

RAISE 2020

(Reynott Academics and Intelligence Scholarship Examination)

SAMPLE PAPER

Class - 8th

Syllabus of the Test : Science & Mathematics of Class 7th

Time : 2 Hrs.

MM : 360

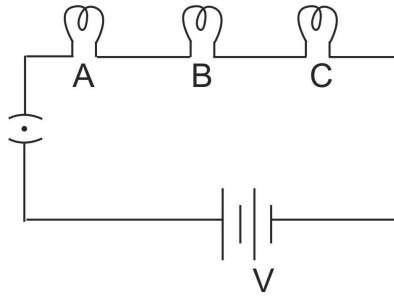
GENERAL INSTRUCTIONS :

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. Which of the following can be used to form a real image?
(A) Concave mirror only.
(B) Plane mirror only.
(C) Convex mirror only.
(D) Both concave and convex mirrors.
2. If an object is placed at a distance of 0.5 m in front of a plane mirror, the distance between the object and the image formed by the mirror will be
(A) 2 m (B) 1 m
(C) 0.5 m (D) 0.25 m
3. An erect and enlarged image can be formed by
(A) only a convex mirror
(B) only a concave mirror
(C) only a plane mirror
(D) both convex and concave mirrors
4. Choose the statement which is not correct in the case of an electric fuse.
(A) Fuses are inserted in electric circuits of all buildings.
(B) There is a maximum limit on the current which can safely flow through the electric circuits.
(C) There is a minimum limit on the current which can safely flow in the electric circuits.
(D) If a proper fuse is inserted in a circuit it will blow off if current exceeds the safe limit.

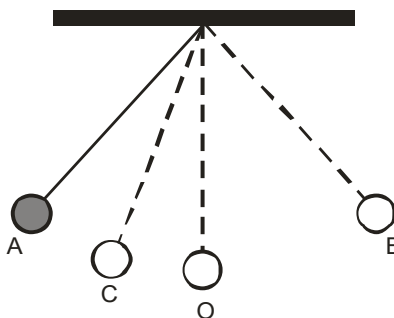
5. Three bulbs A, B, C are connected in a circuit as shown in Figure. When the switch is 'ON'



- (A) bulb C will glow first.
 (B) bulb B and C will glow simultaneously and bulb A will glow after some time.
 (C) all the bulbs A,B and C will glow at the same time.
 (D) the bulbs will glow in the order A, B and C
6. Which of the following precautions need not be taken while using electric gadgets/appliances/circuit?
 (A) We should never touch a lighted electric bulb connected to the mains.
 (B) We should never experiment with the electric supply from the mains or a generator or an inverter.
 (C) We should never use just any wire or strip of metal in place of a fuse.
 (D) We should never turn the switch in ON position.
7. When a switch is in OFF position,
 (i) circuit starting from the positive terminal of the cell stops at the switch.
 (ii) circuit is open.
 (iii) no current flows through it.
 (iv) current flows after some time.

Choose the combination of correct answer from the following.

- (A) all are correct
 (B) (ii) and (iii) are correct
 (C) only (iv) is correct
 (D) only (i) and (ii) are correct
8. Suresh walks to his school which is at a distance of 3 km from his home in 30 minutes. On reaching he finds that the school is closed and comes back by a bicycle with his friend and reaches home in 20 minutes. His average speed in km/h is
 (A) 8.3
 (B) 7.2
 (C) 5
 (D) 3.6
9. The correct symbol to represent the speed of an object is
 (A) 5 m/s
 (B) 5 ms
 (C) 5 m/s⁻¹
 (D) 5 s/m
10. Figure shows an oscillating pendulum.



Time taken by the bob to move from A to C is t_1 and from C to O is t_2 . The time period of this simple pendulum is

- (A) $(t_1 + t_2)$
 (B) $2(t_1 + t_2)$
 (C) $3(t_1 + t_2)$
 (D) $4(t_1 + t_2)$

11. If we denote speed by S, distance by D and time by T, the relationship between these quantities is
- (A) $S = D \times T$ (B) $T = \frac{S}{D}$
(C) $S = \frac{1}{T} \times D$ (D) $S = \frac{T}{D}$
12. Which of the following cannot be used for measurement of time?
- (A) A leaking tap (B) Simple pendulum
(C) Shadow of an object during the day (D) Blinking of eyes
13. A marble tile would feel cold as compared to a wooden tile on a winter morning, because the marble tile
- (A) is a better conductor of heat than the wooden tile (B) is polished while wooden tile is not polished
(C) reflects more heat than wooden tile (D) is a poor conductor of heat than the wooden tile
14. A beggar wrapped himself with a few layers of newspaper on a cold winter night. This helped him to keep himself warm because
- (A) friction between the layers of newspaper produces heat
(B) air trapped between the layers of newspaper is a bad conductor of heat
(C) newspaper is a conductor of heat
(D) newspaper is at a higher temperature than the temperature of the surrounding
15. Nisha and Suresh measured their body temperature. Nisha found her's to be 98.6 °F and Suresh recorded 37°C. Which of the following statement is true?
- (A) Nisha has a higher body temperature than Suresh (B) Nisha has a lower body temperature than Suresh
(C) Both have normal body temperature (D) Both are suffering from fever

SECTION-B (CHEMISTRY)

16. Slow eating away of iron articles in the presence of moist air is called
- (A) galvanisation (B) crystallisation
(C) rusting (D) neutralisation
17. Melting of wax is a _____ change, while burning of candle is _____ change
- (A) irreversible, reversible (B) reversible, irreversible
(C) physical, reversible (D) chemical, irreversible
18. _____ is a physical change where surface molecules of a liquid escape
- (A) Evaporation (B) Condensation
(C) Foaming (D) None of these
19. Which one of the following is a physical change?
- (A) Digestion of food (B) Boiling of an egg
(C) Making of cup of tea (D) None of these
20. The process of obtaining pure crystals of copper sulphate from copper sulphate solution is known as
- (A) crystallisation (B) galvanisation
(C) rusting (D) None of these
21. Examples of physical properties are
- (A) corrosiveness and strength (B) flammability and ability to conduct electricity
(C) melting point and solubility (D) None of these
22. Why rusting of iron is faster in coastal areas than in deserts?
- (A) Because air has more moisture in coastal areas than in desert areas
(B) Because air has less moisture in coastal areas than in desert areas
(C) None of these
(D) Both (A) and (B)

23. Lime water is
(A) dilute solution of Ca(OH)_2 (B) Mg(OH)_2 solution
(C) NaOH solution (D) KOH solution
24. An indicator that turns reddish brown when dissolved in soap solution is
(A) litmus (B) china rose
(C) turmeric powder (D) None of these
25. The acid present in lemon is
(A) citric acid (B) oxalic acid
(C) acetic acid (D) hydrochloric acid
26. When a drop of phenolphthalein is introduced in lime water, the solution turns.
(A) blue (B) red
(C) milky (D) pink
27. Acids are in taste while bases are in taste.
(A) sweet, salty (B) sweet, sour
(C) sour, salty (D) sour, bitter
28. Removing the wool from a sheep is called
(A) sericulture (B) shearing
(C) spinning (D) ginning
29. The wools of Arabian camels is used to make _____.
(A) Sweaters (B) Carpets
(C) Shawls (D) None of these
30. Silk thread woven by silkworm around its larva is made up of
(A) carbohydrates (B) proteins
(C) fat (D) None of these

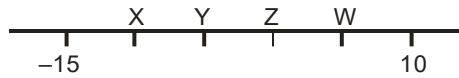
SECTION-C (BIOLOGY)

31. Which of the following statements is/are correct?
(i) All green plants can prepare their own food.
(ii) Most animals are autotrophs.
(iii) Carbon dioxide is not required for photosynthesis.
(iv) Oxygen is liberated during photosynthesis.
Choose the correct answer from the options below:
(A) (i) and (iv) (B) (ii) only
(C) (ii) and (iii) (D) (i) and (ii)
32. The term that is used for the mode of nutrition in yeast, mushroom and bread-mould is
(A) autotrophic (B) insectivorous
(C) saprophytic (D) parasitic
33. Which of the following pair of teeth differ in structure but are similar in function?
(A) canines and incisors (B) molars and premolars
(C) incisors and molars (D) premolars and canines
34. Choose the correct order of terms that describes the process of nutrition in ruminants.
(A) swallowing → partial digestion → chewing of cud → complete digestion
(B) chewing of cud → swallowing → partial digestion → complete digestion
(C) chewing of cud → swallowing → mixing with digestive juices → digestion
(D) swallowing → chewing and mixing → partial digestion → complete digestion

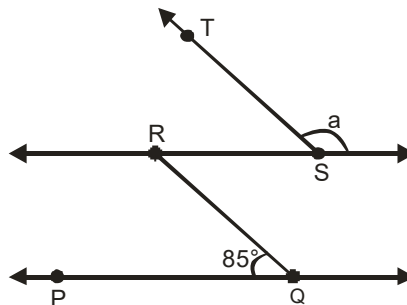
35. The maximum and minimum temperature displayed daily in the weather bulletin refer to the
- (A) highest day temperature and lowest night temperature of the day
 - (B) highest day temperature and highest night temperature of the month
 - (C) temperature recorded at 12 noon and at mid night (00.00 hrs)
 - (D) average highest temperature of day and average lowest temperature of night
36. Which of the following briefly describes the desert climate?
- (A) Hot and humid
 - (B) Dry and humid
 - (C) Hot and dry
 - (D) Hot and wet
37. Read the following environmental conditions of tropical rain forests.
- (i) Hot and humid climate
 - (ii) Unequal lengths of day and night
 - (iii) Abundant rain fall
 - (iv) Abundant light and moisture
- Identify the conditions from the above list that are responsible for the presence of large number of plants and animals in tropical rain forests.
- (A) (i) and (ii)
 - (B) (i) and (iii)
 - (C) (i), (iii) and (iv)
 - (D) (ii) and (iv)
38. Choose the odd one from the following options:
- (A) Thick layer of fat under the skin
 - (B) White fur
 - (C) Long grasping tail
 - (D) Wide and large feet with sharp claws
39. Sometimes when we do heavy exercise, anaerobic respiration takes place in our muscle cells. What is produced during this process?
- (A) alcohol and lactic acid
 - (B) alcohol and CO₂
 - (C) lactic acid and CO₂
 - (D) lactic acid only
40. During the process of exhalation, the ribs move
- (A) down and inwards
 - (B) up and inwards
 - (C) down and outwards.
 - (D) up and outward
41. Earthworms and frogs breathe through their skin because of which the skin of both the organisms is
- (A) moist and rough
 - (B) dry and rough
 - (C) dry and slimy
 - (D) moist and slimy
42. Which of the following is not the name of a tree?
- (A) Teak
 - (B) Sal
 - (C) Porcupine
 - (D) Kachnar
43. Which of the products is not obtained from a forest?
- (A) Honey
 - (B) Catechu
 - (C) Gum
 - (D) Ginger
44. Forests are not responsible for
- (A) providing medicinal plants
 - (B) maintaining the flow of water into the streams
 - (C) creating flood conditions
 - (D) absorbing rainwater and maintaining water table
45. Which of the following is/are products of wastewater treatment?
- (A) Biogas
 - (B) Sludge
 - (C) Both biogas and sludge
 - (D) Aerator

SECTION-D (MATHEMATICS)

46. Next three consecutive numbers in the pattern 11, 8, 5, 2, --, --, -- are
 (A) 0, -3, -6 (B) -1, -5, -8
 (C) -2, -5, -8 (D) -1, -4, -7
47. On the following number line value 'Zero' is shown by the point

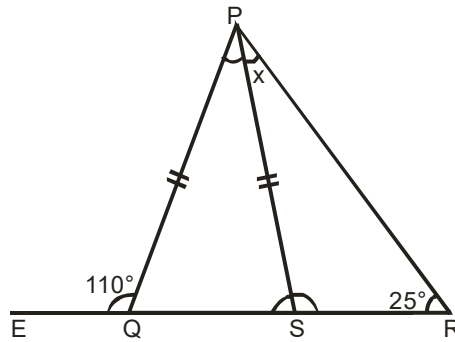


- (A) X (B) Y
 (C) Z (D) W
48. $(-11) \times 7$ is not equal to
 (A) $11 \times (-7)$ (B) $-(11 \times 7)$
 (C) $(-11) \times (-7)$ (D) $7 \times (-11)$
49. $3\frac{3}{4} \div \frac{3}{4}$ equal to:
 (A) 3 (B) 4
 (C) 5 (D) $\frac{45}{16}$
50. Reciprocal of the fraction $\frac{2}{3}$ is:
 (A) 2 (B) 3
 (C) $\frac{2}{3}$ (D) $\frac{3}{2}$
51. On dividing 7 by $\frac{2}{5}$, the result is
 (A) $\frac{14}{2}$ (B) $\frac{35}{4}$
 (C) $\frac{14}{5}$ (D) $\frac{35}{2}$
52. The angles between North and West and South and East are
 (A) complementary (B) supplementary
 (C) both are acute (D) both are obtuse
53. The angle which makes a linear pair with an angle of 61° is of
 (A) 29° (B) 61°
 (C) 122° (D) 119°
54. The measure of an angle which is four times its supplement is
 (A) 36° (B) 144°
 (C) 16° (D) 64°
55. In the given figure, if $PQ \parallel RS$ and $QR \parallel TS$, then the value of a is



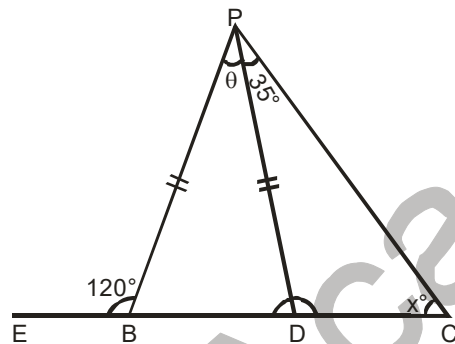
- (A) 95° (B) 90°
 (C) 85° (D) 75°

56. In the figure, $PQ = PS$. The value of x is



- (A) 35° (B) 45°
 (C) 55° (D) 70°

57. In the figure, $PB = PD$. The value of x is

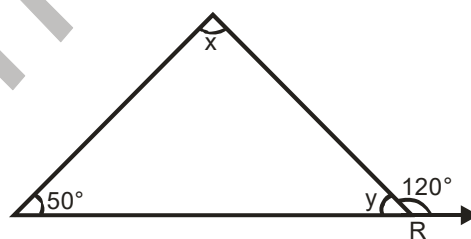


- (A) 85° (B) 90°
 (C) 25° (D) 35°

58. If two angles of a triangle are 60° each, then the triangle is

- (A) Isosceles but not equilateral (B) Scalene
 (C) Equilateral (D) Right-angled

59. The measures of $\angle x$ and $\angle y$ in figure are respectively



- (A) $30^\circ, 60^\circ$ (B) $40^\circ, 40^\circ$
 (C) $70^\circ, 70^\circ$ (D) $70^\circ, 60^\circ$

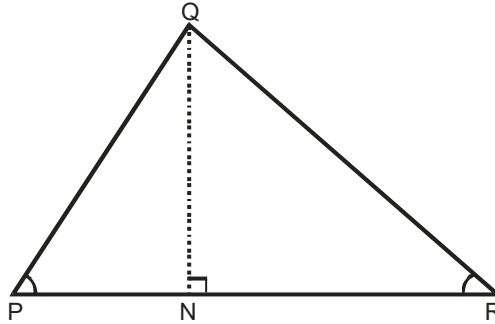
60. Which of the following rational numbers is negative?

- (A) $-\left(\frac{-3}{7}\right)$ (B) $\frac{-5}{-8}$
 (C) $\frac{9}{8}$ (D) $\frac{3}{-7}$

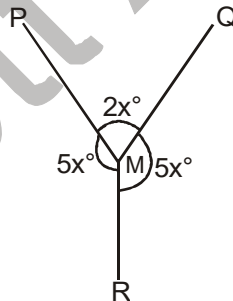
61. A wire is bent to form a square of side 22 cm. If the wire is rebent to form a circle, its radius is

- (A) 22 cm (B) 14 cm
 (C) 11 cm (D) 7 cm

62. Area of a rectangle and the area of a circle are equal. If the dimensions of the rectangle are $14\text{cm} \times 11\text{cm}$, then radius of the circle is
 (A) 21 cm (B) 10.5 cm
 (C) 14 cm (D) 7 cm
63. Area of triangle PQR is 100 cm^2 in the figure. If altitude QT is 10 cm, then its base PR is



- (A) 20 cm (B) 15 cm
 (C) 10 cm (D) 5 cm
64. The sum of $x^4 - xy + 2y^2$ and $-x^4 + xy + 2y^2$ is
 (A) Monomial and polynomial in y (B) Binomial and Polynomial
 (C) Trinomial and polynomial (D) Monomial and polynomial in x
65. $(1^\circ + 2^\circ + 3^\circ)$ is equal to
 (A) 0 (B) 1
 (C) 3 (D) 6
66. Find x in $\frac{-3}{5} = \frac{x}{-15}$
 (A) 9 (B) -9
 (C) -3 (D) 3
67. In the given figure, the value of x is



- (A) 10 (B) 20
 (C) 30 (D) 40
68. Which of the following statement (s) is/are false ?
 (A) two triangles having same area are congruent.
 (B) If two sides and one angle of a triangle are equal to the corresponding two sides and the angle of another triangle, then the two triangles are congruent.
 (C) If the hypotenuse of one right triangle is equal to the hypotenuse of another triangle, then the triangles are congruent.
 (D) All the above
69. If two sides of an isosceles triangles are 3 cm and 8 cm, then the length of the third side is :
 (A) 3 cm (B) 8 cm
 (C) 3 cm or 8 cm (D) 5 cm
70. If two triangles are formed by dividing a square into half, what is the measure of each angle ?
 (A) $50^\circ, 50^\circ, 80^\circ$ (B) $90^\circ, 45^\circ, 45^\circ$
 (C) $65^\circ, 65^\circ, 5^\circ$ (D) $60^\circ, 60^\circ, 60^\circ$

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. What is the missing number: 3, 7, 15, 31, 63, (...)
 (A) 92 (B) 115
 (C) 127 (D) 131
74. Find the wrong number in the series :
 7, 28, 63, 124, 215, 342, 511
 (A) 7 (B) 28
 (C) 124 (D) 215
75. Find the wrong number in the series :
 3, 8, 15, 24, 34, 48, 63
 (A) 15 (B) 24
 (C) 34 (D) 48
76. Find the wrong number in the series : 24, 27, 31, 33, 36
 (A) 24 (B) 27
 (C) 31 (D) 33

Directions : (Q. 77 & Q. 78)

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

77. ___ aba ___ ba ___ ab
 (A) abbba (B) abbab
 (C) baabb (D) bbaba
78. ___ babbba ___ a ___
 (A) ababb (B) baaab
 (C) bbaba (D) babbb
79. What terms will fill the blank spaces ?
 Z, X, V, T, R, (...), (...)
 (A) O, K (B) N, M
 (C) K, S (D) P, N
80. $\frac{5}{x} = \frac{x}{1.25}$, find the value of x?
 (A) 0.0025 (B) 0.025
 (C) 0.025 (D) 2.5
81. If '+' means 'divided by', '-' means 'multiplied by', 'x' means 'minus' and '+-' means 'plus', which of the following will be the value of the expression $16 \div 8 - 4 + 2 \times 4$?
 (A) 16 (B) 28
 (C) 32 (D) 44

82. If + means \div , - means \times , \div means + and \times means -, then $36 \times 12 + 4 \div 6 + 2 - 3 = ?$
- (A) 2 (B) 18
(C) 42 (D) $6\frac{1}{2}$

Directions : (Q. 83 & Q. 85)

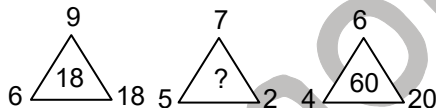
Read the information carefully and answer the question based on it.

Five persons are sitting in a row. One of the two persons at the extreme ends is intelligent and other one is fair. A fat person is sitting to the right of a weak person. A tall person is to the left of the fair person and the weak person is sitting between the intelligent and the fat person.

83. Tall person is at which place counting from right?
- (A) First (B) Second
(C) Third (D) Fourth
84. Person to the left of weak person possesses which of the following characteristics ?
- (A) Intelligent (B) Fat
(C) Fair (D) Tall
85. Which of the following persons is sitting at the centre?
- (A) Intelligent (B) Fat
(C) Fair (D) Weak
86. Insert the missing number in the given trend

3	25	2
4	64	4
3	?	3

- (A) 81 (B) 6
(C) 39 (D) 36
87. Insert the missing number in the given trend



- (A) 14 (B) 34
(C) 60 (D) 70

Directions : (Q. 88 to Q. 90)

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. In a certain code, RIPPLE is written as 613382 and LIFE is written as 8192. How is PILLER written in that code?
- (A) 318826 (B) 318286
(C) 618826 (D) 328816
90. If LINGER is 123456 and FORCE is 56789, then FIERCE is
- (A) 345667 (B) 456678
(C) 345677 (D) 556789





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RAISE 2020

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SAMPLE PAPER

Class - 8th

ANSWER KEY

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

