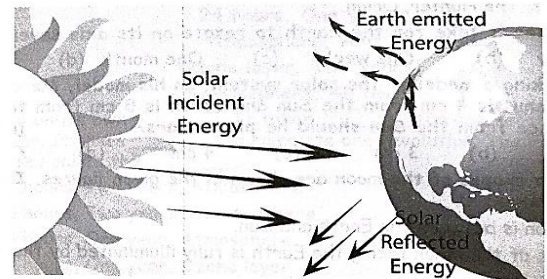
- a. Mother                      b. Daughter                      c. Grand daughter                      d. Sister

**SECTION - D (WISE WIZARD)**

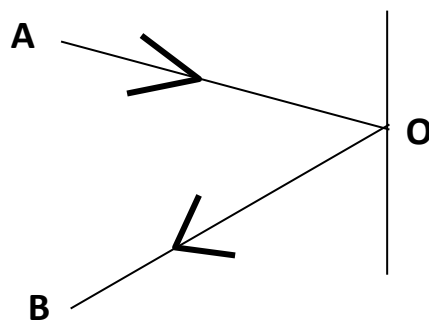
Q31. Look at the following diagram and answer the following question:-

Why is solar energy reflected from the Earth?

- a. Due to gravitational pull of the earth.  
 b. Due to presence of atmosphere on the earth.  
 c. Due to presence of water on the earth.  
 d. Due to the presence of animals on the earth.



Q32. Look at the following figure and choose the correct statement.



- a. AO is an incident ray and OB is a reflected ray.  
 b. AO is a reflected ray and OB is an incident ray.  
 c. Both AO and OB are reflected rays.  
 d. Both AO and OB are incident rays.

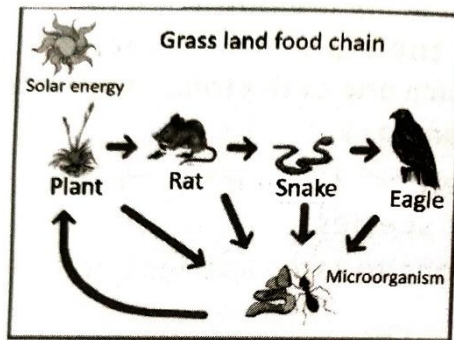
Q33. Match the following:-

- |               |                     |
|---------------|---------------------|
| 1. Fish       | A. Lung             |
| 2. Human      | B. Spiracle         |
| 3. Earth worm | C. Gill             |
| 4. Cockroach  | D. thin, moist skin |

- a. 1- C, 2 -A, 3-B, 4-D  
 b. 1-C, 2-B, 3-D, 4-A  
 c. 1-C, 2-A, 3-D, 4-B  
 d. 1-D, 2-A, 3-C, 4-B

Q34. Given below is a grass land food chain.

Which of the following organisms are producers and decomposers?



- a. Rat and snake are producer and micro organisms are decomposers.
- b. Plant is producer rat and snake are decomposers.
- c. Plant is producer and microorganisms are decomposers.
- d. There are no producers only consumers are in the food chain, rat and snake are decomposers.

Q35. Consider the following statements:-

Statement :1 Physical change is usually reversible and temporary.

Statement :2 Chemical change is usually irreversible and permanent.

Which one of the following is correct about the above statements?

- a. Both statements are false
- b. Both statements are true
- c. Statement 1 is true and 2 is false
- d. Statement 1 is false and 2 is true