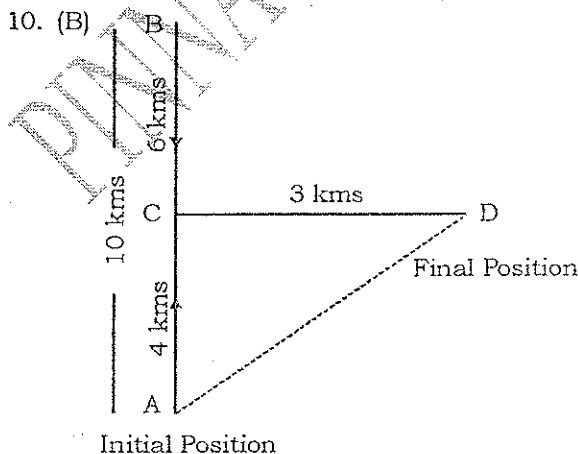


SSC solution on 27 July -018

- (C) Second is used to make first.
- (C) $584 = 8^3 + 8^2 + 8 = 512 + 64 + 8$
 $84 = 4^3 + 4^2 + 4$
- (B)

C	E	H	L	M	O	R	V	B	D	G	K	L	N	O	U
- (B) As all other three gives a sense of words (AIR, ASK and TRUE) by arranging the letters but the word 'BTD' does not have such meaning after arranging the letters.
- (D) $2348 = 8 \times 2 + 3 \times 4 = 28$
 $3426 = 6 \times 3 + 4 \times 2 = 26$
 $3524 = 4 \times 3 + 5 \times 2 = 22$
 $4352 = 4 \times 2 + 3 \times 5 = 23 + 26$
- (B) All except 'RICE' are Kharif crops.
- (C) $\frac{54}{32} = (5 + 4) - (3 + 2) = 4$
 $\frac{36}{42} = (3 + 6) - (4 + 2) = 3$
 $\frac{92}{22} = (9 + 2) - (2 + 2) = 7$
 $\frac{28}{33} = (2 + 8) - (3 + 3) = 4$
- (C) Arrange in increasing order
Small bowl @ Big glass @ Mug @ Bucket @
(4) (5) (2) (3)
Water tank
(1)
- (B) Watch covers 3 min in 60 hrs
Watch covers 1 min in $\frac{60}{3}$ hrs = 20 hrs
So, 1 pm on Tuesday + 20 hrs = 9 am on Wednesday, it was showing the correct time.

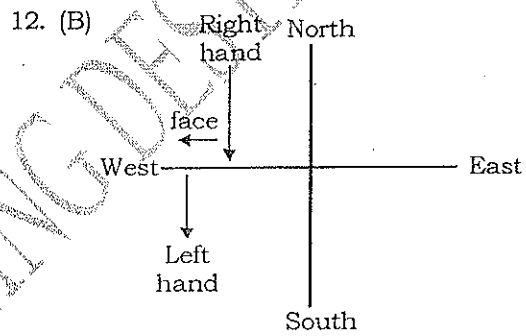


AB = 10 kms
AC = 10 - 6 = 4
CD = 3 kms
 $AD^2 = AC^2 + CD^2$
 $AD^2 = 3^2 + 4^2$

$AD = \sqrt{25} = 5$ kms

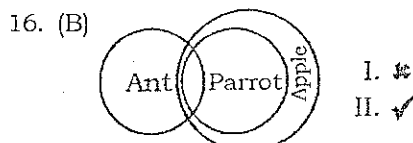
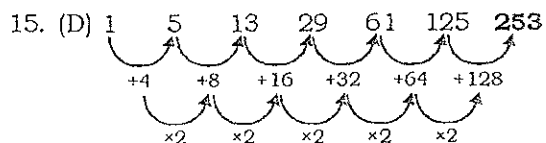
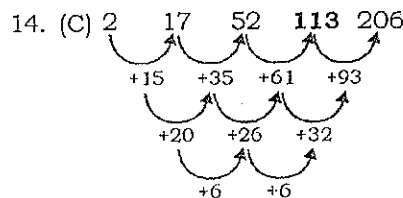
D is in north-east direction with respect to A.

- (C) The day for any date advances one day per year, two days in leap years. For leap years, if we start in 1982 then the repeats are **1993, 1999, 2004, 2010**. The pattern is 11, 6, 5, 6 (starting in 1982). **Leap years repeat after every 28 years** which means before 1982 the calendar was earlier used in 1954.



From the above figure, it is clear that his left hand will be in South direction.

- (C) The profit of lady will be the loss of shopkeeper. So, his total loss is ₹ 1000 as the lady has given a fake note of ₹ 1000.





17. (C) $p \times p / p \times p / p \times p / p \times p$

18. (B) $18 \times 12 = 24 \times 9$
 $12 \times 16 = 24 \times 8$
 $16 \times 9 = 18 \times 8$

19. (B) As, the corner digits $6^2 = 36$, $4^2 = 16$, $5^2 = 25$,
 $8^2 = 64$

Also, we have

$$[36 - (4 \times 4) - 1] = 36 - 17 = 19 = S$$

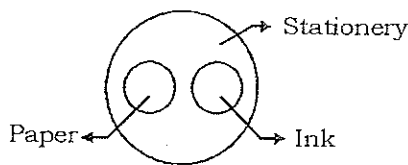
$$[16 - (7 \times 1) - 1] = 16 - 8 = 8 = H$$

$$[64 - (10 \times 5) - 1] = 64 - 51 = 13 = M$$

In the same way

$$[25 - (5 \times 2)] - 1 = 25 - 11 = 14 = N$$

20. (B)



21. (B) Sanchit himself is the only child of his father. So, Sanchit's wife is Neha's **mother**.

22. (C) From the given dice, we can conclude that 6, 4, 1 and 2 dots appear adjacent to 3 dots. Clearly, there will be 5 dots on the face opposite the face with 3 dots.

23. (C)

24. (A) Let the number in A and B be a & b respectively.

As per the question,

$$a - 10 = b + 10 = a - b = 20$$

$$a + 20 = 2(b - 20) = a - 2b = -60$$

On solving both the above equations, we have
A = 100; B = 80

25. (B)

26. (B) The given principle is one of the postulates of the Dalton's atomic theory given in 1803 by John Dalton. The postulates of Dalton's atomic theory are as follows:

1. Elements consist of indivisible small particles (atoms).

2. All atoms of the same element are identical; different elements have different number of atoms.

3. Atoms can neither be created nor destroyed.

4. 'Compound elements' i.e. Compounds are formed when atoms of different elements join in simple ratios to form molecules.

27. (B) Charter Acts of 1813 was an Act of the Parliament of the United Kingdom which renewed the charter issued to the British East India Company, and continued the Company's rule in India. However, the Company's commercial monopoly was ended, except for the tea trade and the trade with China. Reflecting the growth of British power in India.

28. (C) The International Day of the Girl Child is celebrated on 11th October every year. In 2011, the United Nations General Assembly declared October 11th as the International Day of the Girl Child, to recognize girl's right and the unique challenges they face around the world.

29. (A) Half-miler Jinson Johnson from Kerala has won the gold medal in the 800 m race at the 56th National Inter-State Senior Athletics Championships at the GMC Balayogi Stadium in Hyderabad. He missed the Rio Olympics qualification standard narrowly. He clocked 1 : 46.43 while the Rio Games qualification mark stands at 1 : 46.00.

30. (A) Mount Vinson is the highest peak in Antarctica, with an elevation of 16,066 feet (4,897 meters). It is located on the southern part of the main ridge of the Sentinel Range of the Ellsworth Mountains.

32. (A) The Sakas came to India through the Bolan Pass. They were a Scythian tribe or group of tribes of Iranian origin.

33. (B) Rolling friction or rolling drag, is the force resisting the motion when a body rolls on a surface. It is mainly caused by non-elastic effects; that is, not all the energy needed for deformation of the wheel, road bed, etc. is recovered when the pressure is removed. Another cause of rolling resistance lies in the slippage between the wheel and the surface, which dissipates energy.

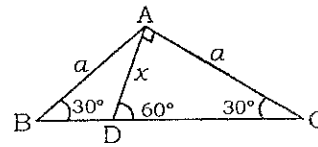
35. (A) Sabarimala Sree Ayyappa Temple is one of the most ancient and prominent Sastha temples in the country. Sabarimala is a Hindu pilgrimage centre located at the Periyar Tiger Reserve in the Western Ghat mountain ranges of Pathanamthitta District, Perunad grama panchayat in Kerala.

36. (A) Ballistics is the science of mechanics that deals with the launching, flight, behaviour, and effects of projectiles, especially bullets, gravity bombs, rockets, or the like; the science or art of designing and accelerating projectiles so as to achieve a desired performance.

37. (C) Alaknanda river meets the Dhauliganga river at Vishnuprayag, the Nandakini river at Nandprayag, the Pindar river at Karnaprayag, the Mandakini river at Rudraprayag and finally the Bhagirathi river at Devprayag to form the mainstream, the Ganges.

39. (A) India's largest food products marketing organization Amul has become the official sponsor of Indian contingent to the 2016 Rio Olympics. The purpose of Amul is to engage with youth and leverage the connection between the energy of milk and sports. The company will launch a series of advertising campaigns for milk and various dairy products to promote this association. Amul has embarked upon an "Eat Milk with Every Meal" campaign to highlight the importance of milk and dairy products like cheese, yogurt, butter, ghee, paneer, etc.
43. (D) IFCI Ltd. was set up in 1948 as Industrial Finance Corporation of India, a Statutory Corporation, through 'The Industrial Finance Corporation of India Act, 1948' of Parliament. It provided medium and long term finance to industry. After repeal of this Act in 1993, IFCI became a Public Limited Company registered under the Companies Act, 1956.
44. (B) The seven ancient wonders of the world include Great Pyramid at Giza, Egypt; Hanging Gardens of Babylon; Statue of Zeus at Olympia, Greece; Temple of Artemis at Ephesus; Mausoleum at Halicarnassus; Colossus of Rhodes and Lighthouse at Alexandria, Egypt; The Taj Mahal in India.
45. (B) Henri Becquerel was a physicist, Nobel laureate, and the discoverer of radioactivity, for his work in this field he, along with Marie Curie and Pierre Curie, received the 1903 Nobel Prize in Physics.
46. (D) Bargis was the Royal cavalry of the Maratha army system. There were two kinds of cavalry viz. Bargirs and the Shiledars. Bargirs were provided horses from the state and thus, the horses were the property of the royal household and were looked after by state officers. Shiledars used to keep their own horses.
48. (B) The Itaipu hydroelectric power plant is second largest hydropower plant in Brazil. The project is located on the Parana River, at the border between Brazil and Paraguay. Itaipu dam with an installed capacity of 14,000MW ranks as the world's second largest hydropower plant.
49. (D) The bulk of the Central Government subsidies arise on the provision of economic services, which account for 88% of the total subsidies (10% on merit services and 78% on non-merit).
50. (B) Bhamala Stupa is an ancient Gandhara stupa located in Pakistan near Haripur and is a part of so called Bhamala Buddhist Complex. It is a national heritage site of Pakistan and dates back to 4th century AD. This stupa is different from other Gandhara stupas as it looks cross shaped like an Aztec Pyramid.

51. (C)



$$\angle DAC = 90^\circ$$

In $\triangle ADC$

$$\tan 60^\circ = \frac{AC}{AD} = \frac{a}{x}$$

$$\sqrt{3} = \frac{a}{x}; x = \frac{a}{\sqrt{3}}$$

52. (D) $SP = 18000 \times \frac{80}{100} = ₹ 14,400$

$$CP = \frac{14400}{96} \times 100 = ₹ 15,000$$

53. (B) Let the total no. of candidates = 100

$$\text{Total marks of 40 candidates} = 40 \times 74$$

$$\& \text{ total marks of 60 candidates} = 60 \times 77$$

Hence, required average marks

$$= \frac{40 \times 74 + 60 \times 77}{100}$$

$$= \frac{2960 + 4620}{100}$$

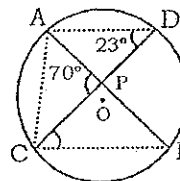
$$= \frac{7580}{100} = 75.80$$

54. (B) $x \times \left(\frac{\sqrt{3}}{2}\right)^2 \times \frac{\sqrt{3}}{2} = \frac{1^2 \cdot 2}{\sqrt{3}}$

$$= x \times \frac{3}{4} \times \frac{\sqrt{3}}{2} = \frac{2}{\sqrt{3}}$$

$$x = \frac{\sqrt{3} \times 8 \times 2}{3 \times \sqrt{3} \times 2} = \frac{8}{3} = 2\frac{2}{3}$$

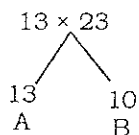
55. (B)



$$\angle ADC = \angle ABC \quad [\text{Angle formed by same chord of a circle}]$$

$$\angle BCD = 70^\circ - 23^\circ = 47^\circ$$

56. (C) Ratio of efficiency $\Rightarrow 130 : 100 = 13 : 10$
Ratio of time = 10 : 13
Vivek completes 13 units in a day.
Then his work in 23 days = 13×23 Units



$$\text{Required days} = \frac{13 \times 23}{10 + 13}$$

$$= \frac{13 \times 23}{23}$$

$$= 13 \text{ days}$$

57. (B) 50% increase in 5 years = $.1 + \frac{50}{100}$

$$= \frac{3}{2} \text{ times}$$

If 10 year = $\left(\frac{3}{2}\right)^2$ times &

15 years = $\left(\frac{3}{2}\right)^3$ times

and in 20 years = $\left(\frac{3}{2}\right)^4$ times

$$\therefore x \left(\frac{3}{2}\right)^2 = y \left(\frac{3}{2}\right)^3 = z \left(\frac{3}{2}\right)^4 = K$$

$$x = \frac{4}{9} K, y = \frac{8}{27} K, z = \frac{16}{81} K$$

$$x : y : z = \frac{4}{9} K : \frac{8}{27} K : \frac{16}{81} K = 9 : 6 : 4$$

58. (B) Let the parts be x, y and $[5200 - (x+y)]$

$$\frac{x \times 4 \times 1}{100} = \frac{y \times 6 \times 1}{100}$$

$$= \frac{[5200 - (x+y)] \times 8 \times 1}{100}$$

$$\Rightarrow \frac{x}{y} = \frac{6}{4} = \frac{3}{2}$$

$$y = \frac{2}{3} x$$

$$\text{So, } \frac{x \times 4 \times 1}{100} = \frac{5200 - x + \frac{2}{3}x}{100}$$

$$x = 2 \left[5200 - \frac{5}{3}x \right]$$

$$x = 10400 - \frac{10}{3}x$$

$$\frac{13}{3}x = 10400$$

$$x = 2400$$

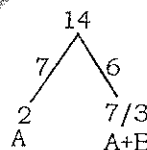
59. (D) $n \times 2\pi rh = 72\%$ of Area

$$150 \times 2 \times \frac{22}{7} \times 1.68 \times 4.5 = \frac{72}{100} \times \text{Area}$$

$$\text{Area} = \frac{150 \times 2 \times 22 \times 1.68 \times 4.5}{7 \times 72}$$

$$= 9900 \text{ m}^2$$

60. (A)



$$\text{Required time} = \frac{14}{7-6}$$

$$= 14 \text{ Hours.}$$

61. (A) $1 + 9 + 25 + \dots + 121$

$$\Rightarrow 1^2 + 3^2 + 5^2 + \dots + 11^2$$

$$\Rightarrow (1^2 + 3^2 + 5^2 + \dots + 11^2) - (2^2 + 4^2 + 6^2 + \dots + 10^2)$$

$$\Rightarrow \left(\frac{n(n+1)(2n+1)}{6} \right) - 2^2(1^2 + 2^2 + 3^2 + \dots + 5^2)$$

$$\Rightarrow \left[\frac{11 \times 12 \times 23}{6} \right] - \left[4 \left(\frac{5 \times 6 \times 11}{6} \right) \right]$$

$$\Rightarrow 506 - 220$$

$$= 286$$

Short Trick :-

$$\text{Formula} = \frac{n(n+1)(n+2)}{6}$$

[where n is last term]

$$= \frac{11 \times 12 \times 13}{6}$$

$$= 286$$

62. (A) Let total voters be 100%
Vote cast = 100% - 10%
= 90%

Valid votes = $90\% \times \frac{80}{100}$
= 72%

Winner = 40%
Loser = 72% - 40% = 32%
8% = 3600

$100\% = \frac{3600}{8} \times 100$
= 450×100
= 45000

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

$\Rightarrow 2 + x\sqrt{3} = \frac{1}{2 + \sqrt{3}} \times \frac{2 - \sqrt{3}}{2 - \sqrt{3}}$

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

$\Rightarrow 2 + x\sqrt{3} = \frac{2 - \sqrt{3}}{4 - 3}$

$\Rightarrow 2 + x\sqrt{3} = 2 - \sqrt{3}$
So, $x = -1$

64. (A) Rest part of milk = $1 - \frac{40}{400}$
= $\frac{9}{10}$

Required pure milk = $40 \times \left(\frac{9}{10}\right)^6$
= $40 \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10}$
= 21.2576 l
= 21.25 l

65. (D) Let the cost of rice = ₹ x/kg

Discount = $\frac{x \times 40}{100} = ₹ \frac{2x}{5}$

New cost = $x - \frac{2x}{5} = \frac{3x}{5}$

ATQ,

$\frac{45}{3x} - \frac{45}{x} = 60$

$\Rightarrow \frac{75}{x} - \frac{45}{x} = 60$

$x = \frac{30}{60} = ₹.5$ or 50 paise

then reduced price = $\frac{3 \times 50}{5} = 30$ paise

66. (B) $\frac{x^2 + y^2 + 2xy}{x^2 - y^2} = \frac{(x+y)^2}{(x+y)(x-y)}$

After substituting the value of x and y

we have, $\frac{(19+18)^2}{(19+18)(19-18)}$

= $\frac{37 \times 37}{37} = 37$

67. (B) $\cos(3x - 20) = \sin(3y + 20)$
 $\Rightarrow \cos(3x - 20) = \cos(90 - 3y - 20)$
 $\Rightarrow 3x - 20 = 90 - 3y - 20$
 $\Rightarrow 3x + 3y = 90$
 $\Rightarrow x + y = 30$
 $\Rightarrow 4(x + y) = 4 \times 30 = 120^\circ$

68. (B) Avg. Speed = $\frac{\text{Total distance}}{\text{Total time}}$

ATQ,

$\Rightarrow 53 + \frac{1}{3} = \frac{200}{\frac{50}{40} + \frac{150}{x}}$

$\Rightarrow \frac{160}{3} = \frac{200 \times 40x}{50x + 600}$

$\Rightarrow 200x = 24000 = 600x$

$\Rightarrow 400x = 24000$

$x = 60$ Km/h

69. (A) Single equivalent discount

= $\frac{25}{100} + 5 - \frac{25 \times 5}{100}$

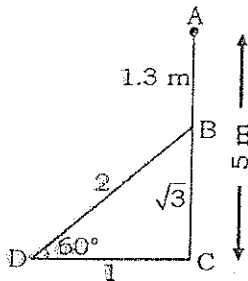
= $9 \frac{3}{4} = \frac{39}{4} \%$

\ S.P. = $80 \times \frac{361}{400} = ₹ 72.2$

70. (A) H.C.F of $\frac{35}{12}, \frac{49}{30}, \frac{21}{20}$

= $\frac{\text{H.C.F of } 35, 49 \text{ and } 21}{\text{L.C.M of } 12, 30 \text{ and } 20} = \frac{7}{60}$

71. (B)



$$\therefore \sqrt{3} = 5 - 1.3$$

$$\sqrt{3} = 3.7$$

$$\sqrt{2} = \frac{3.7}{\sqrt{3}} \times 2 = \frac{7.4\sqrt{3}}{3}$$

Length of the ladder = 4.27 m

Distance of the ladder from the foot of the

$$\text{pole} = \frac{3.7}{\sqrt{3}} = \frac{3.7 \times 1.73}{3} = 2.14 \text{ m}$$

72. (A) $25\% = \frac{1}{4}$, $20\% = \frac{1}{5}$

$$A : B : C$$

$$4 \times 6 : 5 \times 6$$

$$\frac{6 \times 5 : 5 \times 5}{24 : 30 : 25}$$

$$\therefore \text{Share of A} = \frac{395}{79} \times 24 = ₹ 120$$

73. (A)

Population in 1971

$$= 54.80 \text{ crores}$$

Population in 1981 = 68.40 crores

$$\text{Increase} = (68.40 - 54.80) \text{ crores}$$

$$= 13.6 \text{ crores}$$

\therefore Increase%

$$= \frac{13.6}{54.80} \times 100 = 24.8\%$$

74. (D)

Percentage increase in 1981 = 24.8%

(From Q 73)

Percentage increase in 1971

$$= \left(\frac{54.80 - 43.92}{43.92} \right) \times 100$$

$$= 24.77\%$$

Hence, increase in highest in 1981.

75. (A)

Total increase is least

$$= (68.40 - 27.90) \text{ crores}$$

$$= 40.5 \text{ crores}$$

\therefore Annual increase

$$= \frac{40.5}{50} \text{ crores}$$

$$= \frac{40.5 \times 10000000}{50} = 8100000$$

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Belittle	make (someone or something) seem unimportant	तुच्छ समझना
Coherent	(of an argument, theory, or policy) logical and consistent	संगत, स्पष्ट
Comprehensive	complete; including all or nearly all elements or aspects of something	व्यापक
Consensual	relating to or involving consent, especially mutual consent	पारस्परिक सहमति
Dissipation	squandering of money, energy, or resources	फिजूलखर्ची, अपव्ययिता
Extol	praise enthusiastically	प्रशंसा करना
Extrapolate	to conclude a theory based on certain statistics	निष्कर्ष निकालना
Extricate	free (someone or something) from a constraint or difficulty	छुड़ाना
Exuberate	make something worse	और अधिक खराब करना
Futile	incapable of producing any useful result; pointless	व्यर्थ, निरर्थक
Impartial	fair and just	निष्पक्ष
Inflate	increase (something) by a large or excessive amount	बढ़ा-चढ़ा कर कहना
Intervention	the action or process of intervening	हस्तक्षेप
Maverick	an unorthodox or independent-minded person	स्वतंत्र, अपरंपरागत
Offspring	a person's child or children	वंशज, संतान
Posterity	all the people who will live in the future	भावी पीढ़ी
Propagation	the act of spreading ideas, beliefs or information among many people	प्रचार-प्रसार करना
Subdued	overcome, quieten, or bring under control	दबाना, कमजोर करना

SSC Answer key on 27 July - 2018

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