

**SSC MOCK TEST – 226 (SOLUTION)**

1. (D) As, KILOGRAM has 8 letters and  $8^3 = 512$ .  
 Similarly, KILOMETER has 9 letters and  
 $9^3 = 729$

2. (C) As,  
  
 Similarly,

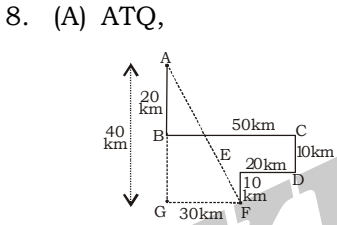
3. (A) As, in Russia the parliament is called Duma.  
 Similarly, in Colombia the parliament is called **Congress**.

4. (D) Except **UOPA**, the remaining have vowels only.

5. (D) Crane, Parrot and Cuckoos are birds while **Buffalo** is an animal.

6. (D) Except **Subtraction**, the remaining are synonyms.

7. (C)  
 Letter → Word → Sentence → Paragraph  
**4            1            3            2**



AG = AB + CD + EF = 40 km  
 GF = BC - ED = 50 - 20 = 30 km  
 Points AGF form a right angle triangle  
 So, AF =  $\sqrt{30^2 + 40^2} = 50$  km

9. (A) Yellow → Green  
 Red → Blue  
**Pink** → Violet

10. (A) 3 → 6 → 9 → 18 → 36 → 42 → 48  
 +3    +3    ×2    ×2    +6    +6

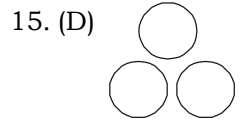
11. (B) 1 4 27 256 3125  
 ↓   ↓   ↓   ↓   ↓  
 $1^1$   $2^2$   $3^3$   $4^4$   $5^5$

12. (B) As,

13. (A) Number of days between 10 January, 2016 and 15 September, 2016  
 = 21 + 29 + 31 + 30 + 31 + 30 + 31 + 31 + 15 = 249

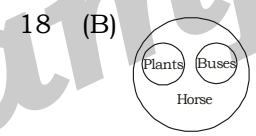
then, day on 15<sup>th</sup> September, 2016 =  $\frac{249}{7}$   
 =  $35\frac{4}{7}$   
 = 35 weeks + 4 days = 4 days = **Thursday**

14. (D)  $25 \div 5 - 10 \times 2 + 30 = 15$

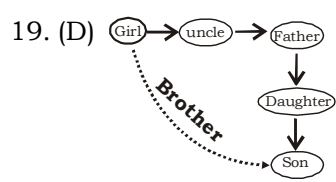


16. (C)  $72 = 9 \times 8$   
 $45 = 5 \times 9$   
 $30 = 6 \times 5$   
**48 = 8 \times 6**

17. (A) As,  $13 - 6 = 7 \Rightarrow 7 \times 6 = 42$   
 $17 - 8 = 9 \Rightarrow 9 \times 6 = 54$   
 Similarly,  
 $27 - 9 = 18 \Rightarrow 18 \times 6 = 108$



I. **False**  
 II. **False**



20. (C) A B C D E F

21. (C) M I N I S T E R (letter E not present)

22. (C)

23. (C)

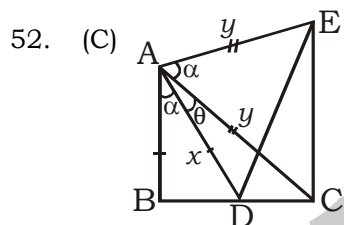
24. (D)

25. (C) Total number of triangles = **21**

26. (A) Harappa – DayaRam Sahani (1921)  
 Mohinjo-daro – Rakhil Das Banrjee (1922)  
 Kalibangam – Amalananda Ghosh (1951)  
 and B.V Lol & B. K Thapar (1961)  
 Lothal – Ranganatha Sharma (1954)

28. (A) Big-Bang Theory was later explained by Rober Begoner.
29. (B) Planet's order according to their density- Earth (5.5), Mercury (5.4), Venus (5.2) Mars (3.9), Neptune (1.6), Jupiter (1.3), Uranus (1.3) and Saturn (0.7).
30. (D) Other Bank in first stage- Bank of India, Central Bank of India, Canara Bank, Syndicate Bank, United Commerical Bank, Punjab National Bank, Allahabad Bank, United Bank of India and Dena Bank.  
Banks Nationalised in second stage- Andhara Bank, Cooperation Bank, Oriental Bank of Commerce, Punjab and Sindh Bank and Vijaya Bank.
31. (A) Rubber Board – Kottayam  
National Jute and Tea Board – Kolkata  
Tobacco Board – Guntur
33. (C) B.R. Ambedkar – Drafting Committee  
K.M Munsi – Order of Business  
H.C Mookherjee – Minorities Sub – Committee
34. (A) X – rays – Wilhelm Rontgen –  $10^{18}$  to  $10^{16}$   
Ultraviolet rays – Ritter –  $10^{16}$  to  $10^{14}$   
Light ways – Newton –  $10^{14}$  to  $10^{12}$   
Gamma rays were founded by Paul Willard and named by Rutherford
35. (C) Newton's law of cooling states that the rate of heat loss of a body is directly proportional to the difference in the temperatures between the body and its surroundings.  
Kirchhoff's law-For an arbitrary body emitting and absorbing thermal radiation in thermodynamic equilibrium, the emissinty is equal to the apsorptivity.
36. (B)  $U^{235}$  – To determine the age of rocks.  
 $Co^{64}$  – To control the blood cancer.  
 $As^{74}$  – To determine the tumer.
37. (A)  $HCL > HNO_3 > H_2SO_4 > CH_3COOH$
38. (B) Rana tigrina – Frog  
Bos indicus – Cow  
Musca domestica – Housefly
39. (D) Lycopene – Present in Tomato  
Carotine – Present in Radish  
Betanin – Present in Beetroot
40. (D) Dhruva was constructed in 1985.
43. (A) Arunachal Pradesh and Meghalaya share border with only 2 states.
44. (B) Eight countries are : Benin, Burkina Faso  
Ivory Coast, Guinea – Bissau, Mali, Niger, Senegal and Toga.
46. (D) In Urban areas average calories requirements is 2100.

51. (C) ATQ.,  
 $(6.66)^x = (0.666)^y = 10000$   
 $\Rightarrow (6.66)^x = 10000 = 10^4$   
 $\Rightarrow 6.66 = 10^{4/x} \dots(i)$   
 $\Rightarrow (0.666)^y = 10000 = 10^4$   
 $0.666 = 10^{4/y} \dots(ii)$   
 Dividing equation (i) by (ii)
- $$\frac{6.66}{0.666} = \frac{10^{4/x}}{10^{4/y}}$$
- $$\Rightarrow 10 = 10^{\frac{4}{x} - \frac{4}{y}}$$
- $$\Rightarrow 4\left(\frac{1}{x} - \frac{1}{y}\right) = 1$$
- $$\Rightarrow \frac{1}{x} - \frac{1}{y} = \frac{1}{4}$$



In  $\triangle ABC$ ,  
 $\angle A = \alpha + \theta$   
 $AB = x$   
 $AC = y$   
 In  $\triangle ADE$ ,  
 $\angle A = \alpha + \theta$   
 $AD = x$   
 $AE = y$   
 $\therefore \triangle ABC \cong \triangle ADE$   
 $\therefore BC = DE$   
 $DE = 8 \text{ cm}$

53. (D) ATQ.,
- $\frac{1}{2}$  litre  $\rightarrow$  480 gm  
 1 litre  $\rightarrow$  960 gm  
 Using alligation method
- |         |         |
|---------|---------|
| Mixture | Mixture |
| 1       | 2       |
| 1000    | 800     |
|         | 960     |
| 160     | : 40    |
| 4       | : 1     |
- Percentage of liquid 1 in total concentration =  $\frac{4}{5} \times 100 = 80\%$

54. (C) Let, the number be  $x$  and  $y$   
 Then,  $x + y = 55$   
 Now,  $x \times y = \text{H.C.F.} \times \text{L.C.M.}$   
 $\Rightarrow xy = 5 \times 120 = 600$   
 Hence, The required sum  

$$= \frac{1}{x} + \frac{1}{y} = \frac{x+y}{xy} = \frac{55}{600}$$

$$= \frac{11}{120}$$

55. (C) Let the unit and ten's digit be  $x$  and  $y$  respectively.  
 Then, number =  $10y + x$   
 ATQ.,  
 $x = y + 5$  ... (i)  
 and  $(10x + y) = 2(10y + x) - 4$   
 $\Rightarrow 8x - 19y = -4$  ... (ii)  
 Using eq. (i) and eq. (ii) we get  
 $y = 4$  and  $x = 9$   
 Then, Required number =  $10(4) + 9 = 49$ .

56. (A) Comparing statement I and III  
 We get the statement I redundant information while comparing with statement III.  
 From statement III.  
 Speed of train =  $\frac{400}{10} = 40$  m/sec.  

$$= \left(40 \times \frac{18}{5}\right) \frac{\text{km}}{\text{hr}} = 144 \text{ km/hr}$$
 From statement II  
 time taken =  $\left(\frac{1116}{144}\right) \text{ hrs} = \frac{31}{4} \text{ hrs}$   

$$= 7 \frac{3}{4} \text{ hrs} = 7 \text{ hrs } 45 \text{ min.}$$
 So, the train will reach city X at 4 pm.  
 Hence, II and III only gives the answer.

57. (D)  $P = ₹16000$   
 $CI = ₹2522$   
 Amount =  $₹(16,000 + 2522)$   
 $= ₹18522$   
 In 9 months interest compounded quarterly then total cycles are 3.  

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

$$18522 = 16000 \left(1 + \frac{r}{100}\right)^3$$
 $\Rightarrow r = 5\%$   
 Hence rate of interest per annum = 20%

58. (D)  $l \cos^2\theta + m \sin^2\theta = \frac{\cos^2\theta [\operatorname{cosec}^2\theta + 1]}{\operatorname{cosec}^2\theta - 1}$   

$$\Rightarrow l \cos^2\theta + m \sin^2\theta = \frac{\cos^2\theta (1 + \sin^2\theta)}{1 - \sin^2\theta}$$

$$\Rightarrow l \cos^2\theta + m \sin^2\theta = 1 + \sin^2\theta$$

$$\Rightarrow l \cos^2\theta + m \sin^2\theta = \sin^2\theta + \cos^2\theta + \sin^2\theta$$

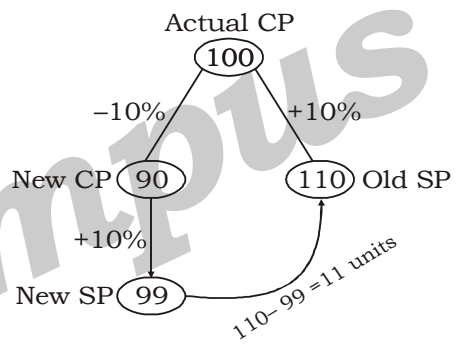
$$\Rightarrow l \cos^2\theta + m \sin^2\theta = 2 \sin^2\theta + \cos^2\theta$$

$$\Rightarrow (l-1) \cos^2\theta = (2-m) \sin^2\theta$$

$$\Rightarrow \tan^2\theta = \frac{l-1}{2-m}$$

$$\Rightarrow \tan\theta = \sqrt{\frac{l-1}{2-m}}$$

59. (C) Let the cost price of the bicycle = 100 units  
 ATQ,



$\therefore 11 \text{ units} = ₹1331$   
 $\therefore 100 \text{ units} = ₹ \frac{1331}{11} \times 100 = ₹12100$

60. (B) Let, three friends Rajesh, Ramesh, and Rakesh are respectively A, B and C.  

$$\frac{1}{6}A = \frac{B}{4} = \frac{C \times 2}{5} = K$$

$$A : B : C = 6K : 4K : \frac{5K}{2}$$

$$= 12 : 8 : 5$$
 25 Units  $\rightarrow ₹2250$   
 12 units  $\rightarrow ₹ \frac{12 \times 2250}{25}$   
 $\rightarrow ₹1080$

61. (B) Total numbers of ways to Arrange letter RAMAN are

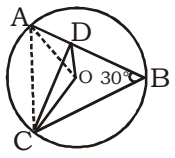
$$= \frac{5!}{2!} = 60$$

If all vowels will come together then total number of ways = 4!

$$\text{Probability} = \frac{\text{Condition ways}}{\text{total number of ways}}$$

$$= \frac{4!}{60} = \frac{2}{5}$$

62. (A) Draw line from A to C to & A to O.



Now,  $\angle AOC = 2\angle ABC$   
 $= 2 \times 30^\circ = 60^\circ$

$\therefore AO = OC = \text{radius}$   
 So,  $\Delta AOC$  is an equilateral  $\Delta$ .

$$\angle ACD = 60 - \angle OCD$$

$$= 60^\circ - 20^\circ = 40^\circ$$

$$\text{Now, } \angle CAB = \angle CAO + \angle OAB$$

$$= 60 + 10$$

$$= 70^\circ$$

$$\text{In } \Delta ACD, \angle ADC = 180 - (40 + 70) = 70^\circ$$

$$\therefore AC = CD$$

$$AC = OC$$

$$\therefore AC = CD = OC$$

In  $\Delta COD$

$$\angle OCD = 20^\circ (\text{given})$$

$$\angle ODC = \frac{(180 - 20)}{2} = 80^\circ$$

63. (D) In quadrilateral ABCD

$$\angle A + \angle C + \angle B + \angle D = 360^\circ \dots(i)$$

$$(\angle A + \angle C) + (\angle B + \angle D) = 360^\circ$$

$$3(\angle B + \angle D) = 360^\circ \Rightarrow \angle B + \angle D = 120^\circ$$

Given  $\angle A = 40^\circ$  put in (i)

$$40^\circ + 120^\circ + \angle C = 360^\circ$$

$$\angle C = 360^\circ - 160^\circ = 200^\circ$$

64. (C) ATQ.,

$$x^2 + bx + c = 0$$

$4a, 3a$  are roots of the equation.

$$\text{Sum of roots } (4a + 3a) = -b$$

$$\Rightarrow 7a = -b$$

$$\Rightarrow b^2 = 49a^2$$

$$\text{Product of roots } (4a \times 3a) = c$$

$$\Rightarrow 12a^2 = c$$

$$\text{Now, } b^2 + c = 49a^2 + 12a^2$$

$$= 61a^2$$

$\therefore a$  is an integer

$\therefore a^2 = \text{always a perfect square.}$

$$= 61 \times a^2$$

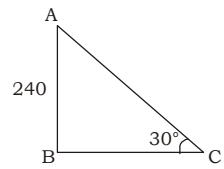
$$\times 1$$

$$\times 4$$

$$\times 9$$

Putting the value of  $a^2 = 9$  and get answer 549.

65.(A)



$$\sin 30^\circ = \frac{AB}{AC} = \frac{240}{AC}$$

$$\Rightarrow \frac{1}{2} = \frac{240}{AC} \Rightarrow AC = 480 \text{ m}$$

Hence length of string = 480 m

66.(B) Req. numbers of cube =  $\frac{24 \times 12 \times 4}{(4)^3} = 18$

67.(A)

A + B	8	}	24	2
B + C	12		24	2
C + A	8		24	3

$$2(A + B + C) = 8$$

$$A + B + C = 4$$

$$\therefore \text{Required number of days} = \frac{24}{4} = 6 \text{ days}$$

68. (B) Let the investments be ₹ x for 14 months, ₹ y for 8 months and ₹ z for 7 months respectively.

$$\text{Then, } 14x : 8y : 7z = 5 : 7 : 8$$

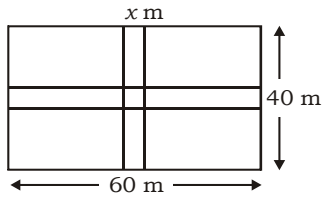
$$\text{Now, } \frac{14x}{8y} = \frac{5}{7} \Leftrightarrow 98x = 40y \Leftrightarrow y = \frac{49}{20}x$$

$$\text{and, } \frac{14x}{7z} = \frac{5}{8} \Leftrightarrow 112x = 35z$$

$$\Leftrightarrow z = \frac{112}{35}x = \frac{16}{5}x$$

$$\therefore x : y : z = x : \frac{49}{20}x : \frac{16}{5}x = 20 : 49 : 64$$

69. (B)



Area of the park =  $(60 \times 40) = 2400 \text{ m}^2$

Area of the lawn =  $2109 \text{ m}^2$

$$\therefore \text{Area of the crossroads} = (2400 - 2109) = 291 \text{ m}^2$$

Let the width of the road be  $x \text{ m}$ . Then,  
 Area of road 1 + Area of road 2 - common area of crossroads = Area of crossroads

$$60x + 40x - x^2 = 291$$

$$\Rightarrow x^2 - 100x + 291 = 0$$

$$\Rightarrow (x - 97)(x - 3) = 0$$

$$\Rightarrow x = 3$$

$\therefore$  Width of the road =  $3 \text{ m}$

70. (A)  $x - y = \frac{x+y}{8} = \frac{xy}{9} = k$

$$\Rightarrow x - y = k, x + y = 8k$$

$$\text{and } xy = 9k$$

$$\therefore (x + y)^2 - (x - y)^2 = 64k^2 - k^2$$

$$\Rightarrow 4xy = 63k^2 \Rightarrow 36k = 63k^2 \Rightarrow k = \frac{4}{7}$$

$$\therefore xy = 9k = 9 \times \frac{4}{7} = \frac{36}{7} = 5\frac{1}{7}$$

71. (A) Volume of cylinder =  $\frac{22}{7} \times 6 \times 6 \times 28$

$$\text{Volume of each bullet} = \frac{4}{3} \times \pi \times \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$$

$$\therefore \text{No. of bullet} = \frac{\text{Volume of cylinder}}{\text{Volume of each bullet}}$$

$$= \frac{36 \times 28 \times \frac{22}{7} \times 16}{9 \times \frac{22}{7}} = 1792$$

72. (C)  $\frac{5.32 \times (56 + 44)}{(7.66 + 2.34)(7.66 - 2.34)}$

$$= \frac{5.32 \times 100}{10 \times 5.32} = 10$$

73.(B) Let the required percentage be  $x$  then, we have

$$108 + 108 \times \frac{x}{100} = 144$$

$$\Rightarrow \frac{108x}{100} = 36 \Rightarrow x = \frac{100}{3} = 33\frac{1}{3}\%$$

74.(D) Milk + Tea + coffee =  $108^\circ + 54^\circ + 36^\circ = 198^\circ$

$$\text{Required fraction} = \frac{198^\circ}{360^\circ} = \frac{11}{20}$$

$$\therefore \text{Req. number of people} = \frac{11}{20} \times 2000$$

$$= 1100$$

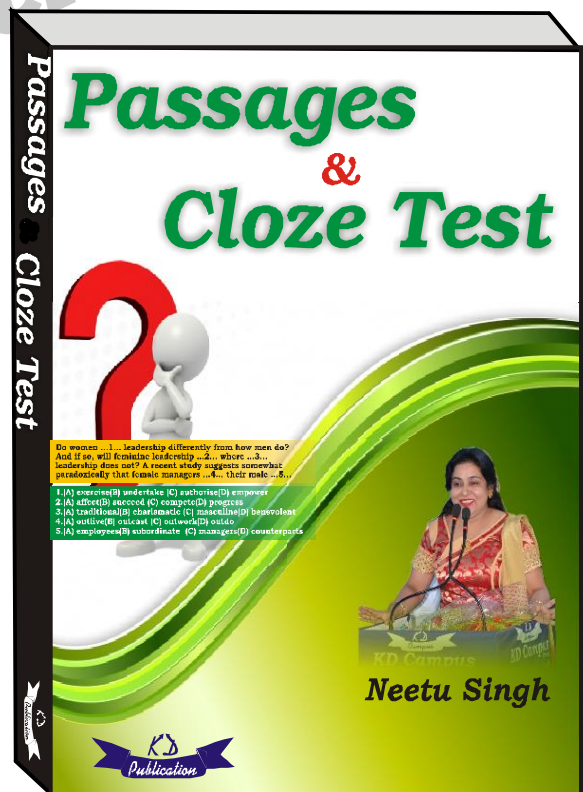
75.(B) Req. diff. (in degree) =  $108^\circ - 36^\circ = 72^\circ$

$$\text{Required difference (in fraction)} = \frac{72^\circ}{360^\circ}$$

$$= \frac{1}{5}$$

$$\therefore \text{Required no. of people} = 2000 \times \frac{1}{5} = 400$$

$$\therefore 23\% \text{ of the result} = \frac{400 \times 23}{100} = 92$$



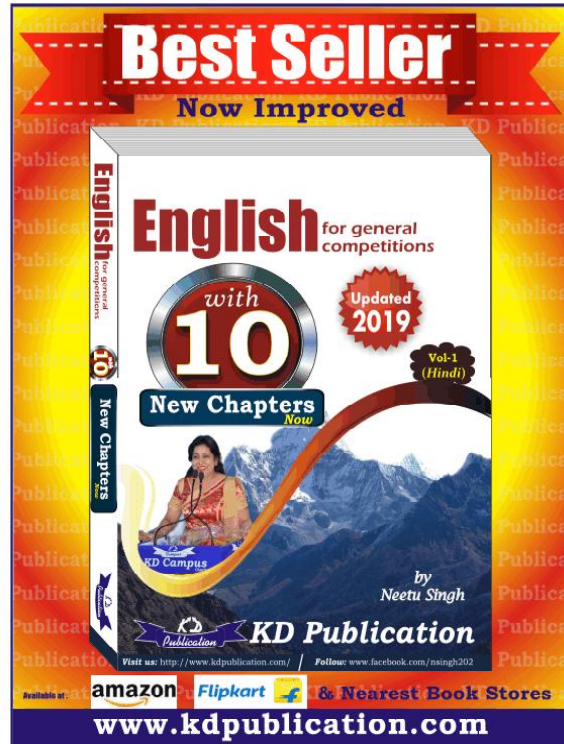
## MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Accessory	a thing of secondary or lesser importance	सहायक
Adhesion	steady or firm attachment	आसंजन
Allegedly	accused but not proven or convicted	कथित तौर पर
Amorphous	having no definite form	अनाकार
Amortize	to pay off (an obligation, such as a mortgage) gradually usually by periodic payments of principal and interest or by payments to a sinking fund	ऋण चुकाना
Anvil	a heavy usually steel-faced iron block on which metal is shaped	निहाई
Assure	to make sure or certain	आश्वासन देना
Attrition	the act of rubbing together	संघर्षण
Bandit	robber	डाकू
Coalesce	to unite into a whole	संगठित होना
Conviction	the act or process of finding a person guilty of a crime especially in a court of law	दोषसिद्धि
Convince	to cause (someone) to believe that something is true	विश्वास दिलाना
Crafty	skilful, clever	चालाक
Dispensation	a general state or ordering of things	व्यवस्था
Encroach	to enter by gradual steps or by stealth into the possessions or rights of another	अतिक्रमण करना
Execrate	to detest utterly	नफरत करना
Foe	an enemy in war	शत्रु
Grieve	to cause to suffer	शोक
Hock	the part of the rear leg of a four-footed animal that is like a human ankle	पिछला घुटना
Obvious	easily discovered, seen, or understood	स्पष्ट
Ominous	suggesting that something bad is going to happen in the future	अमंगल
Pawn	to give (something that you own) to a pawnbroker in exchange for money	बंधक रखना
Pledge	a binding promise or agreement to do or forbear	प्रतिज्ञा
Prosaic	dull or ordinary	नीरस
Repent	to feel regret or contrition	पश्चाताप करना
Revel	to take intense pleasure or satisfaction	आनन्द लेना
Sentry	a soldier who guards a door, gate, etc.	चौकीदार

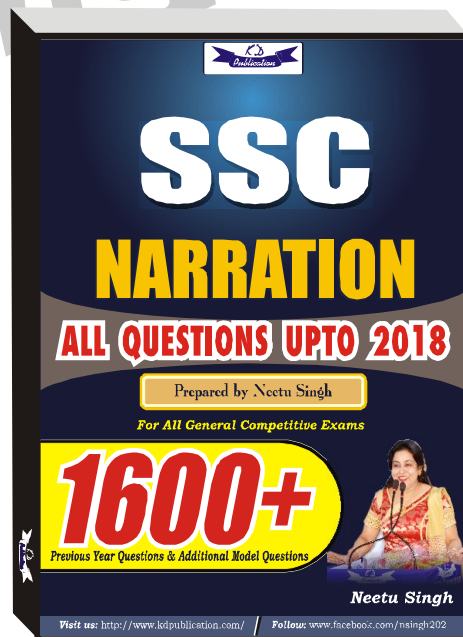


**SSC MOCK TEST - 226 (ANSWER KEY)**

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



76. (A) 'Any' is a determiner which will take a noun after it, thus 'credible' which is an adjective should be changed to 'credibility' which is a noun.
77. (C) Replace "can" with "could" because the sentence is in indirect form so "can" will change into "could".
78. (A) Use 'been' instead of 'being'. As the duration has been given thus perfect continuous should be used and perfect continuous takes "have been + ving" with it.
86. (C) Structure of the 3rd conditional form:  
If + past perfect, Sub + would have + V<sub>3</sub>.
87. (C) It takes 'singular verb' with it. Hence 'It talks' is required. And correct preposition to use here is 'about' after 'talks'. Hence option C is correct.



**Note:- Whatsapp with Mock Test No. and Question No. at 7053606571 for any of the doubts. Join the group and you may also share your suggestions and experience of Sunday Mock Test.**

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