BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL

POST MID TERM EXAMINATION (2026)

MATHEMATICS
MARKING SCHEME

Class   : VIII   Duration : 1 Hr
Date   : 10-01-2026   Max. Marks : 25

I.   MCQ (1 mark each)
1. 3ab (4a + 5b)   [B]
2. 5 (3 x + 5)   [A]
3. $\pi r^2 h$ [B]
4.   41 cm^2 [A]
5. 11 cm   [B]

6. $25 m^2 + 30 m + 9 = (5m)^2 + 30 m + (9)^2$ ½
    $= (5m)^2 + 2 \times 5m \times 3 + (9)^2$ ½
    $= (5 m + 3)^2$ ½
    $= (5m + 3)(5m + 3)$ ½

7. a) $10 y (6 y + 21) \div 5(2y + 7) = \dfrac{30 y (2y+7)}{5(2y+7)}$ ½

                                    $= 6y$ ½

  b) $(10 x - 25) \div (2 x - 5) = \dfrac{5(2x-5)}{2x-5}$ ½
                                $= 5$ ½

8. Area of Trapezium = ½ (a + b) x h   ½
                    = ½ (20 + 30) x 12   ½
                    = 50 x 6   ½
                    = 300 cm^2 ½

9. Metal required to make Cylinder = TSA of Cylinder.
                        = 2 π r (r + h)   ½
                        = 2 x $\dfrac{22}{7}$ x 7 (7 + 3)   ½
                        = 44 x 10   ½
                        = 440 cm^2 ½

10. Diameter = 7 cm
    Radius   = $\dfrac{7}{2}$ cm   , Height = 14 cm
    Volume of Fig A = $\pi r^2 h$ ½
            = $\dfrac{22}{7}$ x $\dfrac{7}{2}$ x $\dfrac{7}{2}$ x 14   ½
            = 539 cm^3 ½

    Volume of Fig B = $\pi r^2 h$ ½

$= \frac{22}{7}$ x 7 x 7 x7   ½

$= 1078$ cm ^{3} ½

∴ Volume of figure B more than the volume of figure A

11. Diameter = 1.4 m
     Radius   = 0.7 m   , height = 2 m

     Area covered in one revolution = CSA of Road Roller   ½
     $= 2 \pi$ r h   ½
     $= 2$ x $\frac{22}{7}$ x 0.7 x 2   ½
     $= 8.8$ m ^{2} ½
     Area covered in 5 revolution $= 8.8$ x 5   ½
     $= 44$ m ^{2} ½

12. $(y^2 + 7 y + 10) \div (y + 5) = \frac{y^{2} + 5y + 2y + 10}{y + 5}$ 1

     $= \frac{y(y+5) + 2(y+5)}{y+5}$ 1

     $= \frac{(y+2)(y+5)}{y+5}$ ½

     $=$ y $+ 2$ ½

13. Factorise : a) $49 x^2 - 36 = (7x)^2 - (6)^2$ 1
     $= (7x + 6)(7x - 6)$ ½

     b) $x^2 + 6x + 8 = x^2 + 4x + 2x + 8$ ½
     $= x(x + 4) + 2(x + 4)$ ½
     $= (x + 2)(x + 4)$ ½

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