

**INDIAN SCHOOL MUSCAT – MIDDLE SECTION – DEPARTMENT OF MATHEMATICS – (2017 – 18)
MID TERM EXAMINATION – MATHEMATICS – MARKING SCHEME – CLASS 7**

S.NO	(SECTION – A) – Q.NO (1 TO 4) – ('1' MARK EACH)	MARKS
1	$180 - 77 = 103^0$	($\frac{1}{2} + \frac{1}{2}$)mark
2	8.764412×10^4	1 mark
3	$-5a^2b, -5b$	($\frac{1}{2} + \frac{1}{2}$)mark
4	$-2 - 5 = -7$	($\frac{1}{2} + \frac{1}{2}$)mark

S.NO	(SECTION – B) – Q.NO (5 TO 10) – ('2' MARKS EACH)
5	$9x - 3y + 7 + 3x + 7y - 11, 9x + 3x - 3y + 7y + 7 - 11 \Rightarrow$ ($\frac{1}{2}$ mark) $12x + 4y - 4 \Rightarrow$ (1 $\frac{1}{2}$ marks)
6	$\{(-24) \div (-8)\}$ or $\{(-24) \div 8\} = 3, -3 = 3$ is greater than (-3) ($\frac{1}{2} + \frac{1}{2} + \frac{1}{2}$) marks $\{(-24) \div (-8)\}$ is greater \Rightarrow ($\frac{1}{2}$ mark)
7	Drawing the number line \Rightarrow ($\frac{1}{2}$ mark) Correct representation $\frac{9}{-5}$ on the number line (1 $\frac{1}{2}$ m)
8	$2 \overline{)432} = 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3 \times = 2^4 \times 3^3 \Rightarrow$ (1 mark) $2 \overline{)216}$ $2 \overline{)108}$ $2 \overline{)54}$ $3 \overline{)27} \Rightarrow$ (1 mark) $3 \overline{)9}$ $3 \overline{)3}$ 1
9	$x = 180 - 95^0 = 85^0 \Rightarrow$ ($\frac{1}{2}$ mark + $\frac{1}{2}$ mark), $z = 85^0, p = 95^0 \Rightarrow$ ($\frac{1}{2}$ mark + $\frac{1}{2}$ mark)
10	$8y + 9 = 25$ $8y = 25 - 9 \Rightarrow$ ($\frac{1}{2}$ mark) $8y = 16 \Rightarrow$ ($\frac{1}{2}$ mark) $y = 16 \div 8 \Rightarrow$ ($\frac{1}{2}$ mark) $y = 2 \Rightarrow$ ($\frac{1}{2}$ mark)

S.NO	(SECTION – C) – Q.NO (11 TO 18) – ('3' MARKS EACH)
11	$\frac{-1}{5}, \frac{-1}{7} \Rightarrow \frac{-7}{35}, \frac{-5}{35} \Rightarrow \frac{-70}{350}, \frac{-50}{350} \Rightarrow$ (1 mark) Writing any 4 rational numbers \Rightarrow ($\frac{1}{2}$ mark each)
12	$9a^3 - 6a^2 - 2 - (7a^3 - a^2 + 12) \Rightarrow$ ($\frac{1}{2}$ mark) $9a^3 - 6a^2 - 2 - 7a^3 + a^2 - 12 \Rightarrow$ ($\frac{1}{2}$ mark) $9a^3 - 7a^3 - 6a^2 + a^2 - 2 - 12 \Rightarrow$ ($\frac{1}{2}$ mark) $2a^3 - 5a^2 - 14 \Rightarrow$ ($\frac{1}{2} + \frac{1}{2} + \frac{1}{2}$) mark
13	$4(2a + 3) = 44$ $8a + 12 = 44 \Rightarrow$ (1 mark) $8a = 44 - 12 \Rightarrow$ ($\frac{1}{2}$ mark) $8a = 32 \Rightarrow$ ($\frac{1}{2}$ mark) $a = 32 \div 8 \Rightarrow$ ($\frac{1}{2}$ mark) $a = 4 \Rightarrow$ ($\frac{1}{2}$ mark)

S.NO	(SECTION – C) – Q.NO (11 TO 18) – (‘3’ MARKS EACH)
14	$\frac{-4}{9} \times \frac{-27}{8} = \frac{3}{2}$ (cancellation => 2 marks , Answer => 1 mark)
15	$[(-36) \div 12] \div [(-11) - (-8)]$ $-3 \div (-11 + 8) \Rightarrow$ (1 mark) $-3 \div (-3) \Rightarrow$ (1 mark) $1 \Rightarrow$ (1 mark)
16	$[7^6 \times 7^4] \div 7^8 \Rightarrow$ (½ mark) $7^{10} \div 7^8 \Rightarrow$ (½ mark) $7^2 \Rightarrow$ (1 mark) $49 \Rightarrow$ (1 mark)
17	$z = 55^0 \Rightarrow$ (½ mark) , $y = 180 - 55 = 125^0 \Rightarrow$ (½ + ½) marks $x = 180 - (55 + 45) = 180 - 100 = 80^0 \Rightarrow$ (½ + ½ + ½) marks
18	2^5 or $(6^3 - 5^2)$ $2^5 = 32 \Rightarrow$ (½ mark) $6^3 - 5^2$ $216 - 25 \Rightarrow$ (½ mark + ½ mark) $191 \Rightarrow$ (½ mark) 191 is greater \Rightarrow (½ mark) $6^3 - 5^2$ is greater \Rightarrow (½ mark)

S.NO	(SECTION – D) – Q.NO (19 TO 28) – (‘4’ MARKS EACH)
19	i) $125 \times (-35) + (-65) \times 125$ $125 [(-35) + (-65)] \Rightarrow$ (½ mark) $125 (-35 - 65) \Rightarrow$ (½ mark) $125 (-100) \Rightarrow$ (1 mark) $-12500 \Rightarrow$ (½ mark) ii) $(4 \times 25) \times (-57) \Rightarrow$ (½ mark) $100 \times (-57) \Rightarrow$ (½ mark) $-5700 \Rightarrow$ (½ mark)
20	$\frac{8}{18}, \frac{-15}{18}, \frac{-9}{18}, \frac{13}{18} \Rightarrow$ 2 marks $\frac{-15}{18} < \frac{-9}{18} < \frac{8}{18} < \frac{13}{18} \Rightarrow$ (1 mark) $\frac{-5}{6} < \frac{-1}{2} < \frac{4}{9} < \frac{13}{18} \Rightarrow$ (1 mark)
21	$\frac{3^3 \times 2^6 \times 5^3}{16 \times 9 \times 25} = \frac{3^3 \times 2^6 \times 5^3}{2^4 \times 3^2 \times 5^2} \Rightarrow$ 1 mark $3^{3-2} \times 2^{6-4} \times 5^{3-2} \Rightarrow$ (1 mark) $3 \times 2^2 \times 5 \Rightarrow$ (1 mark) $3 \times 4 \times 5 \Rightarrow$ (½ mark) $60 \Rightarrow$ (½ mark)
22	$(-410) + 120 \Rightarrow$ (½ mark) $-290 \Rightarrow$ (1 mark) $900 - (-290) \Rightarrow$ (½ mark) $900 + 290 \Rightarrow$ (1 mark) $1190 \Rightarrow$ (1 mark)
23	i) One third of a number plus 5 is 8. $\Rightarrow \frac{x}{3} + 5 = 8 \Rightarrow$ (1 mark) ii) 2 is subtracted from seven times m gives 11 $\Rightarrow 7m - 2 = 11 \Rightarrow$ (1 mark) iii) 10 times p is 90. $\Rightarrow 10p = 90 \Rightarrow$ (1 mark) iv) Three fifth of x is 12. $\Rightarrow \frac{3x}{5} = 12 \Rightarrow$ (1 mark)

24	<p>i) $(3^0 \times 7^0) + 6^0 \Rightarrow (1 \times 1) + 1 = 1 + 1 \Rightarrow (1 \frac{1}{2} \text{ mark})$ $2 \Rightarrow (\frac{1}{2} \text{ mark})$</p> <p>ii) $(a^6 \times a^3) \div a^8 \Rightarrow (a^{6+3}) \div a^8 \Rightarrow (\frac{1}{2} \text{ mark})$ $a^9 \div a^8 \Rightarrow (\frac{1}{2} \text{ mark})$ $a^{9-8} \Rightarrow (\frac{1}{2} \text{ mark})$ $a \Rightarrow (\frac{1}{2} \text{ mark})$</p>
25	<p>a) $\frac{-15}{18} + \frac{8}{18} = \frac{-7}{18} \Rightarrow (1 + 1) \text{ mark}$</p> <p>b) $\frac{7}{8} \div \left(\frac{-21}{4}\right) = \frac{7}{8} \times \frac{-4}{21} = \frac{-1}{6} \Rightarrow (\frac{1}{2} \text{ mark} + 1 \frac{1}{2} \text{ mark})$</p>
26	<p><u>3</u> = $180 - 135 = 45^0 \Rightarrow (\frac{1}{2} + \frac{1}{2}) \text{ mark}$</p> <p><u>4</u> = 135 (vertically opposite angles are equal) $\Rightarrow (\frac{1}{2} + \frac{1}{2}) \text{ mark}$</p> <p><u>6</u> = 135 (corresponding angles are equal) $\Rightarrow (\frac{1}{2} + \frac{1}{2}) \text{ mark}$</p> <p><u>7</u> = 45 (corresponding angles are equal) $\Rightarrow (\frac{1}{2} + \frac{1}{2}) \text{ mark}$</p>
27	<p>$b^2 - 2ab + a^2 + 2b^2 + 2ab + 3a^2$ $b^2 + 2b^2 - 2ab + 2ab + a^2 + 3a^2 \Rightarrow (1 \text{ mark})$ $3b^2 + 4a^2 \Rightarrow (1 \text{ mark})$ $3b^2 + 4a^2 - (a^2 + b^2 + 2ab) \Rightarrow (\frac{1}{2} \text{ mark})$ $3b^2 + 4a^2 - a^2 - b^2 - 2ab \Rightarrow (\frac{1}{2} \text{ mark})$ $3b^2 - b^2 + 4a^2 - a^2 - 2ab \Rightarrow (\frac{1}{2} \text{ mark})$ $2b^2 + 3a^2 - 2ab \Rightarrow (\frac{1}{2} \text{ mark})$</p>
28	<p>$8a^2 - 3a + 7a - 5a^2$ $8a^2 - 5a^2 - 3a + 7a \Rightarrow (1 \text{ mark})$ $3a^2 + 4a \Rightarrow (1 \text{ mark})$ $3(1)^2 + 4(1) \Rightarrow (\frac{1}{2} \text{ mark})$ $3 + 4 \Rightarrow (1 \text{ mark})$ $7 \Rightarrow (\frac{1}{2} \text{ mark})$</p>