Reynott Academy

Branch Office : 265-A, Lajpat Nagar, Opp. Mission Hospital, Jalandhar

RAISE

(Reynott Academics and Intelligence Scholarship Examination)

SAMPLE PAPER

Class - 9th

> **Syllabus of the Test : Science & Mathematics of Class 8th**

Time : 2 Hrs.   **MM : 360**

GENERAL INSTRUCTIONS :

1. All questions are compulsory.
2. Blank paper, clipboard, log tables, calculators, cellular phones and electronic gadgets in any form are not allowed inside the examination hall.
3. Use only Black/Blue Ball Pen for filling the OMR. Do not use Gel/ Ink/ Felt pen as it might smudge the OMR.
4. For each right answer you will be **awarded 4 marks** if you darken the bubble corresponding to the correct answer and zero marks if no bubble is darkened. In case of bubbling of incorrect answer, **NO NEGATIVE MARK** will be awarded.
5. This Question Paper consists of 90 questions. Please check before starting to attempt. The question paper consists of five Sections, Section-A (Physics: 1 to 15), Section-B (Chemistry: 16 to 30), Section-C (Biology: 31 to 45), Section-D (Mathematics: 46 to 70), Section-E (Mental Ability: 71 to 90).

SECTION-A (PHYSICS)

1. An electric current can produce
   (A) heating effect only
   (B) chemical effect only
   (C) magnetic effect only
   (D) chemical, heating, and magnetic effects

2. Which one of the following solutions will not conduct electricity?
   (A) lemon juice
   (B) vinegar
   (C) tap water
   (D) vegetable oil

3. Which of the following metals is used in electroplating to make objects appear shining?
   (A) iron
   (B) copper
   (C) chromium
   (D) aluminium

4. A list of mediums is given below.
   (i) wood (iii) air
   (ii) water (iv) vacuum
   In which of these mediums can sound travel?
   (A) i & ii only
   (B) i, ii & iii only
   (C) iii & iv only
   (D) ii, iii & iv only

5. Pitch of sound is determined by its
   (A) frequency
   (B) amplitude
   (C) speed
   (D) loudness

6. The loudness of sound is determined by the
   (A) amplitude of vibration
   (B) ratio of amplitude and frequency of vibration
   (C) frequency of vibration
   (D) product of amplitude and frequency of vibration

7. Whenever the surfaces in contact tend to move or move with respect to each other, the force of friction comes into play

   (A) only if the objects are solid

   (B) only if one of the two objects is liquid

   (C) only if one of the two objects is gaseous

   (D) irrespective of whether the objects are solid, liquid or gaseous

8. To sharpen the blade of a knife by rubbing it against a surface, which of the following will be most suitable?

   (A) stone   (B) plastic block

   (C) wooden block   (D) glass block

9. Which of the following statements is incorrect?

   (A) Friction acts on a ball rolling along the ground

   (B) Friction acts on a boat moving on water

   (C) Friction acts on a bicycle moving on a smooth road

   (D) Friction does not act on a ball moving through air

10. In a large commercial complex there are four ways to reach the main road. One of the path has loose soil, the second is laid with polished marble, the third is laid with bricks and the fourth has gravel surface. It is raining heavily and Nisha wishes to reach the main road. The path on which she is least likely to slip is

    (A) loose soil   (B) polished marble

    (C) bricks   (D) gravel

11.

    A   B   C
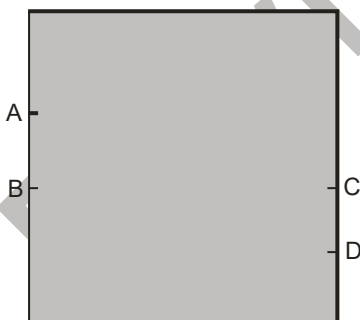
    A brick is kept in three different ways on a table as shown in Fig. The pressure exerted by the brick on the table will be

    (A) maximum in position A   (B) maximum in position B

    (C) maximum in position C   (D) equal in all cases

12.

    A water tank has four taps fixed at points A, B, C, D as shown in Fig. The water will flow out at the same pressure from taps at

    (A) B and C   (B) A and B

    (C) C and D   (D) A and C

13. Two objects repel each other. This repulsion could be due to

    (A) frictional force only   (B) electrostatic force only

    (C) magnetic force only   (D) either a magnetic or an electrostatic force

14. Figure shows a container filled with water. Which of the following statements is correct about pressure of water?
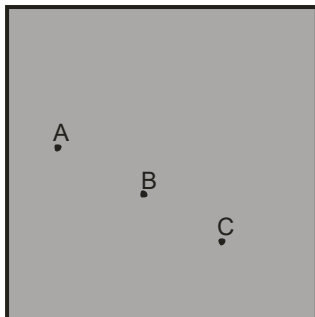
(A) Pressure at A> Pressure at B> Pressure at C   (B) Pressure at A=Pressure at B=Pressure at C

(C) Pressure at A< Pressure at B>Pressure at C   (D) Pressure at A< Pressure at B<Pressure at C

15.

In the circuit shown in Figure, when the circuit is completed, the hammer strikes the gong. Which of the following force is responsible for the movement of hammer?

(A) gravitational force alone   (B) electrostatic force alone

(C) magnetic force alone   (D) frictional force alone

SECTION-B (CHEMISTRY)

16. The element which should be stored in the Kerosene oil is

(A) Phosphorus   (B) Mercury

(C) Sodium   (D) Calcium

17. Bronze is an alloy of

(A) Cu, Mn and Cl   (B) Cu and Sn

(C) Zn and Ag   (D) Ag, Al and Zn

18. The least percent of carbon is found in

(A) Wrought Iron   (B) Steel

(C) Cast Iron   (D) pig iron

19. Coating of zinc on the iron is called

(A) Amalgam   (B) Coating

(C) Galvanisation   (D) Polishing

20. The lustre of metal is due to

(A) It's high density   (B) It's high polishing nature

(C) It's chemical inertness   (D) Presence of free electrons

21. Non-metallic oxides are

(A) acidic   (B) basic

(C) neutral   (D) (A) and (C)

22. Reactivity series gives

    (A) arrangement of metals in the order of decreasing reactivity

    (B) arrangement of non-metals in the order of decreasing reactivity

    (C) arrangement of metals in the order of increasing reactivity

    (D) arrangement of non-metals in the order of increasing reactivity

23. Which of the following metals is soft

    (A) Na   (B) Pb

    (C) Al   (D) Cu

24. Due to it's semiconductor properties, the non metal used in computer, T.V. etc. is

    (A) Carbon   (B) Silicon

    (C) Bromine   (D) Fluorine

25. Which of the following are natural fibres

    (A) Nylon, polyester and spandex   (B) Viscose, rayon

    (C) Wool, silk and hemp   (D) Petroleum, coal and natural gas

26. The major raw materials for Rayon is obtained from

    (A) wood   (B) coal

    (C) petroleum   (D) both coal and petroleum

27. The plastics which soften upon being heated but regains all it's original properties on cooling are known as

    (A) Thermoplastics   (B) Thermosetting plastics

    (C) Thermoelastic   (D) None of the above

28. Which of the following are thermosets

    (A) Bakelite   (B) Polystyrene

    (C) Polythene   (D) Thermocol

29. Which is known as artificial silk

    (A) Rayon   (B) Nylon

    (C) Dacron   (D) Polyester

30. Disposal of plastic is a major problem because

    (A) It is non biodegradable   (B) It is biodegradable

    (C) It is flame retardant   (D) All of these

SECTION-C (BIOLOGY)

31. Propagation of ginger is generally done using

    (A) seed   (B) stem (rhizome)

    (C) root   (D) leaf

32. Which of the following tools would a farmer use to remove weeds from the field?

    (A) Hoe   (B) Plough

    (C) Axe   (D) Cultivator

33. Which of the following is not true for fertilisers?

    (A) They increase the yield.

    (B) Their excessive use disturbs the balance of nutrients in soil.

    (C) They are generally used in small quantity.

    (D) They are environment friendly.

34. The system of irrigation where in water is supplied drop by drop near the roots of plants, is called

    (A) pulley system   (B) drip system

    (C) sprinkler system   (D) lever system

35. Which of the following reproduces only inside a host cell?

    (A) Bacteria   (B) Virus

    (C) Amoeba   (D) Fungus.

36. The two micro-organisms which live in symbiotic association in lichens are

    (A) fungus and protozoa   (B) alga and bacteria

    (C) bacteria and protozoa   (D) alga and fungus

37. The disease caused by a protozoan and spread by an insect is _____.

    (A) dengue   (B) malaria

    (C) polio   (D) measles

38. Which one of the following changes may occur due to desertification?

    (A) Decrease in atmospheric temperature.

    (B) Increase in water holding capacity of soil.

    (C) Increased chances of floods.

    (D) Conversion of fertile land into a desert.

39. The place meant for conservation of biodiversity in their natural habitat are

    (i)   Zoological garden   (iii) Wildlife sanctuary

    (ii) Botanical garden   (iv) National park

    (A) i & ii;   (B) ii & iii;

    (C) iii & iv;   (D) i & iv

40. The Red Data Book keeps a record of all the

    (i)   endemic species   (iii) endangered plants

    (ii) extinct species   (iv) endangered animals

    (A) i & ii;   (B) ii & iii;

    (C) iii & iv;   (D) i & iv

41. In our country, large patches of forests are being cleared for cultivation of crops. The environmental impact of such a practice will lead to

    (A) soil erosion   (B) soil conservation

    (C) soil pollution   (D) soil fertility

42. Majority of cells cannot be seen directly with our naked eyes because:

    (A) organisms are generally unicellular

    (B) cells are microscopic

    (C) cells are present only inside the body

    (D) cells are grouped into tissues

43. Which one of the following term is not a part of the nucleus?

    (A) ribosome   (B) nucleolus

    (C) chromosome   (D) gene

44. The unit of measurement used for expressing dimension (size) of cells is:

    (A) centimeter   (B) millimeter

    (C) micrometer   (D) metre

45. Cheek cells do not have _____

    (A) cell membrane   (B) nucleus

    (C) golgi apparatus   (D) plastids

SECTION-D (MATHEMATICS)

46. To get the product 1, we should multiply $\dfrac{8}{21}$ by

(A) $\dfrac{8}{21}$ (B) $\dfrac{-8}{21}$

(C) $\dfrac{21}{8}$ (D) $\dfrac{-21}{8}$

47. The reciprocal of $\dfrac{-3}{8} \times \left(\dfrac{-7}{13} \right)$ is

(A) $\dfrac{104}{21}$ (B) $\dfrac{-104}{21}$

(C) $\dfrac{21}{104}$ (D) $\dfrac{-21}{104}$

48. Which of the following is not true?
(A) Rational numbers are closed under addition   (B) Rational numbers are closed under subtraction.
(C) Rational numbers are closed under multiplication   (D) Rational numbers are closed under division.

49. Data represented using circles is known as
(A) Bar graph   (B) Histogram
(C) Pictograph   (D) Pie chart

50. In a pie chart, the total angle at the centre of the circle is
(A) 180°   (B) 360°
(C) 270°   (D) 90°

51. What is the probability of choosing a vowel from the alphabets?

(A) $\dfrac{21}{26}$ (B) $\dfrac{5}{26}$

(C) $\dfrac{1}{26}$ (D) $\dfrac{3}{26}$

52. A coin is tossed three times. The number of possible outcomes is
(A) 3   (B) 4
(C) 6   (D) 8

53. Which of the following is a square of an even number?
(A) 144   (B) 169
(C) 441   (D) 625

54. Which of the following will have 4 at the units place?
(A) 14^2 (B) 62^2
(C) 27^2 (D) 35^2

55. Which of the following numbers is not a perfect cube?
(A) 216   (B) 567
(C) 125   (D) 343

56. A perfect square can never have the following digit in its ones place.

(A) 1

(B) 8

(C) 0

(D) 6

57. The solution of the equation $ax + b = 0$ is

(A) $x = \dfrac{a}{b}$

(B) $x = -b$

(C) $x = \dfrac{-b}{a}$

(D) $x = \dfrac{b}{a}$

58. If $\dfrac{5x}{3} - 4 = \dfrac{2x}{5}$, then the numerical value of $2x - 7$ is

(A) $\dfrac{19}{13}$

(B) $-\dfrac{13}{19}$

(C) 0

(D) $\dfrac{13}{19}$

59. Which of the following can never be the measure of exterior angle of a regular polygon?

(A) 22°

(B) 36°

(C) 45°

(D) 30°

60. The sum of adjacent angles of a parallelogram is

(A) 180°

(B) 120°

(C) 360°

(D) 90°

61. For which of the following, diagonals bisect each other?

(A) Square

(B) Kite

(C) Trapezium

(D) Quadrilateral

62. Which of the following figures satisfy the following property?

Only one pair of sides are parallel.
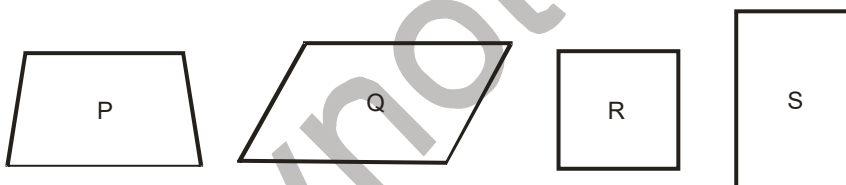
(A) P

(B) Q

(C) R

(D) S

63. The sum of all exterior angles of a triangle is

(A) 180°

(B) 360°

(C) 540°

(D) 720°

64. How many diagonals does a hexagon have?

(A) 9

(B) 8

(C) 2

(D) 6

65. 3^{-2} can be written as

(A) 3^2

(B) $\dfrac{1}{3^2}$

(C) $\dfrac{1}{3^{-2}}$

(D) $-\dfrac{2}{3}$

66. If y be any non-zero integer, then y^0 is equal to

(A) 1

(B) 0

(C) -1

(C) Not defined

67. $\left(\dfrac{-7}{5}\right)^{-1}$ is equal to

(A) $\dfrac{5}{7}$

(B) $-\dfrac{5}{7}$

(C) $\dfrac{7}{5}$

(D) $-\dfrac{7}{5}$

68. The compound interest on Rs 50,000 at 4% per annum for 2 years compounded annually is

(A) Rs 4,000

(B) Rs 4,080

(C) Rs 4,280

(D) Rs 4,050

69. 40% of [100 − 20% of 300] is equal to

(A) 20

(B) 16

(C) 140

(D) 64

70. Latika bought a teapot for Rs 120 and a set of cups for Rs 400. She sold teapot at a profit of 5% and cups at a loss of 5%. The amount received by her is

(A) Rs 494

(B) Rs 546

(C) Rs 506

(D) Rs 534

SECTION-E (MENTAL ABILITY)

71. Which is the number that comes next in the sequence : 0, 6, 24, 60, 120, 210 ?

(A) 240

(B) 290

(C) 336

(D) 504

72. Which is the number that comes next in the following sequence ?

4, 6, 12, 14, 28, 30,(...)

(A) 32

(B) 60

(C) 62

(D) 64

73. Three of the following four are alike in a certain way and so form a group. Which one does not belong to that group?

(A) Bud

(B) Branch

(C) Leaf

(D) Plant

74.. Find the odd-man out?

(A) PSRQ

(B) CGEF

(C) JMLK

(D) VYXW

75. Choose the word which is least like the other words in the group

(A) Book
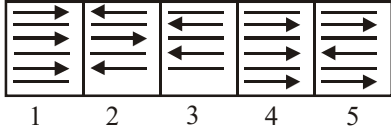
(B) Paper

(C) Pencil

(D) Pen

Directions :(Q. 76. & Q. 77)

In each of the following examples find the figure from the answer Set (i.e. figs. 1, 2, 3, 4 and 5) which will continue the series given in the problem Set (i.e. figs. A, B, C, D and E).
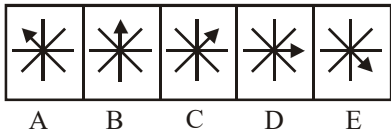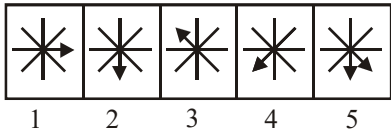
76. Problem Figures
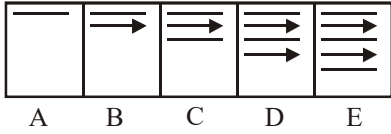
Answer Figures

(A) 1   (B) 2

(C) 3   (D) 4

77. Problem Figures

Answer Figures

(A) 1   (B) 2

(C) 3   (D) 4

78. A man is facing south. He turns 135º in the anticlockwise direction and then 180º in the clockwise direction. Which direction is he facing now ?

(A) North-east   (B) North-west

(C) South-east   (D) South-west

79. A man is facing north-west. He turns 90º in the clockwise direction and then 135º in the anticlockwise direction. Which direction is he facing now ?

(A) East   (B) West

(C) North   (D) South

80. A man is facing north-west. He turns 90º in the clockwise direction, then 180º in the anticlockwise direction and then another 90º in the same direction. Which direction is he facing now ?

(A) South   (B) South west

(C) West   (D) South-east

Directions : (Q. 81. & Q. 82)

In the following questions, choose the missing word in place of sign "?" On the basis of the relationship between the words given on the left / right hand side of sign :

81. Lung : Man : : Gill : ?

(A) Cow   (B) Hen

(C) Peacock   (D) Fish

82. Mirror : Reflection : : Water : ?

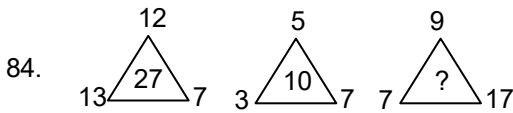(A) Conduction   (B) Reflection

(C) Refraction   (D) Immersion

83. Insert the missing number in the given trend

3	25	2
4	64	4
3	?	3

(A) 81　　　　　　　　　　　　　　　　(B) 6
(C) 39　　　　　　　　　　　　　　　　(D) 36

Directions : **(Q. 84)**

Choose the missing number in question 84. The relation between the number within the bracket and those outside the brackets are the same for both lines in each question.

84.

(A) 25　　　　　　　　　　　　　　　　(B) 20
(C) 27　　　　　　　　　　　　　　　　(D) 28

Directions : **(Q. 85 to Q. 87)**

In each of the following letter series, some of the letters are missing which are given in that order as one of the alternatives belows it. Choose the correct alternative.

85. A, B, D, G, ?
(A) M　　　　　　　　　　　　　　　　(B) L
(C) K　　　　　　　　　　　　　　　　(D) H

86. A, C, F, H, ?, M
(A) L　　　　　　　　　　　　　　　　(B) K
(C) J　　　　　　　　　　　　　　　　(D) I

87. AZ, BY, CX, ?
(A) EF　　　　　　　　　　　　　　　　(B) GH
(C) IJ　　　　　　　　　　　　　　　　(D) DW

Directions : **(Q. 88 to Q. 89)**

In each of the following questions below, find out the correct answer from the given alternatives.

88. In a certain code, GIGANTIC is written as GIGTANCI. How is MIRACLES written in that code ?
(A) MIRLCAES　　　　　　　　　　　　(B) MIRLACSE
(C) RIMCALSE　　　　　　　　　　　　(D) RIMLCAES

89. If LINGER is 123456 and FORCE is 56789, then FIERCE is
(A) 345667　　　　　　　　　　　　　(B) 456678
(C) 345677　　　　　　　　　　　　　(D) 556789

Directions : for (Q. 90)

Each of the following questions consists of five figures marked A, B, C, D and E called the problem figures followed by five other figures marked 1, 2, 3, 4 and 5 called the answer figures. Select a figure from amongst the answer figures which will continue the same series as established by the five problem figures.

90. Problem Figures
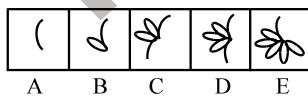
Answer Figures
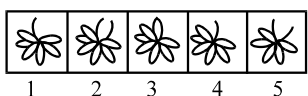
(A) 1　　　　　　　　　　　　　　　　(B) 2
(C) 3　　　　　　　　　　　　　　　　(D) 4

❑　❑　❑

Reynott Academy

Branch Office : 265-A, Lajpat Nagar, Opp. Mission Hospital, Jalandhar

RAISE
(Reynott Academics and Intelligence Scholarship Examination)
SAMPLE PAPER
Class - 9th

ANSWER KEY

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

❑   ❑   ❑