# MINDATHON SCIENCE OLYMPIAD (MSO) CLASS - IV

## SAMPLE PAPER (2024)

Time: 1 hour Max Marks: 40

#### General Instructions:

- . There are a total of 35 questions in this test.
- · Read each question carefully and answer all of them.
- . All the answers must be correctly marked in the OMR sheet provided to you.
- Questions (1-30) carry one mark. Questions in the Mindathon Little Scientists (31-35) are worth 2 marks each.

#### SECTION A

#### GENERAL SCIENCE AND SCIENTIFIC AWARENESS

- 1. Which of the following will give blue black colour with iodine?
  - a) potato juice

b) lemon juice

c) orange juice

- d) milk
- 2. The stomatal pores at the undersurface of the leaf, are responsible for
  - a) releasing water for transpiration
  - b) exchanging oxygen and carbon dioxide with the surroundings
  - c) both a) and b)
  - d) releasing chlorophyll in air
- 3. Match the food nutrients with their sources
  - p. carbohydrates
- w. milk, egg

q. fats

x. green leafy vegetables

r. proteins

- y, rice and wheat
- s. protective food
- z. cream, butter, oil b) p-z, q-y, r-x, s-w
- a) p-z, q-y, r-w, s-x c) p-y, q-z, r-w, s-x

- d) p-x, q-y, r-x, s-w
- 4. Match the foods with their technique of cooking :
  - p. frying

w. dhokla

- q. steaming
- x. cashews

r. baking s. roasting

- y. bhatura z. cookies
- a) p-y, q-w, r-z, s-x

b) p-w, q-y r-z, s-x

c) p-y, q-z, r-w, s-x

d) p-y, q-x, s-z, s-w

5.	Sometimes a sticky yel	low layer of germs develop on teeth. This is called.			
	a) plaque				
	b) cavity	YAYAR YARYAYAYAYA			
	c) caries				
	d) microbe				
6.	From the mouth of water	er:			
	"I stay liquid in your room				
	but I freeze when you co	of me to (1)			
	Boil me, I will disappear as steam at (2)				
	here (1) and (2) respective	ely are			
	a) 0°C, 32°F	b) 100°C, 100°F			
	c) 32°F, 100°C	d) 32°C, 100°F			
7.	A : Matter can absorb o	r give out heat to change its state.			
	B : All substances exchange equal amount of heat to change their state.				
	a) Both A and B are corre	ct.			
	b) Both A and B are incor	rect.			
	c) Only A is correct.				
	d) Only B is correct.				
8.	If a child is bitten by a dog, the doctor gives injection to prevent the occurrence of				
	a) rabies	b) cancer			
	c) diabetes	d) hypertension			
9.	State true/false for the following statement :				
	· The presence of hemo	globin in blood makes it appear green.			
	<ul> <li>Heart pumps blood fro</li> </ul>	m sunrise to sunset and sleeps at night.			
	· Our heartbeat is the rh	ythmic contraction of heart muscles.			
	Heart, blood and blood vessels constitute circulatory system.				
	a) FFTT	b) TTFF			
	c) TFTF	d) FTFT			
10.	Match the columns in t	ne following			
	p. Blood vessels	t. Fluid connective tissues			
	q. Heart	u. Tubes that carry blood			
	r. Blood	v. It transports substance			
	s. Circulatory system	w. Organ which pumps blood			
	a) p-u, q-w, r-t, s-v	b) p-w, q-u, r-t, s-v			
	c) p-u, q-w, r-v, s-t	d) p-v, q-w, r-t, s-u			

11.	State true / fals a) Turtles lay the	e among the fol	The state of the s	nund	
			투신	air to cool down.	
	100	3.7	moulting i.e. she		
A	d) Tadpole has a		mouning i.e. she	d tricii old skiri.	
BY	a) TFTF		c) FTFT	d) FETT	
12.		wn here is an e		9/1111	
12.	a) parasite	Wil liele is all e	b) scavenge	or A	
	c) omnivore		d) arboreal	A STATE OF THE STA	Leech
13.		emal' recently l			100 0
13.	The cyclone' Remal' recently hit the eastern coast of India. It was predicted well in advance with the help of pictures clicked by				
	a) news reporter	The state of the s	b) journalist		
	c) tourists		d) artificial s	satellites	
14.	Atomic energy	is obtained by	splitting a heav	y atom into sma	aller ones. This
	energy is used			ਨੀ: 	
	a) making atom	bomb	b) generatir	ng electricity	
	c) both a) and b)	)	d) running t	rains	
15.	in a solar cell,	energy is	converted into_	energy.	
	a) heat, light		b) light, hea	at	
	c) light, electrica	The state of the s	d) electrical	, light	
		S	ECTION B		
		EVER	YDAY SCIENC	E	
16.	When a green p	olant is kept in o	lark for a few da	vs then it gets	
/	a) tanned	11	b) destarch	왔다. 경투	
	c) variegated		d) destroye	d	
17.	Committee of the state of the s		· 그렇게 없는 사이를 보고 있다면 보고 있다면 다른 사람들이 없다.	es some plants	
		sorb exhaled ga		se plants could	be
	a) tape grass		b) pond we		
1	c) both a) and b)		d) none of t		
18.		ctus plant care t be found in it?	fully. Which of	these	Lessan
	a) green stem w	hich can do phot	osynthesis		W-71

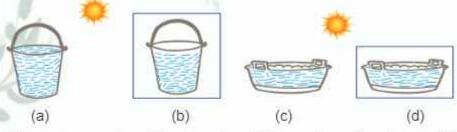
- b) fleshy stem with a waxy coating
- c) leaf with stomata on the top
- d) deep roots



Cactus plant

19.	Given below is a sequence of blank spaces. Identify the correct word for each blank: Deficiency of iodine in body causes (A) If we have lack of (B), we can have scurvy in gums we must take enough (C) in food to avoid getting rickets (bent bones) or osteoporosis.					
	a) (A) goitre	(B) Vitamin C	(C) calcium			
	b) (A) blurred vision	(B) Vitamin D	(C) phosph	orus /	1	
	c) (A) lack of energy	(B) Vitamin A	(C) iron			
	d) (A) pale skin	(B) Vitamin B	(C) sodium		1	
20.	We use this instrument a) stars b) food processing	t in laboratories t	o observe			
	c) microbes					
	d) tooth decay					
21.	After taking a hot shower bath, Radha saw that her bathroom mirror had become foggy. This would happen because					
	a) vapour condensed on mirror glass					
	b) vapour deposited on mirror glass					
	c) vapour froze into ice particles					
	d) none of these					
22.	If a person suffers first degree burns, then what first aid should be given to him/ her?					
	a) The wound should be washed with soap and warm water.					
	b) Keep the burnt area under cold running water for some time.					
	c) Tie a tight band over the wound.					
	d) Apply an antiseptic lo	tion and tie a band	age.			
23.	The gas sprayed by a fire extinguisher on a burning object is					
	a) oxygen			(tens to		
	b) carbon dioxide					
	c) water vapour					
	d) nitrogen					
24.	Touch your wrist along the thumbline with your fingers. The throbbing you feel is called					
	a) pulse	b) m	icturition			
	c) heartbeat	d) he	eart rate			
25.	In the dark and damp of eggs could belong to	corners of a store	room, Rohan f	ound some eggs. The	se	
	a) butterfly b) r	noth c) co	ockroaches	d) bats	H	

# 26. Water was kept in four containers as shown below. In which of these evaporation rate will be maximum?



- 27. The wet grass in winter morning dries up in a few hours. Which of these process represent this observation?
  - a) dew  $\rightarrow$  (evaporate)  $\rightarrow$  frost
  - b) frost  $\rightarrow$  (melts)  $\rightarrow$  dew
  - c) dew → (evaporate) → vapour
  - d) frost  $\rightarrow$  (melts)  $\rightarrow$  vapour
- 28. In which of the following cases no work is being done?







- d) all of these
- A rolling football stops on its own after travelling some distance. It happens because
  - a) There is a force opposing its motion.
- b) It was not hit hard enough.

c) It was very heavy.

- d) It was acted by earth's gravity.
- People using wheelchair can easily move around in public places and can use public transport too, using
  - a) lever

b) wedge

c) inclined plane

d) screw

### SECTION C

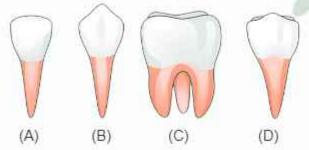
## MINDATHON LITTLE SCIENTISTS

- 31. Plants of hilly areas need to withstand snowfall, rain and harsh weather. This could even damage their leaves. In such plants
  - a) leaves are modified into spines
  - b) leaves are broad and flat
  - c) leaves are needle shaped
  - d) leaves form cones

- 32. A: Water helps in removal of waste from the body.
  - B: Our body is approximately 71% water.
  - a) Both A and B are correct.
  - c) Only A is correct.

- b) Both A and B are incorrect.
- d) Only B is correct.

33.



In the above figures inscisors and molars are respectively

- a) A and B
- c) C and D

- b) B and C
- d) A and C
- 34. The animal which swings through branches with its long and curled tail is



- a) Macague
- c) Koala bear

- b) Gorilla
- d) Giant panda
- 35. Identify the form of energy possessed by all of these :









- a) mechanical energy
- b) heat energy
- c) chemical energy
- d) muscular energy



# ANSWER SHEET

JOENT NAME (IN ENGLISH CAPITAL LETTERS ONLY)		
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y	24 A B C B 47 A D C	0
	25 A O C O 48 A D C	0
	49 A 0 C	0
	50 (A) (0) (0)	0

Signature of the Student & Data of Examination

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