

Jawahar Navodaya Vidyalaya

Entrance Exam (Class IX)

PRACTICE SET 01

Instructions

1. This question paper contains 100 questions, which is divided into following four sections
Section I English (15 Questions); **Section II** Hindi (15 Questions) and
Section III Mathematics (35 Questions); **Section IV** General Science (35 Questions).
2. Each question carries 1 Mark.
3. The candidate is expected to attempt all the questions.

Section I English

Directions (Q. Nos. 1-5) *Read the passage carefully and choose the best answer to each question out of the four alternatives.*

Passage

Chameleons can make their skin colour change, but not because they decide to. The colour changes to help the chameleon avoid its enemies. It is a form of camouflage, a disguise that lets it blend in with its surroundings. The changes are actually determined by environmental factors, such as light and temperature.

Bright sunlight causes the skin to get darken. On cool nights, the colour fades to a creamy colour. The colour also changes when chameleons are excited, angry or afraid. The colour change is rapid and increases when the chameleon is handled, injured, or approached by another chameleon.

There are many types of chameleons. Almost half of them are found on the African Island of Madagascar. The others mostly occur in the Sahara desert, with few in Western Asia and Southern Europe. Chameleons live in trees; where they usually eat insects. Very large chameleons may even use their sticky tongues to catch birds.

1. A chameleon's colour changes to help it
 - (a) fly away
 - (b) look beautiful
 - (c) avoid its enemies
 - (d) attract prey

2. Chameleons change colour when they are
 - (a) excited, angry or hungry
 - (b) afraid, excited or angry
 - (c) angry, excited or happy
 - (d) afraid, angry or hungry
3. The colour changing ability of a chameleon is a form of camouflage which is a
 - (a) colour that fades
 - (b) disguise that lets it blend in with its surroundings
 - (c) dance done by chameleons
 - (d) disease which affects chameleons
4. The colour changes are determined by
 - (a) light and wind
 - (b) light and pressure
 - (c) light and temperature
 - (d) pressure and temperature
5. Half of the world's chameleons are found
 - (a) on the Asian Island of Madagascar
 - (b) in the Sahara Desert
 - (c) on the African Island of Madagascar
 - (d) in the continent of Asia

Directions (Q. Nos. 6-8) *Fill in the blanks with the correct parts of speech from the given alternatives.*

6. How much did you spend roses?
 - (a) in
 - (b) on
 - (c) of
 - (d) from
7. I could hardly recognise him I saw him.
 - (a) after
 - (b) but
 - (c) and
 - (d) when

8. Our teacher encouraged setting the poem to music.
(a) his (b) him (c) he (d) he's
9. Choose the correct passive form of the given sentence from the following
Don't subject the animals to cruelty
(a) The animals are not to be subjected to cruelty.
(b) The animals shall not be subjected to cruelty.
(c) The animals will not be subjected to cruelty.
(d) The animals should not be subjected to cruelty.

Directions (Q. Nos. 10-11) Fill in the blanks with a suitable clause to complete the sentences

10. No one knows.....
(a) who he is (b) whom he is
(c) why he is (d) when he is
11. She will not let you go
(a) unless you will bless her.
(b) unless you do not bless her.
(c) unless you bless her. (d) if you bless her.

Directions (Q. Nos. 12-13) In the following questions, choose the one which best expresses the meaning of the given word

12. Humiliation
(a) Elimination (b) Dishonor
(c) Irritation (d) Damage
13. Valient
(a) Courageous (b) Quarrelsome
(c) Cheerful (d) Repulsive

Directions (Q. Nos. 14-15) In the following questions choose the word opposite in meaning to the given word.

14. Boisterous
(a) Naughty (b) Quiet
(c) Reserved (d) Bouncy
15. Veteran
(a) Activist (b) Enthusiast
(c) Novice (d) Master

Section II हिन्दी

निर्देश (प्र. सं. 16-20) दिए गए अनुच्छेद को ध्यानपूर्वक पढ़िए और उससे सम्बन्धित प्रश्नों के उत्तर दीजिए।

देश और जाति के उत्थान में शिक्षा पहला सोपान है। बिना शिक्षा के देश न तो कृषि सम्बन्धी उन्नति कर सकता है और न औद्योगिक। वैज्ञानिक शिक्षा का अभाव हमारे औद्योगिक पिछड़ेपन का मूल कारण है। हमारे लुहार-मजदूरों को सैद्धान्तिक ज्ञान का अभाव रहता है, इसलिए वे नए आविष्कार करने में असमर्थ रहते हैं। शिक्षा के बिना मनुष्य अपने प्रारम्भिक आविष्कारों की भी मौंग नहीं कर सकता और न अपने स्वाभिमान को सुरक्षित रख सकता है। शिक्षा के बिना रहन-सहन का स्तर भी ऊँचा नहीं उठ सकता। बहुत से सम्पन्न लोग भी धन का सदुपयोग शिक्षा के अभाव के कारण नहीं कर सकते।

16. देश और जाति के उत्थान के लिए प्रथम चरण है
(a) औद्योगिक उन्नति (b) कृषि सम्बन्धी उन्नति
(c) शिक्षा (d) सैद्धान्तिक ज्ञान
17. औद्योगिक पिछड़ेपन का मूल कारण है
(a) वैज्ञानिक शिक्षा
(b) वैज्ञानिक शिक्षा का अभाव
(c) शिक्षा
(d) उपरोक्त में से कोई नहीं
18. अपने स्वाभिमान को सुरक्षित रख सकता है
(a) मजदूर (b) उच्च वर्ग
(c) शिक्षित वर्ग (d) निम्न वर्ग

19. 'सम्पन्न' का विलोम शब्द होगा
(a) विपत्ति (b) संपत्ति
(c) विपन्न (d) कृपण
20. शिक्षा के अभाव में क्या सम्भव नहीं होता
(a) धन का सदुपयोग (b) धन का दुरुपयोग
(c) व्यवसाय करना (d) इनमें से कोई नहीं
21. 'आँखों का तारा होगा' का उपयुक्त अर्थ है
(a) आँखों में पानी आना
(b) अधिक प्रिय होना
(c) अप्रिय होना
(d) तारे देखना
22. शुद्ध रूप छाँटिए
(a) व्यक्त (b) व्यक्त
(c) तयक्त (d) तयक्त
23. 'आदि से उपरान्त अन्त तक' को कहते हैं
(a) अधोपान्त (b) अधोपान्त
(c) समाप्त (d) छह
24. निम्न में कौन द्विगु समास नहीं है?
(a) नवरात्र (b) नवग्रह
(c) चतुर्भुज (d) त्रिलोक
25. 'यहीं बैठकर पढ़ो' वाक्य का उदाहरण है।
(a) विधिवाचक (b) इच्छावाचक
(c) संकेतवाचक (d) आज्ञावाचक

26. 'नीलिमा रोती है' वाक्य में कौन-सी क्रिया है?

- (a) सकर्मक (b) द्विकर्मक
(c) अकर्मक (d) सकारक

27. 'वृक्ष से पत्ता गिरा' वाक्य में रेखांकित शब्द में कारक है

- (a) कर्ता (b) करण (c) कर्म (d) अपादान

28. 'वधू' का पर्यायवाची शब्द है

- (a) इन्दिरा (b) दारा (c) भानु (d) अक्षर

29. 'उत्थान' का विलोम शब्द है

- (a) पवन (b) प्रगति
(c) विपत्ति (d) उपरोक्त में से कोई नहीं

30. निम्न में से कौन-सा वाक्य शुद्ध है?

- (a) ईश्वर के अनेक नामों हैं
(b) ईश्वर के अनेक नाम है
(c) ईश्वर के अनेकों नाम हैं
(d) ईश्वर के अनेक नाम हैं

Section III Mathematics

31. The difference in the measures of two complementary angles is 12° , then the measures of the angles, are

- (a) $51^\circ, 39^\circ$ (b) $60^\circ, 30^\circ$
(c) $45^\circ, 45^\circ$ (d) $51^\circ, 51^\circ$

32. The surface area of a sphere of diameter 14 cm, is

- (a) 166 cm^2 (b) 196 cm^2 (c) 661 cm^2 (d) 616 cm^2

33. The sum of three consecutive even numbers is 138, then the greatest of these numbers is

- (a) 44 (b) 46 (c) 42 (d) 48

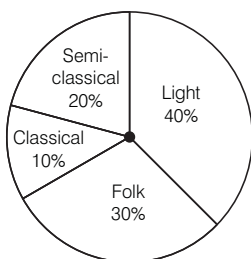
34. The factorisation of $84 - 2r - 2r^2$, is

- (a) $(6 - r)(r + 7)$ (b) $(7 - r)(r + 6)$
(c) $2(6 - r)(r + 7)$ (d) $2(7 - r)(r + 7)$

35. If $\frac{x^2 + y^2}{x^2 - y^2} = \frac{17}{8}$, then the value of $x : y$, is

- (a) 3 : 5 (b) 5 : 3
(c) 3 : 8 (d) 5 : 8

Directions (Q. Nos. 36-37) A pie chart is given below



Peoples like different type of music

36. Which type of music is liked by the maximum number of people ?

- (a) Semi-Classical (b) Classical
(c) High (d) Folk

37. If a cassette company were to make 1000 CD'S, how many of semi-classical and folk would they make ?

- (a) 200, 400 (b) 100, 300
(c) 200, 300 (d) 100, 400

38. The value of $\frac{\sqrt{24} + \sqrt{216}}{\sqrt{96}}$, is

- (a) 8 (b) 6 (c) 4 (d) 2

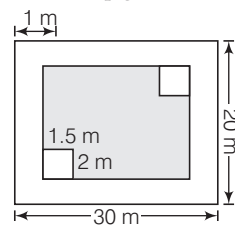
39. Navin purchased a cellphone for ₹ 12000 and sold it for ₹ 8000, then his loss per cent, is

- (a) 30% (b) 33% (c) $33\frac{1}{3}\%$ (d) $34\frac{1}{3}\%$

40. The value of $(3x + 2y)^2 + (3x - 2y)^2$, is

- (a) $9x^2 + 4y^2$ (b) $18x^2 + 8y^2$
(c) $12xy$ (d) $24xy$

41. There are two rectangular flower beds of size $1.5 \text{ m} \times 2 \text{ m}$ each in the park as shown in the given figure and the rest has grass on it, then the area covered by grass, is



- (a) 498 m^2 (b) 948 m^2
(c) 894 m^2 (d) 849 m^2

42. Efficiency of Kanchan is four times to that of Hina. If they will complete the work is 24 days by working together, then in how many days can Hina alone complete the work ?

- (a) 36 days (b) 24 days
(c) 144 days (d) 96 days

43. The sum required to earn a monthly interest of ₹ 1500 at 5% per annum at simple interest.

(a) ₹ 360000 (b) ₹ 36000
(c) ₹ 180000 (d) ₹ 18000

44. 30 persons can reap a field in 17 days. How many more persons should be engaged to reap the same field in 10 days ?

(a) 17 (b) 30 (c) 51 (d) 21

45. A negative integer and a positive integer whose difference is +2, are

(a) -1, 3 (b) -2, 4
(c) -1, 1 (d) -4, 6

46. Six bells begin to toll together at the interval of 10 s, 15sec, 20sec, 25sec, 30sec, 35sec respectively, then how many times will they toll together in the span of 7 h ?

(a) 12 (b) 10 (c) 8 (d) 6

47. Difference of two perfect cubes is 189. If the cube root of the smaller of the two numbers is 3, the cube root of the larger number, is

(a) 27 (b) 36
(c) 9 (d) 6

48. If $p(x) = x^3 - 4x^2 + x + 6$, then the value of $p(3)$ is

(a) 27 (b) 10 (c) 4 (d) 0

49. If $a : b = 5 : 3$, then the value of $(5a + 8b) : (6a - 7b)$, is

(a) 9:49 (b) 49:9
(c) 11:50 (d) 50:11

50. If you have a spinning wheel with 3 green sectors, 5 black sectors and 10 red sectors, then the probability of getting a non-black sector, is

(a) $\frac{1}{9}$ (b) $\frac{1}{6}$
(c) $\frac{5}{9}$ (d) $\frac{13}{18}$

51. The value of $\sqrt{248} + \sqrt{52} + \sqrt{144}$, is

(a) 17 (b) 16 (c) 15 (d) 14

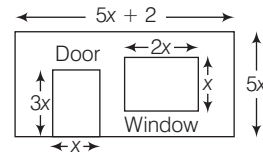
52. Find the compound interest on ₹ 48000 for one year at 8% per annum, when compounded half-yearly.

(a) ₹ 51916 (b) ₹ 51916.80
(c) ₹ 3916.80 (d) ₹ 3910.80

53. If lemons were bought at ₹ 48 per dozen and sold at the rate of ₹ 48 per 10, then the gain or loss per cent, is

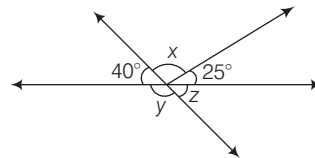
(a) 40% profit (b) 40% loss
(c) 20% profit (d) 20% loss

54. The alongside figure shows the dimensions of a wall having a window and a door of a room. Then, the algebraic expression for the area of the wall to be painted, is



(a) $x(2x + 1)$ sq unit (b) $2x(x + 1)$ sq unit
(c) $10x(2x + 1)$ sq unit (d) $(x + 1)$ sq unit

55. The values of the angles x , y and z are respectively, (see figure)



(a) $115^\circ, 140^\circ, 40^\circ$ (b) $40^\circ, 140^\circ, 115^\circ$
(c) $140^\circ, 40^\circ, 115^\circ$ (d) $115^\circ, 40^\circ, 140^\circ$

56. If $5^{3x-1} \div 25 = 125$, then the value of x , is

(a) 4 (b) 3
(c) 2 (d) 1

57. If $x - \frac{1}{x} = 7$, then the value of $x^2 + \frac{1}{x^2}$, is

(a) 49 (b) 50 (c) 51 (d) 52

58. A pair of integers whose product is -36 and whose difference is 15, is

(a) -3, 12 (b) -12, 3 (c) 9, -4 (d) 4, -9

59. The HCF of $\frac{12}{7}, \frac{18}{7}, \frac{24}{7}$, is

(a) $12/7$ (b) $6/7$ (c) $4/7$ (d) $3/7$

60. By prime factorisation, the value of the cube root of 5832, is

(a) 16 (b) 17 (c) 18 (d) 19

61. If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 3 : 2, then the greater of the two angles, is

(a) 72° (b) 36°
(c) 108° (d) 44°

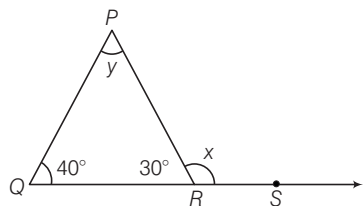
62. The nature of $(-5 + 2\sqrt{5} - \sqrt{5})$ is

(a) natural (b) integer
(c) rational (d) irrational

63. If the total surface area of a cube is 486 cm^2 , then its lateral surface area.

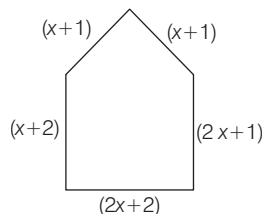
(a) 243 cm^2 (b) 342 cm^2
(c) 324 cm^2 (d) 432 cm^2

64. In the following figure, then the value of $2x$, is



- (a) 300° (b) 200° (c) 100° (d) 50°

65. For what value of x , the perimeter of shape is 77 cm?



- (a) 14 cm (b) 12 cm (c) 10 cm (d) 8 cm

Section IV Science

66. The normal range of vocal cords in women is
(a) 20 mm (b) 10 mm (c) 15 mm (d) 40 mm
67. The loudness of sound is determined by its
(a) amplitude of vibration
(b) ratio of amplitude and frequency of vibration
(c) frequency of vibration
(d) product of amplitude and frequency of vibration
68. Galvanisation is a process used to prevent the rusting of which of the following?
(a) Iron (b) Zinc
(c) Aluminium (d) Copper
69. Silk fibre is obtained from
(a) Fleece of sheep (b) Cotton ball
(c) Cocoon (d) shiny jute stalk
70. During dry weather while combing hair, sometimes we experience hair flying apart. The force responsible for this is
(a) force of gravity (b) electrostatic force
(c) force of friction (d) magnetic force
71. On heating one end of iron rod, other end also gets heated. Such materials are called
(a) good conductor of heat (b) good insulator of heat
(c) bad conductor of heat (d) heater
72. Which one records the distance travelled by a vehicle?
(a) Speedometer (b) Manometer
(c) Motometer (d) Odometer
73. The pressure exerted by liquid due to increase in depth
(a) reduces
(b) increases
(c) remains same
(d) depends on the nature of liquid
74. Which of the following is not always necessary to observe a shadow?
(a) Sun (b) Screen
(c) Source of light (d) Opaque object
75. The objects which partially allow the light to pass through it are called
(a) transparent (b) luminous
(c) opaque (d) translucent
76. Which of the following can never form a circular shadow?
(a) A ball (b) A flat disc
(c) A shoe box (d) An icecream cone
77. Bouncing back of ray of light from shining surface on which it was incident is known as
(a) refraction (b) bending
(c) reflection (d) dispersion
78. Circuit breaker device which can be used in place of fuse in domestic electric wiring is called
(a) DCB (b) MCD (c) MCB (d) BCM
79. If the number of turns in the coil of an electromagnet is more, the strength of the electromagnet will be
(a) lesser (b) greater
(c) double (d) same
80. Which of the following characteristic is most suitable material for making the core of an electromagnet?
(a) Brass (b) Aluminium
(c) Iron (d) Steel
81. Amount of heat required to warm an object depends on
(a) mass of object
(b) temperature change
(c) nature of substance
(d) All of the above
82. At atmospheric pressure, water boils at 100°C . If pressure is reduced, then
(a) it still boils at same temperature
(b) it now boils at a lower temperature
(c) it now boils at a higher temperature
(d) it does not boil at all

- 83.** An iron ball at 40°C is dropped in a mug containing water at 40°C. The heat will
 (a) flow from iron ball to water
 (b) not flow from iron ball to water or from water to iron ball
 (c) flow from water to iron ball
 (d) increase the temperature of both
- 84.** Stainless steel pans are usually provided with copper bottoms. The reason for this could be that
 (a) copper bottom makes the pan more durable
 (b) such pans appear colourful
 (c) copper is a better conductor of heat than the stainless steel
 (d) copper is easier to clean than the stainless steel
- 85.** Neutralisation reaction is a
 (a) physical and reversible change
 (b) physical change that cannot be reversed
 (c) chemical and reversible change
 (d) chemical change that cannot be reversed
- 86.** Pick the synthetic fibre out of the following.
 (a) Cotton (b) Nylon
 (c) Jute (d) Wool
- 87.** Wool fibre cannot be obtained from which of the following?
 (a) Goat (b) Liama
 (c) Alpaca (d) Moth
- 88.** Turmeric is a natural indicator. On adding its paste to acid and base separately, which colours would be observed?
 (a) Yellow in both acid and base
 (b) Yellow in acid and red in base
 (c) Pink in acid and yellow in base
 (d) Red in acid and blue in base
- 89.** Which of the following is not a plastid?
 (a) Chloroplast (b) Chromoplast
 (c) Leucoplast (d) Ribosome
- 90.** Which of the following cells does not have a nucleus?
 (a) White blood cell
 (b) Red blood cell
 (c) Nerve cell
 (d) Muscle cell
- 91.** A suitable term for the various components of cells is
 (a) tissue (b) cell organelles
 (c) chromosomes (d) genes
- 92.** The mode of vegetative reproduction where scion and stock are used is called
 (a) budding (b) grafting (c) cutting (d) layering
- 93.** Which among the following have hairs on seed?
 (a) Drumstick (b) Cotton
 (c) Aak (d) Maple
- 94.** Biological pollution in water is caused by
 (a) coal mines
 (b) domestic sewage and animal excreta
 (c) oil spills
 (d) chemicals like paint
- 95.** Which of these does not prevent growth of bacteria?
 (a) Salt (b) Oil (c) Sugar (d) Water
- 96.** Potable water is the water which is
 (a) obtained from a river
 (b) obtained from a lake
 (c) pure and fit for drinking
 (d) used only for washing clothes
- 97.** Scientist who discovered the fermentation
 (a) Alexander Fleming (b) Louis Pasteur
 (c) Johann Mendel (d) Charles Darwin
- 98.** Given below is a list of edible plants.
 (i) Banana (ii) Pumpkin
 (iii) Lady finger (iv) Brinjal
 Which pair of plants has two or more edible parts?
 (a) (i) and (ii) (b) (ii) and (iii)
 (c) (ii) and (iv) (d) (i) and (iv)
- 99.** Which one of the following sources of protein is different from others?
 (a) Peas (b) Grams
 (c) Soybeans (d) Cottage cheese (paneer)
- 100.** The buds at the tip of the stem or its branches are called
 (a) axillary buds (b) nodal buds
 (c) apical buds (d) growing buds

Answers

1	(c)	2	(b)	3	(b)	4	(c)	5	(c)	6	(b)	7	(d)	8	(b)	9	(d)	10	(a)
11	(c)	12	(b)	13	(a)	14	(b)	15	(c)	16	(c)	17	(b)	18	(c)	19	(c)	20	(a)
21	(b)	22	(a)	23	(b)	24	(c)	25	(d)	26	(c)	27	(d)	28	(b)	29	(a)	30	(d)
31	(a)	32	(d)	33	(b)	34	(c)	35	(b)	36	(c)	37	(c)	38	(d)	39	(c)	40	(b)
41	(a)	42	(c)	43	(a)	44	(d)	45	(c)	46	(a)	47	(d)	48	(d)	49	(b)	50	(d)
51	(b)	52	(c)	53	(c)	54	(c)	55	(a)	56	(c)	57	(c)	58	(a)	59	(b)	60	(c)
61	(c)	62	(d)	63	(c)	64	(a)	65	(c)	66	(c)	67	(a)	68	(a)	69	(c)	70	(b)
71	(a)	72	(d)	73	(b)	74	(a)	75	(d)	76	(c)	77	(c)	78	(c)	79	(b)	80	(c)
81	(d)	82	(b)	83	(b)	84	(c)	85	(d)	86	(b)	87	(d)	88	(b)	89	(d)	90	(b)
91	(b)	92	(b)	93	(b)	94	(d)	95	(d)	96	(c)	97	(b)	98	(c)	99	(d)	100	(c)