

SSC CGL (Tier-I) Exam Practice Set – Explanation

1. (a) Binding is related to Book. Similarly, Criminal is related to Gang. অ্যানালাইসিস

2. (b) $M + A + N + G + O$
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 (Place Value) $13 + 1 + 14 + 7 + 15 = 50$

Similarly,

$C + H + I + L + L + I$
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 (Place Value) $3 + 8 + 9 + 12 + 12 + 9 = 53$

3. (a) $BORE = 2 + 15 + 18 + 5 = \frac{40}{4} = 10$
 (number of digits)

$HOTEL = 8 + 15 + 20 + 5 + 12 = \frac{60}{5} = 12$
 (number of digits)

4. (c) $24 : 27 \quad 72 : 81$ অ্যানালাইসিস
 $\swarrow \quad \uparrow \quad \swarrow \quad \uparrow$
 $\times 3 \quad \times 3$

5. (a)
 6. (c) "Leg" is used when "Knee" is folded. Similarly, "Arm" is used when "Elbow" is folded.
 7. (a) Human is a mammal. Similarly, hail is a snow.
 8. (d) As seeing an injury, a saddist is happy. Similarly, seeing a robbery, a thief is happy.

9. (a) $18 : 52 :: 12 : 34$ অ্যানালাইসিস
 $\downarrow \quad \uparrow \quad \downarrow \quad \uparrow$
 $(18 \times 3) - 2 \quad (12 \times 3) - 2$

10. (c)
 $C F I L : O R U X :: D G J M : P S V Y$
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 $+1 \quad +1 \quad +1 \quad +1$
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 $+1 \quad +1 \quad +1 \quad +1$

11. (b) $3 \times 12 = 36$
 $9 \times 4 = 36$
 $18 \times 2 = 36$
 Similarly,
 $6 \times 6 = 36$ অ্যানালাইসিস

12. (a) Diagonally the sum of the digits is equal.
 13. (b) $10 + 6 + 7 = 23$
 $6 + 9 + 8 = 23$

Similarly,
 $5 + 7 + 11 = 23$

14. (a) $(56 + 15) - (22 + 8) = 41$
 $(49 + 9) - (10 + 9) = 36$ অ্যানালাইসিস

Similarly, $(34 + 11) - (14 + 6) = 25$

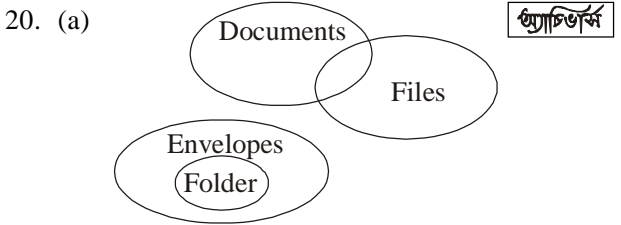
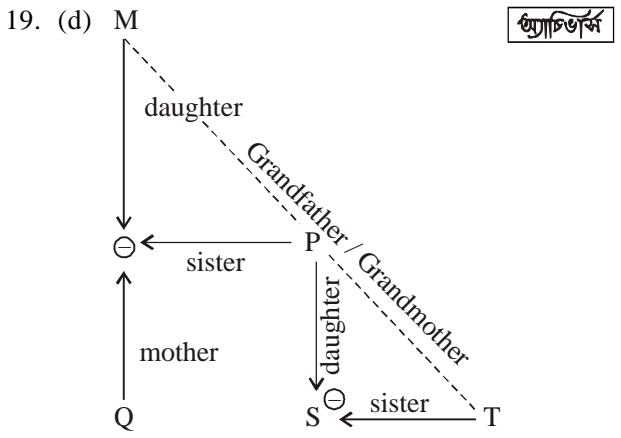
15. (d) hfeg/hfeg/hfeg/hfeg

16. (b) $\frac{\text{Exploit}}{1} \quad \frac{\text{Explore}}{5} \quad \frac{\text{Explosive}}{2} \quad \frac{\text{Exponent}}{3}$
 Exposition
 4

17. (b) TIRED

18. (c) $L \xrightarrow{10} 16 \xleftarrow{10} R$ অ্যানালাইসিস
 Saroj Rajani
 $\searrow \quad \swarrow$
 27
 Saroj

Rajani's position from right = $10 + 16 + 1 = 27$ th.



Conclusion- I - ✓
 II - ×

21. (a)
 22. (d)

23. (b)
24. (c) প্র্যাচিভর্স
25. (a) M = 01, **13**, 22, 30
U = 47, 55, **64**, 76
M = 01, 13, 22, **30**
B = **45**, 57, 66, 74
L = 46, 54, **67**, 75
E = **44**, 56, 65, 77
26. (d) Central Statistical Organisation is a governmental Agency in India. It established 2nd May, 1951 and its headquarters situated in New Delhi. প্র্যাচিভর্স
27. (d)
28. (b) Dilwara Temple were build by Vimal Shah and designed by Vastupala, Jain Minsiter of Dholka, between the 11th and 16th Centuries.
29. (a) Tyto, a category of bird species consisting of barn owls, grass owls and masked owls was selected as the official Mascot of the 44th edition of International Kolkata Book Fair 2020 (IKBF) for the 1st time.
30. (c) The reforms were outlined in the Montagu-Chelmsford report prepared in 1918 and formed the basis of Government of India Act 1919. These are related to Constitutional reforms.
31. (a) প্র্যাচিভর্স
32. (a)
33. (b) On January 29, 2020, NITI Aayog (National Institution for Transforming India), a policy think tank of the Government of India (GoI), released the ranking of Aspirational Districts of the country for the month of December 2019. The ranking is based on the progress made in 5 development areas in 112 aspirational districts across India in December 2019. The rankings focus on progress in Health and nutrition, education, agriculture and water resources, financial inclusion & skill development and Basic infrastructure. প্র্যাচিভর্স
34. (a) The first Summit of SAARC was held in Dhaka, Bangladesh On 7-8 December 1985 and was attended by the Government representative and president of Bangladesh, Maldives, Pakistan and Sri Lanka, the Kings of Bhutan and Nepal and the Prime Minister of India.
35. (a) Ice is packed in saw dust because Saw dust is a good insulator, that is it does not conduct heat easily, which means that if you put it around ice the heat that melts it can't get to it very easily stopping it from melting.
36. (c) The Lodhi dynasty was a Pashtun Dynasty that ruled Delhi Sultanate from 1451 to 1526. It was founded by Bahlul Lodi when he replaced Sayyid dynasty. প্র্যাচিভর্স
37. (d) X-rays has various uses. But according to option the main use of X-ray is to detect defects in precious stones and diamonds.
38. (c) Peroxyacetyl nitrate is a secondary pollutant present in photochemical smog. It is thermally unstable and decomposes into Peroxyethanoyl radicals and nitrogen dioxide gas.
39. (a) Maximum fixation of solar energy is done by Green Plants. প্র্যাচিভর্স
40. (a) When a firm itself expands its output scale for production, known as the internal economy. So, we can easily says that the internal economies are simply due to the increase in the scale of production. There are some kind of internal economies of scale.
- Administrative or Managerial Economies
 - Technical Economies
 - Marketing Economies or Commercial Economies
 - Indivisibility প্র্যাচিভর্স
 - Financial Economies
41. (d) On January 30, 2020 Gita Sabharwal of India was appointed as the UN (United Nations) Resident Coordinator (RC) of Thailand by United Nations Secretary-General Antonio Guterres. Gita Sabharwal recently served in UN, Sri Lanka as the Peace building and Development Adviser for 7 years.
42. (b) After the decline of the Delhi sultans in the early 16th century, the Mughals began to rule over North India. Babur was the first Mughal ruler. The other important Mughal rulers were Humayun, Akbar, Jahangir, Shahjahan, Aurangzeb and Bahadur Shah II. The earliest Mughal coins are of silver and copper. **Humayun** was the first Mughal ruler to issue **gold coins**. Some of the most beautiful gold coins were issued by Akbar and his successors. These coins are called **muhur** or **Muhar** meaning "seal". প্র্যাচিভর্স
43. (c) The 74th Constitutional Amendment Act, 1992, added part IX A of the Constitution of

India, related to Municipalities and provided Constitutional status to urban local government.

44. (d) Deep Sea plains is the deepest and the most extensive part of the ocean floor and accounts for about 40% of the total ocean floor.

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45. (a) Silicon is used in solar cells.

46. (b) The ‘‘Treaty of Purandar’’ was signed on June 11, 1665, between the Rajput ruler **Jai Singh I**, who was commander of the Mughal Empire and Maratha Chhatrapati **Shivaji Maharaj**. Shivaji was forced to sign the agreement after Jai Singh besieged **Purandar Fort**.

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47. (d)

48. (a) Laxmi Sehgal was revolutionary of the Indian Independence movement, and officer of the Indian National Army and the Minister of Women's Affairs in the Azad Hind Government.

49. (a) The planned development model was adopted on the 1st April 1951.

50. (b) On January 29, 2020, Dr. Partap Chauhan, the pioneer of Ayurvedic Telemedicine, has Conferred with Prestigious Ayurveda Ratan Award 2020 in Brussels, Belgium during Ayurveda Day Celebration at the European Parliament.

51. (c) ATQ,

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$$40 = \frac{(3200 - 3000) \times \frac{5}{2} \times r}{100}$$

$$r = \frac{40 \times 100 \times 2}{200 \times 5} = 8\%$$

Rate of interest = 8%

52. (a) Let cost price = ₹100

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$$\text{Marked price} = 100 \times \frac{9}{5} = ₹180$$

$$\text{Selling price} = ₹ \left(100 \times \frac{120}{100} \right) = ₹120$$

$$\text{Discount percent} = \frac{180 - 120}{180} \times 100 = 33 \frac{1}{3}\%$$

53. (b) $\frac{4}{5}$ of $\frac{5}{8} \times 6 + 15 - 10 = \frac{4}{15} \times \frac{5}{8} \times 6 + 5$
 $= 1 + 5 = 6$

$$\begin{array}{r}
 \text{54. (d) A} \quad 25 \quad \xrightarrow{\hspace{5em}} \quad 6 \\
 \hspace{10em} \searrow \quad 150 \\
 \text{B} \quad 30 \quad \xrightarrow{\hspace{5em}} \quad 5 \\
 \hline
 \text{A+B} \hspace{10em} 11
 \end{array}$$

Work done by (A + B) in 5 days = $11 \times 5 = 55$ unit

Units of work left = $150 - 55 = 95$

$$\text{Work left} = \frac{95}{150} = \frac{19}{30}$$

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55. (c) ATQ,

$$68921 = 64000 \left(1 + \frac{5}{2 \times 100} \right)^t$$

$$\frac{68921}{64000} = \left(\frac{41}{40} \right)^t$$

$$\left(\frac{41}{40} \right)^3 = \left(\frac{41}{40} \right)^t$$

t = 3 half yearly

$$\text{So, time} = \frac{3}{2} = 1 \frac{1}{2} \text{ years}$$

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56. (c) $x + \frac{1}{x} = \sqrt{3}$

Cubing both side

$$x^3 + \frac{1}{x^3} + 3 \cdot x \cdot \frac{1}{x} \left(x + \frac{1}{x} \right) = 3\sqrt{3}$$

$$x^3 + \frac{1}{x^3} = 3\sqrt{3} - 3\sqrt{3} = 0$$

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$$x^6 + 1 = 0$$

$$x^{306} + x^{300} + x^{270} + x^{264} - x^{204} - x^{198} + 1$$

$$= x^{300}(x^6 + 1) + x^{264}(x^6 + 1) - x^{198}(x^6 + 1) + 1$$

$$= 0 + 0 - 0 + 1 = 1$$

57. (b) Required angle = $\frac{360}{100} \times 35^\circ = 126^\circ$

58. (c) Income from 'Income tax and Excise duty'
 $= \frac{733 \times 45}{100} = ₹329.85$ cr

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59. (d) Income from other sources other than market tax
 $= \frac{165}{33} \times 67 = ₹335$ cr

60. (a) $\sqrt{\frac{0.324 \times 0.081 \times 4.624}{1.5625 \times 0.0289 \times 72.9 \times 64}}$

$$= \sqrt{\frac{324 \times 81 \times 4624}{15625 \times 289 \times 729 \times 64}}$$

$$= \frac{18 \times 9 \times 68}{125 \times 17 \times 27 \times 8} = \frac{3}{125}$$

$$= 0.024$$

61. (d) $x^3 + y^3 + z^3 - 3xyz$

$$= \frac{1}{2}(x+y+z)[(x-y)^2 + (y-z)^2 + (z-x)^2]$$

$$= \frac{1}{2}(676)[0^2 + 1^2 + 1^2]$$

$$= \frac{1}{2} \times 676 \times 2 = 676$$

62. (c) The number of families

$$= 25 + 15 + 35 + 10 + 20 + 30 + 20 + 45 + 35 + 30 = 265$$

63. (b) Required number of families

$$= 45 + 35 + 30 = 110$$

64. (c) Required number of families

$$= 20 + 30 = 50$$

65. (c) Required percentage = $\frac{85}{265} \times 100 = 32.07\%$

66. (d) $(6.23)^3 + 3 \times 11 \times 4.77 \times 6.23 + (4.77)^3$
 $= (6.23)^2 + (6.23 + 4.77) \times 14.77 \times 6.23 + (4.77)^3$
 $= (6.23 + 4.77)^3$
 $[\therefore a^3 + b^3 + 3ab(a+b) = (a+b)^3]$
 $= (11.00)^3$
 $= 1331$

67. (b) $x = y$

$$\text{So, } k^3 - 3k^2 = 1 - 3k$$

$$k^3 - 3k^2 + 3k - 1 = 0$$

$$(k-1)^3 = 0 \Rightarrow k = 1$$

68. (c) $x = \frac{\sqrt{5}-\sqrt{3}}{\sqrt{5}+\sqrt{3}}$ and $y = \frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}}$

$$x = \frac{(\sqrt{5}-\sqrt{3})(\sqrt{5}-\sqrt{3})}{(\sqrt{5}+\sqrt{3})(\sqrt{5}-\sqrt{3})}$$

$$x = 4 - 2\sqrt{5} \quad \text{Similarly, } y = 4 + 2\sqrt{5}$$

$$\text{So, } x = \frac{1}{y} \quad \text{or } xy = 1 \quad \text{and } x + \frac{1}{x} = 8$$

$$x^2 + \frac{1}{x^2} = (8)^2 - 2 = 64 - 2 = 62$$

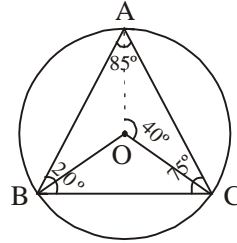
$$\frac{x^2 + xy + y^2}{x^2 - xy + y^2} = \frac{x^2 + \frac{1}{x^2} + xy}{x^2 + \frac{1}{x^2} - xy}$$

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$$= \frac{62+1}{62-1} = \frac{63}{61}$$

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69. (c)



$$\angle BAC = 85^\circ$$

$$\angle BCA = 75^\circ$$

$$\text{Thus } \angle ABC = 20^\circ$$

$$\angle AOC = 40^\circ$$

[Angle at the centre is double that of at circumcenter]

OC and OA are radius

$$\angle OAC = \frac{180^\circ - 40^\circ}{2} = \frac{140^\circ}{2} = 70^\circ$$

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70. (a) $1 + \frac{1}{\cot^2 63^\circ} - \sec^2 27^\circ + \frac{1}{\sin^2 63^\circ} - \operatorname{cosec}^2 27^\circ$
 $= 1 + \tan^2 63^\circ - \operatorname{cosec}^2 (90^\circ - 27^\circ) + \operatorname{cosec}^2 63^\circ$
 $- \sec^2 (90^\circ - 27^\circ)$
 $= 1 + (\sec^2 63^\circ - 1) - \operatorname{cosec}^2 63^\circ + \operatorname{cosec}^2 63^\circ$
 $- \sec^2 63^\circ = 0$

71. (d) Circumcentre.

72. (c) Let C.P. of radio = ₹x

ATQ,

$$x \times \left(\frac{30-20}{100} \right) = 60$$

$$x = ₹600$$

73. (b) ATQ,

Runs made by player in next inning

$$= 32 + 6 \times 11 = 98$$

74. (b) ATQ,

Required number = HCF of (2300 - 32) and (3500 - 56)

$$= \text{HCF of } 2268 \text{ and } 3444 = 84$$

75. (b) $\sin^4 \theta + \cos^4 \theta = 2\sin^2 \theta \cos^2 \theta$

$$\frac{\sin^4 \theta}{\sin^2 \theta \cos^2 \theta} + \frac{\cos^4 \theta}{\sin^2 \theta \cos^2 \theta} = 2$$

$$\tan^2 \theta + \frac{1}{\cot^2 \theta} = 2$$

$$\text{So, } \tan^2 \theta = +1$$

$$\tan \theta = \pm 1$$

76. (c) **Unless** is used to say that something can only happen or be true in a particular situation. Another negative cannot be used

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- with **unless**. Use of don't is inappropriate. **Unless** should always be followed by a positive sentence.
Hence, **work hard** will replace **don't work hard**. শ্রুতিভঙ্গ
77. (c) **One by one** or **one after another/the other** is the right usage.
one by one : first one, then the next, then the next etc., separately
one after another : used for saying that actions are done/things happen with very little time between them; one after the other.
78. (b) It is Double Comparatives related error.
Use of more + -er (Comparative Degree) is incorrect.
Hence, much faster/faster is the right usage.
79. (a) **to bring to light** : to make new information known to people.
● After careful investigation all the facts of the case were **brought to light**. The best option is to reveal.
80. (c) **to burn the candle at both ends** : to work very hard and stay up very late at night.
● Jenny has been **burning the candle at both ends** for weeks, working two jobs during the week. শ্রুতিভঙ্গ
The best option is to work hard.
81. (b) **to shed crocodile tears** : to pretend to be sad about something but is not really sad at all.
● The child wasn't really sad, but she shed crocodile tears anyway. The best option is **to pretend grief**.
82. (d) **a white elephant** : costly and useless possession
● The new office block has become an expensive **white elephant**.
The best option is **costly and troublesome possession, useless to its owner**.
83. (b) **tuneless (Adjective)** : not having a pleasant tune or sound
melodious (Adjective) : pleasant to listen to. শ্রুতিভঙ্গ
harmonious (Adjective): friendly, peaceful and without any disagreement; very pleasant when played or sung together
odious (Adjective) : extremely unpleasant; horrible
mellifluous (Adjective) : sounding sweet and smooth; very pleasant to listen to
84. (d) **befog (Verb)** : to make somebody confused
enlighten (Verb) : to give somebody information so that he may understand something better শ্রুতিভঙ্গ
slander (Verb) : to make a false spoken statement about somebody that is intended to damage the good opinion that people have of him
bemoan (Verb) : to complain or say that you are not happy about something
darken (Verb) : to become dark; to make something dark; to become/make somebody unhappy or angry
85. (b) **apathy (Noun)** : the feeling of not being interested in or enthusiastic about something, or things in general. শ্রুতিভঙ্গ
zeal (Noun) : great energy or enthusiasm connected with something that you feel strongly about.
disinterest (Noun) : lack of interest
carelessness (Noun) : the quality of not being careful or taking pains
hatred (Noun): a very strong feeling of dislike. শ্রুতিভঙ্গ
86. (a) **speleology** শ্রুতিভঙ্গ
speleology (N.) : the scientific study of caves
seismology (N.) : the scientific study of earthquakes
topology (N.) : the way the parts of something are arranged and related
numismatics (N.) : the study of coins and medals
87. (a) **rancid**
rancid (Adj.) : having an unpleasant stale taste/smell as the result of decomposition
insipid (Adj.) : having almost no taste/flavour
savoury (Adj.) : having a pleasant taste/smell
tepid (Adj.) : slightly warm, sometimes in a way that is not pleasant শ্রুতিভঙ্গ
88. (a) **anonymous** শ্রুতিভঙ্গ
anonymous (Adj.) : with a name that is not known/or that is not made public
acrimonious (Adj.) : angry and full of strong bitter feelings and words
audacious (Adj.) : willing to take risks/to do something shocking
assiduous (Adj.) : working very hard and taking great care that everything is done as well as it can be

89. (c) **extempore.**

90. (b) of (Prep.)

91. (a) known (Verb)

92. (c) size (Noun)

93. (c) same (Adj.)

94. (b) have (Aux. V.)

95. (c) The misspelt word is **vacilate.**
The correct spelling is **vacillate**

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96. (d) The misspelt word is **againest.**
The correct spelling is **against**

97. (c) The misspelt word is **literecy.**

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The correct spelling is **literacy**

98. (d) Here, **title, bestowed** is the right usage.

99. (d) Here, **adept, demonstration** is the right usage.

100. (b) Here, **so, gasping** is the right usage.