

Jawahar Navodaya Vidyalaya

Entrance Exam (Class IX)

PRACTICE SET 03

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. 1-2) *Fill in the blanks with the most appropriate option given against each question.*

1. The stairs are wet and slippery. Walk
(a) carefuller (b) carefuls
(c) careful (d) carefully
2. He at the seminar on Thursday because he was sick.
(a) was not (b) is not
(c) will not be (d) had not

Directions (Q. Nos. 3-4) *Fill in the blanks in the given sentence with the correct use of clause.*

3. My brother doesn't know
(a) he is tall (b) how tall is he?
(c) how tall he is. (d) how he is tall.
4. I couldn't believe it took them to process my application.
(a) how much (b) how long
(c) how many (d) where

Directions (Q. Nos. 5-9) *Read the passage and answer the questions that are given below.*

Fifty years ago people ate ice cream only in summer. Now it is eaten all the year round. It originated in the Orient, centuries before English schoolboys first tasted it. Marco Polo saw people eating ice cream there and brought back the idea to Italy. From Italy the idea was carried to France. It became very popular in France with the rich, and an effort was even made to keep the recipes a secret from the common people. But, of

course, they soon learned about this **delicious** new food and ice cream became popular with everyone. Soon it spread all over the world. The first factory to manufacture ice cream was started in Baltimore, Maryland, in 1851. However, the real development of ice cream and the ice cream business didn't take place until after 1900 with new developments in refrigeration.

A small amount of gelatin is used in order to retain the smoothness of the ice cream by preventing the formation of ice crystals. When you eat a third of a pint of vanilla ice cream, you are getting about as much calcium, protein, and vitamin B as are in half a cup of whole milk, and as much vitamin A and calories as are in one cup of milk.

5. The major change towards ice cream is that
(a) it is eaten throughout the year
(b) it is eaten as a dessert
(c) it is eaten in summer
(d) it is eaten in winter
6. Ice cream became popular with everyone
(a) when the idea was carried from Italy to France
(b) when English schoolboys tasted it
(c) when the rich in France started eating it
(d) when the common people learned about its recipe
7. The introduction of refrigeration led to the
(a) increased consumption of ice cream
(b) development of the ice cream business
(c) increase in the production of ice cream
(d) improvement in the quality of ice cream

8. The smoothness of ice cream is retained by
 (a) forming ice crystals
 (b) using a small amount of gelatin
 (c) using eggs
 (d) using cream and milk
9. Choose the word from the option which means the same as 'delicious' as used in the passage.
 (a) quality (b) bitter
 (c) tasty (d) flavour

Directions (Q. Nos. 10-11) Choose the most opposite meaning word of the given word in the following questions.

10. DIVIDED
 (a) United (b) Dignified
 (c) Separated (d) Isolated
11. SUPERIORITY
 (a) Seniority (b) Juniority
 (c) Inferiority (d) Urbanity

Directions (Q. Nos. 12-13) Change the following sentences into passive voice.

12. Radha is singing a song.
 (a) A song has been being sung by Radha.
 (b) A song is sung by Radha.
 (c) A song has being sung by Radha.
 (d) A song is being sung by Radha.
13. He had written a poem.
 (a) A poem has written by him.
 (b) A poem had written by him.
 (c) A poem had been written by him.
 (d) A poem has been written by him.

Directions (Q. Nos. 14-15) Choose the similar meaning word of the given word in the following questions.

14. PACIFY
 (a) Gather (b) Allot (c) Calm (d) Remit
15. SECURITY
 (a) Boldness (b) Safety
 (c) Fearlessness (d) Confidence

Section II Hindi

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

सामान्यतः दुष्टों की वन्दना में या तो भय रहता है या व्यंग्य, परन्तु जहाँ हम हानि होने के पहले ही हानि के कारण की वन्दना करने लगते हैं, वहाँ हमारी वन्दना के मूल में भय नहीं, बल्कि उसकी स्थायी दशा की आशंका है। इस वन्दना में दुष्टों को थपकी देकर सुलाने की चाल है, जिसमें विघ्न बाधाओं से जान बच सके। आशंका से उत्पन्न यह नम्रता गोस्वामी जी को आश्रय से आलम्बन बना देती है। जब स्फुट अंशों के संचारी भावों तथा अनुभावों को छोड़कर वन्दना के पीछे निहित भावना की दृष्टि से देखते हैं, तो यह आश्रय से संक्रमित आलम्बन का उदाहरण बन जाता है। सन्तों, देवताओं तथा राम की वन्दना पर्याप्त नहीं इसलिए दुष्टों की भी वन्दना की जाती है। इससे दुष्टों के महत्त्व की भायिक सृष्टि होती है और वह उन्हें और भी उपहास्य बना देती है।

16. दुष्टों की वन्दना में क्या रहता है?

- (a) भय, व्यंग्य
 (b) हर्ष, क्रोध
 (c) हानि, लाभ
 (d) ये सभी

17. दुष्ट वन्दना के पीछे लेखक का उद्देश्य है

- (a) दुष्टों को लज्जित करना
 (b) दुष्टों को थपकी देकर सुलाना
 (c) दुष्टों से अपना बचाव करना
 (d) दुष्टों का सहयोग प्राप्त करना

18. रामचरितमानस एक भक्ति काव्य है। इसमें दुष्ट वन्दना का रहस्य है

- (a) तुलसी को व्यापक दृष्टि
 (b) तुलसी का सभी को राममय देखना
 (c) तुलसी की उदारता
 (d) तुलसी का शील-सौजन्य

19. देवताओं, महापुरुषों, सज्जनों के साथ दुष्टों की वन्दना इसलिए सार्थक कही जाएगी कि महाकवि तुलसीदास

- (a) सन्त कवि थे (b) उदार नेता थे
 (c) हित-अनहित और अपने-पराए की भावना से ऊपर उठ चुके थे
 (d) निर्वरता चाहते थे

20. भय का विलोम शब्द है

- (a) निर्भय (b) डरहीन (c) निर्बल (d) दुर्धर

21. किस समास का प्रथम पद संख्यावाचक विशेषण होता है?

- (a) द्विगु (b) द्वन्द्व (c) अव्ययीभाव (d) तत्पुरुष

22. 'सोना' संज्ञा का उदाहरण है।

- (a) समूहवाचक (b) द्रव्यवाचक
 (c) जातिवाचक (d) व्यक्तिवाचक

23. निम्न में अशुद्ध वाक्य है

- (a) बेटी पराए घर का धन होती है
 (b) बेटी पराए घर का धन होता है
 (c) बेटी पराया घर का धन होता है
 (d) बेटी पराया घर का धन होती है

24. 'में, पर' किस कारक के कारक चिह्न हैं?

- (a) अधिकरण (b) अपादान
(c) सम्प्रदान (d) कर्म

25. प्रश्नवाचक सर्वनाम है

- (a) मैं (b) कौन
(c) तुम (d) वह

26. 'श्र' संयुक्त व्यंजन किसके योग से बना है?

- (a) स् + र (b) ष् + र
(c) श् + र (d) श्र + र

27. धृत का तद्भव शब्द है

- (a) घी (b) घड़ा (c) घर (d) गृह

28. 'व्याल' किसका पर्यायवाची है?

- (a) पक्षी (b) सिंह (c) सर्प (d) मोर

29. 'आ बैल! मुझे मार' का अर्थ है

- (a) बैल से मरवाना
(b) बैल से पीटना
(c) जान-बूझकर मुसीबत मोल लेना
(d) ये सभी

30. निम्न में संयुक्त वाक्य का उदाहरण है

- (a) वह घर आया और बाहर चला गया
(b) उन्हें याद था कि राधा घर ही है
(c) यदि राम आए तो मुझे बताना
(d) राजू घर पर ही है।

Section III Mathematics

31. The value of $[(16)^{1/2}]^{1/2}$ is

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

32. Simplify the expression $[\{(81)^{-1/2}\}^{-1/4}]^2$.

- (a) 1 (b) 2 (c) 3 (d) 9

33. The value of x , if $\left(\frac{6}{5}\right)^x \left(\frac{5}{6}\right)^{2x} = \frac{125}{216}$ is

- (a) 2 (b) 3 (c) 5 (d) 6

34. In $\triangle ABC$, if $BC = AB$ and $\angle B = 80^\circ$, then $\angle A$ is equal to

- (a) 40° (b) 50° (c) 60° (d) 70°

35. If $x = 1$, $y = 1$ and $z = -2$, then the value of expression $x^3 + y^3 + z^3 - 3xyz$ is

- (a) 0 (b) 1 (c) 2 (d) 3

36. The degree of the polynomial $5x^3 - 2x^2 + 1$ is

- (a) 3 (b) 2 (c) 0 (d) 4

37. Factors of $x^2 - 14x - 147$ are

- (a) $(x - 21)(x + 14)$ (b) $(x - 21)(x + 7)$
(c) $(x + 21)(x - 7)$ (d) $(x + 14)(x - 7)$

38. The greatest number that will divide 445, 572 and 699, leaving remainders 4, 5 and 6 respectively, is

- (a) 9 (b) 7 (c) 63 (d) 21

39. A merchant has 120 L of oil of one kind, 180 L of another kind and 240 L of a third kind. He wants to sell the oil by filling the three kinds of oil in tins of equal capacity. What should be the greatest capacity of such tin?

- (a) 50 L (b) 55 L (c) 60 L (d) 70 L

40. The HCF of 513 and 783 is

- (a) 9 (b) 12 (c) 18 (d) 27

41. Reshma prepared 18 kg of burfi by mixing khoya with sugar in the ratio of 7 : 2. How much khoya did she use?

- (a) 14 kg (b) 4 kg (c) 10 kg (d) 8 kg

42. School starts at 7: 00 am and gets over at 12 : 30 pm. If the break time is from 9 : 50 am to 10 : 10 am, then the ratio of the break time to the total time for which the students spend at school, is

- (a) 1 : 11 (b) 2 : 33 (c) 1 : 33 (d) 4 : 33

43. If $(x^2y + 2y^2 + 3)$ is subtracted from $(3x^2y + 2y^2 + 5)$, then, the coefficient of y in the result is

- (a) x^2 (b) $2x^2$ (c) $3x^2$ (d) $-x^2$

44. The perimeter of a parallelogram is 32 cm. If the longer side measures 9.5 cm, then the measure of the shorter side is

- (a) 6.5 cm (b) 6 cm (c) 5.5 cm (d) 5 cm

45. If the perimeter of an equilateral triangle is 60 m, then its area is

- (a) $25\sqrt{3} \text{ m}^2$ (b) $75\sqrt{3} \text{ m}^2$
(c) $50\sqrt{3} \text{ m}^2$ (d) $100\sqrt{3} \text{ m}^2$

46. The area of an isosceles triangle having base 2 cm and the length of one of the equal sides 4 cm, is

- (a) $2\sqrt{3} \text{ cm}^2$ (b) $\sqrt{15} \text{ cm}^2$
(c) $3\sqrt{2} \text{ cm}^2$ (d) $\sqrt{21} \text{ cm}^2$

47. The mean of 24 numbers is 12. If 2 is added to every number, then the new mean will be

- (a) 12 (b) 14
(c) 16 (d) 18

48. Express $0.00323232\ldots$ in the form of $\frac{p}{q}$.

- (a) $\frac{8}{2475}$ (b) $\frac{7}{2136}$ (c) $\frac{6}{1815}$ (d) $\frac{5}{1531}$

49. An irrational number between $\frac{1}{7}$ and $\frac{1}{3}$ is

- (a) 0.4101001000..... (b) 0.1401001000.....
(c) 0.3401001000..... (d) 0.2101001000.....

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

- (a) 2 (b) 3 (c) $4\sqrt{2}$ (d) 6

51. The length of each side of a cube, if its volume is 512 cm^3 , is

- (a) 7 cm (b) 8 cm (c) 9 cm (d) 10 cm

52. The cost of an article was ₹ 15500. ₹ 450 were spent on its repairs. If it is sold for a profit of 15%, the selling price of the article is

- (a) ₹ 19412.50 (b) ₹ 18342.50
(c) ₹ 17401.50 (d) ₹ 16500.50

53. The interest and amount to be paid on ₹ 15000 at 5% per annum after 2 yr are

- (a) ₹ 1500, ₹ 15000 (b) ₹ 1000, ₹ 16000
(c) ₹ 1500, ₹ 16500 (d) ₹ 1200, ₹ 16200

54. A machinery worth ₹ 10500 depreciated by 5%. Its value after one year is

- (a) ₹ 6690 (b) ₹ 7750
(c) ₹ 8825 (d) ₹ 9975

55. The population of a city after 2 yr, which is at present 12 lakh, if the rate of increase is 4%, is

- (a) 1264250 (b) 1245010
(c) 1297920 (d) 1310042

56. Two dice are thrown simultaneously. The probability of getting a multiple of 2 on one die and a multiple of 3 on the other die, is

- (a) $\frac{7}{36}$ (b) $\frac{11}{36}$ (c) $\frac{19}{36}$ (d) $\frac{13}{36}$

57. $\{5^2 + (12^2)^{1/2}\}^3$ is equal to

- (a) 40124 (b) 37011
(c) 50653 (d) 24614

58. 72% of 25 students are good in Mathematics. How many students are not good in Mathematics?

- (a) 3 (b) 4 (c) 6 (d) 7

59. A football team won 10 matches out of the total number of matches they played their win percentage was 40, then how many matches did they play in all?

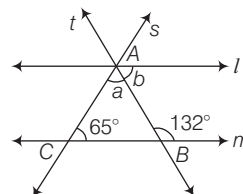
- (a) 10 (b) 15
(c) 20 (d) 25

60. A VCR and TV were bought for ₹ 8000 each.

The shopkeeper made a loss of 4% on the VCR and a profit of 8% on the TV. The gain or loss per cent on the whole transaction was

- (a) 2% profit (b) 2% loss (c) 1% profit (d) 1% loss

61. In the given figure, if $l \parallel m$, then the values of a and b are

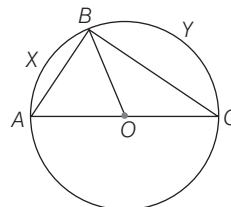


- (a) $\angle a = 70^\circ$ and $\angle b = 45^\circ$ (b) $\angle a = 61^\circ$ and $\angle b = 54^\circ$
(c) $\angle a = 65^\circ$ and $\angle b = 50^\circ$ (d) $\angle a = 67^\circ$ and $\angle b = 48^\circ$

62. Find the length of a chord of a circle which is at a distance of 6 cm from the centre of the circle, if the radius of the circle is 10 cm.

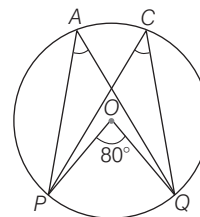
- (a) 8 cm (b) 14 cm (c) 16 cm (d) 20 cm

63. In the given figure, AOC is a diameter of the circle and arc $AXB = \frac{1}{2}$ arc BYC . Then, $\angle BOC$ is equal to



- (a) 100° (b) 120° (c) 130° (d) 115°

64. In the given figure, if $\angle POQ = 80^\circ$, then $\angle PAQ$ and $\angle PCQ$ are



- (a) $\angle PAQ = 30^\circ$ and $\angle PCQ = 40^\circ$
(b) $\angle PAQ = \angle PCQ = 30^\circ$
(c) $\angle PAQ = \angle PCQ = 40^\circ$
(d) $\angle PAQ = \angle PCQ = 35^\circ$

65. If surface area of a sphere is $676\pi \text{ cm}^2$, then its radius is

- (a) 10 cm (b) 11 cm (c) 12 cm (d) 13 cm

Section IV General Science

66. Which one of the following force is a contact force?
(a) Force of gravity (b) Force of friction
(c) Magnetic force (d) Electrostatic force
67. The wear and tear in the machine part is due to
(a) electrostatic force .
(b) muscular force
(c) frictional force
(d) gravitational force
68. The basic unit of speed is
(a) km/min (b) m/min
(c) km/h (d) m/s
69. The process of depositing a thin layer of any superior metal over an object of a cheaper metal with the help of electricity is called
(a) electro refining (b) electro metallurgy
(c) electroplating (d) None of these
70. Plastic wire is
(a) an insulator (b) a conductor
(c) Both (a) and (b) (d) None of these
71. Vibrations in a body produce
(a) sound (b) pressure
(c) density (d) current
72. Loudness of sound is measured in units of
(a) decibel (dB)
(b) Hertz (Hz)
(c) metre (m)
(d) metre / second (m/s)
73. The loudness of sound is determined by is
(a) amplitude of vibration
(b) ratio of amplitude and frequency of vibration
(c) frequency of vibration
(d) product of amplitude and frequency of vibration
74. Which of the following are used to study the growth of foetus inside the mother's womb?
(a) Radiowaves (b) X-rays
(c) Infrared waves (d) Ultrasound
75. Which among the following in the given options is an example of a magnetic substance?
(a) Cobalt (b) Nickel
(c) Iron (d) All of these
76. When electric current is passed through a conducting solution, there is a change of colour of the solution. This indicates
(a) the chemical effect of current
(b) the heating effect of current
(c) the magnetic effect of current
(d) the lightning effect of current
77. A person cannot see the distant objects clearly (though) he can see the nearby object clearly. He is suffering from the defect of vision called
(a) myopia (b) hypermetropia
(c) cataract (d) night blindness
78. No medium is required for transfer of heat by the process of
(a) conduction (b) convection
(c) Both (a) and (b) (d) radiation
79. Which of the following is non - biodegradable?
(a) Paper (b) Cotton cloth
(c) Plastic (d) Wood
80. Metals are generally hard. Which of the following metals is an exception and can be cut with a knife?
(a) Iron (b) Sodium
(c) Gold (d) Magnesium
81. The substance that does not burn with flame is
(a) LPG (b) camphor
(c) dry grass (d) charcoal
82. The term sericulture is used for
(a) culture of bacteria
(b) rearing of silkworm
(c) making silk fabric from silk yarn
(d) production of sarees
83. Which of the following is an acid-base indicator ?
(a) Vinegar (b) Lime water
(c) Turmeric (d) Baking soda
84. Materials which can be drawn into wires are called ductile. Which of the following is not a ductile material?
(a) Silver (b) Copper
(c) Sulphur (d) Aluminium
85. The material which is commonly used for making electric iron sole?
(a) PVC (b) Acrylic (c) Teflon (d) PET
86. When coal burns in air,
(a) carbon monoxide is formed
(b) sulphur dioxide is formed
(c) oxygen is formed
(d) carbon dioxide is formed
87. PET is a
(a) polyester (b) nylon
(c) polyamide (d) thermosetting polymer

88. Which metal is present in haemoglobin?
 (a) Magnesium (b) Iron
 (c) Carbon (d) Zinc
89. The general process that takes place at a sheep shearing shed is
 (a) removal of fleece
 (b) separating hair of different textures
 (c) washing of sheep fibre to remove grease
 (d) rolling of sheep fibre into yarn
90. Which of the following is not a cell?
 (a) Red Blood cell (RBC)
 (b) Bacterium
 (c) Spermatozoa
 (d) Virus
91. Which one of the following terms is not a part of the nucleus?
 (a) Ribosome (b) Chromosome
 (c) Nucleolus (d) Gene
92. Which among the following do not reproduce by vegetative reproduction.
 (a) Wheat (b) Sugarcane
 (c) Rose (d) Jasmine
93. The fusion of male and female gametes is called
 (a) ovulation (b) population
 (c) pollinating (d) fertilization
94. The disease caused by a protozoan and spread by an insect is
 (a) dengue (b) malariae
 (c) polio (d) measles
95. Which of these do not have a regular cell structure?
 (a) Bacteria (b) Viruses
 (c) Protozoa (d) Algae
96. The phenomenon of 'marble cancer' is due to
 (a) soot particles.
 (b) CFCs
 (c) log
 (d) acid rain
97. Roughage component in our food is made up of
 (a) glucose
 (b) cellulose
 (c) starch
 (d) sugarcane
98. One of the following food is not obtained from animals. The food is
 (a) honey (b) milk
 (c) maize (d) mutton
99. A pond contains clean water. Which of the following activities will produce least pollution of water?
 (a) Washing clothes in the pond
 (b) Bathing animals in the pond
 (c) Washing motor vehicles in the pond
 (d) Swimming in the pond
100. Which of the following nutrients is not present in milk?
 (a) Protein (b) Vitamin - C
 (c) Calcium (d) Vitamin - D

Answers

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