SSC CGL/CHSL TIER 2 (CRASH COURSE)

1.$(a + b)^2 = a^2+b^2+2ab$

2.$(a + b)^2 = (a-b)^2+4\ ab$

3. $(a-b)^2=a^2+b^2-2ab$

4.$(a-b)^2=(a + b)^2-4ab$

5. $\left\{x+\frac{1}{x}\right\}=x^2+\frac{1}{x^2}+2$

6. $\left(x+\frac{1}{x}\right)^2=\left(x-\frac{1}{x}\right)^2+4$

7. $\left(x-\frac{1}{x}\right)^2=X^2+\frac{1}{x^2}-2$

8. $\left(x-\frac{1}{x}\right)^2=\left(x+\frac{1}{x}\right)^2-4$

9.$(a+b+c)^2 = a^2+b^2+c^2+2(ab+bc+ca)$

10. $(a+b)^3 = a^3+b^3+3ab(a+b)$

11. $(a-b)^3 = a^3-b^3-3ab(a-b)$

12. $a^2 - b^2 = (a-b)(a+b)$

13. $a^3-b^3=(a-b)(a^2+ab+b^2)$

14. $a^3 + b^3=(a+b)(a^2-ab+b^2)$

15. $\left(x+\frac{1}{x}\right)^3 = x^3+\frac{1}{x^3}+3\left(x+\frac{1}{x}\right)$

16. $\left(x-\frac{1}{x}\right)^3 = x^3-\frac{1}{x^3}+3\left(x-\frac{1}{x}\right)$

17. $a^3+b^3+C^3-3abc=(a+b+c)(a^2+b^2+c^2-ab-bc-ca)$

18. If $a+b+c=0$ then $a^3+b^3+c^3=3abc$

19. $a^2+b^2+c^2-ab-bc-ca=\frac{1}{2}[(a-b)^2+(b-c)^2+(c-a)^2]$

20. $(a+b+c)^3=a^3+b^3+c^3+3(a+b)(b+c)(c+a)$

21. $a^3+b^3+c^3-3abc=\frac{1}{2}(a+b+c)[(a-b)^2+(b-c)^2+(c-a)^2]$

1-$X + \frac{1}{X} = 4$, $X^2 + \frac{1}{X^2} = ?$

a.14
b.16
c.32
d.18

2-$X + \frac{1}{X} = 3$, $X^3 + \frac{1}{X^3} = ?$

a. 18
b.27
c.24
d.36

3-$X^5 + \frac{1}{X^5}$ =?, if $X + \frac{1}{X}$=3

a. 123
b.126
c.120
d.128

4-$X^2 + \frac{1}{X^2}$ =14, if $X + \frac{1}{X}$=?

a. 4
b.5
c.6
d.2

5-$X^2 + \frac{1}{X^2} = 34$, $X^2 - \frac{1}{X^2} = ?$

a. $24\sqrt{2}$
b.24
c.28
d.$36\sqrt{2}$

6- $X^4 + \frac{1}{X^4} = 12$, $X + \frac{1}{X} = ?$

a. 4
b.16
c.6
d.4

7. If $x^{\frac{1}{4}} + \frac{1_1}{x^4} = 6, X + \frac{1}{X}$=?

a.115
4
b.125
4
c.134
4
d.166
4

8. $x + \frac{1}{x} = \sqrt{3}$, x^{6}=?

a.-1
b.1
c.2
d.-2

9. $x + \frac{1}{X} = 1$, $x^3 = ?$

a.-1
b.1
c.3
d.0

10. $x + \frac{1}{X} = -1$, $x^3 = ?$

a.1
b.-1
c.0
d.2

11. if $X^2 + \frac{1}{X^2}$=7, find the value of $x^3 + \frac{1}{X^3}$

a.18
b.28
c.27
d.32

12. If $x-\frac{1}{x}=2$, *find the vlaue of* $x^4-\frac{1}{X^4}$

a. $24\sqrt{2}$
b. $28\sqrt{2}$
c. $22\sqrt{2}$
d. $2\sqrt{2}$

13. If $x^2+\frac{1}{x^2} = 6, find\ the\ vlaue\ of\ x^3 - \frac{1}{X^3}$

a. 14
b.16
c.18
d.20

14. If $\frac{P}{q} - \frac{q}{p} = 4$, find the value of $\frac{P^3}{q^3} + \frac{q^3}{q^3}$

a. $34\sqrt{5}$

b. $30\sqrt{5}$

c.30

d.24

15. If $\frac{x^2}{y^2} + \frac{y^2}{x^2} = 14$, find the value of $\frac{x^3}{y^3} + \frac{y^3}{x^3}$

a. 52
b.64
c.56
d.48

16. If $a^4 + b^4 = a^2b^2$, find the value of $a^6 + b^6$

a. 0
b.1
c.2
d.4

17. If $\frac{x^2-x+1}{x^2+x+1} = \frac{2}{3}$, *find the value of* $x + \frac{1}{x}$

a. 5
b.4
c.8
d.0

18. If $x+\frac{1}{16x}=1$, the value of $64x^2+\frac{1}{64x^3}$ is

a. 4
b.52
c.64
d.76

19. If $x+\frac{1}{x}=5$, then value of $\frac{x^4+\frac{1}{x^2}}{x^2-3x+1}$ is

a. 70
b.50
c.110
d.55

20. If a=3+ $2\sqrt{2}$, then value of $\frac{a^6+a^2+a^4+1}{a^3}$ is

a. 204
b. 212
c.192
d.240

21. If $x+\frac{1}{4x}=\frac{3}{2}$ find the value of $8x3+1/8x3$ is

a. 0
b. 1
c.2
d.3