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**INDIAN SCHOOL MUSCAT  
MIDDLE SECTION  
FINAL EXAMINATION 2017-18**



**SUBJECT - MATHEMATICS**

Code: MZM04071112

CLASS: 8

Time Allotted: 2 ½ Hrs.

08.03.2018

Max .Marks: 80

1. The question paper comprises of four Sections, A, B, C & D. You have to attempt all the sections.
2. All questions are compulsory.
3. All answers should be written in the answer sheet provided.

**SECTION A**

Qns	Marks
1. Find the HCF of $4x^2y$ , $6xy^2$ , $2xy^2$	1
2. Write the standard form of 0.000007065.	1
3. Write the co-ordinates of the Origin.	1
4. The number of digits in the square root of 11664 is _____.	1
5. Evaluate $(1^3 + 2^3 + 3^3)^{-1}$	1
6. Find the lateral surface area of a cube of a side 3cm.	1

**SECTION B**

7. Find the least number by which 720 be multiplied to make it a perfect square.	2
8. Find the value of $(2ax + 9y)(2ax + 9y)$ using suitable identity.	2
9. The area of a rhombus is $1080m^2$ and one of the diagonals is 72m. Find the length of the other diagonal.	2
10. Solve: $7m - 3(m - 2) = (3m - 5)$	2
11. Find the value of $(5^{-1} \times 3^{-1}) \div 6^{-1}$ using suitable laws of exponents.	2
12. Factorize : $ax - 2ay - bx + 2by$	2

**SECTION C**

13. Vani is 24 years older than Rani . 10 years before Vani's age was five times the age of Rani. Find their present ages	3
14. The area of a Trapezium is $540 m^2$ . If the parallel sides are 30m and 24 m long, find the distance between them	3
15. Find the product of $(4m + 1)$ and $(4m - 5)$ using suitable identity.	3

16. Reshma bought a television set for ₹42000 including 5% VAT. Find the price before VAT and VAT amount. 3
17. Factorize the expression  $(x^2 - 4x - 21)$  and divide by  $(x + 3)$  3
18. Evaluate using laws of exponents :  $\frac{32 \times 125 \times a^8}{2^4 \times a^{-6} \times 25}$  3
19. Multiply  $(2a^2 + 5ab + b^2)$  by  $(a^2 - 3b^2)$ . 3
20. Rishi bought a cooler for ₹1200 and spent ₹40 for repair and sold it at a profit of 25% , Find the value of S.P 3

21. The distances thrown by competitors in a Javelin throw event are given as – 3

Distance(m)	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80
Frequency	5	8	12	10	9	5

Draw a histogram for the given data.

22. Construct a rhombus ABCD , AB = 4.9cm and  $\angle A = 80^\circ$ . 3

### SECTION D

23. Find the least number to be added to 9225 to make it a perfect square. Find the square root of the number so obtained. 4

24. Find the amount and the compound interest on ₹ 14,000 for 1 year at 10% annum compounded half yearly. 4

25. If numerator is 2 less than the denominator of a rational number and when 1 is subtracted from numerator and denominator both, the rational number obtained is  $\frac{1}{2}$ . 4

Find the rational number

26. The total surface area of a cylinder is  $440m^2$ . Find the volume of the cylinder if the radius of its base is 7m. 4

27. Draw a linear graph to show the relationship between the cost and the quantity of onions using the following data. 4

Weight ( in kg)	1	2	3	4	5
Cost( in ₹)	20	40	60	80	100

28. Simplify using identity:  $(2a + 3b)^2 - (a - 2b)^2$  4

29. Construct a quadrilateral PQRS in which  $\angle Q = 60^\circ$ ,  $\angle R = 90^\circ$ , QR = 5cm, PQ = 7cm and RS = 6.5cm 4

30. The monthly sale of computers by a shopkeeper is as shown below. Draw a pie chart to represent the data. 4

Months	March	April	May	June
No. of computers	12	24	20	16