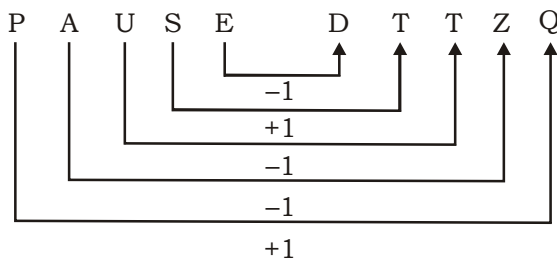
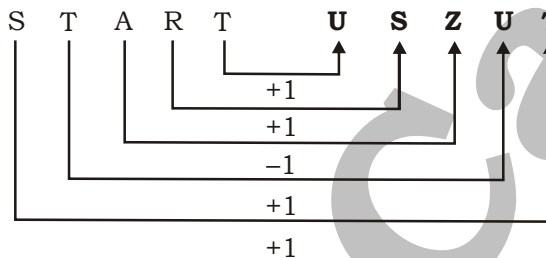


SSC MOCK TEST - 340 (SOLUTION)

1. (A) As,
 $28 \Rightarrow 28 \times 2 = 56 \Rightarrow 5 + 6 = 11$
 Similarly,
 $35 \Rightarrow 35 \times 2 = 70 \Rightarrow 7 + 0 = 7$
2. (C) First is the opposite of second.
3. (D) (A) $27 \Rightarrow 2 + 7 = 9 \Rightarrow (3)^2$ (Square number)
 (B) $97 \Rightarrow 9 + 7 = 16 \Rightarrow (4)^2$ (Square number)
 (C) $31 \Rightarrow 3 + 1 = 4 \Rightarrow (2)^2$ (Square number)
 (D) $39 \Rightarrow 3 + 9 = 12$ (Not square number)
4. (B) Except April, others have 31 days.
5. (A) As,



Similarly,



6. (A) $95 + 19 = 114$
 $114 + 38 = 152$
 $152 + 57 = 209$
 $209 + 76 = 285$
 $285 + 95 = \mathbf{380}$

7. (D) D E G J N S
 $\uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow$
 $+1 \quad +2 \quad +3 \quad +4 \quad +5$

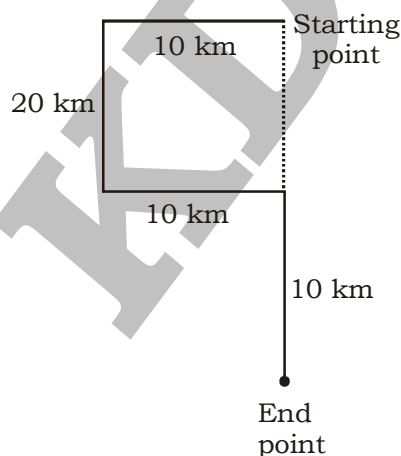
8. (B)
-
- E
|
C
/ \
A D
|
B

Hence, C is the nephew of E.

9. (A) As,
 $18 \Rightarrow 18 \div (1 + 8) = 2$
 $(2)^3 = 8$
 Similarly,
 $27 \Rightarrow 27 \div (2 + 7) = 3$
 $(3)^3 = 27$
10. (A) dlmpz/dlmpz/dlmpz
11. (B)
12. (C) **In the first column,**
 $(18 - 12)^3 = 216$
In the second column,
 $(17 - 13)^3 = 64$
In the third column,
 $(15 - 7)^3 = 512$
13. (A) $18 \div 6 \times 12 + 5 - 4 = 37$
 After changing 18 and 12 to each other,
 $12 \div 6 \times 18 + 5 - 4 = 37$
 $2 \times 18 + 5 - 4 = 37$
 $41 - 4 = 37$
 $37 = 37$
14. (B) 3. Adress \rightarrow 4. Affective \rightarrow 1. Affiliated \rightarrow 2. Analogous
15. (C) Age of A = 17 years
 Age of R = $17 - 5 = 12$ years
 Age of C = $12 + 3 = 15$ years
16. (C)
17. (D) On 31st December, 2005 was Saturday.
 Number of odd days from 2006 to 2009 = $(1 + 1 + 2 + 1) = 5$ days
 On 31 December 2004, it was Thursday.
 Thus, 1 January 2010 was Friday.

18. (A)

19. (D)



He is in South direction and distance is 30 km with respect to starting point.

20. (A) Total number of students = $(28 + 17) - 1 = 44$
21. (B) As,
 $(5)^2 + (12)^2 = 13^2$
Similarly,
 $(12)^2 + (16)^2 = 20^2$
22. (A) 23. (C) 24. (B) 25. (D)
27. (D) In Mesopotamian Civilization "every city had a patron-god of its own. The god of Ur (one of the greatest cities of Mesopotami (A) was Nannar. The temple of the god, called Ziggurat meaning the 'Hill of Heaven', was built of bricks on an artificial area. The Ziggurat in Ur was more than 20 metres high and in three storeys.
30. (C) Ibrahim Adil Shah II of the Adil Shahi dynasty, was the king of Bijapur Sultanate.
32. (D) According to modern periodic law, the properties of elements are a periodic function of their atomic numbers. Atomic number is the number of protons in the nucleus of an atom, which is characteristic of a chemical element and determines its place in the periodic table.
34. (D) Vijayanagar's arch rival were Bahmani Sultans with whom they fought over Tungabhadra Doab (between Krishna and Tungabhadra(A), Raichur Doab (Krishna-Godavari delta(A) and Marathwada. Vijayanagar - Bahmani contest was started by Bukka-I in 1367 when he attacked the Bahmani fortress at Mudkal.
36. (D) Bhaichung Bhutia (born 15 December 1976), also spelled as Baichung Bhutia, is an Indian former professional footballer who played as a striker. Bhutia is considered as the torchbearer of Indian football in the international arena. He is often nicknamed the Sikkimese Sniper because of his shooting skills in football.
38. (A) The general physical relief is likely to be the boldest in The Himalayan Mountain Complex.
40. (B) In March 1999 Brian Jones and Bertrand Piccard made the first non-stop flight around the world in a balloon. Their dangerous journey began in Switzerland and finished over Africa. It took just 20 days.
41. (C) The Rath Yatra (or Car Festival of Puri) is held at Puri (Odisha(A) in Asharh (June-July). The images of Jagannath, his brother Balaram and sister Subhadra are taken out in procession from the temple on three massive wooden chariots.
42. (B) The headquarters of the bank is at 6 ADB Avenue, Mandaluyong, Metro Manila, Philippines, and it has 42 field offices in Asia and the Pacific and representative offices in Washington, Frankfurt, Tokyo and Sydney. The bank employs about 3,000 people, representing 60 of its 68 members.
43. (D) Huntington's disease. ALS (amyotrophic lateral sclerosis), or Lou Gehrig's disease. Parkinson's disease. all forms of dementia.
44. (A) The Lok Sabha, unless sooner dissolved, continues to operate for five years for time being from the date appointed for its first meeting. However, while a proclamation of emergency is in operation, this period may be extended by Parliament by law or decree.
46. (C) The three principal utopian socialists were the Frenchmen Henri de Saint-Simon (1760-1825) and Charles Fourier (1772-1837) and the British factory owner Robert Owen (1771-1858)
48. (B) The masterpiece of Chola sculpture is the famous Natraja or the Dancing Shiva image at the great temple of Chidambaram. The Nataraja has been described as the "cutura epitome" of the Chola period.
51. (B) Ratio of profit between Priti and Raghav = $5000 \times 12 : 8000 \times 5$
 $= 60 : 40 = 3 : 2$

$$\therefore \text{Share of Raghav in profit} = \frac{1500}{5} \times 2 = ₹ 600$$

52. (C) Let the maximum marks be x .

ATQ,

$$x \times \frac{20}{100} + 10 = x \times \frac{42}{100} - x \times \frac{12}{100}$$

$$\frac{20x}{100} + 10 = \frac{30x}{100}$$

$$\frac{30x}{100} - \frac{20x}{100} = 10$$

$$\frac{10x}{100} = 10$$

$$\therefore x = 100$$

53. (C) Let the quantity of first, second and third variety be $2x$, $4x$ and $3x$ kg respectively.

$$\text{Total cost price} = 50 \times 2x + 20 \times 4x + 30 \times 3x = 100x + 80x + 90x = ₹ 270x$$

$$\text{Total selling price} = 33 \times (2x + 4x + 3x) = 33 \times 9x = ₹ 297x$$

$$\therefore \text{Profit\%} = \left(\frac{297x - 270x}{270x} \times 100 \right) \% = 10\%$$

54. (B) $P = ₹ 15625$

$$R = 4\%$$

$$A = ₹ 17576$$

$$T = ?$$

We know that,

$$A = P \left(1 + \frac{R}{100} \right)^T$$

$$17576 = 15625 \left(1 + \frac{4}{100} \right)^T$$

$$\frac{17576}{15625} = \left(1 + \frac{4}{100} \right)^T$$

$$\left(\frac{26}{25} \right)^3 = \left(\frac{26}{25} \right)^T$$

$$\therefore T = 3 \text{ years}$$

55. (B) 50% of $(x - y) = 30\%$ of $(x + y)$

$$\frac{50}{100}(x - y) = \frac{30}{100}(x + y)$$

$$\frac{x - y}{2} = \frac{3x + 3y}{10}$$

$$10x - 10y = 6x + 6y$$

$$4x = 16y$$

$$\frac{x}{y} = \frac{16}{4}$$

$$\therefore \text{Required\%} = \left(\frac{4}{16} \times 100 \right) \% = 25\%$$

56. (C) $\left(1 - \frac{1}{3}\right)\left(1 - \frac{1}{4}\right)\left(1 - \frac{1}{5}\right) \dots \left(1 - \frac{1}{99}\right)\left(1 - \frac{1}{100}\right)$
 $= \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \dots \times \frac{98}{99} \times \frac{99}{100} = 2 \times \frac{1}{100} = \frac{1}{50}$

57. (D) Let the M.P be ₹ 100.

\therefore Cost price = $100 \times \frac{3}{4} = ₹ 75$

Selling price = $100 \times \frac{120}{100} = ₹ 120$

Profit% = $\left(\frac{120 - 75}{75} \times 100\right)\% = \left(\frac{45}{75} \times 100\right)\% = 60\%$

58. (A) Let the original speed of the aircraft be x km/hr.

Then new speed = (x - 200) km/hr

Duration of flight at original speed = $\left(\frac{600}{x}\right)$ hour

Duration of flight at reduced speed = $\left(\frac{600}{x - 200}\right)$ hour

ATQ,

$$\frac{600}{x - 200} - \frac{600}{x} = \frac{1}{2}$$

$$\frac{600x - 600(x - 20)}{x(x - 200)} = \frac{1}{2}$$

$$\frac{120000}{x^2 - 200x} = \frac{1}{2}$$

$$x^2 - 200x - 240000 = 0$$

$$x^2 - 600x + 400x - 240000 = 0$$

$$(x - 600)(x + 400) = 0 \quad (\text{Ignore the -ve value of } x)$$

$$x = 600 \text{ or } x = -400$$

$\therefore x = 600$

So, the original speed of the aircraft was 600 km/hr.

Hence, duration of flight = $\left(\frac{600}{x}\right)$ hour = $\left(\frac{600}{60}\right)$ hour = 1 hour

59. (B) Volume of the sphere = Volume of the cylinder

$$\frac{4}{3}\pi r^3 = \pi r^2 h \quad [\because \text{Their radii are equal}]$$

$$\frac{r}{h} = \frac{3}{4}$$

$$r : h = 3 : 4$$

60. (D) $l = 28$ cm
 $r = 14$ cm

$$l = \frac{\pi r \theta}{180}$$

$$28 = \frac{22}{7} \times \frac{14 \times \theta}{180}$$

$$\theta = \frac{28 \times 180 \times 7}{22 \times 14} = \frac{7 \times 180}{11}$$

$$\text{Sector area} = \frac{\pi r^2 \theta}{360} = \frac{22}{7} \times \frac{14 \times 14}{360} \times \frac{7 \times 180}{11} = 196 \text{ cm}^2$$

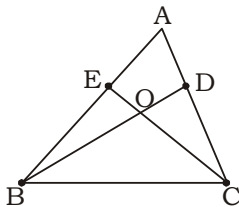
61. (A) Area of the paper = Surface area of the cylinder

$$22 \times 10 = 2 \times \frac{22}{7} \times r \times 10$$

$$r = \frac{7}{2} \text{ cm}$$

$$\text{Volume of the cylinder} = \pi r^2 h = \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times 10 = 385 \text{ cm}^3$$

62. (D)



Median BD = median CE (given)

$$\frac{2}{3} BD = \frac{2}{3} CE$$

$$BO = CO$$

$\angle OBC = \angle OCB$ (Angles opposite to equal sides of a Δ are equal)

In ΔBCD and ΔCBE ,

$$BD = CE \text{ (given)}$$

$$BC = CB \text{ (Common)}$$

$$\angle DBC = \angle ECB \text{ (proved above)}$$

$$\Delta BCD \cong \Delta CBE$$

$$DC = BE \text{ (by CPCT)}$$

$$2DC = 2BE \quad (\text{AC} = \text{AB} = 4 \text{ cm})$$

63. (B) $\sin \theta + \cos \theta = \sqrt{2} \sin (90^\circ - \theta)$

$$\sin \theta = \sqrt{2} \cos \theta - \cos \theta$$

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

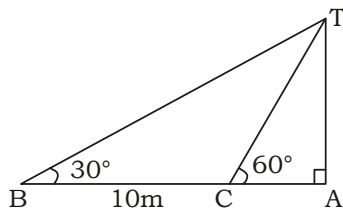
$$\frac{\cos \theta}{\sin \theta} = \frac{1}{\sqrt{2}-1}$$

$$\cos \theta = \frac{1}{\sqrt{2}-1} = \frac{\sqrt{2}+1}{(\sqrt{2}-1)(\sqrt{2}+1)} = \sqrt{2}+1$$

64. (B)
$$\frac{x^4+1}{x^5-\frac{1}{x}} = \frac{\frac{x^4+1}{x^2}}{\frac{x^5+\frac{1}{x}}{x^2}}$$

$$= \frac{x^2 - \frac{1}{x^2}}{x^3 - \frac{1}{x^3}} = \frac{\left(x - \frac{1}{x^2}\right)^3 + 2}{\left(x - \frac{1}{x}\right)^3 + \left(x - \frac{1}{x}\right)} = \frac{3^2+2}{3^3+9} = \frac{11}{36}$$

65. (B)



Speed of the train = 60 km/h

$$BC = 60 \times \frac{10}{60} = 10 \text{ km}$$

In $\triangle TAC$,

$$\tan 60^\circ = \frac{TA}{CA}$$

$$\sqrt{3} = \frac{TA}{CA}$$

$$CA = \frac{TA}{\sqrt{3}} \text{ km}$$

In $\triangle TAB$,

$$\tan 30^\circ = \frac{TA}{BA}$$

$$\frac{1}{\sqrt{3}} = \frac{TA}{BC+CA}$$

$$\frac{1}{\sqrt{3}} = \frac{TA}{\frac{TA}{\sqrt{3}}+10}$$

$$3TA = TA + 10\sqrt{3}$$

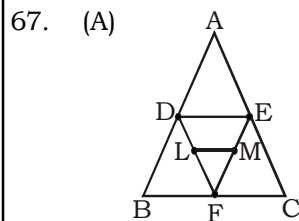
$$TA = 5\sqrt{3} \text{ km}$$

66. (A)
$$\frac{a + 2\sqrt{ab} + b}{\sqrt{a} + \sqrt{b}} + \frac{a - 2\sqrt{ab} + b}{\sqrt{a} - \sqrt{b}}$$

$$= \frac{(\sqrt{a} + \sqrt{b})^2}{\sqrt{a} + \sqrt{b}} + \frac{(\sqrt{a} - \sqrt{b})^2}{\sqrt{a} - \sqrt{b}}$$

$$= \sqrt{a} + \sqrt{b} + \sqrt{a} - \sqrt{b}$$

$$= 2\sqrt{a} = 2\sqrt{9} = 6$$



$$\frac{AB}{AD} = \frac{BC}{DE}$$

[By Similar triangles]

$$\frac{2}{1} = \frac{BC}{DE}$$

$$BC = 2DE$$

$$\frac{LM}{DE} = \frac{LF}{DF}$$

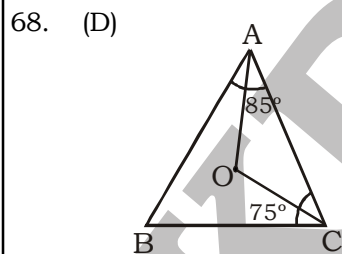
[By Similar triangles]

$$\frac{LM}{DE} = \frac{1}{2}$$

$$DE = 2LM$$

$$2 \times 2 LM = BC$$

$$LM : BC = 1 : 4$$



In $\triangle ABC$,

$$\angle ABC = 180^\circ - 85^\circ - 75^\circ = 20^\circ$$

$$\angle AOC = 2 \times \angle ABC = 2 \times 20^\circ = 40^\circ$$

$$\angle OAC = \frac{1}{2}(180^\circ - \angle AOC)$$

$$= \frac{1}{2}(180^\circ - 40^\circ) = 70^\circ$$

69. (C) Length of tree having 80 m shadow = $\frac{24}{18} \times 60 = 80$ m

70. (A) Fourth proportional = $\frac{9}{16} \times 8 = 4.5$

71. (A) Let selling price of a chair = ₹ x

$$\text{So total selling price} = 30x + 20x \times \frac{3}{4} = ₹ 45x$$

$$\text{Selling price} = 5000 + \frac{35}{100} \times 5000 = ₹ 6750$$

$$\text{Selling price of each a chair} = \frac{6750}{45} = ₹ 150$$

72. (B) Required students = $30 + 30 + 20 + 40 = 120$

73. (C) Required ratio = $60 : 50 = 6 : 5$

74. (D) Required difference = $(60 + 40) - (40 + 50) = 10$

75. (A) Required ratio = $40 : 50 : 50 = 4 : 5 : 5$

MEANINGS IN ALPHABETICAL ORDER

Acquainted	make someone aware of or familiar with	परिचित
Acquitted	free from a criminal charge by a verdict of not guilty affairs of state or diplomatic occasions	बरी, दोषमुक्त
Affluent	wealthy against surprise attack	धनी
Circuitous	longer than the most direct way	घुमावदार
Congenial	pleasant because of similar to one's interest faults or weaknesses from the main force, used especially as a guard	अनुकूल, सौहार्दपूर्ण
Gradual	taking place or progressing slowly	क्रमिक
Indulge	allow oneself to enjoy the pleasure of something institution in which you use humour to show their	लिप्त होना
Mechanism	a natural or established process by which something	तंत्र
Mellow	pleasantly smooth or soft; free from harshness	कोमल
Monotonous	dull, tedious, and repetitious	नीरस, उबाऊ
Outpost	a small military camp or position at some distance	चौकी
Plaintive	sounding sad and mournful	शोक भरा, विलापी
Protocol	the official procedure or system of rules governing	अनुशासन तंत्र की क्रियाविधि
Sap	gradually weaken or destroy	कमजोर करना
Satire	a way of criticizing a person, an idea or an takes place or is brought about	व्यंग्य

SSC MOCK TEST - 340 (ANSWER KEY)

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