ADHYYAN DEFENCE ACADEMY

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

ADHYYAN 100% SCHOLARSHIP EXAMINATION

Course : NDA **Full Marks : 100**

Date : 27/04/2025 **Duration : 75 Min.**

A

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 term “Industrial Revolution” refers to:
   (a) The rise of agriculture
   (b) The rise of factories and mechanized production
   (c) The rise of the internet
   (d) The rise of the service sector
2. Which of the following is the highest peak in world?
   (a) K2
   (b) Kanchenjunga
   (c) Nanda Devi
   (d) Mount Everest
3. Which river is known as the “Sorrow of Bihar”?
   (a) Ganga
   (b) Kosi
   (c) Yamuna
   (d) Brahmaputra
4. Which of the following is a feature of a federal government?
   (a) Centralized power
   (b) Division of powers between central and state government
   (c) Rule by a single party
   (d) No constitution
5. The term “secularism” in the Indian context means:
   (a) Absence of religion
   (b) Equal treatment of all religions by the state
   (c) Promotion of one religion
   (d) State religion
6. Which of the following is an example of a tertiary sector activity?
   (a) Farming
   (b) Mining
   (c) Banking
   (d) Manufacturing
7. GDP stands for:
   (a) Gross Domestic Product
   (b) Gross Development Product
   (c) General Domestic Product
   (d) General Development
8. The Non-Cooperation Movement was called off due to which incident?
   (a) Jallianwala Bagh Massacre
   (b) Chauri Chaura incident
   (c) Dandi March
   (d) Quit India Movement
9. Who was the first President of the Indian National Congress?
   (a) Mahatma Gandhi
   (b) Jawaharlal Nehru
   (c) W.C. Banerjee
   (d) B.R.Ambedkar
10. Which of the following is the largest desert in India?
   (a) Thar Desert
   (b) Sahara Desert
   (c) Gobi Desert
   (d) Kalahari Desert

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.

11. The lawyer gave a <u>concise</u> summary of the case.
   (a) Detailed
   (b) Brief
   (c) Lengthy
   (d) Complicated
12. His <u>benevolent</u> nature made him popular among his colleagues.
   (a) Kind
   (b) Cruel
   (c) Greedy
   (d) Selfish
13. The scientist’s <u>innovative</u> ideas led to groundbreaking discoveries.
   (a) Creative
   (b) Common
   (c) Predictable
   (d) Traditional

Part B: Antonyms (3 Questions)

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.

14. The movie was so hilarious that the audience couldn't stop laughing.
    (a) Funny
    (b) Serious
    (c) Joyful
    (d) Cheerful
15. The report contained authentic information.
    (a) Genuine
    (b) Fake
    (c) Accurate
    (d) Real
16. The ancient ruins attracted many tourists.
    (a) Old
    (b) Historic
    (c) Modern
    (d) Traditional

Part C: Spotting Errors (2 Questions)

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).

17. She enjoys (a) / to play (b) / the piano every evening. (c) / No error (d)
18. The children (a) / was playing (b) / in the park when it started raining. (c) / No error (d)

Part D: Cloze Test (2 Questions)

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

Passage:

Reading is a great habit that enhances knowledge and improves vocabulary. People who read regularly develop better (19)............... skills and a deeper understanding of the world. Books also serve as a source of (20)............... for many individuals.

19. (a) Communication
    (b) Cooking
    (c) Physical
    (d) Gardening
20. (a) Boredom
    (b) Entertainment
    (c) Confusion
    (d) Exhaustion
21. During adolescence, several changes occur in the human body. Mark one change from the following associated with sexual maturation in boys
    (a) Increase in height
    (b) Cracking of voice
    (c) Weight gain
    (d) Loss of milk teeth
22. The male reproductive parts of a flower the stamens, are collectively known as
    (a) Androecium
    (b) Filament
    (c) Anther
    (d) Gynoecium
23. Reproduction is essential for living organism in order to _____
    (a) Keep the individual organism alive
    (b) Fulfill their energy requirement
    (c) Maintain growth
    (d) Continue the species generation after generation
24. In the following equation : $Na_2CO_3 + xHCl \rightarrow 2NaCl + CO_2 + H_2O$, the value of x is
    (a) 1
    (b) 2
    (c) 3
    (d) 4
25. Which of the following gives the correct increasing order of acidic strength?
    (a) Water < Acetic acid < Hydrochloric acid
    (b) Water < Hydrochloric acid < Acetic acid
    (c) Acetic acid < water < Hydrochloric acid
    (d) Hydrochloric acid < Water < Acetic acid
26. A compound whose aqueous solution will have the highest pH is
    (a) $NaCl$
    (b) Na_2CO_3
    (c) NH_4Cl
    (d) $NaNO_3$
27. Brass is an alloy of
    (a) Cu and Zn
    (b) Sn and Mn

(c) Cu and Ni
(d) Ni and Zn

28. The molecular formula of fourth member of alkane series is
(a) C_4H_8
(b) C_4H_{10}
(c) C_4H_{12}
(d) C_4H_9

29. The numerical ratio of displacement to distance for a moving object is
(a) Always less than 1
(b) Always equal to 1
(c) Always more than 1
(d) Equal or less than 1

30. Match the List –I with List –II.

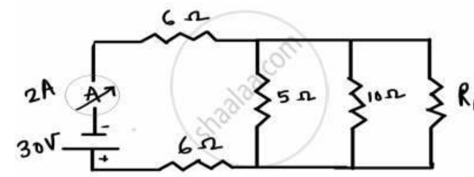
	List -I		List -II
(P)	Newton's first law	(1)	Quantitative definition of force
(Q)	Newton's second law	(2)	Qualitative definition of force
(R)	Newton's third law	(3)	Oppose relative linear motion
(S)	Friction force	(4)	Define nature of force

(a) (P) – (3), (Q) – (2), (R) – (4), (S) – (1)
(b) (P) – (3), (Q) – (4), (R) – (2), (S) – (1)
(c) (P) – (2), (Q) – (1), (R) – (4), (S) – (3)
(d) (P) – (4), (Q) – (3), (R) – (1), (S) – (2)

31. For a convex mirror the image distance $(v) = 5\ cm$, focal length $(f) = 10\ cm$ and height of the image $(h) = 7.5$. The correct representation according to sign conventions is :
(a) $v = -5\ cm, f = -10\ cm\ and\ h_i = -7.5\ cm$
(b) $v = -5\ cm, f = +10\ cm\ and\ h_i = -7.5\ cm$
(c) $v = +5\ cm, f = -10\ cm\ and\ h_i = +7.5\ cm$
(d) $v = +5\ cm, f = +10\ cm\ and\ h_i = +7.5\ cm$

32. The refractive index of medium A is 1.5 and that of medium B is 1.33. If the speed of light in air is $3 \times 10^8\ m/s$, what is the speed of light in medium A and B respectively?
(a) $2 \times 10^8\ m/s$ and $1.33 \times 10^8\ m/s$
(b) $1.33 \times 10^8\ m/s$ and $2 \times 10^8\ m/s$
(c) $2.25 \times 10^8\ m/s$ and $2 \times 10^8\ m/s$
(d) $2 \times 10^8\ m/s$ and $2.25 \times 10^8\ m/s$

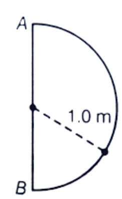
33. In the above circuit, the current reading in the ammeter A is 2A, what would be the value of R_1?



(a) 30Ω
(b) 20Ω
(c) 40Ω
(d) 10Ω

34. For a current in a long straight solenoid N-pole and S-pole are created at the two ends. Among the following statements, the incorrect statement is :
(a) The field lines inside the solenoid are in the form of straight lines which indicates that the magnetic field is the same at all points inside the solenoid.
(b) The strong magnetic field produced inside the solenoid can be used to magnetise a piece of magnetic material like soft iron, when placed inside the coil.
(c) The pattern of the magnetic field associated with the solenoid is different from the pattern of the magnetic field around a bar magnet.
(d) The N-pole and S-pole exchange position when the direction of current through the solenoid is reversed.

35. In 1.0 s, a particle goes from point A to B, moving in a semi-circle of radius 1.0 m (as shown in the figure). The magnitude of the average velocity of the particle is



(a) 3.14 m/s
(b) 2.0 m/s
(c) 1.0 m/s
(d) 0

36. If $x = 3 + 2\sqrt{2}$, then the value of $x^2 - 6x + 1$ is :
(a) 0
(b) 8
(c) 4
(d) $8\sqrt{2}$

37. The area of the triangle formed by the points (1,2), (6,2) and (4,5) is :
(a) 7.5 square units

(b) 9 square units
(c) 6 square units
(d) 4.5 square units

38. In a triangle PQR, if $PQ = PR$ and $\angle Q = 30°$, then the measure of $\angle R$ is :
(a) $30°$
(b) $45°$
(c) $60°$
(d) $75°$

39. A chord of a circle of radius 10 cm makes an angle of 60° at the center. The length of the chord is :
(a) 5 cm
(b) 10 cm
(c) $10\sqrt{3}\ cm$
(d) $5\sqrt{3}\ cm$

40. If two positive integers p and q are expressible in the form $p = ab^2$ and $q = a^2b$, where a and b are prime numbers, then $HCF\ (p, q)$ is :
(a) a
(b) b
(c) ab
(d) a^2b^2

41. The number of polynomials of degree 3 with integral coefficients that have $x + 1, x - 1$ and $x + 2$ as factors is :
(a) Infinite
(b) 0
(c) 1
(d) 2

42. If one root of the quadratic equation $x^2 + px + 12 = 0$ is 4, then the value of p is :
(a) -7
(b) 7
(c) -1
(d) 1

43. If the m^{th} term of an arithmetic progression is n and the n^{th} term is m, then the $(m + n)^{th}$ term is
(a) $m + n$
(b) $m - n$
(c) 0
(d) $m \times n$

44. The distance of the point $(3,4)$ from the x-axis is :
(a) 3
(b) 4
(c) 5
(d) 7

45. If $\tan\theta = a$, then the value of $(1 - \tan^2\theta)/(1 + \tan^2\theta)$ is :
(a) $\cos 2\theta$
(b) $\sin 2\theta$
(c) $\tan 2\theta$
(d) $\cot 2\theta$

46. In triangle $ABC, \angle BAC = 90°$ and $AD \perp BC$. Then
(a) $BD.CD = BC^2$
(b) $AB.AC = BC^2$
(c) $BD.CD = AD^2$
(d) $AB.AC = AD^2$

47. The perimeter of a semicircular protractor of diameter 14 cm is :
(a) $7\pi\ cm$
(b) $14 + 7\pi\ cm$
(c) $14\pi\ cm$
(d) $28 + 14\pi\ cm$

48. A metallic solid sphere of radius 10 cm is melted and recast into smaller spherical balls of radius 5 cm each. The number of balls formed is :
(a) 2
(b) 4
(c) 6
(d) 8

49. The sum of the first 50 natural numbers is :
(a) 1275
(b) 2550
(c) 5050
(d) 10050

50. The value of $\sin 60° - \cos 30°$ is :
(a) 0
(b) 1
(c) $\frac{\sqrt{3}}{2}$
(d) -1