SSLC Model Question Paper Key (2023-24)

Mathematics

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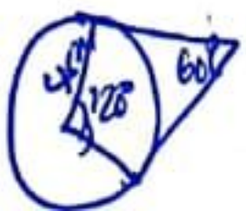
I

1. A) $2q+1$
2. D) Parallel to eachother
3. C) $a_n = a + (n-1)d$
4. B) 2
5. C) $\sqrt{2}$
6. A) $PQ^2 = PR^2 + QR^2$
7. D) $\frac{1}{3}\pi r^2 h$
8. B) 60°

II

9. 20
10. degree is 4
11. $a_5 = -5$
12. $3x^2 - 2x - 5 = 0$
13. $\tan A = \frac{1}{\sqrt{3}}$
14. $\frac{1}{2}$
15. 60°
16. $\pi(r_1 + r_2)l$ sq. units

III

17. $\sqrt{3} = \frac{a-2b}{b}$ (or) 4
18. $x=4, y=2$
19. $S_{30} = 1830$
20. $x=3$ & $x=4$
21. Proof (or) Proof
22. P(5,4)
23. $\frac{9}{15}\left(\frac{3}{5}\right)$
24. 

IV

25. $q(x) = x^2 - 2$, $r(x) = 4x + 3$
(or)
$g(x) = x^2 - x + 1$
26. $l = 40m$, $b = 30m$
27. Area of $\Delta PQR = 20$ sq units
(or)
length of $AD = 6$ units
28. Mean = 29.4 (or) Mode = 16
29.
30. Proof
31. Theorem
32. 

$\frac{2}{3}$
33. Area of Shaded region = $14.19 cm^2$
(or)
length = 22cm

V

34. Graph $(x=3, y=1)$
35. $-10, -6, -2, 2 - \cdots$ $(a=-10, d=4)$
a_{19} is 62
36. $AD = 600m$ (or)
$AB = 18cm$, $AC = 18\sqrt{3}cm$, $AD = 9\sqrt{3}cm$
37. Theorem

VI

38. C.S.A = $192.5 cm^2$
Vol of hemisphere = $11.229 cm^3$