

**IF** Techfest



SOF NATIONAL SCIENCE **OLYMPIAD 2024-25** 

DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

CLASS \_\_

SET-B

### Guidelines for the Candidate

- 1. You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
- 2. Write your Name, School Code, Class, Section, Roll No. and Mobile Number clearly on the OMR Sheet and do not forget to sign it. We will share your marks / result and other information related to SOF exams on your mobile number.
- 3. The Question Paper comprises three sections:
  - Logical Reasoning (5 Questions), Science (25 Questions) and Achievers Section (5 Questions)
  - Each question in Achievers Section carries 2 marks, whereas all other questions carry one mark each.
- 4. All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
- 5. There is only ONE correct answer. Choose only ONE option for an answer.
- 6. To mark your choice of answers by darkening the circles on the OMR Sheet, use HB Pencil or Blue / Black ball point pen only. E.g.
  - Q. 16: Hard outer covering of the tree trunk is called
  - A. Bark
- B. Spine
- C. Branch
- D. Bud.

As the correct answer is option A, you must darken the circle corresponding to option A on the OMR Sheet.

16. • B © D

- 7. Rough work should be done in the blank space provided in the booklet.
- 8. Return the OMR Sheet to the invigilator at the end of the exam.
- 9. Please fill in your personal details in the space provided before attempting the paper.
- 10. Participate in SOF-Techfest IIT Bombay Innovation Challenge. Open for class 8, 9 & 10. For details, please visit: www.sofworld.org

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#### LOGICAL REASONING

Lens \_\_\_\_\_ is third to the right of third lens from the left end in the given arrangement. (Right) D. Y C. R A. H B. S Select the odd one out. В. hats each can be formed from the given hats. 7 groups of \_ C. 4 D. 5 A. 2 B. 3 Find the missing number, if a certain rule is followed either row-wise 8 5 7 or column-wise. 14 16 A. 12 11 3 6 B. 18 C. 10 D. 11 If \_\_\_\_\_ is related to 'Length' in some way, then in the same way related to \_\_\_\_\_. B. Time A. Temperature D. Capacity C. Weight

### SCIENCE

6 Study the given relationship and select the option that correctly identifies X.

Mahogany tree : Timber :: X : Linen

- A. Jute plant
- B. Coconut tree
- C. Cotton plant
- D. Flax plant

7 Select the INCORRECT statement.

- A. Corn plant is a herb that provides us cereal.
- B. Mushroom is not a plant, as it cannot prepare its own food.
- C. Money plant and grapevine are examples of creepers.
- D. Climbers usually have a weak stem.
- 8 X is a wild animal that helps to keep the Earth clean by eating the remains of dead animals. Identify X.



В.



D. 🙀

D.



- 9 What is common among the animals shown in the given picture?
  - A. They both make a sound called bray.
  - B. They both are wild animals.
  - C. Babies of both the animals are called cubs.
  - D. Both B and C





- Which among the following activities helps us the most to build strong muscles?
  - A. Swimming

B. Sitting

C. Watching television

D. Writing

Which of the following activities does NOT make the air dirty?





R



C.



D.



# What is common among the given building materials?

- A. They are required to build a houseboat.
- B. They are used for making pucca houses.
- C. Houses built with these materials do not last very long.
- D. They are used for making temporary houses.



- Which of the following statements is correct regarding the fibre obtained from the animal shown in the given picture?
  - A. Clothes made from this fibre allow body heat to escape easily.
  - B. This fibre is used for making clothes suitable for summers.
  - C. Clothes made from this fibre absorb sweat and allow air to pass through.
  - D. Clothes made from this fibre keep us warm during winter season.
- Rohit's paternal grandparents have only two sons and four grandsons. Rohit's father has two nephews, then how many brother(s) does Rohit has?
  - A. 4

B. 3

C. 2

- D. 1
- On which day, the Prime Minister of India hoists the National Flag at the Red Fort in Delhi?
  - A. Republic Day

B. Children's Day

C. Independence Day

- D. Gandhi Jayanti
- 16 Which of the following options contains natural non-living things only?



and



В.







C.



and



D.



and



- Every Sunday morning around 7 a.m, Kittu goes to the terrace with her father to do yoga. She faces the rising Sun while doing yoga. Which direction must be there on her right side?
  - A. East
- B. West
- C. North
- D. South

18	The road sign shown in the given pic	ture means that a/an	is nearby
	A 119-1	D Cohool	

A. Hospital

C. Bus stop

B. School

D. Airport



## 19 Which of the following activities does NOT require water?



В.



C.



D.



### Select the correct match.

A. Earth - Largest planet

C. Mars - Red planet

B. Venus - Smallest planet

D. Mercury - Hottest planet

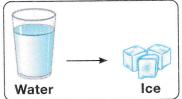
# Which of the following options on unscrambling gives the name of the process shown in the given picture?

A. ETTCRPIIAIPNO

**B. NECAOTSDNOIN** 

C. EIFGZERN

D. TNMGILE



## 22 Which of the following can breathe and grow?

Α.

В.



C.



D.



## Which of the following statements is INCORRECT regarding safety rules?

- A. Never run on wet floors, you may slip and fall down.
- B. Never touch electrical switches or appliances with wet hands, you may get an electric shock.
- C. Never swim in deep waters alone.
- D. Always stand close in front or behind the swing when others are swinging.

24	The leaf shown	in the	given	picture	belongs	to	а	ı

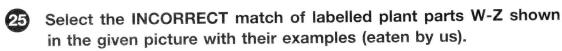
A. Herb

B. Shrub

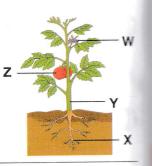
C. Climber

D. Creeper





- A. Y Sugarcane
- B. W Spinach
- C. X Sweet potato
- D. Z Lemon



Refer to the given diagram and select the correct option.

- A. X can be a butterfly.
- B. Y can be an ostrich.
- C. X can be a cockroach.
- D. Y can be a bat.

Flying animal with two legs Y

Body is covered with feathers

27 Select the correct match.

Community helper

Tool used

A. Farmer

- Needle

B. Soldier

Sickle

C. Tailor

Pliers

D. Cobbler

Awl

28

Which of the following activities is/are unsafe?



В.



C



D. All of these





I am fond of sports and would like to become a sportsperson when I grow up.

Kritika

What should Kritika include in her diet to develop strong muscles required for being a sportsperson?

- A. Fish, sweets and butter
- B. Fish, eggs and pulses
- C. Potato chips, fruits and oil
- D. Rice, jaggery and burger

- The item shown in the given picture is used in which of the following Indian seasons?
  - A. Autumn
  - B. Spring
  - C. Summer
  - D Winter



Key:

Man

Woman

Mishti

### **ACHIEVERS SECTION**

- Refer to the given family tree and select the option that correctly fills the following blanks.
  - 1. Kaira is Mishti's \_\_\_\_\_
  - 2. Shivam is Rahul's \_\_\_\_\_
  - has two unmarried aunts.

1 2

3 Kaira Son

A. Daughter B. Niece

statement regarding it.

Shivam Son

Refer to the given flow chart and select the correct

C. Niece

Grandson

Tanishq

D. Cousin

Sibling

Tanishq

Means of land transport Yes Runs on petrol

Yes

Has two wheels

S

Kaira Tanishq Shivam

Seema

Tanuja

Rahul

Mihir

Manu

- A. P can be a submarine whereas Q can be a pull cart.
- B. Q can be a car whereas R can be a scooter.
- C. R can be a bicycle whereas S can be a boat.
- D. S can be a scooter whereas P can be an autorickshaw.
- Study the given word grid and answer the following questions.
  - (a) Names of how many cereal plants are hidden in the given word grid?
  - (b) Names of how many medicinal plants are hidden in the given word grid?
    - (a)

(b)

3 Α.

B. 4

C. 2 1

D. 2

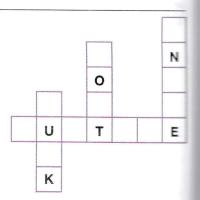
VX P T P Y R M S -T U L G A NO. Y S 0 1 Z R S -A W T L M B M -M 0 SH E N V E C R N T H D QWA X U U T S T BK D A E -M E OL P N 0 M

# Refer to the given diagram and select the correct statement regarding X, Y and Z.

- A. Fibre X can be obtained from the flower of its plant.
- B. Fibre Z can be obtained from an animal whose young one is called lamb.
- C. Fibre Y can be obtained from the cocoon of an insect.
- D. Both B and C

	\/		\/	
Obtained from a shrub	×	Natural fibre used for making	Y	Obtained from an egg laying animal
	X	clothes Z	X	

- 35 Select the option that CANNOT be found in the given crossword puzzle.
  - A. An egg laying carnivorous animal from which leather is obtained.
  - B. A carnivorous animal whose baby is called pup.
  - C. An egg laying animal that eats the flesh of dead animals.
  - D. A farm animal that gives us milk and meat.



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