



# ADHYAN DEFENCE ACADEMY

Global Campus, Dindori road, Nashik , Maharashtra, Pin - 422004

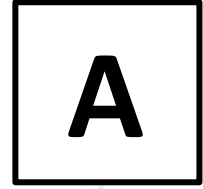
## ADHYAN 100% SCHOLARSHIP EXAMINATION

Course : NDA

Date : 22/03/2026

Full Marks : 100

Duration : 75 Min.



### INSTRUCTIONS

1. This test booklet contains **50** questions. Each question comprises four responses (answer). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best, in any case, choose **ONLY ONE** response for each questions.
2. You have to mark all your responses **ONLY** on the separate Answer Sheet provided see directions in the Answer Sheet.
3. Each question carry **02 marks**.
4. Before you proceed to mark in the Answer Sheet the response to various question in the test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your Admission Certificate.
5. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the invigilator only the Answer Sheet. You are permitted to take away with you the Test Booklet.
6. **Penalty for wrong answers:**  
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY THE CANDIDATE IN THE OBJECTIVE TYPE QUESTION PEPERS.
  - (i) There are four alternative for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third** of the marks assigned to that question will be deducted as penalty.
  - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
  - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

### DECLARATION BY STUDENT

I hereby read and understood that I have reviewed the instruction and guidelines for the exam paper. By accepting this, I agree to abide by the rules and regulations set for by the institution.

Student Name & Signature

1. The SI unit of velocity is?
  - (a)  $m/s^2$
  - (b)  $m/s$
  - (c)  $km/h$
  - (d)  $cm/s$
2. Force and acceleration are directly proportional according to Newton's \_\_\_\_ law.
  - (a) 1<sup>st</sup>
  - (b) 2<sup>nd</sup>
  - (c) 3<sup>rd</sup>
  - (d) None
3. Speed of sound is highest in which medium?
  - (a) Gas
  - (b) Liquid
  - (c) Solid
  - (d) Vacuum
4. If the speed of a body moving in a circle doubles, its centripetal acceleration becomes :
  - (a) Twice
  - (b) Four times
  - (c) Eight times
  - (d) None
5. Law of Universal Gravitation was forwarded by Sir Isaac Newton in :
  - (a) 1687
  - (b) 1786
  - (c) 1876
  - (d) 1957
6. If the distance between two masses is doubled, the gravitational attraction between them
  - (a) Is doubled
  - (b) Becomes four times
  - (c) Is reduced to half
  - (d) Is reduced to a quarter
7. Resistance of a wire is 4 ohm. Now it is stretched so that its length becomes double. Its new resistance will be :
  - (a) 4 ohm
  - (b) 8 ohm
  - (c) 16 ohm
  - (d) 2 ohm
8. Select the incorrect option
  - (a) The HCF and LCM of two numbers are 27 and 162 respectively. If one of the number is 54, then the other number is 81.
  - (b) The LCM of smallest prime number and the smallest composite number is 4.
  - (c)  $3\sqrt{2}$  is an irrational number.
  - (d) None of these
9. The LCM of the polynomial  $(x + 3)^2(x - 2)(x + 1)^2$  and  $(x + 1)^3(x + 3)(x^2 - 4)$  is,
  - (a)  $(x + 1)^3(x + 3)(x^2 - 4)$
  - (b)  $(x + 3)^2(x + 1)^3(x^2 - 4)$
  - (c)  $(x + 3)^2(x + 1)^3(x + 2)$
  - (d)  $(x + 3)^2(x + 1)^2(x - 2)$
10. If  $x = a$  and  $y = b$  is the solution of the equation  $x - y = 2$  and  $x + y = 4$ , then the values of  $a$  and  $b$  are, respectively
  - (a) 3 and 5
  - (b) 5 and 3
  - (c) 3 and 1
  - (d) -1 and -3
11. The sum of three terms of an A.P. is 21 and the product of the first and the third term exceeds the second term by 6, find three terms.
  - (a) 1,7,13
  - (b) 1,6,14
  - (c) 2,8,11
  - (d) 2,7,12
12. The roots of the quadratic equation  $13x^2 + 5x - 2 = 0$  are
  - (a) Real and equal
  - (b) Rational
  - (c) Real and distinct
  - (d) Not real
13. If points  $(t, 2t)$ ,  $(-2,6)$  and  $(3,1)$  are collinear, then  $t =$ 
  - (a)  $\frac{3}{4}$
  - (b)  $\frac{4}{3}$
  - (c)  $\frac{5}{3}$
  - (d)  $\frac{3}{5}$
14. The centroid of a triangle, whose vertices are  $(2,1)$ ,  $(5,2)$  and  $(3,4)$  is
  - (a)  $(\frac{8}{3}, \frac{7}{3})$
  - (b)  $(\frac{10}{3}, \frac{7}{3})$
  - (c)  $(2,3)$
  - (d)  $(\frac{10}{3}, \frac{-7}{3})$
15. The angle of depression of a car parked on the road from the top of a 150 m high tower is  $30^\circ$ . The distance of the car from the tower (in metres) is
  - (a)  $50\sqrt{3}$
  - (b)  $150\sqrt{3}$

- (c)  $150\sqrt{2}$   
 (d) 75
16. If  $\theta$  is in the first quadrant and  $\cos \theta = \frac{3}{5}$ , then the value of  $\frac{5 \tan \theta - 4 \operatorname{cosec} \theta}{5 \sec \theta - 4 \cot \theta}$  will be  
 (a)  $\frac{5}{16}$   
 (b)  $\frac{5}{34}$   
 (c)  $-\frac{5}{34}$   
 (d)  $-\frac{5}{16}$
17. A solid piece of iron is in the form of a cuboid of dimensions  $49 \text{ cm} \times 33 \text{ cm} \times 24 \text{ cm}$  is moulded to form a solid sphere. Find the radius of the sphere.  
 (a) 22 cm  
 (b) 21 cm  
 (c) 18 cm  
 (d) 20 cm
18. The radius of a bicycle wheel is 14 cm. The distance covered by the wheel after making 50 complete rotations is  
 (a) 88 cm  
 (b) 2200 cm  
 (c) 440 cm  
 (d) 4400 cm
19. Which of the following is correct?  
 (a) Mode = 2 Median - 3 Mean  
 (b) Mode = 2 Median + 3 Mean  
 (c) Mode = 3 Median - 2 Mean  
 (d) Mode = 3 Median + 2 Mean
20. A single letter is selected at random from the word 'PROBABILITY'. The probability that it is a vowel is  
 (a)  $\frac{3}{11}$   
 (b)  $\frac{4}{11}$   
 (c)  $\frac{2}{11}$   
 (d)  $\frac{5}{11}$
21. If  $\cos \theta = \frac{8}{17}$ , find the value of  $\sin \theta$  and  $\cot \theta$ .  
 (a)  $\frac{8}{17}, \frac{8}{15}$   
 (b)  $\frac{15}{17}, \frac{8}{15}$   
 (c)  $\frac{15}{17}, \frac{15}{8}$   
 (d)  $\frac{17}{15}, \frac{8}{15}$
22.  $\sin 0^\circ \sin 1^\circ \sin 2^\circ \dots \sin 90^\circ$  is equal to  
 (a) 0  
 (b) 1  
 (c)  $\frac{1}{2}$   
 (d)  $\sin 44^\circ$
23. In which organelle does the complete breakdown of pyruvate occur?  
 (a) Mitochondria  
 (b) Chloroplast  
 (c) Golgi bodies  
 (d) Endoplasmic reticulum
24. A bony cage enclosing a spinal cord is  
 (a) Cranium  
 (b) Skull  
 (c) Meninges  
 (d) Vertebral column
25. Name the common the passage for air and food.  
 (a) Trachea  
 (b) Pharynx  
 (c) Oesophagus  
 (d) Larynx
26. Who was the last powerful Mughal ruler who established control over a very large part of the territory that is now known as India?  
 (a) Akbar  
 (b) Bahadur Shah Zafar  
 (c) Aurangzeb  
 (d) Shah Jahan
27. In which year did the Jallianwala Bagh Massacre take place, marking a turning point in the Indian National Movement?  
 (a) 1915  
 (b) 1919  
 (c) 1921  
 (d) 1929
28. The "Civil Disobedience Movement" was officially launched by Mahatma Gandhi with which of the following events?  
 (a) The Champaran Satyagraha  
 (b) The Non-Cooperation Movement  
 (c) The Dandi March  
 (d) The Quit India Movement
29. Which Treaty of 1832 recognized Greece as an Independent nation?  
 (a) Treaty of Versailles  
 (b) Treaty of Constantinople  
 (c) Treaty of Vienna  
 (d) Treaty of Lausanne

30. Which type of soil is also known as 'Regur Soil' and is ideal for growing cotton?

- (a) Alluvial Soil
- (b) Red Soil
- (c) Black Soil
- (d) Laterite Soil

31. Which of the following is a "Kharif" crop, primarily grown with the onset of monsoon in different parts of the country?

- (a) Wheat
- (b) Mustard
- (c) Gram
- (d) Paddy (rice)

32. The "Indira Gandhi Canal" has significantly transformed the landscape and agricultural productivity of which Indian state?

- (a) Punjab
- (b) Rajasthan
- (c) Haryana
- (d) Gujrat

33. Which of the following is considered a non-conventional source of energy?

- (a) Coal
- (b) Petroleum
- (c) Solar Energy
- (d) Natural Gas

34. Which Fundamental Right in the Indian Constitution allows citizens to move the court if they believe any of their rights have been violated by the State?

- (a) Right to Equality
- (b) Right against Exploitation
- (c) Right to Constitutional Remedies
- (d) Right to Freedom of Religion

35. What is the minimum age required to contest elections for the Lok Sabha (the lower house of Parliament) in India?

- (a) 18 years
- (b) 21 years
- (c) 25 years
- (d) 30 years

#### **Part A: Synonyms (3 Questions)**

**Directions:** Each item in this section consists of a sentence with an underlined word followed by four options. Select the option that is nearest in meaning to the underlined word.

36. The scientist provided a lucid explanation of the complex theory.

- (a) Clear
- (b) Confusing
- (c) Dark

(d) Long

37. The team felt jubilant after winning the championship.

- (a) Sad
- (b) Overjoyed
- (c) Tired
- (d) Anxious

38. He is known for being an industrious worker.

- (a) Lazy
- (b) Famous
- (c) Hardworking
- (d) Wealthy

#### **Part B: Antonyms (3 Questions)**

**Directions:** Each item in this section consists of a sentence with an underlined word followed by four options. Select the option that is opposite in meaning to the underlined word.

39. The heavy rain was transient and lasted only a few minutes.

- (a) Brief
- (b) Permanent
- (c) Temporary
- (d) Fast

40. She was very timid during her first presentation.

- (a) Shy
- (b) Bold
- (c) Nervous
- (d) Quiet

41. The surface of the lake was turbulent during the storm.

- (a) Calm
- (b) Rough
- (c) Violent
- (d) Disturbed

#### **Part C: Spotting Errors (2 Questions)**

**Directions:** Each sentence is divided into three parts. One part of the sentence contains a grammatical error. Identify the part that has the error. If there is no error, choose (d).

42. Neither of (a) / the two brothers (b) / were present.

- (c) / No error (d)

43. She is (a) / senior than (b) / me in service. (c) / No error (d)

#### **Part D: Cloze Test (2 Questions)**

**Directions:** Read the passage and fill in the blanks with the most appropriate word from the options given below each blank.

##### **Passage:**

Technology has revolutionized the way we communicate. It has made the world a (44)..... place by connecting people across

distances. However, over-dependence on gadgets can have (45)..... effects on health.

44. (a) larger (b) smaller (c) colder (d) distant
45. (a) beneficial (b) positive (c) adverse (d) healthy
46. Which of the following are exothermic processes?
- (i) Reaction of water with quick lime
  - (ii) Dilution of an acid
  - (iii) Evaporation of water
  - (iv) Sublimation of camphor (crystals)
- (a) (i) and (ii)  
(b) (ii) and (iii)  
(c) (i) and (iv)  
(d) (ii) and (iv)
47. Which one of the following salts does not contain water of crystallisation?
- (a) Blue vitriol  
(b) Baking soda  
(c) Washing soda  
(d) Gypsum
48. Aluminium is used for making cooking utensils. Which of the following properties of aluminium are responsible for the same?
- (i) Good thermal conductivity
  - (ii) Good electrical conductivity
  - (iii) Ductility
  - (iv) High melting point
- (a) (i) and (ii)  
(b) (i) and (iii)  
(c) (ii) and (iii)  
(d) (i) and (iv)
49. Which of the following statements are correct for carbon compounds?
- i. Most carbon compounds are good conductors of electricity.
  - ii. Most carbon compounds are poor conductors of electricity.
  - iii. Force of attraction between molecules of carbon compounds is not very strong.
  - iv. Force of attraction between molecules of carbon compounds is very strong.
- (a) (ii) and (iv)  
(b) (ii) and (iii)  
(c) (i) and (iv)  
(d) (i) and (iii)

50. Newlands relation is called

- (a) Musical Law
- (b) Law of Octaves
- (c) Periodic Law
- (d) Atomic Mass Law