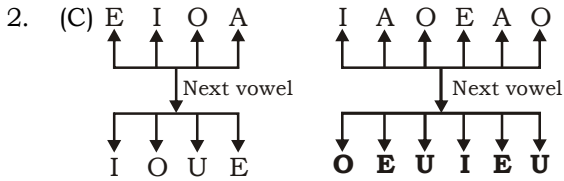


**SSC MOCK TEST – 59 (SOLUTION)**

1. (D)  $14 = (2 \times 9 - 4)$   
 $26 = (2 \times 15 - 4)$   
 $? = 15$



3. (B)  $24 \div 2 \times 4 = 8$   
 $32 \div 3 \times 2 = 6$

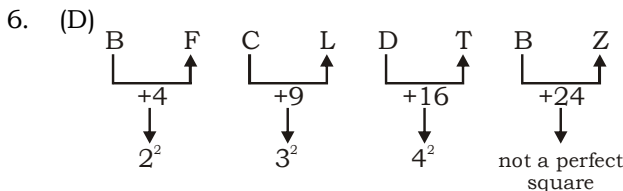
4. (A) As, Word is a group of letters. Similarly, **Book** is a group of **pages**.

5. (C)  $2527 \div \sqrt[2]{25} = 5$  and  $\sqrt[3]{27} = 3 \div 53$

$1608 \div \sqrt[2]{16} = 4$  and  $\sqrt[3]{8} = 2 \div 42$

**2701**  $\div \sqrt[3]{27} = 3$  and  $\sqrt[2]{1} = 1 \div 31$

$6464 \div \sqrt[2]{64} = 8$  and  $\sqrt[3]{64} = 4 \div 84$

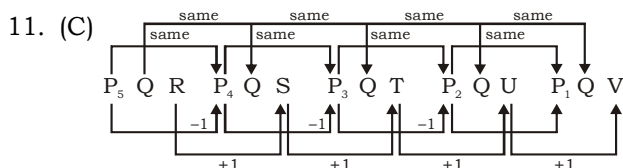


7. (A) Nasik is the in the state of Maharashtra whereas rest three are in the state of Madhya Pradhesh.

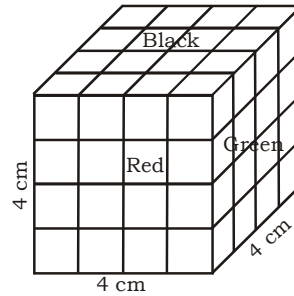
8. (B) Clearly, every member except one (i.e. the winner) must lose one game to decide the winner. Thus, minimum number of matches to be played =  $30 - 1 = 29$ .

9. (C) Sugandha is the daughter of the only son of Arpit's grandfather. Hence, it's clear that Sugandha is the sister of Arpit.

10. (A) The letters of the adjacent faces to the face with letter A are B, F, C and E. Hence, the letter (D) is opposite to the face with letters (A).

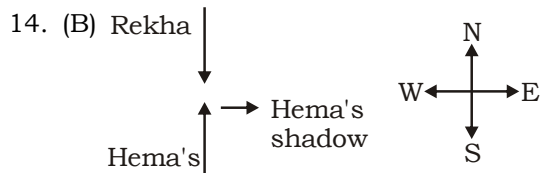
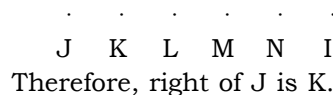


12. (B) Length of the side of the big cube =  $\sqrt[3]{64}$   
 = 4 cms



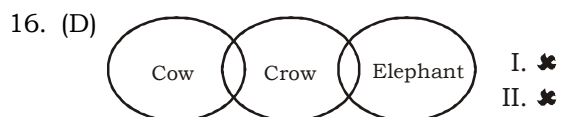
Number of small cubes having two faces coloured =  $8 + 8 + 4 + 4 = 24$   
 and Number of small cubes having only one face coloured =  $4 \times 6 = 24$   
 and Number of small cubes having no face coloured =  $4 + 4 = 8$   
 Therefore, total number of small cubes whose at the most two faces are coloured =  $24 + 24 + 8 = 56$ .

13. (B) The seating arrangement is as follows:



In the evening sun sets in the West. Hence, the shadow falls in the East. Since, Hema's shadow was to the right of Hema. Hence Rekha was facing towards South.

15. (B) The correct order is :  
 Rain 2   Sun 3   Rainbow 1   Child 5   Happy 4



Neither I nor II follows.

17. (A) Sea is a part of Earth, while Sun is different from these two.

18. (D) In all other figures, the number of dots outside the main figure is one more than the number of dots inside the main figure.

19. (C)

20. (D) In each row, there are 3 types of shadings of circles - a circle is unshaded, another circle has its right half shaded with vertical lines and yet another circle has its upper half shaded with horizontal lines. There are three specified positions of the two triangles each of which is used only once in a row. Also, two of the figures in each row have one triangle shaded.
21. (B)
22. (D)
23. (B) As,  $[(8 \div 2) + (8 \times 2) + (8 + 2) + (8 - 2)]$   
 $= 4 + 16 + 10 + 6 = 36$   
 and  $[(9 \div 3) + (9 \times 3) + (9 + 3) + (9 - 3)]$   
 $= 3 + 27 + 12 + 6 = 48$   
 So,  $[(6 \div 2) + (6 \times 2) + (6 + 2) + (6 - 2)]$   
 $= 3 + 12 + 8 + 4 = 27$
24. (B) The two E's of the word 'EAGLE' can't be found in the word 'CAMOUFLAGE'.
25. (B)  $(8 + 9) + (9 + 4) = 17 + 13 = 30 \Rightarrow 30^2 = 900$   
 $(6 + 7) + (7 + 5) = 13 + 12 = 25 \Rightarrow 25^2 = 625$   
 $(5 + 2) + (2 + 3) = 7 + 5 = 12 \Rightarrow 12^2 = \mathbf{144}$   
 $(3 + 1) + (1 + 8) = 4 + 9 = 13 \Rightarrow 13^2 = 169$
26. (C) India has recently set up military hotlines at 3-border locations with China at Border Personnel Meeting (BPM).The hotline has recently been activated at the BPMs locations of Spangur, Nathu La and Kibithu. The in-principle approval has been given for establishment of a hotline between military headquarters of both sides. India has such arrangements with other neighbouring countries, including Pakistan, Myanmar and Nepal, as part of the Confidence Building Measures (CBMs).
27. (B) Alauddin Khilji was a militarist and imperialist to the core. He was very ambitious. Alauddin, whose original name was Ali Gurshap, assumed the title Sikandar-i-Sani (Alexander the Second) and proclaimed Delhi as Dar-ul-Khilafa (Seat of the Caliphate).
28. (D) Notified Area Committee is not constituted by an act of legislatures. It is an area which does not necessarily fulfill all the conditions for the constitution of the municipality. The chairman and all the other members of the committee are appointed by the state government.NAC can be constituted by a notification and there is no need for any statute.
29. (D) Chandragupta-I married the daughter of Licchhavis, a royal influential family .His son and successor Samudragupta calls himself Lichchavi-dauhitra the son of the daughter of the Lichchavis.
30. (D) The pedogenic regime of podzolisation associated with areas of cool & humid climate which have forests as natural vegetation.
31. (B) The doctrine of subsidiary alliance was introduced by Lord Wellesley, British Governor-General of India from 1798 to 1805.The Nizam of Hyderabad was the first to enter into such an alliance in 1798.Tipu Sultan of Mysore refused to do so, but after the British victory in the Fourth Anglo-Mysore War, Mysore was forced to become a subsidiary state in 1799.The Nawab of Awadh was the next to accept the Subsidiary Alliance, in 1801.
32. (D) Hills of Amarkantak is the source of origin of the Son river. Length of this river is 784 km and it joins the Ganga river before reaching Patna.
33. (A) Cook Strait lies between North and South Islands of New Zealand. Bass Strait is a sea strait separating Tasmania from the south of the Australian mainland, specifically the state of Victoria. Foveaux Strait lies between Stewart Island and North Island of New Zealand Torres Strait lies between New Guinea and Australia.
34. (B) German silver does not contain silver, but an alloy of copper, zinc and nickel.
35. (A) Noted Tabla maestro Pandit Lachu Maharaj (73) has recently passed away in Varanasi, Uttar Pradesh. He was renowned internationally and his table performance had drawn attention of the connoisseur of performing arts from across India and world.
36. (B) Article 352 of the Indian Constitution deals with the National emergency that can be proclaimed on the grounds of security threat or the situation crisis in India. In the history of independent India, there were three periods during which a state of emergency was deemed to have existed. It has been proclaimed three times so far- 1962, 1971 and 1975. Financial emergency (article 360) has not been declared so far.
44. (A) Calorific value of Hydrogen = 150 KJ/g
46. (D) Election of Speaker shall be held on such date as the President may fix, and the Secretary-General shall send to every member notice of this date. At any time before noon on the day preceding the date



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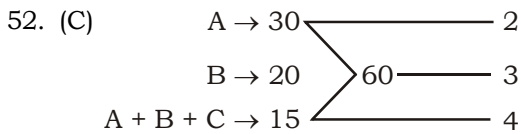
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so fixed, any member may give notice in writing, addressed to the Secretary-General, of a motion that another member be chosen as the Speaker of the House, and the notice shall be seconded by a third member and shall be accompanied by a statement by the member whose name is proposed in the notice that he is willing to serve as Speaker, if elected, provided that a member shall not propose his own name, or second a motion proposing his own name, or propose or second more than one motion.

49. (A) Mesophytes are terrestrial plants which are adapted to neither a particularly dry nor particularly wet environment. An example of a mesophytic habitat would be a rural temperate meadow, which might contain goldenrod, clover, oxeye daisy, and Rosa multiflora.

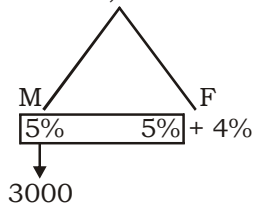
51. (A)  $\frac{15' 40}{1} = \frac{2' 6' D}{2}$

D = 100 days

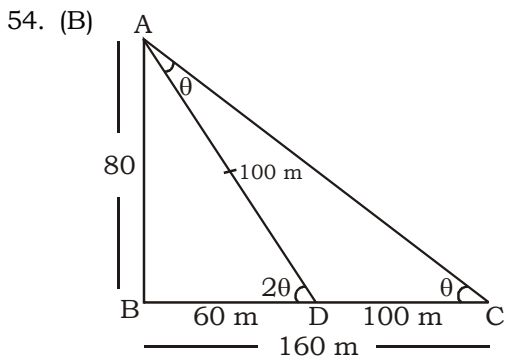


Efficiency of C = -1 unit/hr  
 Required time to C for empty the tank = 60 hr  
 \ Capacity of tank = 60 × 60 × 45  
 = 162,000 litres

53. (A) Total population = 60,000

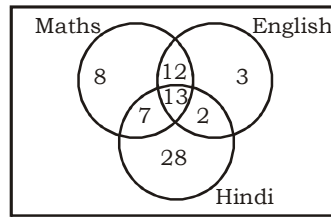


\ 4% = 2000  
 No. of females = 500 × 100 = 50,000  
 No. of males = 10,000



\ ∴ 2q is external angle of DADQ  
 \ ∠A will also be q  
 \ Length of AB = 80 m (from pythgo.)

55. (C)



Maths = 40%  
 English = 30%  
 Hindi = 50%  
 Maths and English = 25%  
 English and Hindi = 15%  
 Maths and Hindi = 22%  
 Maths, English, Hindi = 13%

% of students failed in at least one subject = 73%

Passed % = 27%

56. (A) AB = AP + BP + 3AP

= 4AP ∴  $\frac{AB}{AP} = \frac{4}{1}$  and

AC = AQ + QC = AQ + 3AQ

= 4AQ ∴  $\frac{AC}{AQ} = \frac{4}{1}$

in DABC and DAPQ

∴ ∠BAC = ∠PAQ (common) and

$\frac{AB}{AP} = \frac{AC}{AQ}$

\ DABC ~ DAPQ

\  $\frac{AB}{AP} = \frac{AC}{AQ} = \frac{BC}{PQ} = 4$

∴  $\frac{BC}{PQ} = \frac{4}{1} ∴ \frac{36}{PQ} = 4 ∴ PQ = 9 \text{ cm}$

57. (D) Let the numbers be 3x and 2x

ATQ,  $\frac{3x}{2x+20} = \frac{2}{3}$

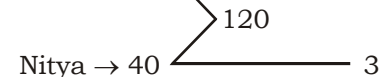
9x = 4x + 40

5x = 40

x = 8

\ Number of ladies = 24

58. (C) Vivek → 60



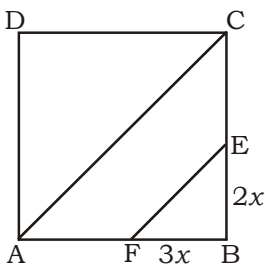
after 4 days remaining work = 100 unit  
 14 days work of Nitya = 42 unit

Efficiency of Appurva =  $\frac{58}{6} = \frac{29}{3}$  unit/day

Time taken to complete 29% of work

∴  $120 \times \frac{29}{100} \times \frac{3}{29} ∴ 3\frac{3}{5}$  days

59. (D)



Let the side of square be  $6x$  then,

$$\frac{1}{2} \times 3x \times 2x = 147$$

$$\Rightarrow x^2 = 49 \Rightarrow x = 7$$

$$\therefore \text{side of square} = 42 \text{ m}$$

$$\Rightarrow AC^2 = (42)^2 + (42)^2 = 2(42)^2$$

$$\Rightarrow AC = 42\sqrt{2} \text{ m}$$

60. (A) ATQ,

$$\text{Quantity of milk} = \frac{7}{8} \times 40 = 35 \text{ litre}$$

$$\text{Quantity of water} = 5 \text{ litre}$$

Let  $x$  litres of water be mixed

$$\therefore \frac{35}{5+x} = \frac{3}{1}$$

$$3x + 15 = 35$$

$$3x = 20$$

$$x = 6\frac{2}{3} \text{ litres}$$

61. (D)  $30\% = \frac{3}{10}$ ,  $15\% = \frac{3}{20}$

C.P	S.P	M.P
$10 \times 20$		$13 \times 20$
	$17 \times 13$	$20 \times 13$
<u>200</u>	<u>221</u>	260

$$\text{Required profit \%} = \frac{21}{200} \times 100 = 10.5\%$$

62. (C) Let the breadth of floor be  $x$  m

$$\therefore \text{Length} = (x + 20) \text{ m}$$

$$\therefore \text{Area of the floor} = (x + 20)x \text{ sq. m}$$

In case II,

$$(x + 10)(x + 5) = x(x + 20)$$

$$\Rightarrow x^2 + 15x + 50 = x^2 + 20x$$

$$\Rightarrow 20x = 15x + 50$$

$$\Rightarrow 5x = 50$$

$$\Rightarrow x = 10 \text{ m}$$

$$\therefore \text{Required area} = (10 + 20) \times 10 = 300 \text{ sq. m}$$

63. (B)  $\frac{x-a^2}{b^2+c^2} + \frac{x-b^2}{c^2+a^2} + \frac{x-c^2}{a^2+b^2} = 3 \dots(i)$

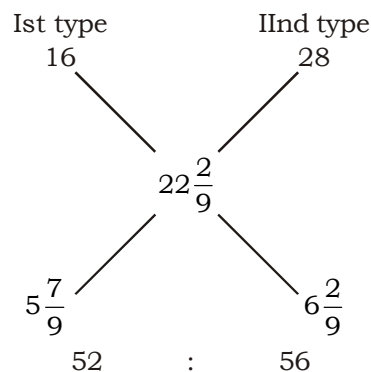
Now, take the value of  $a, b, c$  and  $x$  which satisfy (i)

$$\therefore \text{Let } a = b = c = 1, x = 3 \text{ these value satisfy (i)}$$

$$\therefore x = 3 = a^2 + b^2 + c^2$$

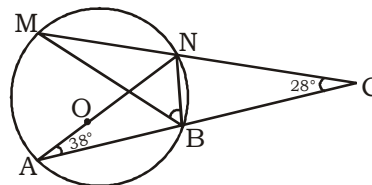
64. (B) Original cost price of mixture

$$= \frac{10}{9} \times 20 = 22\frac{2}{9}$$



13:14

65. (D)



$$\angle ABN = 90^\circ \text{ \{angle in semicircle\}}$$

$$\therefore \angle CBN = 90^\circ$$

$$\therefore \text{in } \triangle CBN,$$

$$\angle BNC = 180^\circ - 90^\circ - 20^\circ = 70^\circ$$

$$\therefore \angle MNB = 180^\circ - 70^\circ = 110^\circ$$

$$\text{and } \angle BMN = \angle BAN = 38^\circ$$

$$\therefore \text{in } \triangle MBN,$$

$$\angle MBN = 180^\circ - 38^\circ - 110^\circ = 32^\circ$$

66. (C)  $\frac{1}{7} + 999 + \frac{692}{693} \times 99$

$$\Rightarrow \frac{1}{7} + 999 \times 99 + \frac{692}{693} \times 99$$

$$\Rightarrow \frac{1}{7} + (100 - 1)99 + \frac{692}{7}$$

$$\Rightarrow \frac{693}{7} + 99000 - 99$$

$$\Rightarrow 99 + 99000 - 99$$

$$\Rightarrow 99000$$

67. (D)  $a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$

$$= \frac{1}{2} (a + b + c)[(a - b)^2 + (b - c)^2 + (c - a)^2]$$

$\therefore$  Expression

$$= \frac{1}{2} \frac{(a + b + c)[(a - b)^2 + (b - c)^2 + (c - a)^2]}{(a - b)^2 + (b - c)^2 + (c - a)^2}$$

$$= \frac{1}{2}(a + b + c) = \frac{1}{2}(25 + 15 - 10) = 15$$

68. (B) L.C.M of 20, 30 and 40 = 120 minutes.  
 \ Time = 1 P.M

69. (C) ATQ,

$$\frac{x + y + z}{3} = z + 5$$

$$x + y + z = 3z + 15$$

$$\text{E } x + y = 3z - z + 15$$

$$\text{E } 2z + 15 = x + y = 39$$

$$\text{E } 2z = 39 - 15 = 24$$

$$z = \frac{24}{2} = 12 \text{ years}$$

70. (B) Principal = 8000

S.I →	400	400	400	
C.I →	20	20	20	C.I →
C.I →	20	20	20	↓
C.I →	1	1	1	ATQ, ×2

1261  
↓  
2522

\ Total simple interest =  $1200 \times 2 = ₹ 2400$

71. (C)  $\frac{\cos^2 q}{\cot^2 q - \cos^2 q} = 3$

$$\text{E } \cos^2 q = 3 \cot^2 q - 3 \cos^2 q$$

$$\text{E } 4 \cos^2 q = 3 \cot^2 q = 3 \frac{\cos^2 q}{\sin^2 q}$$

$$\text{E } 4 \cos^2 q - \frac{3 \cos^2 q}{\sin^2 q} = 0$$

$$\text{E } \cos^2 q \left[ 4 - \frac{3}{\sin^2 q} \right] = 0$$

$$\text{E } 4 - \frac{3}{\sin^2 q} = 0 \text{ and } \cos^2 q = 0$$

$$\text{E } 4 \sin^2 q = 3$$

$$\text{E } \sin q = \frac{\sqrt{3}}{2} = \sin 60^\circ$$

$$\text{E } q = 60^\circ$$

$$\cos^2 q = 0 \text{ E } q = 90^\circ$$

72. (C)  $\cos x + \cos^2 x = 1$

$$\text{E } \cos x = 1 - \cos^2 x = \sin^2 x \quad \dots(i)$$

$$\text{E } \sin^{12} x + 3 \sin^{10} x + 3 \sin^8 x + \sin^6 x - 1$$

$$= (\sin^4 x + \sin^2 x)^3 - 1$$

$$= (\cos^2 x + \sin^2 x)^3 - 1$$

$$= 1 - 1 = 0$$

[By (i)]

73. (D) Required percentage

$$= \frac{60}{15} \times 100 = 400\%$$

74. (C) School A  $\text{E } \frac{120}{270} \times 100 \gg 44\%$

School B  $\text{E } \frac{60}{150} \times 100 = 40\%$

School C  $\text{E } \frac{210}{450} \times 100 \gg 47\%$

(highest income %)

School D  $\text{E } \frac{90}{210} \times 100 \gg 43\%$

75. (B) School A  $\text{E } 120 > 4 \times 24$

School B  $\text{E } 60 > 12 \times 4$

School C  $\text{E } 210 > 45 \times 4$

School D  $\text{E } 90 < 24 \times 4$

School E  $\text{E } 120 = 30 \times 4$

**MEANINGS IN ALPHABETICAL ORDER**

<b>Word</b>	<b>Meaning in English</b>	<b>Meaning in Hindi</b>
Agonise	undergo great mental anguish through worrying about something	तड़पना, चिंता करना
Assuage	make (an unpleasant feeling) less intense	शांत करना
Auspicious	conducive to success; favourable	शुभ, मंगलदायक
Budgeting	allowing or providing a particular amount of money in a budget	पैसे का प्रबंध करना
Cannibals	one eating one's own special	स्वयं की प्रजाति का भक्षण करने वाला
Closure	the act or process of closing something	समापन
Compatriot	a fellow citizen or national of a country	एक ही देश के लोग
Condone	to forgive approve (behavior that is considered morally wrong or offensive)	क्षमा करना
Connoisseur	an expert judge in matters of art	कला का पारखी
Conquer	overcome and take control of (a place or people) by use of military force	अधिकार करना, कब्जा करना
Conundrum	a confusing and difficult problem or question	पहेली
Crone	an old woman who is thin and ugly	अत्यंत पतली एवं बदसूरत बूढ़ी औरत
Cupid	the Roman god of love	प्रेम के देवता
Despair	lose or be without hope	निराश होना
Detrimental	tending to cause harm	हानिकारक
Effeminate	(of a man) having or showing characteristics of a woman	औरतों के गुण वाला
Excursion	a short journey or trip	पर्यटन, सैर
Expulsion	the action of depriving someone of membership in an organization	निष्कासन
Flabby	(of a part of a person's body) soft, loose, and fleshy	स्थूल, थूलथूला
Forfeit	lost or surrendered as a penalty for wrongdoing or neglect	दंड स्वरूप अधिकार खो देना
Garrulous	excessively talkative	बातूनी
Insensitive	showing or feeling no concern for others' feelings	असंवेदनशील
Kleptomaniac	a person who has an uncontrollable strong desire to steal things	चीजें चोरी करने की इच्छा से वशीभूत
Outrage	an extremely strong reaction of anger	गुस्सा, प्रतिरोध
Persistence	firm or obstinate continuance in a course of action in spite of difficulty or opposition	दृढ़ता, अटलता
Redeem	compensate for the faults or bad aspects of (something)	क्षतिपूर्ति करना
Reinstating	restoring someone to their former position	पुनः बहाल करना
Simulate	imitate the appearance or character of	भेष बदलना
Substantiate	provide evidence to support or prove the truth of	पुष्टि करना, सिद्ध करना
Vitals	the organs of the body that are essential for staying alive	शरीर के प्रमुख अंग



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### SSC MOCK TEST - 59 (ANSWER KEY)

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

76. (A) We need definite article 'the' before 'effort' as it is talking about the effort of army.
77. (B) Replace 'her' by 'hers'. 'Your help' should be balanced by 'hers'.
78. (A) Use 'separation from her' instead of 'her separation'. We do not use possessive pronoun with 'separation' and 'leave'.
90. (B) 'More than one' is followed by a singular noun and a singular verb.

**Note:- If you face any problem regarding result or marks scored, please contact 9313111777**

**Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003**