

SOF NATIONAL SCIENCE OLYMPIAD 2023-24







DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Total Questions: 35 | Time: 1 hr.

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: Raj goes to school on a bicycle. Which of these safety rules he should follow?
 - A. He should give signals before taking turns.
- B. He should keep to the right of the road.
- C. He should cross the road by using zebra crossing.
- D. All of these
- As the correct answer is option A, you must darken the circle corresponding to option A on the OMR Sheet.

 7. Rough work should be done in the blank space provided in the booklet.
- 16. B C D

- 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. For classes 8, 9 & 10, "Innovation Challenge" is being conducted by Techfest IIT Bombay in association with SOF. For details, please visit: www.sofworld.org/sof-techfest-iit-bombay-innovation-challenge2023

Name:

SOF Olympiad Roll No.:

Contact No.:





THE WORLD'S BIGGEST OLYMPIADS

25 Years

91,000+ Schools **70**Countries

5.6+ Crores
Assessments

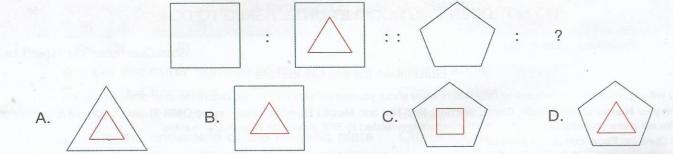
7Olympiads

LOGICAL REASONING

In how many different ways, can the camel reach the pond?

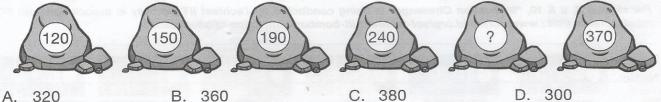
 A. 5
 B. 7
 C. 4
 D. 6

 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.



- 3. How many groups of 4 ducks each can be formed from the given ducks?

 A. 3
 B. 4
 C. 5
 D. 6
- 4. Find the missing number in the given number pattern.



Arrange the alphabets given below to form a meaningful English word and identify the category of that word.



SCIENCE

- 6. Look at the given picture and identify plant part P. How is plant part P useful to a plant?
 - (a) It holds the plant firmly to the soil.
 - (b) It stores the food made by the leaves.
 - (c) It absorbs water and mineral salts from the soil.
 - (d) It transports water and mineral salts to all parts of the plant.
 - A. (a) and (b) only
- B. (a) and (c) only

C. (d) only

D. (a), (b) and (c) only

7. Refer to the given flow chart.



Which of the following options represents the transported substances W, X, Y and Z correctly? (The arrows show the direction of movement of substances W, X, Y and Z.)

	W	X	Y	Z
Α.	Water	Water	Food	Food
В.	Food	Water	Food	Water
C.	Water	Food	Water	Food
D.	Food	*Food	Water	Water

- 8. Which of the following is NOT a characteristic of the bird whose foot is shown in the given picture?
 - A. It is a flesh-eating bird.
 - B. It is also known as the bird of prey.
 - C. It lays the largest egg in the world.
 - D. It has a hooked beak.



- Unscramble the given letter groups to find out the name of a cooking method by which biscuits are made.
 - A. OSANIGTR
- B. KNAIBG
- C. IINLGBO
- D. IESMTAGN

- 10. Preservation of food is done to
 - A. Keep it fresh for a long time
- B. Prevent it from getting spoiled
- C. Keep the nutrients intact for a long time D. All of these.

11.	Mekhela chado A. Kashmir	or is a traditional dress B. Punjab	s worn by the wom C. Gujarat		state? Assam
12.	Which of the formal A. (a) and (b) B. (a), (c) and C. (b) and (d) D. (a), (b), (c) and control of the formal b.	(d) only only	ed for cleaning purp (a)	poses in the	house?
13.	A. They absor	ollowing is a character b less water rinkle resistant	ristic of synthetic fi B. They dr D. All of th	y quickly	
14.	A. GravitationaB. Frictional foC. Frictional fo	while walking on the we al force is more on the orce is more on the we orce is less on the wet al force is less on the	e wet floor et floor floor	to the dry flo	oor. This is because
15.	figure and answ	elled parts 1-4 of huma ver the following quest t of the human digestive stream?	tion.	re absorbed	2 3 4
16.	For sending an A. Fax machin	e-mail the mobile/cor e B. Printer		onnected to s phone D.	
17.	Which of the fo	ollowing phases of Mo	on immediately follo	ows ?	
18.	Which of the fo	B. SPACE FO	C. OR ROUGH WORK	? D.	

19. Which of these mudras (hand gestures) in dance depicts a deer head?









20. Study the given Venn diagram and identify animal X.

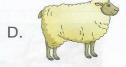
Its young one is called a kid.

The sound it produces is called bleat.









21. Which of the following options shows INCORRECT posture?



В.



C.



- D. Both A and C
- 22. Rohit and Shivani were standing as shown in the given figure. Rohit waved to Shivani and she smiled in reply. Sheet P can be made of
 - A. Wood
 - B. Iron
 - C. Rubber
 - D. Glass.





- 23. Water is essential to us as
 - A. It helps to remove waste materials from our body
 - B. It helps to keep our body cool
 - C. It helps in the digestion of food
 - D. All of these.

	A.	Hearing	B. Sight	C	Touch	D. T	aste
25.			ated in Kerala for	da	ys.		THE STATE OF THE PARTY OF THE P
	A.	2	B. 5	C.	10	D. 2	0
26.	Wh	nich of the fol	lowing kids is/are NO	Γ followin	ng safety rule	s?	n enik dibini d
		An internal statement and street					
	^	202					
	A.	G W	Jeeld belle	B.	0-0-0		
		Y LA				1-00	
		a br					A /
	FA						
	C.			D.	All of these		
stern and a					YOR HILL	eniwoliot er	the nointy of
27.	X is	s a force that	works in the opposite	directio	n of moveme	ent of an ob	ject in contac
27.	VVILI	i a suriace.	works in the opposite	directio	n of moveme	ent of an ob	ject in contac
27.	X is	a surface.					
	X is	Magnetic for	ce B. Push	C.	Pull		ject in contac
	X is A.	Magnetic for	ce B. Push r writing on blackboard	C.	Pull	D. Fr	ictional force
	X is A. Cha	Magnetic formalk is used for It is a soft ro	ce B. Push r writing on blackboard	C. ds becau B.	Pull ise It is made u	D. Fr	ictional force
	X is A. Cha	Magnetic for	ce B. Push r writing on blackboard	C. ds becau B.	Pull	D. Fr	ictional force
28.	X is A. Cha	Magnetic formalk is used for It is a soft roll It is a hard resect the correct	ce B. Push r writing on blackboard ock ock et statement.	C. ds becau B. D.	Pull ise It is made u	D. Fr	ictional force
28.	X is A. Cha A. C. Sele A.	Magnetic formalk is used for It is a soft roll to the correct the correct Than Desert is	ce B. Push r writing on blackboard ock ock st statement. s located in South Afr	C. ds becau B. D.	Pull ise It is made u	D. Fr	ictional force
28.	X is A. Cha A. C. Sele A. B.	Magnetic formalk is used for It is a soft roll it is a hard recet the correct Thar Desert in River Ganga	r writing on blackboard ock ock ock st statement. s located in South Afris one of the rivers of	C. ds becau B. D. ica. India.	Pull use It is made use It is made use	D. Fr	ictional force
228.	X is A. Cha A. C. Sele A. B. C.	Magnetic formalk is used for alk is used for alk is a soft roll to it is a hard recent the correct the correct Thar Desert in River Ganga Dal Lake in A	ce B. Push r writing on blackboard ock ock ock ot statement. s located in South Afr is one of the rivers of	C. ds becau B. D. ica. India.	Pull use It is made use It is made use	D. Fr	ictional force
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ACHIEVERS SECTION

31. Study the given table and select the option that best represents the headings P, Q and R.

Animal	P	Q	R
Goldfish	×	×	1
Grasshopper	×	√ · · · · · · · · · · · · · · · · · · ·	1
Emu	√	×	1

	P and the antique districted at	Q	R
A.	Can fly	Can breathe through lungs	Has wings
В.	Can fly	Lays eggs	Has wings
C.	Has wings	Lays eggs	Can fly
D.	Can breathe through lungs	Can fly	Lays eggs

- 32. Refer to the given word grid and answer the following questions.
 - X How many birds having chisel-shaped beak are hidden in the word grid?
 - Y How many birds that wade through water are hidden in the word grid?

	in the word gira	•
	X	Υ
A.	2	1
В.	3	2
C.	2	3
D.	1	1

K	W	al	Q	D	V	Н
J	0	Н	E	R	0	N
Н	0	0	Р	0	E	S
Α	D	С	G	W	U	Т
W	Р	R	K	L	Р	0
K	E	Α	1	Т	Z	R
С	С	N	Т	M	В	K
F	K	Е	Е	Z	В	0
Α	E	L	W	Е	С	X
S	R	R	N	Y	D	Α

33. Refer to the given flow chart and identify the materials P, Q, R and S.

	Р	Q	R	S	It is obtained from trees.
A.	Tiffin box	Raincoat	Iron rod	Kite	No
В.	Wooden	Tyre	Plastic	Glass	It is transparent. Yes ▶ Q
	door		bucket	tumbler	No
C.	Glass	Book	Car	Cotton shirt	It is shiny. Yes R
D.	Paper	Windowpane	Steel glass	Plastic chair	No It is light and durable. Yes S

34. Veera shone a torchlight at a bunch of grapes as shown in the given picture. What can Veera do to enlarge the shadow of the bunch of grapes on the screen?

1. Shift the screen closer to the grapes.

Shift the screen away from the grapes.

Shift the grapes nearer to the torch.

4. Shift the torch further away from the grapes.

A. 1 and 2 only

B. 2 and 4 only

C. 1 and 3 only

Ice cube

Beaker -

Hot plate

Metallic plate

Torch

Bunch of

grapes

D. 2 and 3 only

Screen

Water (50 m

35. Refer to the given experimental set-up and select the option that correctly fills the blanks in the given sentence.

After sometime, there will be formation of water droplets

(i) due to (ii)

A. On the outer surface of the beaker

B. On the hot plate

C. On the ice cubes

D. On the underside of the metallic plate

(ii) Evaporation

Condensation

Evaporation

Condensation

SPACE FOR ROUGH WORK















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