**ABBOTTABAD PUBLIC SCHOOL**
**ABBOTTABAD**
**Mathematics Entrance Test – Grade 7**

**Syllabus: Grade 6  Time Allowed: 2 hours  Total Marks: 100**

**Section A – Objective (40 Marks)**

Multiple Choice Questions (30 Questions × 1⅓ = 40 Marks)
Choose the correct option.

1. The value of  is:
   a) 525  b) 625  c) 725  d) 425
2. The LCM of 18 and 24 is:
   a) 72  b) 36  c) 24  d) 12
3.  of 64 is:
   a) 36  b) 42  c) 48  d) 52
4. Which of the following is a prime number?
   a) 15  b) 19  c) 21  d) 25
5. The average of 10, 20, 30, 40, and 50 is:
   a) 25  b) 30  c) 35  d) 40
6. The perimeter of a square of side 12 cm is:
   a) 24 cm  b) 36 cm  c) 48 cm  d) 60 cm
7. The value of  is:
   a) 9  b) 27  c) 64  d) 81
8. The reciprocal of  is:
   a)  b)  c)  d)
9. The mode of 4, 5, 6, 6, 7, 7, 7, 8 is:
   a) 5  b) 6  c) 7  d) 8
10. The sum of the angles of a triangle is always:
    a) 90°  b) 180°  c) 270°  d) 360°
11. 
    a) 10  b) 11  c) 12  d) 13
12. The smallest prime number is:
    a) 0  b) 1  c) 2  d) 3
13. The circumference of a circle = 2 × π × ___.
    a) Diameter  b) Radius  c) Area  d) Chord
14. The area of a rectangle is 240 cm² and its length is 20 cm. The breadth is:
    a) 10 cm  b) 12 cm  c) 15 cm  d) 18 cm
15. The additive inverse of –15 is:
    a) –15  b) 0  c) 15  d) 30
16. The probability of getting a head when a coin is tossed is:
    a) 0  b) 1  c)  d)
17. A right angle measures:
    a) 45°  b) 90°  c) 120°  d) 180°
18. The mean of 2, 4, 6, 8 is:
    a) 4  b) 5  c) 6  d) 7
19. Every square is a:
    a) Circle  b) Rectangle  c) Triangle  d) Pentagon
20. The volume of a cube of side 5 cm is:
    a) 15 cm³  b) 25 cm³  c) 125 cm³  d) 225 cm³
21. The place value of 7 in 47,236 is:
    a) 7  b) 70  c) 700  d) 7,000
22. Simplify: .
    a) 4  b) 9  c) 12  d) 16
23. The diagonals of a square are:
    a) Unequal  b) Equal  c) Parallel  d) Perpendicular but unequal
24. If a train covers 60 km in 1 hour, its speed is:
    a) 30 km/h  b) 40 km/h  c) 50 km/h  d) 60 km/h
25. The mode is:
    a) Middle value  b) Most frequent value  c) Largest value  d) Smallest value
26. The sum of first 10 natural numbers is:
    a) 45  b) 50  c) 55  d) 60
27. The perimeter of a circle is also called:
    a) Area  b) Circumference  c) Diameter  d) Radius
28. 
    a) 16  b) 24  c) 32  d) 64

29. Which of these fractions is equivalent to ?

a) b) c) d)

30. The mean of 5, 10, 15, 20, 25 is:

a) 12 b) 15 c) 18 d) 20

## Section B – Subjective (60 Marks)

Part I: Short Questions (30 marks)
(Any 6, each 5 marks)

1. Find the HCF of 84 and 126 by prime factorization method.
2. Simplify: .
3. Solve: If 8 pencils cost Rs. 240, find the cost of 15 pencils.
4. The marks obtained by 6 students are: 12, 15, 20, 10, 13, 15. Find the mean.
5. A rectangle is 20 cm long and 12 cm wide. Find its area and perimeter.
6. Draw a bar graph for the data:

Apples = 20
Oranges = 30
Bananas = 25
Mangoes = 15

## Part II: Long Questions (30 marks)

**(Any 3, each 10 marks)**

7. A man bought 12 chairs for Rs. 9,600. He sold them at Rs. 950 each. Find his profit or loss.
8. A cylindrical tank has radius 7 m and height 10 m. Find its volume (use ).
9. A train travels 180 km in 3 hours. Find its speed in km/h. How much distance will it cover in 5 hours?
10. The marks of 40 students in a test are given:

    0–10: 5 students
    10–20: 8 students
    20–30: 12 students
    30–40: 10 students
    40–50: 5 students
    Draw a histogram to represent this data.