



## SCREENING TEST

**Date:**

**Time: 2 Hours**

**CLASS: VIII TO IX CBSE**

**Max Marks: 400**

### IMPORTANT INSTRUCTIONS:

1. The test is of 2 hours duration.
2. The Test Booklet consists of 100 questions. The maximum marks are 400.
3. There are FIVE parts in the question paper : Physics, Chemistry, Mathematics, Biology and Mental Ability with 20 questions in each part, of equal weightage. Each question is allotted 4 (four) marks for correct response. No marks shall be deducted for incorrect response.
4. There is only one correct response for each question. Filling up more than one response in any question will be treated as wrong response.

## PHYSICS

1. Inertia of a body has a direct dependence on
  - a) velocity
  - b) mass
  - c) area
  - d) volume
2. 1N is the force which produces
  - a) An acceleration of  $1\text{cms}^{-2}$  on a body of mass 1g
  - b) An acceleration of  $1\text{cms}^{-2}$  on a body of mass 1kg
  - c) An acceleration of  $1\text{ms}^{-2}$  on a body of mass 1g
  - d) An acceleration of  $1\text{ms}^{-2}$  on a body of mass 1kg
3. An athlete runs some distance before taking a long jump, because
  - a) It helps him to gain energy
  - b) It helps to apply large force
  - c) It gives himself large amount of inertia
  - d) none of these
4. The rate of change of momentum of an object is proportional to
  - a) net force applied on the object
  - b) acceleration of the object
  - c) mass of the object
  - d) none of these
5. A force a 40 N is applied on a body which moves with an acceleration of  $5\text{ m/s}^2$ . What will be the mass of the body ?
  - a) 4 kg
  - b) 8 kg
  - c) 6 kg
  - d) 5 kg
6. Force effects
  - a) A stationary object into motion
  - b) A moving body to stop
  - c) Direction of moving body
  - d) All of these
7. Force generally denotes
  - a) a push
  - b) a pull
  - c) Both a and b
  - d) neither a nor b
8. The force which opposes the relative motion of a body over another is called
  - a) Force of friction
  - b) Electrostatic force
  - c) magnetic force
  - d) none of these
9. The deep grooves in the tyre of a tractor
  - a) decreases friction
  - b) increases friction
  - c) make it stable
  - d) make tyre more attractive
10. The maximum value of static friction is called
  - a) limiting friction
  - b) static friction
  - c) kinetic friction
  - d) rolling friction
11. What minimum force is required to move a body of mass 5 kg over a surface whose coefficient of friction is 0.3 ? ( $g = 10\text{ ms}^{-2}$ ).
  - a) 15 N
  - b) 13 N
  - c) 12 N
  - d) 10 N
12. Pressure exerted by a body on a surface is
  - a) thrust  $\times$  area
  - b) thrust  $\div$  area
  - c) area  $\div$  thrust
  - d) thrust  $\div$  volume
13. With the increase in the area of contact of an object the pressure
  - a) increases
  - b) decreases
  - c) is not affected
  - d) none of these

14. A force of 16N acts on an area of  $50 \text{ cm}^2$ . What is the pressure in pascal?
- a) 3200 Pa                      b) 4200 Pa                      c) 5200 Pa                      d) 2200 Pa
15. What force will produce a pressure of 50,000 Pa on an area of  $0.20 \text{ m}^2$ ?
- a) 10000 N                      b) 5000 N                      c) 15000 N                      d) 20000 N
16. If force acts on an object which is free to move and we know the magnitude of the force and the mass of the object Newton's second law of motion enables us to determine the object's is
- a) weight                      b) speed                      c) acceleration                      d) position
17. When a force of 1 newton acts on a mass of 1 kg that is free to move, the object moves with a
- a) speed of 1 m/s                      b) speed of 1 km/s  
c) acceleration of  $10 \text{ m/s}^2$                       d) acceleration of  $1 \text{ m/s}^2$
18. When a constant force acts on an object, the object will be accelerated in the direction of the force with an acceleration proportional to \_\_\_\_ of object.
- a) force                      b) velocity                      c) mass                      d) inertia
19. The acceleration produced by a force of 12 newton, exerted on an object of mass 3 kg is
- a)  $12 \text{ m/sec}^2$                       b)  $3 \text{ m/sec}^2$                       c)  $4 \text{ m/sec}^2$                       d) zero
20. Which would require a greater force accelerating a body of 10 g mass at  $5 \text{ m/s}^2$  or a body of 20 g mass at  $2 \text{ m/s}^2$ ?
- a) 10 g mass at  $5 \text{ m/sec}^2$                       b) 20 g mass at  $2 \text{ m/sec}^2$   
c) both cases same acceleration                      d) None of these

## CHEMISTRY

21. The slow process of conversion of dead vegetation into coal is called \_\_\_\_.
- a) decomposition                      b) evolution                      c) carbonification                      d) carbonisation
22. Identify the gas that is generally produced when coal is burnt in the presence of a lot of air.
- a) Carbon monoxide                      b) Sulphur dioxide                      c) Nitrogen dioxide                      d) Carbon dioxide
23. Identify the substance which is tough, porous and black. It is almost a pure form of carbon.
- a) Crude oil                      b) Coke                      c) Coal tar                      d) Coal gas
24. Which of these is an exhaustible resource?
- a) Air                      b) Coal                      c) Water                      d) Sunlight
25. In India, which association advises people on saving petrol or diesel while driving?
- a) Petroleum Conservation Research Association (PCRA)  
b) Coal Conservation Research Association (CCRA)  
c) Eco-driving advice                      d) Petroleum Conservation Association (PCA)
26. Which amongst the following is a petroleum product which can be used in metalling of roads?
- a) Coke                      b) Bitumen                      c) Coal tar                      d) Coal gas

27. Choose the correct option. Column A contains name of products of petroleum and column B contains their uses.

Match them correctly

**Column A**

1. LPG (Liquefied petroleum gas)
2. Petrol
3. Bitumen
4. Paraffin wax

- a) 1 – D, 2 – C, 3 – B, 4 – A  
c) 1 – A, 2 – B, 3 – C, 4 – D

**Column B**

- (a) Paints, road surfacing  
(b) Fuel for home and industry  
(c) Ointments, candles, vaseline etc  
(d) Motor fuel, aviation fuel etc

- b) 1 – B, 2 – D, 3 – A, 4 – C  
d) 1 – B, 2 – D, 3 – C, 4 – A

28. Which of the following is also known as the 'black gold'?

- a) CNG                      b) Natural gas                      c) Coal                      d) Petroleum

29. Which of these is used for making naphthalene balls?

- a) Coal tar                      b) Petroleum                      c) CNG                      d) Paraffin

30. Pavani is very conscious of pollution. So, to reduce the effect of pollution which fuel should she use for her vehicle?

- a) Diesel                      b) Petrol                      c) LPG                      d) CNG

31. Which of the following is a non-metal?

- a) Aluminium                      b) Oxygen                      c) Iron                      d) Silver

32. Metalloids possess the properties of

- a) metals                      b) non-metals                      c) both metals and non-metals                      d) none of these

33. Metal oxides are

- a) neutral                      b) basic                      c) acidic                      d) all of these

34. Which metal is used in wrapping materials?

- a) Aluminium                      b) Zinc                      c) Copper                      d) None of these

35. The most ductile metal is

- a) silver                      b) gold                      c) copper                      d) aluminium

36. In displacement reactions

- a) a more reactive metal displaces a less reactive metal.  
b) a less reactive metal displaces a more reactive metal.  
c) both (a) and (b)                      d) none of these

37. When non-metal reacts with water

- a) hydrogen gas is formed                      b) carbon dioxide gas is formed  
c) non-metals generally do not react with water.                      d) none of these.

38. The solution of ash of magnesium ribbon in water is

- a) acidic                      b) basic                      c) neutral                      d) none of these

39. Sodium metal is stored in

- a) water                      b) alcohol                      c) kerosene                      d) ether

40. Which gas is produced when metals react with acids?

- a) Oxygen                      b) Nitrogen                      c) Hydrogen                      d) Carbon dioxide

### MATHS

41. The solution of  $\frac{2x+3}{2x-1} = \frac{3x-1}{3x+1}$  is

- a)  $1/8$                       b)  $-1/8$                       c)  $8/3$                       d)  $-8/3$

42. If  $\frac{x+3}{2} + 3x = 5(x-3) + \frac{x+23}{5}$ , then what is the value of  $x$ ?

- a) 7                      b) 8                      c) 10                      d) 12

43. The solution for  $\frac{2}{x+3} - \frac{4}{x-3} = \frac{-6}{x+3}$  is

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

44. If  $(3x+4)^2 + (3x-2)^2 = (6x+5)(3x-2) + 12$ , then the value of  $x$  is:

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

45. A number consists of two digits. The digit in the ten's place exceeds the digit in the unit's place by 4. The sum of the digits is  $1/7$  of the number. The number is :

- a) 27                      b) 72                      c) 48                      d) 84

46. At Rahul's birthday party  $5/7$  part of the total cake was distributed the left out cake was

- a)  $7/5$                       b)  $3/5$                       c)  $2/7$                       d)  $6/7$

47. Express  $12/-7$  as a rational number with denominator as -63

- a)  $48/-63$                       b)  $60/-63$                       c)  $96/-63$                       d)  $108/-63$

48. If  $a = \frac{56}{1000}$ ,  $b = \frac{28}{100}$ ,  $c = \frac{16}{10}$ , then  $a + b + c$  is

- a)  $\frac{1936}{100}$                       b)  $\frac{1936}{1000}$                       c)  $\frac{1936}{10000}$                       d)  $\frac{1936}{10}$

49. If  $p$  is  $3/4$  of  $q$  and  $q = \frac{2}{3} + \frac{5}{6}$ , then value of ' $p$ ' is

- a)  $7/8$                       b)  $9/8$                       c)  $11/8$                       d)  $13/8$

50. Divide the sum of  $-13/5$  and  $12/7$  by the product of  $-31/7$  and  $-1/2$  we get

- a)  $-2/7$                       b)  $9/4$                       c) -9                      d) 9

51. If  $\sqrt{\frac{x+144}{144}} = \frac{13}{12}$  then the value of ' $x$ ' is

- a) 25                      b) 24                      c) 35                      d) 27

52. The smallest number by which 6480 should be divided so that the quotient is a perfect square is

- a) 5                      b) 3                      c) 15                      d) 30

53.  $\sqrt{(0.798)^2 + 0.404 \times 0.798 + (0.202)^2} + 1$  is equal to  
 a) 0                                      b) 2                                      c) 1.596                                      d) 0.404
54. If  $\frac{90}{x} = \left(\sqrt{\frac{64}{729}}\right)^{-1/2}$ , then  $x =$   
 a) 45                                      b) 30                                      c) 60                                      d) 90
55. Sum of squares of two numbers is 145. If square root of one number is '3', then other number is  
 a) 136                                      b) 9                                      c) 64                                      d) 8
56. Four-fifth of one-eighth of  $\left(\frac{3}{4}\right)^{th}$  of A is 64, then the cube root of  $\frac{3^{th}}{5}$  of A is  
 a) 5                                      b) 8                                      c) 3                                      d) 4
57. The value of  $\sqrt[3]{0.000027 \times 0.008}$  is  
 a) 0.0006                                      b) 0.06                                      c) 0.006                                      d) 0.6
58. Cube root of  $(-21952)$  is \_\_\_\_  
 a) 38                                      b) -27                                      c) -28                                      d) -34
59.  $\sqrt[3]{\frac{0.027}{0.008}} - \sqrt{\frac{0.09}{0.04}} - 1 =$   
 a) 1                                      b) -1                                      c) 0                                      d) 3/2
60. If  $y = \sqrt[3]{2 \frac{93}{125}}$ , then the value of 'y' is  
 a) 7/5                                      b) 5/7                                      c) 33/7                                      d) 13/7
61. The host for malaria causing protozoan is:  
 a) anopheles mosquito                      b) the cow                                      c) the earthworm                                      d) the tapeworm
62. The bread or dosa dough rises because of the action of:  
 a) heat                                      b) grinding                                      c) growth of yeast cells                                      d) none of these
63. The bacterium that turns milk into curd is:  
 a) lactobacillus                                      b) acetobacter                                      c) rhizobium                                      d) none of these
64. The bacteria was first observed by:  
 a) Louis Pasteur                                      b) Antony Von Leeuwen Hook                                      c) Robert Hooke                                      d) Robert Koch
65. Virus reproduce:  
 a) Only outside the cells of the host organisms                      b) only inside the cells of the host organisms  
 c) both inside and outside the cells of the host organisms                      d) none of these
66. The process of conversion of sugar into alcohol is known as:  
 a) pasteurisation                                      b) fermentation                                      c) decomposition                                      d) none of these

67. In pasteurisation the milk is heated to about:  
 a)  $100^{\circ}\text{C}$                       b)  $50^{\circ}\text{C}$                       c)  $70^{\circ}\text{C}$                       d)  $110^{\circ}\text{C}$
68. The bacterium living in the root nodules of leguminous plants is:  
 a) lactobacillus                      b) acetobacter                      c) rhizobium                      d) none of these
69. Atmospheric nitrogen is used for the synthesis of:  
 a) plant proteins                      b) fats                      c) plant carbohydrates                      d) none of these
70. Which of the following is a preservative:  
 a) sodium benzoate                      b) common salt                      c) vinegar                      d) all of these
71. Hepatitis-A is transmitted through:  
 a) water                      b) air                      c) food                      d) contact
72. Communicable diseases are spread from an infected person to a healthy person through:  
 a) air                      b) water                      c) food                      d) all of these
73. A group of micro organisms that have the characters of both living and non-living are:  
 a) bacteria                      b) protozoa                      c) virus                      d) fungi
74. Which of the following drug is an antibiotic?  
 a) alcohol                      b) insulin                      c) streptomycin                      d) none of these
75. The cause of whooping cough is  
 a) bacteria                      b) fungi                      c) virus                      d) algae
76. Which of the following is air-borne disease:  
 a) typhoid                      b) tuberculosis                      c) cholera                      d) polio
77. Yeast helps in the production of:  
 a) sugar                      b) alcohol                      c) oxygen                      d) none of these
78. Match the column A and column B:

**Column A**

**Column B**

- |                   |              |
|-------------------|--------------|
| A) Dysentery      | i) bacteria  |
| B) Chicken pox    | ii) protozoa |
| C) Tuberculosis   | iii) Fungi   |
| D) Athlete's foot | iv) virus    |

- a) A – ii, B – iv, C – i, D – iii  
 c) A – i, B – iv, C – ii, D – iii

- b) A – ii, B – iii, C – i, D – iv  
 d) A – i, B – iv, C – iii, D – ii

79. Match the column A and column B:

**Column A**

**Column B**

A) citrus canker

i) virus

B) Rust of wheat

ii) bacteria

C) Yellow vein mosaic of bhindi

iii) Fungi

a) A – iii, B – i, C – ii

b) A – ii, B – iii, C – i

c) A – ii, B – i, C – iii

d) A – i, B – ii, C – iii

80. Match the column A and column B:

**Column A**

**Column B**

A) Yeast

i) produces antibiotics

B) Blue green algae

ii) making of cheese

C) Fungi

iii) Production of alcohol

D) bacteria

iv) increases soil fertility

a) A – iii, B – iv, C – ii, D – i

b) A – ii, B – iii, C – i, D – iv

c) A – iii, B – iv, C – i, D – ii

d) A – i, B – iv, C – iii, D – ii

**MENTAL ABILITY**

81. In question there is a number series with one term missing shown by question mark (?). This term is one of the alternatives among the four numbers given under it. That number is 8, 7, 16, 5, 32, 3, 64, 1, 128, (?)

a) 18

b) 13

c) – 1

d) 3

82. This question consists of a number series which contains a wrong term. This term is given as one of the four alternatives among the four numbers given below. The wrong term is 6, 8, 9, 12, 14, 18, 22, 26, 30

a) 12

b) 22

c) 26

d) 30

83. This question consists of four groups. One set is different from other three in some way. Find out the different set -

a) GEDC

b) AZYX

c) PNML

d) USRQ

84. In the following question there is a letter series with one term missing shown by (?). Find this term and encircle its serial DOZ, GRC, (?), ALW, BMX

a) BGL

b) LWH

c) DLT

d) GJM

85. Find out the correct alternative of the question based on the Dice figures.



The number opposite side the face having the no. 5 will be

a) 1

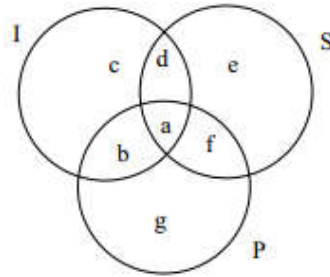
b) 2

c) 3

d) 4



86. Shankar is father of 'B' but 'B' is not son of Shankar then what is the relationship of 'B' to Shankar?  
 a) Grand Daughter      b) Mother      c) Daughter      d) Grand son
87. Find out the missing one from the given alternative.  $03 : 10 :: 08 : (?)$   
 a) 17      b) 16      c) 14      d) 13
88. In the following diagram "I" represents Indians 'S' represent scientists and 'P' represents Politicians.



Indians those are politicians but not scientist will be

- a) a      b) b      c) d      d) f
89. Two sets of the figures are given. One set of Question-figures and another set is of Answer-figures. Question-figures are arranged in sequence. One figure from the Answer figures is to be selected such that it can be placed after the series of Question-figures. Find the correct Serial number of the selected Answer-figure.

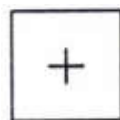


- a)      b)      c)      d)

90. In the following questions visualize the image of the correct item.



- a)      b)      c)      d)
91. In the following questions a question figure is given, that figure exists in one of the given alternative figure find out that figure.



- a)      b)      c)      d)

92. In question there is a number series with one term missing shown by question mark (?). This term is one of the alternatives among the four numbers given under it. That number is 16, 33, 65, 131, (?), 523  
 a) 261      b) 521      c) 613      d) 721

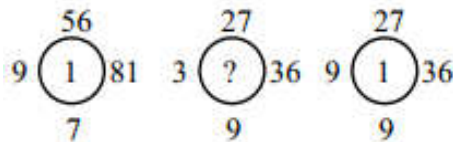
93. Each question consists of four groups. One set is different from other three in some way. Find out the different set–

- a) SUXB                      b) LNQU                      c) BDGK                      d) JLNQ

94. In the following question there is a letter series with one term missing shown by (?). Find this term and encircle its serial– fed, ihg, lkj, (?), rqp

- a) npq                      b) onm                      c) oqp                      d) nom

95. In each question there are circles. Certain numbers are given inside/outside the circles according to a particular rule. In each question one of the circle has a (?) mark inside it. Choose the correct answer to fill in the space marked (?) from the given alternatives.



- a) 9                      b) 10                      c) 11                      d) 12

96. These questions are based on letter series in which some of the letters are missing. The missing letters are given in the proper sequence in one of the alternatives among the four given under each question. Find out the correct alternative. \_ ab \_ a \_ bb \_ ab \_ a \_

- a) abaaba                      b) babbbba                      c) aabbab                      d) bbaabb

97. Out of nine cells of a square one cell is left blank, and in the rest of the cells numbers are written which follow some rule. Get the rule and find out the proper option for the blank cell (?).

?	1	1
9	4	4
2	3	5

- a) 8                      b) 10                      c) 14                      d) 16

98. Find out the correct alternative of the question based on the Dias figure.



The number opposite the face having the no. 2 will be

- a) 1                      b) 4                      c) 3                      d) 5

99. Find out the missing one from the given alternative 01 : 08 :: (?) : 125

- a) 10                      b) 12                      c) 15                      d) 16

100. First day of the month is Wednesday and Last day of the same month is Tuesday then which one will be that month?

- a) January                      b) February                      c) March                      d) August

**!!! ALL THE BEST !!!**

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MONIKARATNA



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SHALINI PRIYA



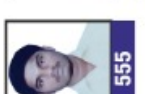
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THILAVAAAMAN



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THAMILIZH INIYAR



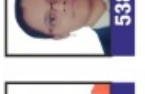
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BLESSINGTON



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MOUNISHA



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JYOTHI



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YOGAKEERTHINI



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VAKJITHAA



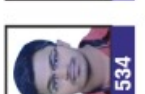
538  
BAGYA G



537  
ISWARYA LAKSHMI



537  
VIRUSHNITHA



535  
THARANI PRIYA



534  
GUNASEELAN



530  
VIMAY



527  
SANDYA



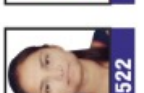
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515  
EINSTEIN DEVAPRASAD



512  
AJAYKRISHNAN



510  
JENCY INFANTA



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SHALINI



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505  
R. LUKESH



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99.43  
SHYAMA MISHRA



98.82  
KAVYA DHANASHINI



96.58  
SASIDEV



95.99  
PHANEESH



95.63  
GANKEEY PRASANTH



95.46  
NACHU BALAN



95.46  
RAKESH



94.40  
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93.54  
YOGAKEERTHINI



93.50  
RAHUL RAJU V



92.60  
NAVIENT KUMAR



92.27  
ADHAVAPRIYA



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MANOJ K



90.83  
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