

SSC MOCK TEST - 344 (SOLUTION)

1. (B) As,

$$N \rightarrow \frac{14}{2} = 7 \rightarrow (7)^2 = 49$$

$$B \rightarrow \frac{2}{2} = 1 \rightarrow (1)^2 = 1$$

$$P \rightarrow \frac{16}{2} = 8 \rightarrow (8)^2 = 64$$

$$D \rightarrow \frac{4}{2} = 2 \rightarrow (2)^2 = 4$$

Similarly,

$$R \rightarrow \frac{18}{2} = 9 \rightarrow (9)^2 = 81$$

$$F \rightarrow \frac{6}{2} = 3 \rightarrow (3)^2 = 9$$

$$T \rightarrow \frac{20}{2} = 10 \rightarrow (10)^2 = 100$$

$$H \rightarrow \frac{8}{2} = 4 \rightarrow (4)^2 = 16$$

2. (D) As,

$$\begin{array}{ccc} 1 & 5 & 3 \\ \downarrow & \downarrow & \downarrow \\ 1^2 + 5^2 - 3 \times 2 = 26 - 6 = 20 \end{array}$$

Similarly,

$$\begin{array}{ccc} 4 & 5 & 4 \\ \downarrow & \downarrow & \downarrow \\ (4)^2 + (5)^2 - 4 \times 2 = 41 - 8 = 33 \end{array}$$

3. (D) Fork, Knife and Bin are used in kitchen, while Sword is used in battle.

4. (C) Krone, Rial and Peso is a currency of Denmark, Iran and Argentina respectively, while 'Quito' is the capital of 'Ecuador'.

5. (C) Amrita's position from the left end $\rightarrow 3^{\text{rd}}$

Sumitra's position from the right end $\rightarrow 26^{\text{th}}$

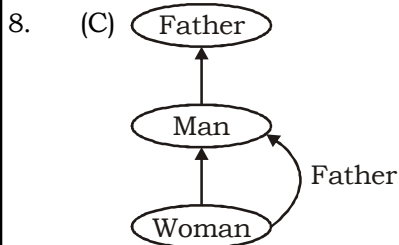
After changing Amrita's position from the left end $\rightarrow 35^{\text{th}}$

$$\therefore \text{Required Number of girls} = 35 + 26 - 1 = 60$$

6. (B) 3125, 3280, 3435, 5220, 5430, 5640, 3320, 3510, 3700

$$\begin{array}{ccccccccc} \curvearrowright & \curvearrowright & & \curvearrowright & \curvearrowright & & \curvearrowright & \curvearrowright & \\ +155 & +155 & & +210 & +210 & & +190 & +190 & \end{array}$$

7. (C) L I G F, P M K J, S P N M,
 $\begin{matrix} \swarrow & \searrow & \swarrow & \searrow & \swarrow & \searrow & \swarrow & \searrow \\ -3 & -2 & -1 & -3 & -2 & -1 & -3 & -2 & -1 \end{matrix}$



Hence, the woman is daughter of that man.

9. (C) It was Saturday on 31 December 2005.
 Number of odd days from 2006 to 2010 = 1 + 1 + 2 + 1 + 1 = 6
 It was Saturday + 6 = Friday on 31 December 2010.
 Hence, it was Sunday on 2 January 2011.

10. (C) HEMA/HEMA/HEMA/HEMA

11. (C)

<p>C $\xleftrightarrow{+1}$ D Consonant</p> <p>O $\xleftrightarrow{\text{Opposite}}$ L Vowel</p> <p>U $\xleftrightarrow{\text{Opposite}}$ F Vowel</p> <p>R $\xleftrightarrow{+2}$ T Consonant</p> <p>I $\xleftrightarrow{\text{Opposite}}$ R Vowel</p> <p>E $\xleftrightarrow{\text{Opposite}}$ V Vowel</p> <p>R $\xleftrightarrow{+3}$ U Consonant</p>	<p>P $\xleftrightarrow{+1}$ Q Consonant</p> <p>A $\xleftrightarrow{\text{Opposite}}$ Z Vowel</p> <p>R $\xleftrightarrow{+2}$ T Consonant</p> <p>E $\xleftrightarrow{\text{Opposite}}$ V Vowel</p> <p>N $\xleftrightarrow{+3}$ Q Consonant</p> <p>T $\xleftrightarrow{+4}$ X Consonant</p>
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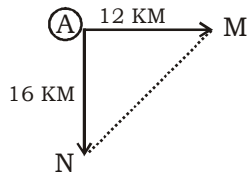
12. (D)

3	15	4	$3 \times 4 + 3 = 15$
7	38	5	$7 \times 5 + 3 = 38$
3	?	5	$3 \times 5 + 3 = 18$

13. (D)

		$\xrightarrow{+1}$		$\xrightarrow{+1}$	
49	5	64	6	81	7
\downarrow		\downarrow		\downarrow	
7 ²		8 ²		9 ²	
\uparrow		\uparrow		\uparrow	
	$\xrightarrow{+1}$		$\xrightarrow{+1}$		

14. (C)



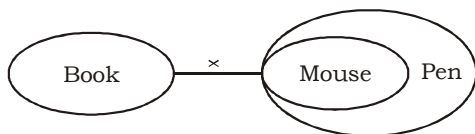
$$MN = \sqrt{(AM)^2 + (AN)^2} = \sqrt{(12)^2 + (16)^2} = \sqrt{144 + 256}$$

$$= \sqrt{400} = 20 \text{ km}$$

15. (D) 3. Karol Bagh → 1. Delhi → 4. North India → 2. India → 5. Asia

16. (C)

17. (A)



I. True II. False III. False

Hence, only conclusion I follows.

18. (D) 19. (B)

20. (A) Angle made by hour hand in $\frac{125}{12}$ hours = $\left(\frac{360}{12} \times \frac{125}{12}\right)^\circ = 312.5^\circ$

Angle made by minute hand in 25 minutes = $\left(\frac{360}{60} \times 25\right)^\circ = 150^\circ$

∴ Reflex angle = $360^\circ - (312.5^\circ - 150^\circ) = 360^\circ - 162.5^\circ = 197.5^\circ$

21. (B) 22. (A) 23. (A) 24. (C)

25. (B) From positions X and Y we conclude that 1, 5, 6 and 3 lie adjacent to 4. Therefore, 2 must lie opposite 4. From positions Y and Z we conclude that 4, 3, 2 and 5 lie adjacent to 6. Therefore, 1 must lie opposite 6. Thus, 2 lies opposite 4, 1 lies opposite 6 and consequently 5 lies opposite 3. As analysed above, the number on the face opposite 4 is 2. In position Y, since 4 lies on the top, therefore 2 must lie at the bottom face.

26. (B) Monopoly is a market form in which the market is dominated by a single seller for goods and services which has no substitutes and there are barriers for entry of a new seller as he himself is the law and price maker.

27. (B) In boxing, bleeder means "a boxer who gets cut easily" or "A fighter who is vulnerable to cuts".

28. (A) **Herpetology:** It is the branch concerned with the study of amphibians.

Ethology: It is the science of animal behaviour.

Mammology: It is Specialised science that deals with the study of mammals.

Morphology: It is The study of forms of things.

30. (C) Isohyets lines are imaginary lines joining places with same level of rainfalls. Isohyets is derived from the Greek word where hyets means Rainfall.

31. (C) Right to Equality in the Indian Constitution includes abolition of untouchability.

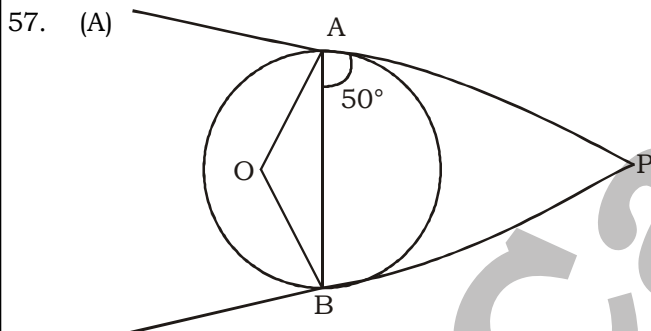
32. (D) Static friction is the friction that exists between a stationary object and the surface on which it's resting. Sliding friction refers to the resistance created by any two objects when sliding against each other. This friction is also known as kinetic friction. The sliding friction is less than static friction because of the interlocking of irregularities in the two surfaces.

33. (A) Indian Mughal paintings originated during the rule of Mughal Emperor, Humayun (1530-1540).
35. (B) India's first official census operation was undertaken in 1881. It has been conducted after every 10 years and it has been conducted 15 times from then. It includes acquiring and recording information about the members of a given population.
37. (D) Bast fibre (also called phloem fibre or skin fibre) is plant fibre collected from the phloem (the "inner bark", sometimes called "skin") or bast surrounding the stem of certain dicotyledonous plants.
38. (A) A change in which no new substances are formed is called physical Change. A physical change involves a change in physical properties.
40. (B) Anti-defection law is mentioned under 10th schedule of the Indian Constitution and was a 52nd amendment.
41. (B) The ozone layer or ozone shield is a region of Earth's stratosphere that absorbs most of the Sun's ultraviolet radiation.
42. (B) Kolkata Port is the oldest operating port in India built by the British East India Company. It was established in 1870. It is a riverine port. In the 19th century, this Port was the premier port in British India.
48. (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.
51. (D) Total of 4 terms = $40 \times 4 = 160$
 Let the first term = x
 Sum of the remaining terms = $3x$
 ATQ,
 $x + 3x = 160$
 $4x = 160$
 $x = \frac{160}{4} = 40$
52. (A) Let the distance travelled on the bicycle be x km.
 Distance travelled on foot = $(50 - x)$ km
 ATQ,
 $\frac{x}{10} + \frac{50 - x}{5} = 9$
 $\frac{x + 100 - 2x}{10} = 9$
 $-x + 100 = 90$
 $x = 10$ km
53. (B) Let $n = 7$, then condition satisfied.
 Hence, $7n = 7 \times 7 = 49$
 Now, $49 \div 5$, then remainder is 4.
 Let the number be $5x$.
 Then, The integer $n = 5x + 2$
 Take $x = 1$
 Then, $n = 7$
 The value of $7n = 49$
 49 divided by 5 leaves the remainder 4
 $\therefore 4$ is the remainder, if $7n$ is divided by 5 .

54. (A) $a + b = 9$ and $ab = 8$
 $(a + b)^3 = a^3 + b^3 + 3ab(a + b)$
 $9^3 = a^3 + b^3 + 3 \times 8(9)$
 $729 = a^3 + b^3 + 216$
 $\therefore a^3 + b^3 = 729 - 216 = 513$

55. (B) $(\operatorname{cosec} 60^\circ - \tan 45^\circ) \cot 30^\circ \tan 60^\circ$
 $= \left(\frac{2}{\sqrt{3}} - 1 \right) \sqrt{3} \times \sqrt{3}$
 $= \frac{2 - \sqrt{3}}{\sqrt{3}} \times 3 = \frac{6 - 3\sqrt{3}}{\sqrt{3}} = 2\sqrt{3} - 3$

56. (C) $(26 - 13 \times 2) \div 2 + 1 \times 4 + 5 \div 15 + 4$
 $= 0 \div 2 + 1 \times 4 + \frac{5}{15} \times 4$
 $= 4 + \frac{4}{3} = \frac{16}{3}$



$PA = PB$ and $\angle PAB = 50^\circ$
 $\angle PBA = \angle PAB$ (Angle opposite sides are equal)
 $\angle PBA = 50^\circ$
 In $\triangle PAB$,
 $\angle PBA + \angle PAB + \angle APB = 180^\circ$ (Angle sum property of triangle)
 $\angle APB = 180^\circ - 100^\circ$
 $\angle APB = 80^\circ$
 $\angle AOB + \angle APB = 180^\circ$ (Supplementary angles)
 $\angle AOB = 180^\circ - 80^\circ$
 $\therefore \angle AOB = 100^\circ$

58. (C) 12 men can complete in 12 days.

1 work 1 man can complete in 1 day $\frac{1}{12 \times 12}$ part of the work.

Men can complete in 6 days $\frac{6 \times 6}{12 \times 12}$ part of work = $\frac{1}{4}$ th of the work

Number of remaining men = 6

$$\text{Remaining work} = \frac{3}{4}$$

12 men can complete 1 work in 12 days

$$6 \text{ men can complete } \frac{3}{4} \text{ work in } \frac{12 \times 12 \times 3}{6 \times 4} = 18 \text{ days}$$

∴ Number of extra days = 18 - 6 = 12 days

59. (D) Let the two numbers are x and (25 - x).

LCM × HCF = Multiplication of two numbers

$$30 \times 5 = x \times (25 - x)$$

$$30 \times 5 = 25x - x^2$$

$$x^2 - 25x + 150 = 0$$

$$x^2 - 10x - 15x + 150 = 0$$

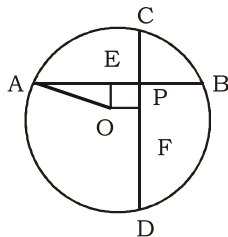
$$x(x - 10) - 15(x - 10) = 0$$

$$(x - 10)(x - 15) = 0$$

$$x = 10 \text{ and } 15$$

∴ Required difference = 15 - 10 = 5

60. (C)



As we can see from the diagram

$$OE^2 = OA^2 - AE^2$$

$$\text{Here, } OA = 15 \text{ cm and } AE = \frac{AB}{2} = \frac{20}{2} = 10 \text{ cm}$$

$$OE^2 = 15^2 - 10^2 = 125 \text{ cm}$$

$$\text{Similarly, } OF^2 = OD^2 - DF^2$$

$$= 225 - 144 = 81 \text{ cm}^2$$

Since, OEFP forms a rectangle

$$\therefore OP = \sqrt{125 + 81} = \sqrt{206} \text{ cm}$$

61. (B) Let the cost price of TV be ₹ 100.

$$\text{Marked price} = 100 \times \frac{130}{100} = ₹ 130$$

$$\text{Selling price} = 130 \times \frac{75}{100} = ₹ 97.50$$

$$\text{Loss} = 100 - 97.50 = ₹ 2.50$$

$$\therefore \text{Loss\%} = \left(\frac{2.50}{100} \times 100 \right) \% = 2.5\%$$

62. (D) Perimeter of rectangular plot = $2 \times (40 + 25) = 2 \times 65 = 130$ m
 Perimeter of square plot = $4 \times \text{side}$
 $4 \times \text{side} = 130$

$$\therefore \text{Side} = \frac{130}{4} = 32.5 \text{ m}$$

63. (A) Side of a cube = HCF of 6, 42, 45 = 3 cm

$$\therefore \text{Least possible number of cubes} = \frac{6 \times 42 \times 45}{3 \times 3 \times 3} = 420$$

64. (C) Filling Pipe $\frac{6}{42}$ 7
 Filling Pipe + leakage $\frac{7}{6}$ 1

$$\therefore \text{Time taken by leakage to empty the tank} = \frac{42}{1} = 42 \text{ hours}$$

65. (D) Percentage discount = $\left(\frac{\text{MP} - \text{SP}}{\text{MP}} \times 100 \right) \%$

$$= \left(\frac{700 - 625}{700} \times 100 \right) \% = 10.71\%$$

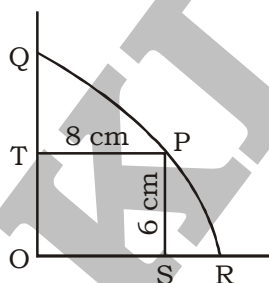
66. (D) Required speed = $\left(\frac{100 + 120}{40} \right) \text{ m/s}$

$$= \left(\frac{220}{40} \times \frac{18}{5} \right) \text{ km/h} = 19.8 \text{ km/h}$$

67. (D) Average age of the family = $\frac{67 \times 2 + 35 \times 2 + 6 \times 3}{2 + 2 + 3}$

$$= \frac{222}{7} = 31 \frac{5}{7} \text{ years}$$

68. (B)

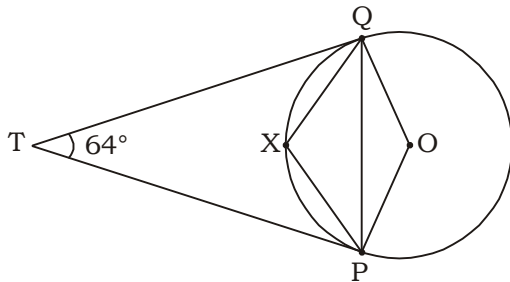


From the figure,

$$OP = \sqrt{6^2 + 8^2} = 10 \text{ cm}$$

$$\text{Length of the Arc OR} = \frac{\pi r \theta}{180} = \frac{\pi \times 10 \times 90}{180} = 5\pi \text{ cm}$$

69. (A)



$$\angle PTQ + \angle POQ = 180^\circ$$

$$\angle POQ = 180 - 64 = 116^\circ$$

$$\therefore \angle PXQ = 180^\circ - \frac{1}{2} \angle POQ$$

$$= 180^\circ - \frac{1}{2} \times 116^\circ = 122^\circ$$

70. (C) $\frac{a}{b} = \frac{\sqrt{5}+1}{\sqrt{5}-1} \times \frac{\sqrt{5}+1}{\sqrt{5}-1}$

$$\frac{a}{b} = \frac{(\sqrt{5}+1)^2}{(\sqrt{5}-1)^2}$$

$$\frac{a}{b} = \frac{5+1+2\sqrt{5}}{5+1-2\sqrt{5}}$$

$$\frac{a}{b} = \frac{6+2\sqrt{5}}{6-2\sqrt{5}}$$

$$\frac{a}{b} = \frac{3+\sqrt{5}}{3-\sqrt{5}}$$

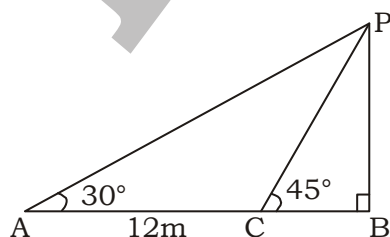
Applying componendo and dividendo, we have

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

$$\frac{a+b}{a-b} = \frac{6}{2\sqrt{5}} = \frac{3}{\sqrt{5}}$$

$$\left(\frac{a-b}{a+b}\right)^2 = \left(\frac{\sqrt{5}}{3}\right)^2 = \frac{5}{9}$$

71. (A)



In $\triangle PBC$,

$$\tan 45^\circ = \frac{PB}{BC}$$

$$1 = \frac{PB}{BC}$$

$$PB = BC$$

In $\triangle PBA$,

$$\tan 30^\circ = \frac{PB}{AB}$$

$$\frac{PB}{AC + CB} = \frac{1}{\sqrt{3}}$$

$$\frac{PB}{12 + PB} = \frac{1}{\sqrt{3}}$$

$$\therefore PB = \frac{12}{\sqrt{3} - 1} = 6(\sqrt{3} + 1)$$

$$= 6 \times 2.732 = 16.392 \text{ m}$$

72. (C) Expenditure on materials and taxes together = $(22 + 36)\%$ of 500 = 58% of 500
 $= 0.58 \times 500 = ₹ 290$ crores

73. (C) Required angle = $\left(\frac{36}{100} \times 360^\circ\right) = 129.6^\circ$

74. (D) $25 = x\%$ of 22

$$\therefore x = \frac{25 \times 100}{22} = 113.64 \approx 114$$

75. (A) Required amount = 13% of 500 - 4% of 500 = ₹ 45 crores

MEANINGS IN ALPHABETICAL ORDER

Absurd	unreasonable, illogical, or inappropriate	बेतुका
Annihilate	destroy utterly	सर्वनाश करना
Antagonism	active hostility or opposition	सक्रिय शत्रुता या विरोध
Aversion	a strong dislike or disinclination	घृणा
Bothersome	causing irritation or annoyance	तंग करने वाला
Emphasis	special importance, value, or prominence given to something	किसी चीज को दिया जाने वाला विशेष महत्त्व, मूल्य या प्रमुखता
Ethos	the characteristic spirit of a culture, era, or community as manifested in its beliefs and aspirations	प्रकृति
Exaggerate	overstate or overemphasize	बड़ा चढ़ाकर कहना
Exhilarate	make (someone) feel very happy, animated, or elated	खुश
Idiotic	very stupid	मूर्खतापूर्ण
Ignorance	lack of knowledge or information	अज्ञान
Initiate	cause (a process or action) to begin	आरंभ करना
Innocuous	not harmful or offensive	हानि न करने वाला
Inoffensive	not objectionable or harmful	अनापत्तिजनक, स्वीकार्य
Intriguing	arousing one's curiosity or interest; fascinating	दिलचस्प
Lethargy	a lack of energy and enthusiasm	सुस्ती, आलस्य
Mundane	lacking interest or excitement; dull	उबाऊ
Naïve	(of a person or action) showing a lack of experience, wisdom, or judgment	निष्कपट
Obliterate	wipe out	मिटाना
Onslaught	a fierce or destructive attack	हमला
Overreach	the act of doing more than your authority allows	अपने अधिकार का अति प्रयोग
Praiseworthy	deserving approval and admiration	सराहनीय
Relevant	closely connected or appropriate to the matter at hand	प्रासंगिक
Revive	restore to life or consciousness	पुर्नजीवित करना
Scanty	small or insufficient in quantity or amount	थोड़ा
Swabbing	wash with a mop	झाड़ू से साफ करना
Taboo	a social or religious custom prohibiting or forbidding a particular practice	पाबंदी
Triviality	lack of seriousness or importance; insignificance	महत्वहीनता, तुच्छता

SSC MOCK TEST - 344 (ANSWER KEY)

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

76. (C) Since, the sentence is in present tense, the 'if clause' should also be in present tense. Change 'placed' into 'place'.
77. (B) Change 'have' into 'has', as it should follow the subject of the sentence 'the popular belief'.
85. (B) 'Hang by a thread' is an idiom which means 'to be in a very dangerous situation or state; to be very close to death, failure, etc.'
86. (B) 'Call out' means 'to publicly criticize or fault someone or something.'
89. (C) The correct spelling of 'Intigrate' is 'Integrate', 'Exhilerate' is 'Exhilarate' and 'Exaggarate' is 'Exaggerate'.
90. (A) The correct spelling is 'Occasionally'.