MÎ	hamps NDIA		<b>2022-23</b> ience challenge exam (aiece)
Name of the Student Name of the School	0.0		Roll No.:
Class	:	Subject: Science	Time: 60 Min

## Instructions to the Candidate

- 1. Each question carries 1 mark. There is no negative marking.
- 2. Separate Optical Mark Reader (OMR) Answer Sheet is supplied to you along with question paper booklet.
- 3. Read the questions carefully and fill in the circle corresponding to your answer. Fill in the circle Completely.
- 4. Rough work should be done only in the space provided in the Question Paper Booklet.
- 5. Return the OMR Answer sheet to the invigilator before leaving the examination hall.
- 6. You can carry the question paper with you after completing the examination.
- 7. Once you enter the examination hall, you are not permitted to leave till the end of the examination.

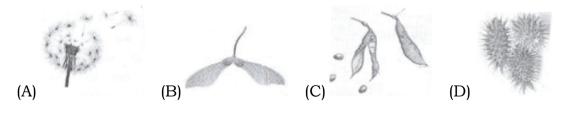
## V Class Science

 'X' is a part of human eye, where image is formed when light falls on it. Message from there is carried to the brain by Y. Here 'X' and 'Y' are
 (A) X - Pupil; Y -Lens
 (B) X - Retina; Y - Iris
 (C) X - Cornea; Y - Optic nerve
 (D) X - Retina; Y - optic nerve

2. The science teacher said that "a tight metal lid of a glass jar can be opened when dipped in warm water". Which of the following process explains the given statement?

(A) Evaporation (B) Contraction (C) Expansion (D) Condensation

3. Seeds of certain plants are very lightweight and have wing – like structures, and are easily carried away by the wind. Which of the following picture best suits the given statement?



- 4. In which of the following activities, work is said to be done?
  - (A) Reading a newspaper
  - (C) Watching television
- (B) Drawing water from a well
- (D) Relaxing after a game.

5. Read the given table

M	N	
Bauxite	Mica	
Magnetite	Quartz	

Here M and N are

- (A) M Gemstones; N Ores (B) M Igneous rocks; N Precious metals
- (C) M Metallic minerals; N Non-metallic minerals
- (D) M Liquefied metals; N Powdered metals

6. Which of the following helps to build up resistance in the body and prevent from some communicable diseases?

- (A) Vitamins and minerals (B) Vaccines
- (C) Antibiotics (D) Antigens

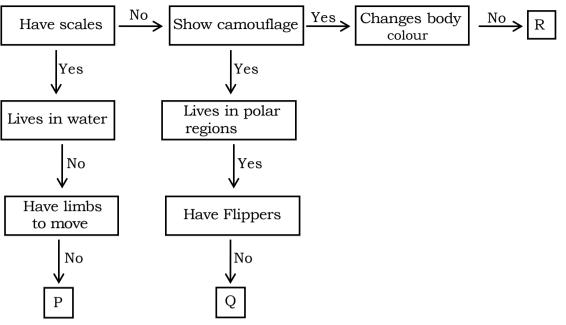
7. Animals that had already disappeared from the Earth are called \_\_\_\_\_\_

- (A) Dinosaurs (B) Endangered animals
- (C) Extinct animals (D) Both B and C
- 8. Cardiac muscles are found in \_\_\_\_\_\_
  (A)Heart (B) eyes (C) stomach (D) lungs
- 9. "Burning of paper is a chemical change" choose the option that supports the statement.
  - (A) Only Physical state of paper changed and a new substance is formed.
  - (B) Chemical composition of paper changed and no new product is formed.

(C) A new substance is formed as the chemical composition of paper is changed.

(D) It is neither a physical change nor a chemical change.

10. Select the option that correctly identifies the animals P, Q and R in the given flow chart.

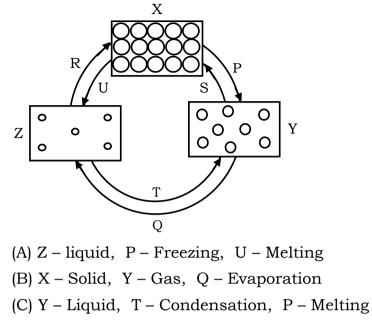


- (A) P Snake; Q Penguin; R Chameleon
- (B) P Crocodile; Q Polar bear; R Chameleon
- (C) P Turtle; Q Seal; R Snail
- (D) P Snake; Q Polar bear; R Grasshopper
- 11. Here are statements that explain in detail, the process of germination. Read and choose the correct option that follows the process in the correct order.
  - (1) As the plant grows in size, it develops leaves.
  - (2) The new plant develops roots and shoots
  - (3) The seed soaks up water, seed coat breaks and the root emerges
  - (4) The seed gets air, water and warmth
  - (5) The cotyledons shrink and disappear

(A) 4, 3, 2, 1, 5 (B) 5, 4, 3, 1, 2 (C) 1, 2, 3, 4, 5 (D) 3, 2, 1, 4, 5

- 12. Read the following first aid steps and identify the type of injury.Remove the clothes around the burnt area. Place the wound under cool running water, dry and loosely wrap a clean bandage and call the doctor immediately
  - (A) Severe burn(B) Chemical burn(C) Fracture(D) Minor burn

13. Study the given diagram carefully and select the correct option.



- (D) Z Solid, R Melting, S Freezing
- 14. Which of the following simple machines is used to join or attach the things together?

(A) Inclined plane	(B) Wedge
(C) Wheel and axle	(D) Screws

15. Identify the joint showing movement in the picture.



(A) Pivot joint (B) Gliding joint (C) Hinge joint (D) Cranial bones

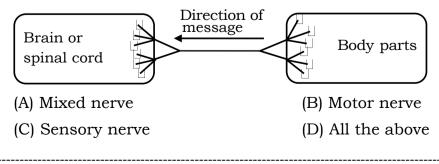
- 16. Which of the following is an example of the force of gravity?
  - (A) A leaf falling from tree. (B) A girl slipped on the wet floor.
  - (C) A boy pulling the door to open.
  - (D) A man rolling the cylinder on the ground.

- 17. Sun is a dwarf star but looks very big as compared to other stars. Why? Choose the correct reason for the above question.
  - (A) It is at the centre of the solar system.
  - (B) It is a huge ball of hot burning gases.
  - (C) Hydrogen changes into helium in the sun.
  - (D) The sun is the closest star to the Earth
- 18. Which of the following statements is true?
  - (A) Bones are held together at the joint by special tissues called tendons.
  - (B) Cartilage present in the bones produces blood cells.
  - (C) Sternum is the longest bone in the human body.
  - (D) Ligaments help to hold the bones together.
- 19. Sheela threw some seeds out of the window. Some of those seeds fell on the metal road. She was surprised to see that they all germinated. How did the seeds germinate without soil?
  - (A) Seeds need only air, water and warmth for germination
  - (B) Soil is essential for germination.
  - (C)Sheela is lying, seeds did not germinate
  - (D) Both (B) and (C)
- 20. Geeta suffered from a deficiency disease. On the doctor's advice, she is taking more milk and milk products and standing in the Sun for half an hour every day.

What might be the disease?

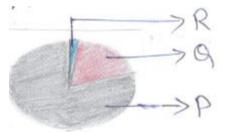
- (A) Anaemia
- (C) Beriberi

- (B) Rickets
- (D) Goitre
- 21. Study the diagram carefully and identify the type of nerve



22.	Read the given clue and identify the type of rock. "It is smooth and glassy formed by quick cooling of lava."					
	(A) Obsidian	(B) Igneous	(C) Metamorphic	(D) Precious stones		
23.	Horse : Lungs : : Cockroaches:					
	(A) Gills	(B) Moist skin	(C) Spiracles	(D) Lungs		
24.	Which of the following crops depend largely on monsoon rains?					
	(A) Wheat and legumes (C) Only legumes		(B) Rice and maize			
			(D) Rice and wheat			
25.	Suppose you have a piece each of granite, pumice and marble. Predict which o					
	the three would not sink when put in a bucket of water					
	(A) Granite	(B) Pumice	(C) Marble	(D) Both A and B		
26.	Read the following statements given by Bheem and Chutki. Identify who is					
	lying.					
	Bheem: Moon does not have atmosphere.					
	Chutki: Moon produces its own light.					
	(A) Chutki		(B) Both are lying			
	(C )Bheem		(D) Both are correct			

27. Study the pie diagram and the following statements about atmospheric gases and choose the correct option.



- (1) 'P' in the air is needed for burning.
- (2) 'R' contains gases such as argon, neon, hydrogen etc.
- (3) 'Q' is essential for the survival of all living things
- (4) None of these

28. Which of these are good sources of roughage?

- (A) Milk and milk products (B) Eggs and fish
- (C) Butter and ghee (D) Vegetables

\_\_\_\_\_

- 29. Which type of joint in the body shows a 360° movement?
  - (A) Joint in the arm and body (B) Joint in
  - (C) Ball and socket joint
- (B) Joint in the leg and body

(D) All the above

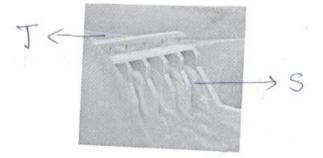
- 30. Jack accidentally puts his hand on a cactus plant. He withdrew his hand immediately. Such actions are called reflex actions. Which of the following organs are involved in such type of actions?(A) Spinal cord (B) Cerebellum (C) Brain stem (D) Cerebrum
- 31. Which of the following statements correctly describes adaptation?
  - (A) It is an area where a particular animal lives
  - (B) Changes only in the features of an organism that helps to get their food.

(C) Changes in the features or behaviour of an organism that help them to survive in a new habitat.

(D) It is change in the features from larval stage to adult stage

- 32. Which of the following is a deficiency disease?(A) Malaria (B) Scurvy (C) Typhoid (D) Pneumonia
- 33. The energy that an object has due to its
  - (i) Movement is kinetic energy
  - (ii) Position is potential energy.

Now read the picture carefully and choose the option that represents 'S' and 'T' correctly



- (A) T Potential energy, S kinetic energy
- (B) T kinetic energy, S Potential energy
- (C) S and T are both potential energy
- (D) S and T are both kinetic energy
- 34. Identify the mis-matched pair
  - (A) Rib cage 12 pairs of ribs
    - (C) Pivot joint wrist and ankle
- (B) Backbone 33 vertebrae
- (D) Skull of adult human 22 bones

35.	Roots of	_ can grow into new	v plants			
	(A) potato	(B) dahlia	(C) rose	(D) ginger		
36.	Rahul thought he is eating a balanced diet. His lunch has slices of mangoes, a					
	roti, a cake, some cooked green vegetables and some steamed rice. But to his					
	dismay, his teacher said it is not a balanced diet. Why? The food has					
	(A) Excess car	bonydrates mounts of fats and	vitomino	(B) No proteins (D) Both (A) and (B)		
	(C) Required a	inounts of fats and	vitaiiiiis			
37.	37. Which of the following represent the functions of skeletal system?					
	(A) It protects soft internal organs.					
	(B) It supports the movement of body parts.					
	(C) It gives sha	ape and support to	our body			
	(D) All the abo	ve				
38.	Certain schoo	ls have certain adm	ussion rules and	take children who live within		
00.	Certain schools have certain admission rules and take children who live within 5 km of the school. Alok lives 2000 m from the school and wants to go to the					
	same school. Will he get admission in the school?					
	(A) The school is far away from his house beyond 5 km to get admission.					
	(B) He will not get the admission as 2000 m/s longer than 5 km.					
	(C) He will get admission as 2000 m is below 5 km from the school					
	(D) He has to s	shift near to the sch	nool if he longs f	or the same school.		
39.	What is sprain	2				
09.	What is sprain? (A) A break or crack in the bone					
	(B) This cause when we twist the ankle or the wrist suddenly					
	(C) It holds the fracture in place.					
	(D) It is a disea	ase caused by anim	al bite			
40.	Study the give					
	P Discuss 1	Q				
	Diamond	Diesel LPG				
	Ruby Sapphire	?				
		ollowing can be pla	ced in group 'O'	2		
	(A) Calcium	(B) Magnetite	(C) Gypsum	(D) Gasoline		
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