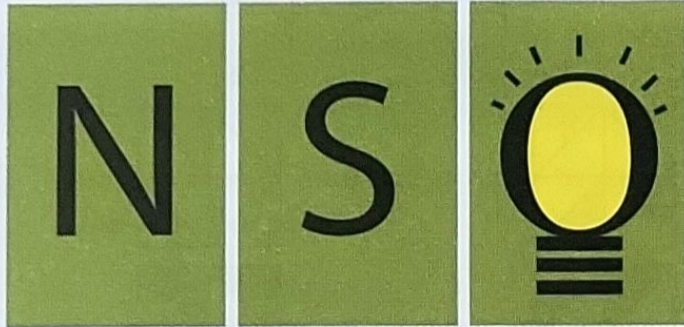




Techfest™
Asia's Largest Science & Technology Festival



SOF NATIONAL SCIENCE OLYMPIAD 2025-26

QUESTION PAPER SET
C

CLASS
5

Total Questions : 50

Time : 1 hr.

Guidelines for the Candidate

- 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, 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.
- The Question Paper comprises three sections:
Logical Reasoning (10 Questions), **Science** (35 Questions) and **Achievers Section** (5 Questions)
Each question in Achievers Section carries 3 marks, whereas all other questions carry 1 mark each.
- All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
- There is only ONE correct answer. Choose only ONE option for an answer.
- 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) (C) (D)
- Rough work should be done in the blank space provided in the booklet.
- Return the OMR Sheet to the invigilator at the end of the exam.
- Please fill in your personal details in the space provided before attempting the paper.
- SOF - Techfest IIT Bombay Innovation Challenge - Open for class 8, 9 and 10. For more details, please visit : www.sofworld.org**

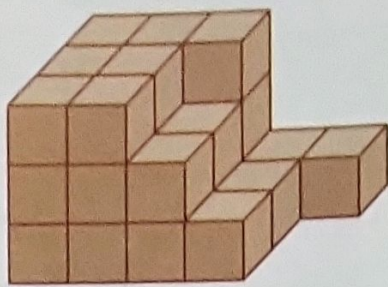


Name:.....

SOF Olympiad Roll No.:..... Contact No.:.....

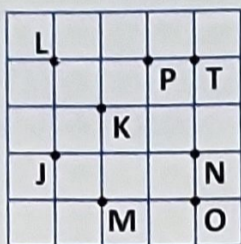
DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

1 Count the number of unit cubes in the given figure.



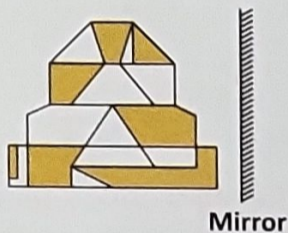
- A. 30 B. 28
C. 29 D. 27

2 Which of the following points is in North-West of point K?



- A. J B. P
C. L D. N

3 Select the CORRECT mirror image of the given figure.



- A. B.
C. D.

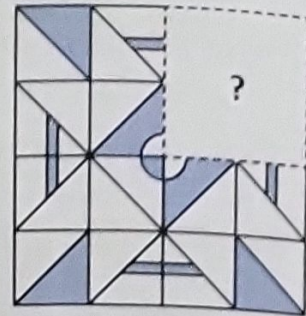
4 Read the given information carefully and answer the following question.

- Anisha and Manoj like orange and pink colors.
- Parul and Varun like green and yellow colors.
- Manoj and Parul like green and orange colors.
- Arya, Manoj and Anisha like pink color.

Who amongst the following likes only green and yellow colors?

- A. Anisha B. Arya
C. Parul D. Varun

5 Select a figure from the options which will complete the given figure pattern.



- A. B.
C. D.

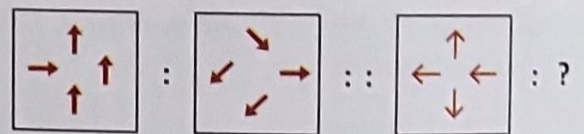
6 Which of the following Venn diagrams best represents the relationship amongst, "Players, Men and Champions"?

- A. B.
C. D.

7 If in a certain code language, 'FRIEND' is written as 'IRFDNE', then how will 'MOTHER' be written in the same language?

- A. TOMREH B. TOMEHR
C. REHTOM D. TOMRHE

8 There is a certain relationship between the pair of figures on the either side of ::. Identify the relationship between the left pair and find the missing figure.



- A. B.
C. D.

9 If Sanaya went for music practice everyday in March 20XX, except the dates which are multiples of 3, then for how many days did she go for music practice in that month? (Assume that every Saturday and Sunday is holiday.)

MARCH 20XX						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

- A. 15
C. 16

- B. 14
D. 18

- 10 Which of the following words cannot be formed from the letters of the given word?

UNPLUGGED

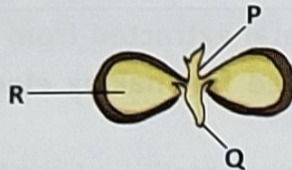
- A. GLUE
B. PLUG
C. BEND
D. LEND

SCIENCE

- 11 Select the odd one out on the basis of breathing methods of animals.

- A. Grasshopper
C. Cockroach
B. Butterfly
D. Prawn

- 12 Refer to the given figure of a dicot seed and select the option that correctly identifies P, Q and R.



- | | P | Q | R |
|----|-----------|-----------|-----------|
| A. | Cotyledon | Seed coat | Radicle |
| B. | Radicle | Cotyledon | Plumule |
| C. | Radicle | Plumule | Cotyledon |
| D. | Plumule | Radicle | Cotyledon |

- 13 Read the given statements and select the incorrect one.

- A. Nerves are thread-like structures that transmit messages between the brain and the body.
B. Diencephalon controls the musculoskeletal movements and maintains the balance and posture of the body.
C. Medulla oblongata remains active even when we sleep, as it controls the involuntary functions like heartbeat, blood circulation, etc.
D. Cerebrum is the largest part of the brain.

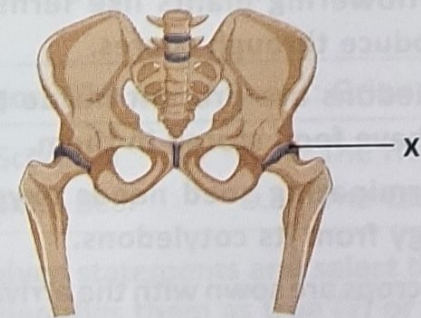
- 14 Refer to the given flow chart and select the correct option regarding X, Y and Z.



- A. Y could be maple whereas Z could be pine.
B. X could be banyan whereas Y could be oak.

- C. X could be duckweed whereas Z could be apple.
D. Y could be spruce whereas Z could be larch.

- 15 Identify the joint X shown in the given figure and select the correct statement regarding it.



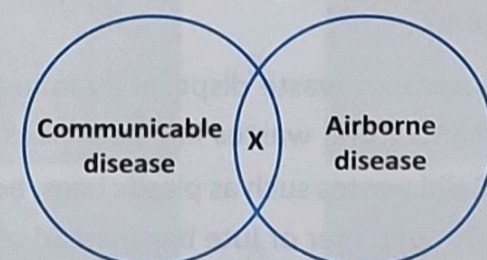
- A. This type of joint allows movement in all directions.
B. This type of joint is an example of immovable joint.
C. This type of joint works like the hinges of a door.
D. This type of joint is also found between the first two vertebrae of the backbone.

- 16 Match the columns and select the correct option.

Column I	Column II
P. Salamander	(i) Arboreal animal
Q. Chameleon	(ii) Amphibian
R. Bat	(iii) Aquatic animal
S. Octopus	(iv) Aerial animal

- A. P – (ii), Q – (iv), R – (iii), S – (i)
B. P – (i), Q – (iii), R – (ii), S – (iv)
C. P – (ii), Q – (i), R – (iv), S – (iii)
D. P – (i), Q – (iii), R – (iv), S – (ii)

- 17 Refer to the given Venn diagram and identify X.



- A. Common cold
C. Cholera
B. Pneumonia
D. Both A and B

- 18 Unscramble the given letters to get the name of an animal.

CTUOSL

Now, select the correct statement regarding it.

- A. It travels from Arctic region to Antarctic region and back again each year.
- B. It travels from Antarctica to its tropical breeding ground in the coastal water of Australia.
- C. It travels from Canada to Mexico and the participation of at least five generations is required to complete its annual migratory cycle.
- D. It is the most destructive migratory insect and travels approximately 5-130 km/day.
- 19 Read the given statements and select the incorrect one(s).
- (i) Non-flowering plants like ferns and mosses reproduce through spores.
- (ii) Cotyledons are present inside the seed coat and have food stored in them.
- (iii) A germinating seed needs oxygen to obtain energy from its cotyledons.
- (iv) Rabi crops are sown with the arrival of monsoon.
- A. (i) and (ii) only
- B. (iv) only
- C. (iii) and (iv) only
- D. (i), (ii) and (iii) only
- 20 Identify the natural disaster from the given statements.
- (i) It is caused by the sudden movement of tectonic plates.
- (ii) It is measured by an instrument called seismograph.
- (iii) It generates seismic waves that can be measured on the Richter scale.
- A. Earthquake B. Tsunami
- C. Cyclone D. Volcano
- 21 _____ is an example of metamorphic rock.
- A. Gneiss B. Shale
- C. Pumice D. Basalt
- 22 Which of the following activities does not cause soil pollution?
- A. Improper waste disposal by industries
- B. Agricultural wastes like pesticides and fertilisers
- C. Solid wastes such as plastic bags, bottles, cans, etc.
- D. Use of paper or jute bag instead of polythene bag
- 23 Unscramble the given letters in the box to obtain the names of few items.

PPREA, DACROBRAD, ARICCME LOBW, LOGD RIGN, EHTLPOYNE, FLEA, ICON

How many among them are biodegradable wastes?

- A. 2 B. 3
- C. 4 D. 5

- 24 Read the given statement and select the option that correctly identifies the process X.

X is a special change of state in which a substance absorbs energy so quickly from its surroundings that it changes directly from solid to gas, without undergoing melting.

- A. Freezing B. Sublimation
- C. Condensation D. Evaporation

- 25 Read the given statements regarding X and Y and select the option that correctly identifies them.

X : It is a metal extracted from chalcopyrite ore and is used for making electrical wires and utensils.

Y : It is a non-metallic mineral used in making glass and ceramics.

- | | X | Y |
|----|-----------|----------|
| A. | Aluminium | Mica |
| B. | Copper | Silica |
| C. | Silver | Platinum |
| D. | Zinc | Sapphire |

- 26 Read the given statements and select the option that correctly fills the blanks in any two of them.

- (i) _____ is a rapid flow of snow down a slope such as hill or a mountain.
- (ii) The hollow, top of a bowl-shaped volcanic mountain is called _____.
- (iii) _____ is an example of extinct volcano.
- (iv) The smaller quakes or tremors that occur after a massive earthquake are called _____.
- A. (i) – Flood, (ii) – Crater
- B. (i) – Avalanche, (iii) – Mount Thielsen
- C. (iii) – Mount Erebus, (iv) – Aftershocks
- D. (ii) – Epicentre, (iv) – Landslides

- 27 Select the option which on unscrambling gives the name of a practice that is used for soil conservation.

- A. NOTIATESORFED B. GNIERHTAWE
- C. TMEENNAKB D. VERRGOGINAZ

28 Read the given statements and select the option that correctly fills the blanks.

- (i) In winters, we wear woollen clothes made from wool, which is obtained from _____.
- (ii) _____ is the first synthetic fibre.
- (iii) Linen is obtained from the _____ of the flax plant.

	(i)	(ii)	(iii)
A.	Sheep	Nylon	Stem
B.	Silkworm	Rayon	Fruit
C.	Yak	Polyester	Flower
D.	Rabbit	Lycra	Leaves

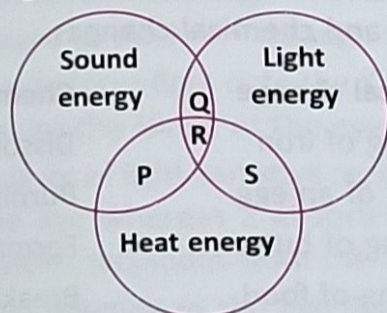
29 Read the given statements regarding a planet.

- (i) Its atmosphere is mainly made up of hydrogen and helium.
- (ii) It takes about 12 years to revolve around the Sun.
- (iii) It has 95 moons.

Now, select the option that correctly identifies it.

A. Jupiter	B. Venus
C. Mars	D. Saturn

30 The given Venn diagram represents electrical appliances according to the forms of energy that they convert into from electrical energy, when they are in use. Which of the following best represents a television?

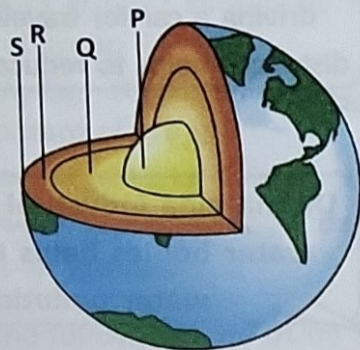


A. P	B. Q
C. R	D. S

31 _____ was the first Indian satellite, launched in 1975.

A. Sputnik I	B. Aryabhata
C. Bhaskara-I	D. Rohini RS-1

32 Refer to the given diagram showing internal structure of Earth and select the correct statement regarding layers P, Q, R and S of Earth.



- A. Layer P extends upto a depth of 2900 km.
- B. Layer Q is mainly made up of magnesium and aluminium, and remains solid despite its extremely hot temperature.
- C. Layer R is made up of nickel and iron and is about 2200 km thick.
- D. Layer S is rocky and is broken into many pieces called plates.

33 Which of the following simple machines is/are example(s) of lever?



- A. P only
- B. P and R only
- C. Q and R only
- D. P, Q and R

34 Complete the given analogy by selecting the correct option.

Ursa Major : The Great Bear :: Orion : _____

- A. The Scorpion
- B. The Hunter
- C. The Little Bear
- D. The Queen

35 Read the given statements and select the option that correctly identifies them as true (T) or false (F) ones.

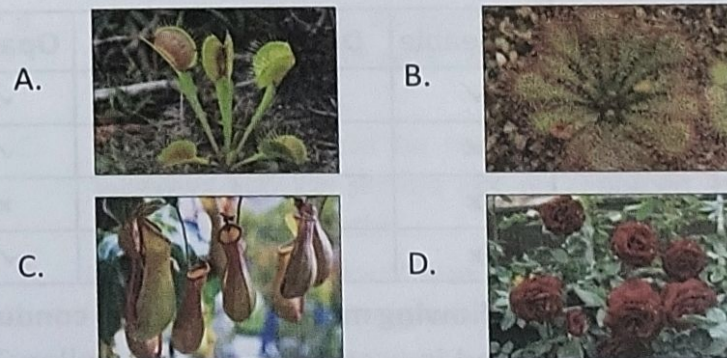
- (i) An injured person must be given first aid immediately.
- (ii) In case of a bee sting, tie the bitten area tightly with a bandage.
- (iii) In case of fainting, the person should be laid down with his/her legs raised above the heart level to improve the blood flow to the brain.
- (iv) In case of a minor burn, wash the burnt area with cool water.

	(i)	(ii)	(iii)	(iv)
A.	T	T	T	T
B.	T	F	T	T
C.	T	T	F	T
D.	F	T	F	F

36 Read the given statement regarding plant X.

Plant X grows in soil that is poor in mineral (nitrogen), therefore it fulfills its nutrient requirement by trapping and eating insects.

Now, select the option that cannot be plant X.



37 Read the given statements and select the correct option.
Statement 1: Runoff water from an animal feedlot or forest adds organic pollutants and germs to the water bodies.

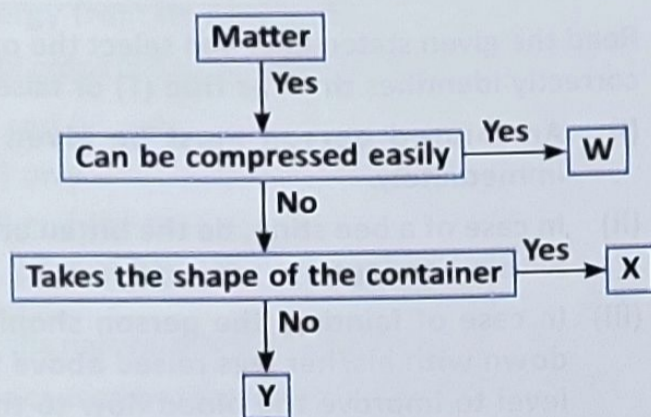
Statement 2: Excessive use of fertilisers in agricultural fields leads to eutrophication in water bodies.

- A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.
- B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.
- C. Statement 1 is true but statement 2 is false.
- D. Both statements 1 and 2 are false.

38 _____ is used to separate a mixture of oil and water.

- A. Distillation
- B. Filtration
- C. Decantation
- D. Separating funnel

39 Refer to the given flow chart. Identify W, X and Y; and select the correct statement regarding them.



- A. W could be a material in which the interparticle space is maximum.
- B. X could be a material that turns into liquid state on heating.
- C. Y could be a material in which the particles have negligible force of attraction.
- D. Y could be a material, which can flow and fill the entire space available to it.

40 The given table shows the properties of four different materials P, Q, R and S.

Material	Properties			
	Malleable	Ductile	Lustrous	Opaque
P	✓	✓	✓	✓
Q	x	x	✓	✓
R	x	x	x	x
S	x	x	x	✓

Which of the following materials is a good conductor of electricity and is used for making jewellery?

- A. Material P
- B. Material R
- C. Material Q
- D. Material S

41 Which of the following plants grows best in clayey soil?

- A. Paddy
- B. Cucumber
- C. Cactus
- D. Watermelon

42 Match the columns and select the correct option from the given codes.

Column I	Column II
1. Beriberi	(a) Vitamin B ₁
2. Anaemia	(b) Iron
3. Rickets	(c) Vitamin D
4. Goitre	(d) Iodine

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

43 Select the option that correctly identifies the examples of physical and chemical changes.

Physical change	Chemical change
A. Rusting of iron	Dissolving sugar
B. Frying of an egg	Burning of wood
C. Melting of butter	Formation of curd
D. Cooking of food	Breaking of glass

44 Which among the following children has/have made the correct statement regarding the conservation of environment?



Richa

Installation of electrostatic precipitators in factories help to reduce air pollution.



Shalu

Using a bicycle or walking instead of driving a car for travelling to short distances helps to reduce air pollution.



Vivek

Discharging industrial waste into water bodies helps to reduce water pollution.

Forests must be protected to save the environment for future generations.



Rashi

- A. Richa and Rashi only
- B. Vivek and Rashi only
- C. Richa, Vivek and Rashi only
- D. Richa, Shalu and Rashi only

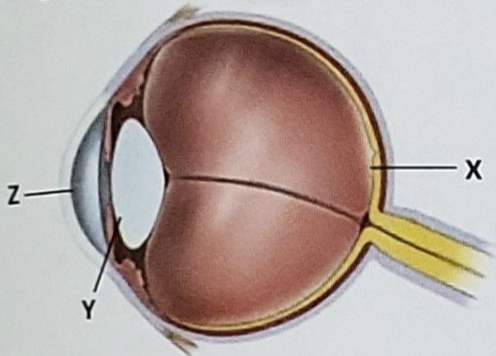
45 The seed shown in the given picture is dispersed by _____.



- A. Water
- B. Wind
- C. Explosion
- D. Animals

ACHIEVERS SECTION

46 Identify the labelled parts X, Y and Z in the given diagram of human eye and select the correct statement regarding them.



- A. X helps to form an image whereas Y helps to send messages to the brain through the optic nerve.
- B. Y helps to focus light onto the X whereas Z mainly maintains the shape of the eyeball.
- C. X is a layer of light-sensitive receptors at the back of the eye whereas Z absorbs the majority of ultraviolet radiations from the Sun.
- D. X is an opening in the eye through which light enters whereas Y protects all the inner layers of the eye.

47 Shweta made three groups consisting of three plants each on the basis of vegetative reproduction. She placed one wrong plant in each group. Identify the wrong plant in each group and select the correct option.

Group I: Potato, Beetroot, Ginger

Group II: *Dahlia*, Carrot, Garlic

Group III: *Begonia*, *Bryophyllum*, Onion

- A. Ginger of group I should be interchanged with garlic of group II.
- B. *Bryophyllum* of group III should be interchanged with potato of group I.
- C. Beetroot of group I should be replaced by turmeric.
- D. *Begonia* of group III should be interchanged with potato of group I.

48 Which of the following cannot be found in the given word grid?

P	I	H	J	Z	Y
J	B	P	R	Z	T
A	U	Q	Q	T	Y
W	O	F	S	S	X
T	Y	R	L	P	V
P	A	I	E	Q	N
A	N	C	V	R	Q
N	C	T	E	T	T
P	Y	I	R	C	E
S	Z	O	O	Y	B
W	A	N	P	R	E

- A. The upward push of water on a floating object.
- B. A renewable and non-polluting source of energy.
- C. A simple machine consisting of a beam or a rigid rod pivoted at a fixed hinge.
- D. A force that causes moving things to slow down and eventually stop.

49 Read the given paragraph where few words have been italicised and select the incorrect option.

The atmosphere of Earth is divided into *four* layers. Troposphere is the *first* layer above the Earth's surface. It extends upto *16 km* from the Earth's surface. Mesosphere is the *second* layer that prevents small rocks and *meteorites* from reaching the Earth's surface. It extends upto *600 km* above the Earth's surface. *Thermosphere* is the fourth and the *coldest* layer where many satellites orbit the Earth.

- A. *Four* should be replaced with *five* whereas *first* should not be replaced as it is mentioned correctly.
- B. *16 km* should not be replaced whereas *second* should be replaced with *third* as it is mentioned incorrectly.
- C. *Meteorites* should be replaced with *UV rays* whereas *600 km* should not be replaced as it is mentioned correctly.
- D. *Thermosphere* should not be replaced whereas *coldest* should be replaced with *hottest* as it is mentioned incorrectly.

50 Read the given statements and select the option that correctly identifies them as true (T) or false (F) ones.

- (i) Harmful gases released into the atmosphere have created holes in the ozone layer present in the troposphere.
- (ii) The increase in the concentration of greenhouse gases in the atmosphere leads to a decrease in temperature of the Earth.
- (iii) Montreal Protocol was signed by different countries in 1987 to protect the ozone layer by phasing out the production and use of ozone depleting substances.

- (iv) Deforestation is an effective method for conservation of soil.
- (v) Chemicals present in polluted water decrease the amount of oxygen in water which leads to the death of aquatic animals.

	(i)	(ii)	(iii)	(iv)	(v)
A.	F	F	T	F	T
B.	F	F	F	T	T
C.	T	T	F	T	F
D.	F	F	T	T	F

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