

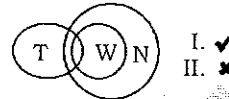
SSC Selection (14APR-17)

1. (A) Second can be obtained by moving  $135^\circ$  in clockwise direction from first.
2. (C)  $18 \Rightarrow \frac{18^2}{2} = 162$  and  $22 \Rightarrow \frac{22^2}{2} = 242$
3. (D) Dividing the first number by 7 will give the second number.
4. (B) The first two letters are written in reverse order and third letter is same.
5. (B) Australia is a continent whereas others are countries.
6. (D) Sum of digits in each number **except (D)** is 25.
7. (A) In all other pairs the ratio is **1 : 3**.
8. (C) Only 'U' is the vowel.
9. (B) **2, 4, 3, 1**
10. (A) After exchanging the signs we have,

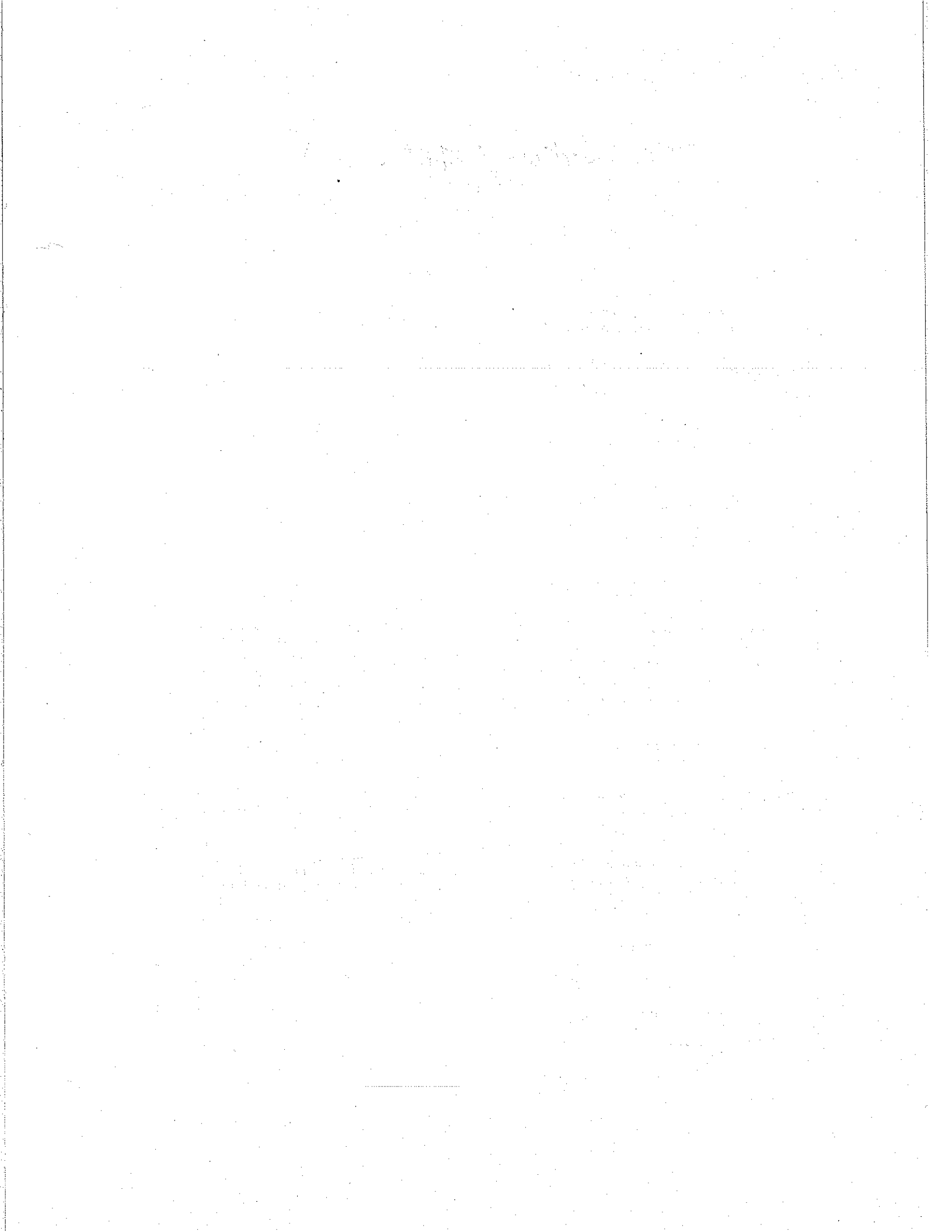
$$\text{Given expression} = \frac{(18-3)+5-1}{5 \times 4 - 3 \times 7 + 2} = \frac{3-1}{22-21} = 2$$

11. (B)  $\sqrt[3]{64} = 4$  &  $4 \times 12 = 48$   
 $\sqrt[3]{8} = 2$  &  $2 \times 13 = 26$   
 $\sqrt[3]{27} = 3$  &  $3 \times 3 = 9$
12. (C) Continuous prime numbers are written in three Columns.  
So, ? = **17**
13. (A)  $9 + 8 = 17$  and  $2 \times 17 = 34$   
 $11 + 13 = 24$  and  $4 \times 24 = 96$   
 $6 + 3 = 9$  and  $12 \times 9 = 108$
14. (B) From the four dies, we have concluded that digits 3, 6, 1 and 5 appear adjacent to 4. Clearly, there will be **2** on the face opposite to 4.
15. (D) PET = OPQDEFSTU  
SIT = RSTHIJSTU
16. (B) ECONOMIST
17. (A) Each number is 13 times of a prime number starting from 7.  
So, result =  $13 \times 19 = 247$
18. (B) The sequence is-  
 $1 \times 2, 2 \times 3, 3 \times 4, 4 \times 5, 5 \times 6, 6 \times 7$   
 $\therefore$  Required answer =  $4 \times 5 = 20$
19. (C) The word is 'BIOLOGY'.
20. (D) 'Train' starts with letter T and next letter to it is U.  
'Bus' starts with letter B and next letter to it is C.  
'Car' starts with letter C and next letter to it is D.  
'Elephant' starts with letter E and next letter to it is F.

21. (D) Boy's maternal uncle will be brother of boy's mother. Maternal uncle of mother's brother and maternal uncle of woman are brothers which means woman is sister of mother's brother i.e., woman is the mother of the boy. So, the boy is woman's son.
22. (D) Only conclusion I follows.



23. (D)
24. (A)
25. (D)
26. (C) Agriculture was the main occupation of the Indus Valley people. Crops such as wheat, barley, peas and bananas were raised. In the olden days, there was enough rain in that region and occasional floods brought a great deal of fertile soil to the area. People used to plough the land with wooden ploughshares drawn by men and oxen. From the existence of granaries it is concluded that there were surplus food-grains.
27. (A) Philippine Sea is the largest Sea in the world with reference to the surface area. The Philippine Sea is a marginal sea and a part of the North Pacific Ocean.  
**The 10 largest seas by surface area are the Philippine Sea, the Coral Sea, the Arabian Sea, the South China Sea, the Weddell Sea, the Caribbean Sea, the Mediterranean Sea, the Tasman Sea, the Bering Sea and the Bay of Bengal.**
28. (A) Article 222 empowers the President to transfer judges from one High Court to another. Clause (2) of this article goes on to provide that when a judge is transferred he shall be entitled to receive a compensatory allowance in addition to his salary. It is felt that there is no real justification for granting such an allowance and it is accordingly proposed to omit clause.
29. (C) Public-private partnership (PPP) is a funding model for a public infrastructure project such as a new telecommunications system, airport, and power plant. The public partner is represented by the government at a local, state and/or national level. The private partner can be a privately-owned business, public corporation or consortium of businesses with a specific area of expertise.



30. (B) Density of gold is  $19.30 \text{ g/cm}^3$ . The density of ultra pure liquid mercury is  $13.534 \text{ g/cm}^3$  and the density of steel is  $7.80 \text{ g/cm}^3$ .
31. (B) The chemical formula for sodium bicarbonate is  $\text{NaHCO}_3$ . The common name of this substance is baking soda, and its chemical name is sodium hydrogen carbonate. Sodium bicarbonate is a leavening agent that's commonly used in baking. Although inactive in its dry form, mixing it with an acid and liquid causes a chemical reaction that releases a gas.
33. (C) The National University of Singapore (NUS) has topped the full list of the top 300 institutions in the Times Higher Education (THE)'s Asia University ranking 2017. From India, Indian Institute of Science (IISc) Bangalore ranked at 27th while IIT Bombay secured 42nd rank. For the first time, India has become the 3rd most-represented nation with 33 universities in the ranking.
34. (A) The Chief Minister of Assam, Sarbananda Sonowal has recently launched initiatives to develop Majuli as India's first carbon neutral district and as a biodiversity heritage. Apart from this, Assam government has also launch "Forests are Lives" campaign to celebrate the importance of Assam's rich forest and biodiversity.
35. (C) One can use the MAX function to find the highest number in a series of numbers.
36. (D) Some titles for traditional Islamic leaders include Caliph, Imam, Sheikh, Mufti, Mujtahid and Allamah. The titles of "Ayatollah" and "Grand Ayatollah" exist only in the Shiite sect of Islam. Islamic religious leaders come in a variety of types due to the absence of an organized hierarchical structure, such as a church in Christianity. The Imam is the most popular leadership position in Islam. It denotes one who leads worship and offers advice within a community in the Sunni sect. The Shias, on the other hand, believe that Imams are descendants of Muhammad. Caliph refers to the supreme religious and political figure in a caliphate, a sovereign state encompassing the entirety of the Muslim nation, called the "Ummah."
37. (D) Duncan Passage is a strait in the Indian Ocean. It separates Rutland Island (part of Great Andaman) to the north and Little Andaman to the south. West of Duncan Passage is the Bay of Bengal. East is the Andaman Sea.
38. (A) Decorum means maintaining proper behaviour. Interpellation means formal right of a Parliament to submit formal question to the government. Crossing the floor means to vote against the party lines. Yielding the floor means the speaker giving part of his or her speaking time to another speaker. While this practice is allowed in some legislative bodies, it is not allowed in deliberative assemblies, unless specifically authorized in the rules.
39. (D) John McCloy was the Bank's President at that time when World Bank loan was received by France.
40. (A) Cloudy nights are warmer than clear nights because, the cloud cover provides a shield which act as an insulator and store up the heat radiated by the earth and do not permit heat to escape.
41. (B) Tritium is a radioactive isotope of hydrogen. The name of this isotope is formed from the Greek word "tritros" meaning "third".
43. (C) Roger Federer has won the 2017 ATP Indian Wells Masters title by defeating Stan Wawrinka in the final by 6-4, 7-5. With this win, Federer joined Novak Djokovic as the only man to win five Indian Wells titles. Earlier, he won this title consecutively three times between 2004 and 2006 and in 2012. At 35, Federer is the oldest ATP player to win one of the elite Masters titles, supplanting Andre Agassi who was 34 when he won in Cincinnati in 2004.
44. (C) Gandhiji's greatest contribution to the social thought of this century is perhaps his insistence on decentralization of the means of production (economic power). It is in the nature of large-scale industries to centralize economic power in the hands of a few individuals. Under capitalism this power comes to be concentrated in the hands of individual capitalists and under socialism, it is arrogated by managers, technocrats and bureaucrats.
45. (D) Cedar is found in Canada, Douglas fir is found in Mexico, Mahogany is found in Myanmar. Teak is found in Honduras.
46. (B) Political scientists speculate that proportional representation leads logically to multi-party systems, since it allows new parties to build a niche in the legislature.

48. (C) The word 'atmosphere' comes from the Greek 'atomos' meaning vapour and 'sphaera' meaning sphere. It is the mixture of gases that surround the sphere of the gases extending to a height of about 200km. The major gases in the atmosphere are nitrogen, oxygen, argon and carbon dioxide. It also contains minor or trace amounts of other elements in compounds like nitrogen and sulphur, hydrocarbons and particulates.

50. (C) Yogi Adityanath has been sworn-in as the 21st Chief Minister of Uttar Pradesh (UP). Apart from this, BJP's state unit chief Keshav Prasad Maurya and party's national vice president Dinesh Sharma also took charge as deputy chief ministers of UP.

51. (C) Percentage increase

$$= \frac{120 - 96}{96} \times 100 = \frac{24}{96} \times 100 = 25\%$$

52. (D) Percentage decrease

$$= \frac{250 - 200}{250} \times 100 = \frac{50}{250} \times 100 = 20\%$$

53. (B) Total production of toys in 2015 = 670 thousand  
 Total production of toys in 2016 = 750 thousand  
 percentage increase

$$= \frac{750 - 670}{670} \times 100 = \frac{8000}{67} = 119.4$$

54. (C) Let total salary = 1100  
 Expenditure = 600  
 saving = 500

$$\text{Expenditure on food} = \frac{20}{100} \times 600 = ₹ 120$$

$$\text{expenditure on clothes} = \frac{40}{100} \times 600 = ₹ 240$$

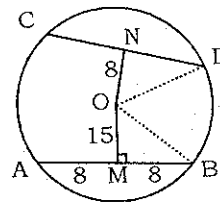
$$\text{Money deposited in bank} = \frac{60}{100} \times 500 = ₹ 300$$

∴ Required percentage

$$= \frac{\text{Money spent on clothes}}{\text{Amount deposited in bank}} \times 100$$

$$= \frac{240}{300} \times 100 = 80\%$$

55. (B)



$$OB = \sqrt{15^2 + 8^2}$$

$$= \sqrt{225 + 64}$$

$$= \sqrt{289}$$

$$= 17 \text{ cm}$$

∴ OB & OD are radius of circle.

$$DN = \sqrt{17^2 - 8^2}$$

$$= \sqrt{289 - 64}$$

$$= \sqrt{225}$$

$$= 15 \text{ cm}$$

$$CD = CN + DN$$

$$= 15 + 15$$

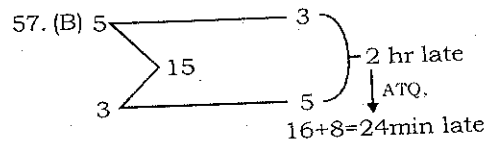
$$= 30 \text{ cm}$$

56. (C) C.P of shopkeeper = ₹  $\frac{20}{24} = ₹ \frac{5}{6}$

S.P of shopkeeper = ₹  $\frac{24}{20} = ₹ \frac{6}{5}$

$$\therefore \text{Profit \%} = \frac{\left(\frac{6}{5} - \frac{5}{6}\right)}{\frac{5}{6}} \times 100$$

$$= \frac{11}{30} \times 100 \times \frac{6}{5} = 44\%$$



$$\therefore \frac{24}{120} = \frac{1}{5}$$

∴ Required distance =  $15 \times \frac{1}{5} = 3 \text{ kms.}$

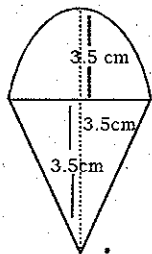
58. (A)  $\cos \theta = \frac{\text{Base}}{\text{hypotenuse}} = \frac{60}{61}$

$$\therefore \text{Perpendicular} = \sqrt{(61)^2 - (60)^2}$$

$$= \sqrt{3721 - 3600} = \sqrt{121} = 11$$

$$\therefore \cot(90^\circ - \theta) = \tan \theta = \frac{\text{Perpendicular}}{\text{Base}} = \frac{11}{60}$$

59. (C)



Height of hemispherical part  
= 3.5 cm = radius of hemispherical part  
ATQ,

Radius of hemispherical part = height of the  
cone  
= 3.5 cm

∴ Volume of ice cream = Volume of cone  
+ hemispherical part

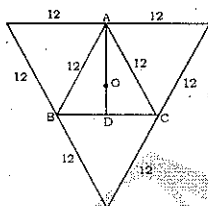
$$= \frac{1}{3} \pi r^2 h + \frac{2}{3} \pi r^3$$

$$= \frac{1}{3} \pi r^2 (h + 2r)$$

$$= \frac{1}{3} \times \frac{22}{7} \times 3.5 \times 3.5 (3.5 + 2 \times 3.5)$$

$$= 134.75 \text{ cm}^3$$

60. (B)



Area of equilateral triangle

$$= \frac{\sqrt{3}}{4} a^2 = \frac{\sqrt{3}}{4} \times (12)^2 = 36\sqrt{3}$$

Now, the area of a regular tetrahedron

$$= 4 \times 36\sqrt{3} = 144\sqrt{3} \text{ cm}^2$$

61. (D)  $x + \frac{1}{2x} = 3$

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

$$\Rightarrow 2x + \frac{1}{x} = 6$$

$$\Rightarrow 8x^3 + \frac{1}{x^3} = 6^3 - 3 \times 2x \times \frac{1}{x} \times 6$$

$$= 216 - 36$$

$$= 180$$

$$\therefore \text{Square root of } 8x^3 + \frac{1}{x^3} = \sqrt{180} = 6\sqrt{5}$$

62. (A) Formula to be used here is,

$$\frac{(2n-4) \times 90}{n} = \frac{(2 \times 7 - 4) \times 90}{7}$$

$$= \frac{900}{7} = 128.57^\circ$$

63. (D) Let the amount invested at the rate of 6% = x  
ATQ,

$$(10000 - x) \times \frac{5}{100} - \frac{x \times 6}{100} = 49$$

$$\Rightarrow 500 - \frac{5x}{100} - \frac{6x}{100} = 49$$

$$\Rightarrow \frac{11x}{100} = 451$$

$$\Rightarrow x = ₹ 4100$$

Hence the amount invested at 6% = ₹ 4100

64. (A) Average speed =  $\frac{\text{Total distance}}{\text{Total time}}$

$$= \frac{36 + 36 + 36}{\frac{36}{6} + \frac{36}{9} + \frac{36}{12}} = \frac{108}{6 + 4 + 3} = \frac{108}{13} = 8\frac{4}{13} \text{ km/hr}$$

65. (C) Let C.P of article = 100 unit

∴ Total profit

$$= 100 \times \frac{3}{4} \times \frac{12}{100} - 100 \times \frac{1}{4} \times \frac{16}{100}$$

$$= 9 - 4 = 5 \text{ unit}$$

Now ATQ,

$$5 \text{ unit} \rightarrow ₹ 55$$

$$\therefore 100 \text{ unit} \rightarrow \frac{55}{5} \times 100 = ₹ 1100$$

66. (D) Minimum value =  $(\sqrt{121} + \sqrt{81})^2$   
=  $(20)^2 = 400$

67. (C) Interest = ₹ (81 - 63) = ₹ 18

Let the time be t years

$$\text{Then, } 18 = \frac{63 \times 25 \times t}{4 \times 100}$$

$$\Rightarrow t = \frac{18 \times 400}{63 \times 25} = 4\frac{4}{7} \text{ years}$$

68. (B)  $x = a \cos \theta$ ,  $y = b \sin \theta$

$$\Rightarrow b^2 x^2 + a^2 y^2 = b^2 a^2 \cos^2 \theta + a^2 b^2 \sin^2 \theta$$

$$= a^2 b^2 (\cos^2 \theta + \sin^2 \theta)$$

$$= a^2 b^2 \times 1 = a^2 b^2$$

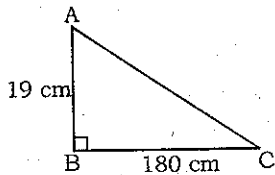
$$\text{Now } \frac{a^2 y^2 + b^2 x^2}{a^2 b^2} = \frac{a^2 b^2}{a^2 b^2} = 1$$

69. (C) Distance covered =  $54 \times \frac{7}{2}$

$$2\pi r = 189 \text{ metre}$$

$$\Rightarrow r = \frac{189 \times 7}{2 \times 22} = 30.06 = 30 \text{ (approx) metres}$$

70. (B)



$$AC = \sqrt{19^2 + 180^2} = 181 \text{ cm}$$

$$\therefore \text{Circum radius} = \frac{181}{2} = 90.5 \text{ cm}$$

(as it is mid-point of hypotenuse).

71. (C) Total runs =  $20 \times 8.6 = 172$

Total runs in 15 overs

$$= 15 \times 7 = 105$$

Runs to be scored in the next 5 overs

$$= 172 - 105 = 67$$

$\therefore$  Now, required run-rate to win the match

$$= \frac{67}{5} = 13.4$$

72. (B)	<b>C.P</b>	<b>S.P</b>
	100	108
	80	112
		4
		$\times 130$
		520

$$\therefore \text{Initial cost price} = 100 \times 130 = ₹ 13,000$$

73. (B) Between 100 and 200 are 105, 112, ..., 196

Let number of terms =  $n$

$$\therefore 196 = 105 + (n-1)7$$

$$\Rightarrow n-1 = \frac{196-105}{7} = 13$$

$$\Rightarrow n = 14$$

$\therefore$  Required number of terms = 14

74. (D) A : B = 1 : 2 = 3 : 6

B : C = 3 : 4 = 6 : 8

C : D = 2 : 3 = 8 : 12

D : E = 3 : 4 = 12 : 16

$$\Rightarrow A : B : C : D : E = 3 : 6 : 8 : 12 : 16$$

$$\therefore A : E = 3 : 16$$

75. (D)  $\cos A + \sin A = \sqrt{2} \cos A$

$$\Rightarrow \sin A = (\sqrt{2} - 1) \cos A$$

$$\Rightarrow \frac{\sin A}{\sqrt{2} - 1} = \cos A$$

$$\Rightarrow \tan A = \sqrt{2} - 1$$

$$\Rightarrow \tan^2 A = 2 + 1 - 2\sqrt{2}$$

$$\Rightarrow \tan^2 A + 1 = 3 - 2\sqrt{2} + 1$$

$$\Rightarrow \sec^2 A = 4 - 2\sqrt{2}$$

**MEANINGS IN ALPHABETICAL ORDER**

WORDS	MEANING IN ENGLISH	MEANING IN HINDI
Ambush	to lie in wait, lurk, way lay	घात लगाना
Anomaly	something that deviates from normal	अनियमितता
Camouflage	concealment by means of disguise	छद्मावरण करना
Criticize	to express disapproval	निंदा करना
Cuddle	to hold close in affection desired end	गले से सटा लेना
Exaggerate	overstate, overemphasize	बड़ा चढा कर कहना
Hanky Panky	dishonest behaviour	छल-कपट
Heterogeneity	the quality of being diverse in character or content	बिभिन्नता
Invigorate	to give life and energy to animate	स्फूर्ति से भरा हुआ
Jugglery	Manipulation or trickery especially to achieve a	धोखे बाजी
Malapropism	the mistaken use of word in place of a similar word	गलती से ग़लत शब्द का प्रयोग करना
Neologism	a newly coined word	नवशब्द
Parasite	an organism that lives on other organism for benefits	परोपजीवी, उपजीवी
Plebiscite	vote, referendum	जनमत संग्रह
Provoke	to incite to anger	उकसाना
Pun	to make a joke by using a word in two senses	दो अर्थों के बाँतो से मजाक बनाना
Relinquish	to give over possession or control of	छोड़ देना
Renounce	to give up, refuse or resign by formal declaration	त्याग देना
Resort	to have recourse	रास्ता अपनाना
Revined	To repost or share a video	किसी वीडियो को दोबारा डालना
Symbiotic	A cooperative relationship (between two groups)	सहजीवी
Vivified	to endowed with life, animate	जान डाल देना
Way lay	to lie in wait for or attack from ambush	घात लगाना

Answer Key (12 APs - 17)

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