PINNACLE Learning Destination

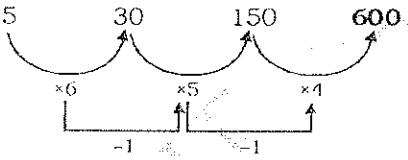
Pinnacle Learning Destination
Plot No.3 Third Floor Main Road
Raghunathpur, Sector 22 -Noida,
Uttar Pradesh
Pin-201301Ph-+91-9555662244

SSC Solution on 06 July 018

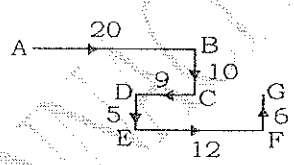
1. (D) As Clock shows the time, similarly Thermometer shows the **Temperature**.
2. (A) A body consist of skeleton and **language** consist of grammar.
3. (C) $9 \times 7 = 63$ and $4 \times 8 = \mathbf{32}$
4. (B) All except **Whales** are reptiles.
5. (D) All except **elevation** are synonyms of one another.
6. (C) **TUSV** (2314) is not following the same order as others i.e., RQPS = JIHK = EDCF = 3214 are following.
7. (C) Only son of Amar's Mother's father is Amar maternal Uncle
   So, Girl's maternal uncle is the Amar's maternal uncle. Thus, the Girl's mother is Amar's **Aunt**.
8. (B) $2 \times 4 - 3 = 5$
   $3 \times 4 - 6 = 6$
   $4 \times 5 - 9 = 11$
   $6 \times 2 - 3 = \mathbf{9}$
9. (C) $6 \times 8 \times 10 = 480 \Rightarrow \frac{480}{10} = 48$

   $6 \times 5 \times 7 = 120 \Rightarrow \frac{120}{10} = 12$

   $9 \times 8 \times 5 = 360 \Rightarrow \frac{360}{10} = \mathbf{36}$
10. (C) 5, 30, 150, **600**

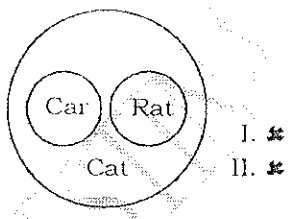
11. (B)

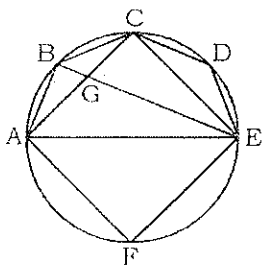
    Now, dog is facing **North**.
12. (D) From dice 1 and dice 4.

Digit (Top)	3	1	2
Digit (Bottom)	5	6	4

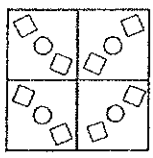
    So, when 1 is on the top, 6 at the bottom.
13. (D) The pattern is $-4, -9, -16, \ldots$ i.e. $-2^2, -3^2, -4^2, \ldots$
    So, missing pattern = $169 - 5^2 = 169 - 25 = \mathbf{144}$.
14. (B) $(2^2 - 1), (4^2 - 1), \ldots, (8^2 - 1), (10^2 - 1), (12^2 - 1)$
    So, missing term = $(6^2 - 1) = (36 - 1) = \mathbf{35}$.
15. (A) Ayush's present age = 10 years.
    His mother's present age = (10 + 20) = 30 years
    Ayush's father's present age = (30 + 5) = 35 years
    Ayush's father's age at the time of Ayush's birth = (35 – 10) = 25 years.
    Therefore Ayush's father's age at the time of marriage = (25 – 2) = **23 years**
16. (D) Tiger is carnivorous, but Horse is herbivours.
17. (D)

    Neither I nor II follows.
18. (C) 1 ® 3 ® 5 ® 2 ® 4
19. (B)
20. (B)

    Simple triangles are ABG, BCG, CGE, CDE, AGE and AEF i.e. 6 in number.
    Triangles composed of two components each are ABE, ABC, BCE and ACE i.e. 4 in number.
    So, there are 6 + 4 = 10 triangles in the figure.
21. (C)
22. (C)

    
23. (B)
24. (A)
25. (C)

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27. (B) The largest committee is the committee of estimates and it has 30 members

Committee on	No. of members
Public Accounts	22
Estimates	30
Public undertakings	22
Petitions	LS(15), RS(10)

28. (C) Bollywood Actress Sonam Kapoor has been bestowed with the 2016 ET Panache Trendsetter Award in Mumbai, Maharashtra. Beside her, Vijay Shekhar Sharma, Kavin Bharti Mittal, Bhavin and Divyank Turakhia, Dipa Karmakar, Devendra Jhajharia, Ananya Birla, etc., has been honoured with the award. The award recognizes the efforts of entrepreneurs, innovators, newsmakers and athletes whose stories inspire millions and whose services transform lives. Each winner is harbingers of change, driven by professional passion, personal elan and a commitment to quality.

29. (B) A strait is a narrow, typically navigable channel of water that connects two larger, navigable bodies of water. It commonly refers to a channel of water that lies between two land masses, but it may also refer to a navigable channel through a body of water that is otherwise not navigable, for example, because it is too shallow, or because it contains an un-navigable reef or archipelago.

30. (D) The 104th edition of Indian Science Congress (ISC) 2017 will be held at the Sri Venkateswara University in Tirupati, Andhra Pradesh from January 3rd to 7th, 2017. In the 2017 ISC, 9 Nobel Laureates from the United States, Japan, France, Israel and Bangladesh would attend the event and share their experiences. In addition to this, a huge contingent of 200 scientists from foreign nations, 10,000 scientists representing various national laboratories, faculty and research scholars from Indian universities and several others will take part in the event to exchange their views on a range of scientific issues, both on national and international level.

32. (A) Revolt of 1857 is referred as Sepoy Mutiny by many historians. After the mutiny Lord Canning was made the Viceroy and power was transferred from the East India Company to the British crown by Act of 1858.

34. (C) Capital markets provide for the buying and selling of long term debt or equity backed securities. When they work well, the capital markets channel the wealth of savers to those who can put it to long term productive use, such as companies or governments making long term investments. Capital Markets allow businesses to raise long-term funds by providing a market for securities, both through debt and equity. Capital markets offer a whole range of complicated products which allow businesses and banks not just to raise capital but also to 'hedge' (protect) against risks.

35. (C) The average albedo of earth is 34%. It varies according to the colour and texture of the surface. According to the ecosystem, the maximum albedo would be of Tundra, than Taiga, then tropical green forest and tropical deciduous forest respectively.

36. (C) Duration of Panchayats is five years. Fresh election to constitute a Panchayat shall be completed before the expiry of its term; or in case of dissolution before the expiry of a period of 6 months from the date of its dissolution.

37. (C) The World Food Day (WFD) is observed every year on October 16th to mark the foundation of Food and Agriculture Organisation (FAO) of the United Nations in 1945. The global message for WFD 2016 is "Climate is changing. Food and agriculture must too".

38. (C) Calcium is the most common and abundant mineral in the body. It is important for healthy bones and teeth, helps muscle relax and contract, important in nerve functioning, blood clotting etc. Sodium is needed for proper fluid balance, nerve transmission and muscle contraction.

40. (B)

Minerals		Mining area
Graphite	⊗	Bellary
Lead	⊗	Zawar
Salt	⊗	Didwana
Siler	⊗	Rampa

41. (D) Female birds in most families have only one functional ovary (the left one), connected to an oviduct-although two ovaries are present in the embryonic stage of each female bird.

42. (D) In 1327, Tughluq passed an order to shift the capital from Delhi to Deogiri/Daulatabad (in present-day Maharashtra) in the Deccan region of south India. Tughluq said that it would help him to establish control over the fertile land of the Deccan plateau. He also felt that it would make him safe from the Mongol invasions which were mainly aimed at Delhi and regions in north India. Also, it was not always possible to operate an army from Delhi for the occupation of Southern states. Muhammad-bin-Tughlaq himself had spent a number of years when a prince in occupying and guarding the southern states during the rein of his father.

43. (C) Federal Bank is a major Indian commercial bank in the private sector, headquartered at Kochi, Kerala.

44. (D) China has successfully launched its longest-ever manned space mission "Shenzhou-11" spacecraft into space by a Long March-2F carrier rocket from the Jiuquan Satellite Launch Centre near the Gobi Desert, China. The two astronauts will stay in space for 30 days to test complex's ability to support human life. They will also conduct medical and scientific experiments. The purpose of the mission is to dock with the Tiangong-2 space laboratory and gain experience from a 30-day residence and to test its life-support systems.

46. (B) Marginal product of an input (factor of production) is the extra output that can be produced by using one more unit of the input (for instance, the difference in output when a firm's labour usage is increased from five to six units), assuming that the quantities of no other inputs to production change. Marginal product, which occasionally goes by the alias marginal physical product (MPP) is the one of the two measures derived from the total product. The other is average product. Marginal product is directly proportional to total product.

47. (C) The Constitution of India recognizes religious and linguistic minorities under article 29 and 30 (Cultural and Educational rights). However it does not define the term Minority.

48. (D) Work done by the string of the simple pendulum during one complete oscillation is zero. Tension in the string exactly cancels the component parallel to the string. This leaves a net restoring force back towards the equilibrium position as it is equal to zero.

51. (B) Quantity of water in 250 kg dry grapes,

$$= \left(\frac{10}{100}\right) \times 250 = 25 \text{ kg}$$

Then, pulp of grapes = 225 kg
We get 20 kg pulp in 100 kg fresh grapes.
To get 225 kg pulp , we need fresh grapes,

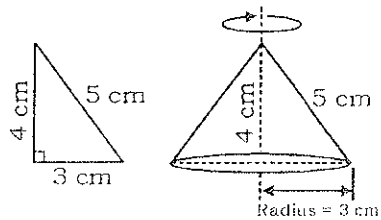
$$= \left(\frac{100 \times 225}{20}\right) = 1125 \text{ kg.}$$

52. (C) Let largest angle = $3x$
smallest angle = x
second largest angle = 44°
$3x + x + 44 = 180$
$4x + 44 = 180$
$4x = 136$
$x = 34$
Largest angle = $3x = 3 \times 34 = 102°$
150% of the largest angle

$$= \frac{102 \times 150}{100} = 153°$$

53. (C) $2\sqrt{50} + \sqrt{18} - \sqrt{72} = 10\sqrt{2} + 3\sqrt{2} - 6\sqrt{2}$
$= 7\sqrt{2}$
$= 7 \times 1.414$
$= 9.898$

54. (A)



Clearly, we have $r = 3$ cm and $h = 4$ cm.

$$\therefore \text{Volume} = \frac{1}{3}\pi r^2 h = \left(\frac{1}{3}\right) \times \pi \times 3^2 \times 4 = 12\pi \text{ cm}^3$$

55. (C) Take P = x.

Then, $Q = \frac{4x}{3}$, $R = \frac{24x}{15}$, $S = \frac{8x}{7}$

So, P + Q + R + S = 1066

$$\Rightarrow x + \frac{4x}{3} + 3 + \frac{24x}{15} + \frac{8x}{7} = 1066$$

On simplifying, $x = 210$.
Accordingly,
P = 210
Q = 280
R = 336
S = 240
So, R gets the maximum.

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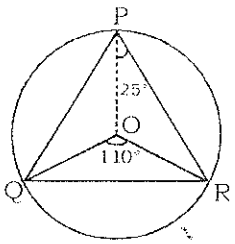
56. (C) $(a \times b) = \frac{a+b}{a-b} \Rightarrow 1 \times 2 = \frac{1+2}{1-2} = -3$

Now, $-3 \times 3 = \frac{-3+3}{-3-3} = 0$

57. (C)



$\angle QOR = 110°$, $\angle QPR = 55°$
$OR = OP \Rightarrow \angle OPR = \angle PRO = 25°$

$OP = OQ \Rightarrow \angle OQR = \angle ORQ = \frac{70}{2} = 35°$

$\angle PRQ = \angle PRO + \angle ORQ$
$= 25° + 35° = 60°$

58. (C) For inversely proportional numbers, the product of the number must always be constant, if all other conditions are the same.
Let x and y be both 10, then
xy = Constant
$\Rightarrow 10 \times 10$ = Constant
If x increases by 10%, then the new value of x will be 11. And the product of x and y will be 110. But product of x and y should be constant (100 in this case.) Then y should be decrease to keep the product constant. Now,
$xy = 100$
$11y = 100$

$y = \frac{100}{11}$

And in percentage terms

$$\left(10 - \frac{\frac{100}{11}}{10}\right) \times 100 = \left(\frac{10}{110}\right) \times 100 = \frac{100}{11}\%$$

59. (C) $\frac{1}{\text{cosec}\,q - \cot q} \times \frac{\text{cosec}\,q + \cos q}{\text{cosec}\,q + \cos q} = \frac{1}{\sin q}$

$\Rightarrow \text{cosec}\,q + \cot q - \text{cosec}\,q$
$= \cot q$

60. (A) Assuming every line has 100 characters.
$\Rightarrow$ with 8% margin, the total number of characters written in one line is $100 - 8 = 92$
Time taken to write 20 lines is 10 mins
$\Rightarrow$ time taken to write 1 line = 92 characters

is $\left(\frac{10}{92 \times 20}\right)$

Now, when the margin is increased by 25%
$\Rightarrow$ new margin is $8 + 0.25 \times 8 = 10$
$\Rightarrow$ number of characters per line now = 90
Total number of characters to be written = number of characters per line × number of lines per page × number of pages = $90 \times 40 \times 23$
Total time required = Total number of characters × time required to type one character

$= (90 \times 40 \times 23) \times \left(\frac{10}{92 \times 20}\right) = 450$ minutes

= 7 hours and 30 minutes

61. (D) Let fraction = $\frac{x}{y}$

ATQ, $\frac{x \times \frac{450}{100}}{y \times \frac{400}{100}} = \frac{9}{22}$

$\Rightarrow \frac{x}{y} = \frac{4}{11}$

62. (C) $x = 3 + 2\sqrt{2} \Rightarrow x + \frac{1}{x} = 6$

$\frac{1}{x} = 3 - 2\sqrt{2} \Rightarrow \left(x + \frac{1}{x}\right)^2 - 2 = 6^2 - 2$

$\Rightarrow x^2 + \frac{1}{x^2} = 34$

63. (B) Distance covered in first 2 hrs
$= (70 \times 2) = 140$ km
Distance covered in next 2 hrs
$= (80 \times 2) = 160$ km
Remaining distance
$= 345 - (140 + 160) = 45$ km
Speed in the fifth hour = 90 km/hr
Time taken to cover 45 km = as speed is 90 km/hr means it covers 90 km in 1 hour

$\Rightarrow 45$ km $= \frac{1}{2}$ hr

Total time taken $= 2 + 2 + \frac{1}{2} = 4\frac{1}{2}$ hrs

64. (A) $xy = 8$ possible value of $(x, y) = (1, 8)$ $(2, 4)$ $(4, 2)$ $(8, 1)$
when $(x, y) = (1, 8) \Rightarrow 2x + y = 2 \times 1 + 8 = 10$
$(x, y) = (2, 4) = 2x + y = 2 \times 2 + 4 = 8$ ⊗ minimum value
$(x, y) = (4, 2) = 2x + y = 2 \times 4 + 2 = 10$
$(x, y) = (8, 1) = 2x + y = 2 \times 8 + 1 = 17$

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65. (C) Total runs scored by the player in 40 innings = 40 × 50
Total runs scored by the player in 38 innings after excluding two innings = 38 × 48
Sum of the scores of the excluded innings = 40 × 50 – 38 × 48 = 2000 – 1824 = 176
Given that the scores of the excluded innings differ by 172. Hence let's take
the highest score as x + 172 and lowest score as x
Now x + 172 + x = 176
Þ 2x = 4

Þ $x = \frac{4}{2} = 2$

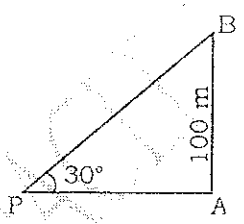
Highest score = x + 172 = 2 + 172 = 174

66. (B) Men $25 \times \frac{2}{5} = 10$

Women $25 \times \frac{3}{5} = 15$

Wage each man 5x
Woman 4x
20% of amount retaining = 275 × 20% = 55
Remaining amount = 275 – 55 = 220
Þ10 × 5x + 15 × 4x = 220
Þ110x = 220
Þ x = 2
Wages of women = 4x = 4 × 2 = ₹ 8

67. (C) Let AB be the tower



Then, ÐAPB = 30° and AB = 100 m

$\frac{AB}{AP} = \tan 30° = \frac{1}{\sqrt{3}}$

Þ AP = (AB × $\sqrt{3}$) m

= 100$\sqrt{3}$ m
= (100 × 1.73) m
= 173 m

68. (D) Let the length of the train be x m
So, the length of the platform = 3x m

Time taken in crossing the platform = $\frac{4x}{20}$ sec

Time taken in crossing the pole = $\frac{x}{20}$ sec

Þ $\frac{x}{20} + 24 = \frac{4x}{20}$ Þ x = 160 m

Length of the train = 160 m

69. (B) Let the length of the cloth be x m therefore,

cost of 1 m cloth = $\frac{35}{x}$

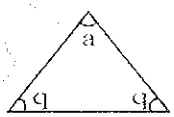
ATQ, $\frac{35}{x} - 1 = \frac{35}{x+4}$

Þ $\frac{35}{x} - \frac{35}{x+4} = 1$

Þ $\frac{35x + 140 - 35}{x(x+4)} = 1$ Þ $x^2 + 4x - 140 = 0$

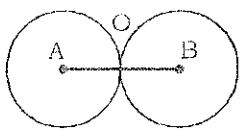
Þ $(x-10)(x+14) = 0$
Þ x = 10
\ The length of the piece of cloth = 10 m

70. (A)



Let q be the equal angles and a be the unequal angle a = 2 × 2q = 4q
As sum of all angles of a triangle is 180°
a + q + q = 180° Þ 4q + q + q = 180°
Þ 6q = 180° Þ q = 30°
\ Each equal angles is of 30°.

71. (B)



AB = 7, AO = 4 cm
AO + OB = 7 cm
Þ 4 + OB = 7
Þ OB = 7 – 4
= 3 cm
\ Other radius = 3 cm

72. (A) SP of 12 marble = 12, Loss = 20%

CP = $\frac{1}{0.8}$ = 1.25

If profit = 20%, new SP = $1.25 \times \frac{120}{100}$ = ₹ 1.5

For ₹ 1, he should sell = $\frac{12}{1.5}$ = 8 marbles.

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73. (A) Required ratio = $\frac{30}{45} = \frac{2}{3}$

74. (D) Given ratio = 30 : 45 : 25
= 6 : 9 : 5
6 + 9 + 5 = 20
Also, 6 + 5 = 11
Þ 20 = 5 lakh
then, 11 = $\frac{5}{20} \times 11$ lakh
= 2.75 lakh
= 2,75000

75. (B) ∵ 1 million = 10 lakh
\ 5 million = 50 lakh
Given ratio = 35 : 55 : 10
= 7 : 11 : 2
As, 7 + 11 + 2 = 20
It means 20 = 50 lakhs
then 7 = $\frac{50}{20} \times 7$ lakhs
= 17.5 lakh
= 17,50,000

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MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Haste	urgency of movement or action; hurry	जल्दबाजी
Valiant	showing courage or determination	बहादुर
Repulsive	causing strong dislike	प्रतिकारक
Obstreperous	noisy and difficult to control	प्रचंड, कोलाहलमय
Sullen	depressed mood	उदास
Dissent	to publicly disagree with an official opinion	मतभेद
Candid	straightforward; frank	स्पष्टवादी, निष्कपट
Ambiguous	not expressed or understood clearly	अस्पष्टवादी
Tenacious	firm or strong	दृढ़
Serfs	an agricultural labourer bound under the feudal system to work on his lord's estate	गुलाम
Accused	charge with an offense or crime	अभियुक्त
Calligraphy	decorative handwriting	सुलेखकला
Topography	the arrangement of the natural and artificial physical features of an area	स्थलाकृति
Atheism	a disbelief in the existence of deity	नास्तिकता
Nihilism	the belief that traditional morals, ideas, beliefs, etc., have no worth or value	विनाशवाद
Agnosticism	a person who does not have a definite belief about whether God exists or not	अज्ञेयवाद
Unintelligible	impossible to understand	अस्पष्ट

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SSC Answer Key on 06 July 018

1. (D)	26. (C)	51. (B)	76. (C)
2. (A)	27. (B)	52. (C)	77. (B)
3. (C)	28. (C)	53. (C)	78. (B)
4. (B)	29. (B)	54. (A)	79. (B)
5. (D)	30. (D)	55. (C)	80. (B)
6. (C)	31. (B)	56. (C)	81. (A)
7. (C)	32. (A)	57. (C)	82. (A)
8. (B)	33. (C)	58. (C)	83. (D)
9. (C)	34. (C)	59. (C)	84. (C)
10. (C)	35. (C)	60. (A)	85. (B)
11. (B)	36. (C)	61. (D)	86. (C)
12. (D)	37. (C)	62. (C)	87. (B)
13. (D)	38. (C)	63. (B)	88. (B)
14. (B)	39. (B)	64. (A)	89. (C)
15. (A)	40. (B)	65. (C)	90. (A)
16. (D)	41. (D)	66. (B)	91. (B)
17. (D)	42. (D)	67. (C)	92. (B)
18. (C)	43. (C)	68. (D)	93. (B)
19. (B)	44. (D)	69. (B)	94. (C)
20. (B)	45. (C)	70. (A)	95. (D)
21. (C)	46. (B)	71. (B)	96. (A)
22. (C)	47. (C)	72. (A)	97. (C)
23. (B)	48. (D)	73. (A)	98. (B)
24. (A)	49. (C)	74. (D)	99. (C)
25. (C)	50. (A)	75. (B)	100. (D)