

MARKING SCHEME (2019-2020)CLASS - X (BASIC)
(MATHS)SECTION - A

- | | |
|--------|--------|
| 1 - b | 11 - b |
| 2 - c | 12 - d |
| 3 - a | 13 - a |
| 4 - c | 14 - d |
| 5 - b | 15 - b |
| 6 - b | 16 - b |
| 7 - b | 17 - a |
| 8 - a | 18 - c |
| 9 - c | 19 - b |
| 10 - d | 20 - c |

SECTION - B

- 21 - Correct solⁿ $x = 24$ $y = 11$ - (2)
- 22 - $T_n = 2n - 3$ (1)
- $T_5 = 2 \times 5 - 3$ (1)
- $= 10 - 3$
- $= 7$
- 23 - Correct construction - (2)
- 24 - P (prime) $= \frac{25}{100} = \frac{1}{4}$ - (2)
- 25 - IF the two lines are parallel to each other
then $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$ (1)

$$\frac{6}{3} = \frac{2k}{5} \neq \frac{-10}{8}$$

$$\Rightarrow 2k = \frac{30}{3}$$

$$\Rightarrow k = \frac{30}{2 \times 3} = 5$$

} ①

26 -

$$\text{mid point} = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \quad \text{--- ①}$$

$$= \left(\frac{-2 + 4}{2}, \frac{6 + (-8)}{2} \right)$$

$$= \left(\frac{2}{2}, \frac{-2}{2} \right)$$

$$= (1, -1)$$

} --- ①

SECTION-C

Q:27

Correct solution by substitution method --- ③

Q:28

$$T_n = a + (n-1)d$$

$$T_{11} = a + (11-1)d$$

$$38 = a + 10d$$

} --- ①

$$T_{16} = a + (16-1)d$$

$$73 = a + 15d$$

$$a = -32, d = 7$$

} --- ①

$$\text{Then } T_{31} = 178$$

} --- ①

Q:29

Correct proof

----- ③

Q:30

④

$$\frac{\cos 45^\circ}{\sec 30^\circ + \csc 30^\circ} = \frac{\frac{1}{\sqrt{2}}}{\frac{2}{\sqrt{3}} + 2}$$

--- ①

3

$$z = \frac{\frac{1}{\sqrt{2}}}{\frac{2}{\sqrt{3}} + \frac{2}{1}} = \frac{\frac{1}{\sqrt{2}}}{\frac{2+2\sqrt{3}}{\sqrt{3}}}$$

$$= \frac{1}{\sqrt{2}} \times \frac{\sqrt{3}}{2+2\sqrt{3}} = \frac{\sqrt{3}}{2\sqrt{2}+2\sqrt{6}}$$

} ~~1~~
} $\frac{1}{2}$

(b) $\frac{5\cos^2 60^\circ + 4\sec^2 30^\circ - \tan^2 45^\circ}{\sin^2 30^\circ + \cos^2 30^\circ} = \frac{5(\frac{1}{2})^2 + 4(\frac{2}{\sqrt{3}})^2 - (1)^2}{1}$ } $\frac{1}{2}$

$$= 5 \times \frac{1}{4} + 4 \times \frac{4}{3} - 1$$

$$= \frac{5}{4} + \frac{16}{3} - 1$$

$$= \frac{79-12}{12} = \frac{67}{12}$$

} ①

Q.31

Correct formula of mean ——— ①

Correct solution ——— ①

Correct Answer ——— ①

Q.32

(a) $P(W) = \frac{2}{9}$ ——— ①

(b) $P(B) = \frac{3}{9} = \frac{1}{3}$ ——— ①

(c) $P(R) = \frac{4}{9}$ ——— ①

Q.33

Area of shaded region ——— ①
 = Area of Quadrant - Area of Square

Then correct solution ——— ②

Q.34

The point on x-axis be (x, 0) }
 use of distance formula } ——— ①

Correct Solution
OR

— (2)

$$\sqrt{(2-10)^2 + (-3-4)^2} = 10$$

— (1)

Correct Solution to find the value of y

— (2)

Q.35

Correct statement & Proof
OR

— (4)

Correct statement & Proof

— (4)

Q.36

Correct construction with the
given measurement

— (4)

Q.37

Correct proof

— (4)

Q.38

$$\text{Mode} = l + \left(\frac{f_1 - f_0}{2f_1 - f_0 - f_2} \right) \times h$$

— (1)

Correct solution

— (3)

Q.39

$$2\pi r_1 = 18 \Rightarrow r_1 = \frac{18}{2\pi} = \frac{18 \times 7}{2 \times 22} = \frac{63}{22}$$

$$r_1 = \frac{63}{22}$$



— (1)

$$2\pi r_2 = 6 \Rightarrow r_2 = \frac{6}{2\pi} = \frac{3 \times 7}{2 \times 22} = \frac{21}{22}$$

— (1)

$$\text{C.S.A} = \pi l (r_1 + r_2)$$

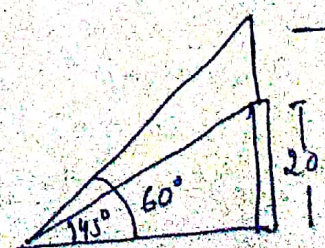
— (1)

Correct solⁿ

— (1)

Q.40

Correct diagram
Correct solution



— (1)

— (1)