



**3<sup>rd</sup> LHC STATE LEVEL NATIONAL SCIENCE DAY COMPETITION 2025**

*Organized by*

**Internal Quality Assurance Cell (IQAC), Lilong Haorelbi College, Manipur**

**Date: 23<sup>rd</sup> February, 2025**

**Time: 11:00 AM – 12:00 PM**

**Venue: ITEP Block, Lilong Haorelbi College**

*in connection with the observance of*

**NATIONAL SCIENCE DAY 2025 (February 28)**

**TEST BOOKLET SERIES: A**

*Maximum Marks : 100 (40 Questions)*

*Time Allowed: One Hour*

**INSTRUCTIONS:**

1. Mark your Roll Number and Responses (only one option for each question) on the OMR Answer Sheet provided separately.
2. All 40 Questions carry equal marks ( $2.5 \times 40 = 100$ ).
3. There shall be NO Penalty for any incorrect answer.

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1. Which one of the following gases is commonly used in tear gas?

- |              |              |
|--------------|--------------|
| (A) Bromine  | (B) Chlorine |
| (C) Fluorine | (D) Sulphur  |

2. The largest and most massive natural satellite in the Solar System, Ganymede, belongs to which one of the following planets?

- |            |             |
|------------|-------------|
| (A) Venus  | (B) Uranus  |
| (C) Saturn | (D) Jupiter |

3. What is the normal range of audible frequencies for the human ear?

- |                    |                    |
|--------------------|--------------------|
| (A) 0.02 to 20 KHz | (B) 0.2 to 200 KHz |
| (C) 0.04 to 40 KHz | (D) 0.4 to 400 KHz |

4. Which phenomenon of light is related to the 'Raman Effect'?

- |                 |                |
|-----------------|----------------|
| (A) Diffraction | (B) Reflection |
| (C) Refraction  | (D) Scattering |

5. Consider the following statements:

1. Protozoa are made up of only one cell.
2. Viruses are not made out of cells.

With reference to the given statements, which one of the following is correct?

- |                  |                     |
|------------------|---------------------|
| (A) 1 only       | (B) 2 only          |
| (C) Both 1 and 2 | (D) Neither 1 nor 2 |

6. Which one of the following statements is **true** about fossil fuels?

- |  |
|--|
| (A) Some fossil fuels are renewable.                 |
| (B) Some fossil fuels do not contain carbon.         |
| (C) All fossil fuels occur in the form of gases.     |
| (D) All fossil fuels are found in the Earth's crust. |

7. Smartphone batteries consist of commonly \_\_\_\_\_.

- |             |               |
|-------------|---------------|
| (A) Silicon | (B) Manganese |
| (C) Lithium | (D) Cadmium   |

8. Consider the following pairs:

Common Name :	Scientific Name
1. Sangai (State Animal) :	<i>Cervus eldii eldii</i>
2. Nongin (State Bird) :	<i>Syrnaticus humia</i>
3. Shirui lily (State Flower):	<i>Nelumbo nucifera</i>
4. Pineapple (State Fruit) :	<i>Mangifera indica</i>

Which is the correct option in the above pairs?

- (A) Only one pair is correct
- (B) Only two pairs are correct
- (C) All the three pairs are correct
- (D) All the four pairs are correct

9. Which one of the following compounds causes acid rain directly?

- |                      |                     |
|----------------------|---------------------|
| (A) Titanium oxide   | (B) Carbon monoxide |
| (C) Hydrogen dioxide | (D) Sulphur dioxide |

10. Which one of the following working principles is used in aircraft and Unmanned Aerial Vehicle (UAV) popularly known as Drone?

- |                           |                           |
|---------------------------|---------------------------|
| (A) Archimedes' Principle | (B) Bernoulli's Principle |
| (C) Galileo's Principle   | (D) Newton's Principle    |

11. Which of the following is **NOT** a byproduct of photosynthesis?

- |             |            |
|-------------|------------|
| (A) Glucose | (B) Heat   |
| (C) Light   | (D) Oxygen |

12. Consider the following statements:

1. Hot water freezes faster than cold water.
2. Hot water evaporates faster than cold water.

With reference to the given statements, which one of the following options is correct?

- (A) 1 only
- (B) 2 only
- (C) Either 1 or 2 is inconclusive.
- (D) Both 1 and 2 are inconclusive.

13. Which part of the poppy plant is used to obtain the drug "opium"?

- |           |            |
|-----------|------------|
| (A) Latex | (B) Stem   |
| (C) Root  | (D) Flower |

14. Who among the following is generally considered as the father of "Artificial Intelligence (AI)"?

- |                  |                      |
|------------------|----------------------|
| (A) Bob Thomas   | (B) John McCarthy    |
| (C) Kevin Ashton | (D) Vinton Gray Cerf |

15. Which of the following sequences is the correct increasing order of temperature of the zones of a candle flame?

- |                        |                        |
|------------------------|------------------------|
| (A) Inner-Middle-Outer | (B) Middle-Inner-Outer |
| (C) Outer-Inner-Middle | (D) Outer-Middle-Inner |

16. With reference to the Komodo Dragon of Indonesia, consider the following statements:

1. The Komodo Dragon is a mammal.
2. The Komodo Dragon reproduces by laying eggs.

Which of the given statements is/are correct?

- |                  |                     |
|------------------|---------------------|
| (A) 1 only       | (B) 2 only          |
| (C) Both 1 and 2 | (D) Neither 1 nor 2 |

17. What does the abbreviation LASER stand for?

- (A) Light Actualization by Simultaneous Emission of Radiation
- (B) Light Application by Simultaneous Electronic Radiation
- (C) Light Amplification by Stimulated Emission of Radiation
- (D) Light Arrangement by Synchronized Electronic Radiation

18. Complete the following analogy by choosing the correct options given below:

Anaemia: Iron :: Goitre : \_\_\_\_\_

(A) Calcium	(B) Iodine
(C) Phosphorous	(D) Zinc

19. Which one of the following soil types is considered the most fertile and productive?

- |                   |                |
|-------------------|----------------|
| (A) Alluvial Soil | (B) Black Soil |
| (C) Laterite Soil | (D) Red Soil   |

20. Which one of the following rocks floats on water?

- |                |               |
|----------------|---------------|
| (A) Kimberlite | (B) Limestone |
| (C) Pumice     | (D) Slate     |

  
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21. Which one of the following is the correct nature of the image formed by a Kaleidoscope?

- (A) Distorted (B) Enlarged  
(C) Reduced (D) Symmetrical

22. Two statements are given below marked as Assertion (I) and Reason (II). Only the correct option is to be selected.

**Assertion (I):** Bananas are radioactive fruits.

**Reason (II):** Bananas contain Potassium.

Which one of the following is correct?

- (A) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I  
(B) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I  
(C) Statement-I is correct, but Statement-II is incorrect  
(D) Statement-I is incorrect, but Statement-II is correct

23. Which one of the following is the largest cell in the human body?

- (A) Neuron (B) Ovum  
(C) RBC (D) Sperm

24. Consider the following statements related to various scientific processes:

1. Fermentation is used to make 'Ngari'.
2. Galvanization is used to strengthen iron.
3. Pasteurization is used to kill pathogens in milk.
4. Vulcanization is used to weaken rubber.

How many of the above given statements is/are correct?

- (A) Only one (B) Only two  
(C) Only three (D) All four

25. Which one of the following scientific instruments is used to measure atmospheric pressure?

- (A) Thermometer (B) Odometer  
(C) Hygrometer (D) Barometer

26. Phumdis are floating mats of soil, plants and organic matter in Loktak Lake, Manipur, India. Which amongst the following physical phenomena is primarily responsible for floating of Phumdis?

- (A) Buoyancy (B) Isostasy  
(C) Gravitation (D) Osmosis

27. The irritating itching sensation felt in the tongue while eating raw colocasia (also known as taro) is due to presence of \_\_\_\_\_.

- (A) Calcium Oxalate (B) Magnesium Chloride  
(C) Sodium Hydroxide (D) Zinc Sulphate

28. Consider the following eminent scientists of India/Indian origin:

1. Venkatraman Ramakrishnan
2. Subrahmanyam Chandrasekhar
3. Har Gobind Khorana
4. Chandrasekhara Venkata Raman

How many of the above scientists won the Nobel Prize?

- (A) Only one (B) Only two  
(C) Only three (D) All four

29. In summer, a lady with excess perspiration feels weak. Which of the following factor (s) might cause her weakness?

- (A) Loss of carbohydrates (B) Loss of more water  
(C) Loss of salts (D) All the three factors

30. A person in a moving bus is thrown forward when the bus suddenly stops. This is best explained by

- (A) Newton's First Law  
(B) Newton's Second Law  
(C) Newton's Third Law  
(D) All of the above

31. It is not possible to burp in space in the same way as on Earth. This is due to

- (A) absence of gravity (B) decrease of gravity  
(C) increase of gravity (D) meeting of gravities

32. With reference to natural fibers, consider the following pairs:

Natural Fibre:	Natural Source
1. Abaca:	Banana Plant
2. Coir:	Coconut Plant
3. Linen:	Flax Plant
4. Sisal:	Lotus Plant

How many of the above pairs is/are correct?

- (A) Only one  
(B) Only two  
(C) Only three  
(D) All four

33. Which one of the following insects performs the "waggle dance" as a form of communication?

- (A) Butterfly (B) Grasshopper  
(C) Honeybee (D) Wasp

34. A fresh egg sinks in pure water while a rotten egg floats. Select the appropriate reason (s) for this phenomenon from the following options.

- (A) A fresh egg is denser than water  
(B) As an egg ages, the air cell at the blunt end of the egg grows larger, making it less dense.  
(C) When an egg rots, bacteria produce gases that further increase the air cell size, causing the egg to float.  
(D) All of the above statements are appropriate reasons.

35. Which one of the following hormones of human body is also known as "feel-good" hormone?

- (A) Testosterone (B) Oxytocin  
(C) Dopamine (D) Adrenaline

36. Consider the following pairs with reference to vector-borne diseases:

Disease:	Vector
1. Typhus:	Lice
2. Japanese encephalitis:	Fleas
3. Chikungunya:	Tick

Which is the correct option in the above pairs?

- (A) Only one pair is correct  
(B) Only two pairs are correct  
(C) All the three pairs are correct  
(D) None of the pairs is correct

37. Consider the following species:

1. Dodo  
2. Golden Toad  
3. Piranha

How many of the above species are declared extinct?

- (A) Only one (B) Only two  
(C) All three (D) None

38. Uchina and Kanglayen, widely used in traditional Manipuri food and medicine, are essentially \_\_\_\_\_

- (A) algae (B) fungi  
(C) either algae or fungi (D) neither algae nor fungi

39. Consider the following crops:

1. Cauliflower  
2. Mustard  
3. Peas  
4. Wheat

How many of the above crops is/are generally considered 'Rabi Crop (s)' in India?

- (A) Only one  
(B) Only two  
(C) Only three  
(D) All four

40. Consider the following pairs:

**Dustbin Colour:** **Garbage Type to be collected**

1. Blue : wet and biodegradable waste  
2. Green : hazardous waste  
3. Red : dry and non-biodegradable waste

Which is the correct option in the above pairs?

- (A) Only one pair is correct  
(B) Only two pairs are correct  
(C) All the three pairs are correct  
(D) None of the pairs is correct

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