NAME		ROLL NO.	

INDIAN SCHOOL MUSCAT
MIDDLE SECTION
HALF YEARLY EXAMINATION 2019–20
SUBJECT – MATHEMATICS

Code:MXM05

CLASS :8

Time Allotted: 2 ½ hrs

23.09.2019

Max .Marks: 80

General Instructions.

1.The question paper comprises of three sections **A ,B, C** and **D**. You have to **attempt all** the sections.

2. All the questions are **compulsory.**

3. All the answers should be written in the **answer sheet** provided.

Q.NO1 **SECTION 'A'–('1' MARK EACH) – TOTAL – 20 MARKS** Marks

(a) Each exterior angle of a regular polygon with 15 sides is _____ 1
a)360^0 b)24^0 c)15^0 d)180^0

(b) $\sqrt[3]{343}+\sqrt{169}$ =_____ a)13 b)512 c)20 d)91 1

(c) If two quantities 'r' and 's' vary directly, then the constant of proportion is _____ 1
a) r × s b) r + s c) $\frac{r}{s}$ d) r – s

(d) A quadrilateral PQRS with PQ=QR=RS=SP and PR ≠ QS is a _____ 1
a)Kite b) Rhombus c)Rectangle d) Parallelogram

(e) The property used in $\frac{-1}{6}\times(-6)$ = (-6)× $\frac{-1}{6}$ = 1 is _____ 1
a) Multiplicative Inverse b) Multiplicative Identity c) Commutative d) Associative

(f) Rational number not in between $\frac{1}{3}$ and $\frac{1}{2}$ is _____ a) $\frac{21}{60}$ b) $\frac{25}{60}$ c) $\frac{29}{60}$ d) 2 1

(g) The number of non-perfect square numbers between 75^2 and 76^2 is _____ 1
a) 75 b)76 c) 152 d) 150

(h) Which of the following is a square number as well as a cube number 1
a)36 b) 144 c)729 d)576

(i) The least number by which $3^2\times7^3\times5$ should be multiplied to make the resulting product a perfect cube is _____ a) 10 b) 20 c) 50 d) 75 1

(j) The product of 17*x* and 2*xy* is _____ 1
a) $17x^2y$ b) $34\,x^2y$ c) $34xy$ d) $19\,x^2y$

(k) Find the sum of $1\frac{2}{3}$ and its additive inverse 1

(l) Find the measure of each exterior angle of a regular octagon 1

(m) Express 5.067×10^{-3} in usual form 1

(n) Write the multiplicative inverse of$(-5)^{-3}$ 1

(o) Write the coefficient of "xy^2" in the expression $7x - 6xy^2 + 5y + 3$ is 1

(p) Find the cost of 20 stamps, if the cost of 15 stamps is Rs 300 — 1

(q) Find $\sqrt{0.000289}$ — 1

(r) Find the value of $(-5)^{-1} \times (3)^{-1}$ — 1

(s) Find the value of $\frac{1}{4} x^2y\,(12x - 4y^2)$ — 1

(t) By what least number should 54 be divided to make it a perfect cube? — 1

Q.NO **SECTION 'B'–('2' MARKS EACH) – TOTAL – 12 MARKS** Marks

(2) Find the each interior angle of a regular nonagon — 2

(3) Find the square root of 7569 by long division. — 2

(4) Simplify (2ab+5a) - (6ab+3a) + (18ab-2a) — 2

(5) Find the value of 'a' if $7^{-a+3} = \frac{1}{343}$ — 2

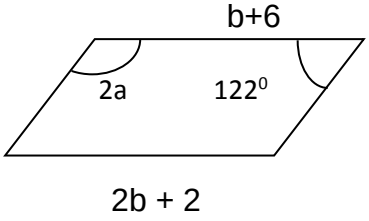
(6) Find the cube root of 5832 — 2

(7) If 14 men can do a piece of work in 39 days. How many men will do it in 26 days. — 2

Q.NO **SECTION 'C'–('3' MARKS EACH) – TOTAL – 24 MARKS** Marks

(8) Find the number of diagonals of regular polygon with each exterior angle 40^0 — 3

(9) Find the least number to be added with 6784 to make it as a square number — 3

(10) 

Find the values of 'a' and 'b' for the given parallelogram (give reason) — 3

(11) Check if 3528 is a cube number. If not, find the least number must be multiplied with 3528 to make it as a cube number — 3

(12) If x and y are in inverse proportion, find the value of 'm' and 'n'

x	m	100	50
y	40	n	20

— 3

(13) Simplify using properties: $\left(\frac{-3}{8} \times \frac{-2}{7}\right) - \frac{1}{21} - \left(\frac{5}{8} \times \frac{-2}{7}\right)$ — 3

(14) Simplify by using laws of exponents $\left[\left(7^3\right)^4 \div \left(7^9\right)\right] + \left[3^2 \times 5^0\right]$ — 3

(15) Find the product of $(5m+6m^2n)$ and $(2mn-3)$ 3

Q.NO **SECTION 'D'–('4' MARKS EACH) – TOTAL – 24 MARKS** Marks

(16) a) Find 4 rational numbers in between $\frac{2}{5}$ and $\frac{3}{7}$

b) Represent $\frac{3}{-4}$ on the number line 4

Subtract $(3y-8)(5y-1)$ from $(40y+15y^2)$

(17) OR 4

Simplify 3m (n – 5) + n (m + 3) and find the value of the expression m = 1 , n = - 1

(18) a)Find the least number to be subtracted from 9900 to make it a perfect square
b) Find the Pythagorean triplet if one of the members is 12 4

(19) 8 taps having the same rate of flow, fill a tank in $1\frac{1}{2}$ hours . If two taps go out of order how long the remaining taps will take to fill the tank? 4

(20) Find the smallest square number, which is divisible by 5, 15 and 50. 4

(21) Find the value of the following by using laws of exponents 4

a) $\frac{2^{-1}\times 10^3\times m^7}{5^2\times m^{-1}}$ $b)$ $\left[\frac{1}{6}\right]^{-3}+\left[\frac{1}{4}\right]^{-3}$

End of the question paper.