



**NARAYAN  
FUTURE DOCTORS ACADEMY**

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**SHRI NFDA**

**Scholarship Cum Admission**

**Test**

**2025**

# Sample Paper

**Medical**

**(Class X Studying, Moving to Class XI)**

**Physics, Chemistry, Biology, Logical Reasoning & General Ability**

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## INSTRUCTIONS FOR CANDIDATE

1. Duration of the test 1 hr
2. The paper consists of four sections: - Physics, Chemistry, Biology and Mental Ability.
3. The Test Booklet consists of **25** questions. The maximum marks are **100**. There is **no negative marking** for wrong answer.
4. There is only one correct answer hence mark one choice only. Darken your choice in OMR Sheet with Blue/Black Ball Point Pen. Return the OMR Sheet & Question Paper to the invigilator at the end of the exam.

# Shri NFDA Scholarship cum Admission Test

## Sample Paper

(Class X Studying, Moving to Class XI)

(The questions given in sample paper are indicative of the level and pattern of questions that will be asked in SN-SAT - 2025)

Time: 1hr

MM: 100

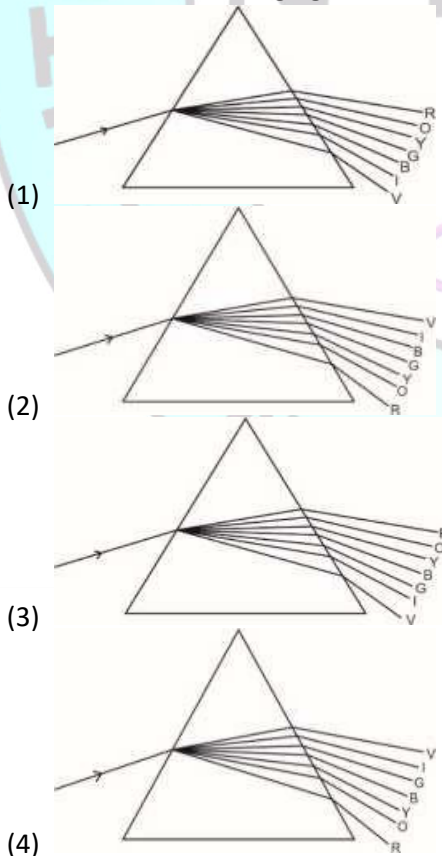
### Section: I (Physics)

This section contains 6 multiple choice questions. Each question has 4 choices (1), (2), (3) and (4) out of which **ONLY ONE** choice is correct.

1. The material used for making filaments of electric bulb is

- (1) Tungsten
- (2) Nickel
- (3) Chromium
- (4) Cobalt

2. Which of the following figures is correctly show the dispersion of white light by a glass prism?



3. The change in the direction of a wave passing from one medium to another is termed as
- (1) Interference
  - (2) Mirage
  - (3) Diffraction
  - (4) Refraction
4. The ratio of the sine of the angle of incidence to the sine of the angle of refraction is a constant. It is given by
- (1) Faraday's law
  - (2) Snell's law
  - (3) Newton's law
  - (4) Murphy's law
5. Which of the following is the good conductor of electricity?
- (1) Paper
  - (2) Iron
  - (3) Glass
  - (4) Ebonite
6. The SI unit of resistance is
- (1) Volt
  - (2) Faraday
  - (3) Ampere
  - (4) Ohm

### Section: II (Chemistry)

This section contains 6 multiple choice questions. Each question has 4 choices (1), (2), (3) and (4) out of which **ONLY ONE** choice is correct.

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7. Which of the following condition help us to determine that a chemical reaction has taken place?
- (1) Evolution of gas
  - (2) Formation of precipitate
  - (3) Change in colour
  - (4) All of the above
8. Which of the following correctly represents a balanced chemical equation?
- (1)  $\text{Fe (s)} + 4\text{H}_2\text{O (g)} \rightarrow \text{Fe}_3\text{O}_4 \text{ (s)} + 4\text{H}_2\text{(g)}$
  - (2)  $3\text{Fe (s)} + 4\text{H}_2\text{O (g)} \rightarrow \text{Fe}_3\text{O}_4 \text{ (s)} + 4\text{H}_2\text{(g)}$
  - (3)  $3\text{Fe (s)} + \text{H}_2\text{O (g)} \rightarrow \text{Fe}_3\text{O}_4 \text{ (s)} + \text{H}_2\text{(g)}$
  - (4)  $3\text{Fe (s)} + 4\text{H}_2\text{O (g)} \rightarrow \text{Fe}_3\text{O}_4 \text{ (s)} + \text{H}_2\text{(g)}$

9. Which of the following condition help us to determine that a chemical reaction has taken place?
- (1) Evolution of gas
  - (2) Formation of precipitate
  - (3) Change in Colour
  - (4) All of the above
10. **Assertion (A):**  $2\text{H}_2\text{S}(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{S}(\text{s}) + 2\text{H}_2\text{O}(\text{l})$  is a redox reaction.  
**Reason (R):** In this reaction, oxidation of  $\text{H}_2\text{S}$  to S and reduction of  $\text{O}_2$  to  $\text{H}_2\text{O}$  takes place.
- (1) Both Assertion(A) and Reason(R) are true and reason is the correct explanation of Assertion(A).
  - (2) Both Assertion(A) and Reason(R) are true but reason is not the correct explanation of Assertion(A).
  - (3) Assertion(A) is true but Reason(R) is false.
  - (4) Assertion(A) is false but Reason(R) is true.
11. An element with atomic number.....will form a basic oxide.
- (1) 7 (2, 5)
  - (2) 17(2, 8, 7)
  - (3) 14(2, 8, 4)
  - (4) 11(2, 8, 1)
12. Which of the following statements are usually correct for carbon compounds?
- (i) These are good conductors of electricity
  - (ii) These are poor conductors of electricity
  - (iii) They have strong forces of attraction between their molecules
  - (iv) They do not have strong forces of attraction between their molecules
- (1) (i) and (iii)
  - (2) (ii) and (iii)
  - (3) (i) and (iv)
  - (4) (ii) and (iv)

### Section: III (Biology)

This section contains 6 multiple choice questions. Each question has 4 choices (1), (2), (3) and (4) out of which **ONLY ONE** choice is correct.

13. The process in plants that converts the light energy into chemical energy is known as –
- (1) Digestion
  - (2) Photosynthesis
  - (3) Respiration

(4) Assimilation

14. Electrical impulse travels in a neuron from –

- (1) Dendrite → axon → axonal end → cell body
- (2) Cell body → dendrite → axon → axonal end
- (3) Dendrite → cell body → axon → axonal end
- (4) Axonal end → axon → cell body → dendrite

15. In the given figure of Female Reproductive System, the parts and their functions are given.



Choose the correctly matched option:

- (1) Ovary - Entry of the sperms
- (2) Oviduct - Site of fertilisation
- (3) Uterus - Production of egg
- (4) Vagina - Site of implantation

16. New species may be formed if

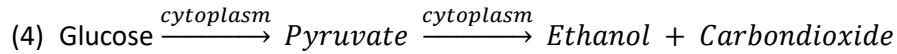
- (i) DNA undergoes significant changes in germ cells
- (ii) chromosome number changes in the gamete
- (iii) there is no change in the genetic material
- (iv) mating does not take place

Choose the correct set of options

- (1) (i) and (ii)
- (2) (i) and (iii)
- (3) (ii), (iii) and (iv)
- (4) (i), (ii) and (iii)

17. The correct sequence of anaerobic reactions in yeast is

- (1) Glucose  $\xrightarrow{\text{cytoplasm}}$  Pyruvate  $\xrightarrow{\text{mitochondria}}$  Ethanol + Carbondioxide
- (2) Glucose  $\xrightarrow{\text{cytoplasm}}$  Pyruvate  $\xrightarrow{\text{cytoplasm}}$  Lactic acid
- (3) Glucose  $\xrightarrow{\text{cytoplasm}}$  Pyruvate  $\xrightarrow{\text{mitochondria}}$  Lactic acid



18. Which of the following statement(s) is(are) true about heart?

- (i) Left atrium receives oxygenated blood from different parts of the body while right atrium receives deoxygenated blood from lungs
  - (ii) Left ventricle pumps oxygenated blood to different body parts while right ventricle pumps deoxygenated blood to lungs
  - (iii) Left atrium transfers oxygenated blood to right ventricle which sends it to different parts of the body
  - (iv) Right atrium receives deoxygenated blood from different parts of the body while left ventricle pumps oxygenated blood to different parts of the body
- (1) (i)  
(2) (ii)  
(3) (ii) and (iv)  
(4) (i) and (iii)

### Section: IV (Logical Reasoning & General Ability)

This section contains 6 multiple choice questions. Each question has 4 choices (1), (2), (3) and (4) out of which **ONLY ONE** choice is correct.

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19. A dice is thrown in the air. The probability of getting odd numbers is

- (1)  $\frac{1}{2}$
- (2)  $\frac{3}{2}$
- (3) 3
- (4) 4

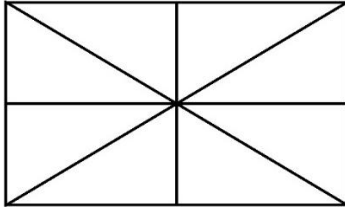
20. A Circle has a number of tangents equal to

- (1) 0
- (2) 1
- (3) 2
- (4) Infinite

21. If AM of  $a$ ,  $a+3$ ,  $a+6$ ,  $a+9$  and  $a+12$  is 10, then  $a$  is equal to;

- (1) 1
- (2) 2
- (3) 3
- (4) 4

22. How many triangles in the figure?



- (1) 16
- (2) 14
- (3) 8
- (4) 12

23. Mr Deepak Mohan walks 5km towards the south and then turns to the right. After walking 3 km he turns to the left and walks 5km. What direction is he facing right now?

- (1) West
- (2) South
- (3) North-East
- (4) South-West

24. Sowmya Krishna walked 20m towards the north. Then she turned right and walks 30 m. Then she turns right and walks 35 m. Then she turns left and walks 15m. Finally, she turns left and walks 15 m. In which direction and how many meters is she from the starting position?

- (1) 15 m West
- (2) 30 m East
- (3) 30 m West
- (4) 45 m East

25.  $(\sin 30^\circ + \cos 60^\circ) - (\sin 60^\circ + \cos 30^\circ)$  is equal to:

- (1) 0
- (2)  $1+2\sqrt{3}$
- (3)  $1-\sqrt{3}$
- (4)  $1+\sqrt{3}$