# EduGrip (*A division of EduGrip Education Pvt. Ltd.*)
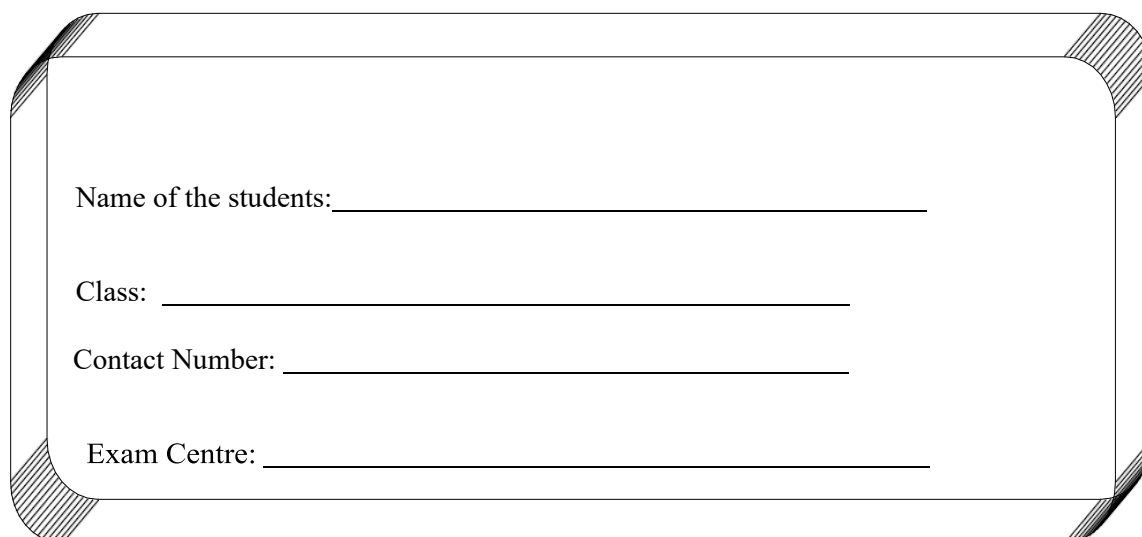
**Class: VIII**          **Time allowed : 90 Minutes**          **Maximum Marks : 120**

**PLEASE READ THE INSTRUCTIONS IN QUESTION BOOKLET BEFORE ANSWERING THE QUESTION PAPER.**

1. Before starting the paper, fill up the required details in the given space provided in the question paper cum answer sheet.
2. The question paper consists of '30' objective type questions. Each question carry 4 marks and all of them are compulsory.
3. Each question contains four alternatives out of which only ONE is correct.
4. There is **NO NEGATIVE** marking.
5. For rough work, use the space provided at the bottom of each page. No extra sheet will be provided for rough work and you are not supposed to bring the same.
6. Use of **blank papers**, **clip boards**, **log tables**, **calculator**, **slide rule**, **mobile** or any other electronic gadgets in any form is "**NOT PERMISSIBLE**".
7. You must not carry mobile phone even if you have the same, give it to your Invigilator before commencement of the test and take it back from him/her after the exam.
8. The answers of the questions must be marked by **ticking correct on the options** against the question by dark Black/Blue Ball point Pen only.

Name of the students:

Class:

Contact Number:

Exam Centre:

# Mathematics

1. The absolute value of | x – 6 | + | 6 – x |, when 0 < x < 6 is
   (A) 6x
   (B) 12
   (C) 2(6 – x)
   (D) None of these

2. The numerator of a fraction is six more than the denominator. If the numerator is increased by 5 and the denominator is decreased by 1, the fraction becomes 3/2 . Find the fraction.

(A) 25

(B) 27/29

(C) 1/25

(D) 29/30

3. The greatest four digit number which is also a perfect square is

(A) 9701

(B) 9801

(C) 9901

(D) None of these

4. The seventh root of x divided by the eighth root of x is

(a) $x$

(b) $\sqrt{x}$

(c) $\sqrt[56]{x}$

(d) $\dfrac{1}{\sqrt[56]{x}}$

*Space For Rough Work*

5. Which of the following is (are) not equal to

$$\left\{\left(\frac{5}{6}\right)^{\frac{1}{5}}\right\}^{\frac{-1}{6}} ?$$

(a) $\left(\frac{5}{6}\right)^{\frac{1}{5}\frac{1}{6}}$

(b) $\dfrac{1}{\left\{\left(\frac{5}{6}\right)^{\frac{1}{5}}\right\}^{\frac{1}{6}}}$

(c) $\left(\frac{6}{5}\right)^{\frac{1}{30}}$

(d) $\left(\frac{5}{6}\right)^{\frac{-1}{30}}$

6. When simplified $\left(-1/27\right)^{-2/3}$
(a) 9
(b) -9
(c) 1/9
(d) −1/9

7. **The factors of x³ − 1 +y³ + 3xy are**
(a) (x − 1 + y)  (x² + 1 + y² + x + y − xy)
(b) (x + y + 1)  (x² + y² + 1- xy − x − y)
(c) (x − 1 + y)   (x² − 1 − y² + x + y + xy)
(d) 3(x + y − 1) (x² + y² − 1)

8. **The expression (a − b)³ + (b − c)³ + (c − a)³ can be factorized as**
(a) (a-b) (b- c) (c − a)
(b) 3(a − b) (b − c) (c − a)
(c) -3(a − b) (b − c) (a − a)
(d) (a + b + c) (a² + b² + c² − ab − bc − ca)

9. **The factors of a² − 1 − 2x − x² are**
(a) (a − x + 1) (a − x − 1)
(b) (a + x − 1) (a − x + 1)
(c) (a + x + 1) (a − x − 1)
(d) none of these

*Space For Rough Work*

**10. The factors of $x^4 + x^2 + 25$ are**
**(a) $(x^2 + 3x + 5)$ $(x^2 - 3x + 5)$**
**(b) $(x^2 + 3x + 5)$ $(x^2 + 3x - 5)$**
**(c) $(x^2 + x + 5)$ $(x^2 - x + 5)$**
**(d) none of these**

**11.** Which of the following is the equation of a line parallel to y-axis?
(a) $y = 0$
(b) $x + y = z$
(c) $y = x$
(d) $x = a$

12. The largest number of the three odd consecutive numbers is $x + 1$. Then, the smallest number is
(a) $x - 1$
(b) $x - 2$
(c) $x - 3$
(d) None of these

13. The root of the equation $2x + 3 = 2(x - 4)$ is
(a) 2
(b) 4
(c) 0
(d) does not exist.

14. x is the second largest three digit prime number. The largest odd number preceding x is
(a) $x - 6$
(b) $x - 9$
(c) $x - 12$
(d) None of these

15. How many non-square numbers he between the pair of numbers $36^2$ and $37^2$ ?
(c) 36
(b) 37
(c) 74
(d) 72

*Space For Rough Work*

# Science
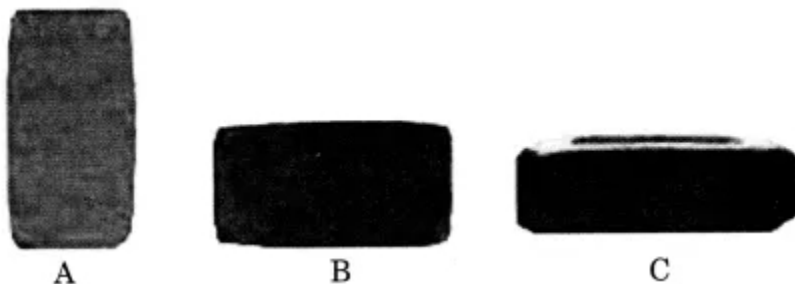
16. The strength of force is expressed by its
(a) weight
(b) mass
(c) magnitude
(d) longitudinal force

17. When the hammer strikes the gong of an electric bell, which of the following force is responsible for the movement of hammer?
(a) Gravitational force alone
(b) Magnetic force alone
(c) Electrostatic force alone
(d) Frictional force alone

18. A brick is kept in three different ways on a table as shown in given figure. The pressure exerted by the brick on the table will be



(a) maximum in position A
(b) maximum in position C
(c) maximum in position B
(d) equal in all cases

19. Force of friction depends on
(a) roughness of surface
(b) smoothness of surface
(c) inclination of surface
(d) all of these

20. 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.

*Space For Rough Work*

21. Which one of the following metals is the most ductile?
(a) Al
(b) Cu
(c) Ag
(d) Au

22. Which one of the following metals is the most reactive and stored in kerosene?
(a) Fe
(b) Au
(c) Cu
(d) K

23. The metal which is not corroded by air, water and acid is
(a) Cu
(b) Zn
(c) Al
(d) Au

24. Metals are
(a) soft and brittle
(b) hard and solid
(c) liquid
(d) generally liquid

25. Iron is galvanised by coating it with
(a) Cr
(b) Na
(c) Mg
(d) Zn

26. The coloured organelles which are found in plants only are
(a) chlorophyll
(b) plastids
(c) vacuoles
(d) WBC

27. The organism containing only a single cell is called
(a) unicellular organism
(b) multicellular organism
(c) organelle
(d) all of these

28. Cells present in living organism differ in
(a) numbers
(b) shape
(c) size
(d) all of these

29. Which cannot fix atmospheric nitrogen in the soil?
(a) Rhizobium
(b) Clostridium
(c) Azotobacter
(d) Penicillin

30. Which of the following disease is spread due to bacteria?
(a) Tuberculosis
(b) Measles
(c) Chicken pox
(d) Polio

*Space For Rough Work*