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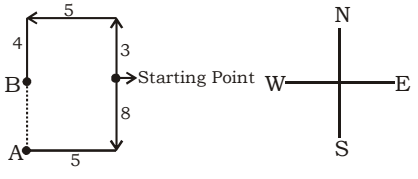
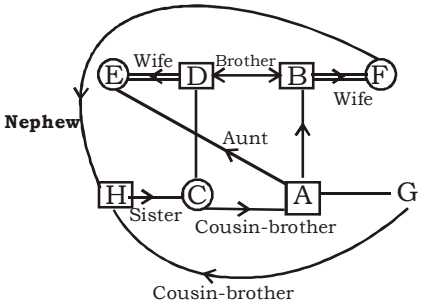
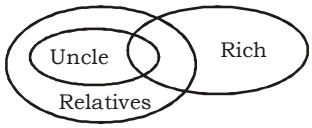
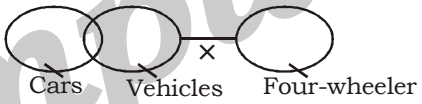
SSC MOCK TEST – 220 (SOLUTION)

1. (B) Female of Lion is Lioness whereas female of Bull is Cow.
2. (C) As, $10^2 - 1 = 99$
and, $10^2 + 1 = 101$
Similarly, $10^2 - 10 = 90$
and, $10^2 + 10 =$ **110**
3. (D) D F I M : W U R N
opposite
G K N P : T P M K
opposite
4. (A) Except (A), all others are synonyms.
5. (C) 126 ⇒ (12 ÷ 6) (✓)
189 ⇒ (18 ÷ 9) (✓)
254 ⇒ (25 ÷ 4) (×)
217 ⇒ (21 ÷ 7) (✓)
6. (D) C F I L (+3 +3 +3) G H I J (+1 +1 +1)
M O Q S (+2 +2 +2) **P S U X** (+3 +2 +3)
7. (D) Market → Vegetables → Buy → Cook → Dinner
8. (B) 18 + 6 – 6 ÷ 3 × 3 = 6
After interchanging the signs
⇒ 18 ÷ 6 – 6 + 3 × 3 = 6
⇒ 3 – 6 + 9 = 6
⇒ **6 = 6**
9. (B) As, B A C K, C A K E
11 3 1 2 5 11 1 3
Similarly, M A D E
5 4 1 13
10. (A) ac**b**/d**d**b/**a**cb/dd**b**/a**c**b/ddb
11. (C) 5 12 26 54 **110**
×2+2 ×2+2 ×2+2 ×2+2
12. (D) As, Cares is related to Affection
Similarly, Kick is related to Hostility
13. (A)


Now, distance between A and B
= 8 + 3 – 4 = 7 km
∴ B is 7 km North with respect to A.
14. (A) As, 35 % 31 = 3 + 5 + 3 + 1 = 12
and, 92 % 30 = 9 + 2 + 3 + 0 = 14
Similarly, 15 % 24 = 1 + 5 + 2 + 4 = **12**
15. (A)


16. (D)


17. (D) A and G represent cricket players who are Indians or men.
18. (C)


Conclusion:
I. (×) II. (×)
III. (✓)
∴ Only conclusion III follows.
19. (A)
20. (D)
21. (D)
22. (A)
23. (C)
24. (A)
25. (B) P I N K
↓ ↓ ↓ ↓
59, 33, 86, 14
27. (B) **Lakshmi Kant Jha** was the eighth Governor of the Reserve Bank of India. Padmaja Naidu was the 5th Governor of West Bengal.
Narayan Datt Tiwari was a three-time Chief Minister of Uttar Pradesh (1976–77, 1984–85, 1988–89) and served once as Chief Minister of Uttarakhand (2002–2007). He served as Governor of Andhra Pradesh from 2007 until 2009.
Sarojini Naidu was the 1st Governor of United Provinces.

28. (A) In the human adult, the bone marrow produces all of the red blood cells, 60–70 percent of the white cells (the granulocytes), and all of the platelets. The lymphatic tissues, particularly the thymus, the spleen, and the lymph nodes, produce the lymphocytes.

29. (B) The Battle of Saragarhi was fought before the Tirah Campaign on 12 September 1897 between the British Indian Empire and the Afghan tribesmen.

31. (B) Byopa is a traditional headgear of Nyishi tribe from Arunachal Pradesh (India) and relevant to Geographical Indication.

32. (D) **The Diencephalon** relays sensory information between brain regions and controls many autonomic functions of the peripheral nervous system.
The Brainstem is the posterior part of the brain, continuous with the spinal cord. In the human brain the brainstem includes the midbrain, the pons and medulla oblongata of the hindbrain.
Cerebrum is the largest part of the brain and it performs higher functions like interpreting touch, vision and hearing, as well as speech, reasoning, emotions, learning and fine control of movement.

36. (A) **Jawaharlal Nehru** Port (Nhava Sheva) - Mumbai
Kamarajar Port , formerly Ennore Port, is located on the Coromandel Coast about 24 km north of Chennai Port, is the 12th major port of India.
Paradip Port - Jagatsinghpur (Odisha).

37. (B) **Solow–Swan Model** attempts to explain long-run economic growth by looking at capital accumulation, labour or population growth and increases in productivity, commonly referred as technological progress.
Input–Output Model is a quantitative economic model that represents the interdependencies between different sectors of a national economy or different regional economies.
The Cournot Model of oligopoly assumes that rival firms produce a homogenous product and each attempts to maximize profits by choosing how much to produce.

41. (C) The theme for the 2019 observance is "Ending the HIV/AIDS Epidemic: Community by Community". World AIDS Day was first observed in 1988.

43. (D) **Ornithology** - the study of birds.
Anthropology - study of humans, human behaviour and societies in the past and present.
Geology –study of the solid Earth, the rocks of which it is composed, and the processes by which they change over time.

44. (D) **A Cataract** is a clouding of the lens in the eye which leads to a decrease in vision.
Dry Eye is a condition in which a person doesn't have enough quality tears to lubricate and nourish the eye.
Macular degeneration, also known as **age-related mascular degeneration** (AMD or ARMD), is a medical condition which may result in blurred or no vision in the center of the visual field.

46. (C) Three sessions of Lok Sabha take place in a year: Budget session: February to May. Monsoon session: July to September. Winter session: November to mid December.

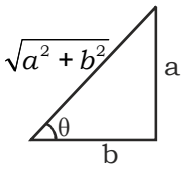
47. (B) Ahom dynasty was established by Sukaphaa. The rule of this dynasty ended with the Burmese invasion of Assam and the subsequent annexation by the British East India Company following the Treaty of Yandabo in 1826.

48. (C) Five Institutes are Delhi University, Banaras Hindu University, University of Hyderabad, IIT Madras and IIT Kharagpur.

49. (C) **Kirigalpotta** is the 2nd tallest mountain in Sri Lanka at 2,388 m.
Hakgala Mountain of Sri Lanka - 2,169 m.
Pidurutalagala is the tallest mountain in Sri Lanka, at 2,524 m. Bible Rock – 670 m.

51. (B) $\left(x^3 - 2\sqrt{2}y^3\right) \div \left(x - \sqrt{2}y\right) = Ax^2 + Bxy + Cy^2$
We know that,
$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$
$\Rightarrow (x - \sqrt{2}\,y)(x^2 + \sqrt{2}\,xy + 2y^2) \div (x - \sqrt{2}\,y) = Ax^2 + Bxy + Cy^2$
$\Rightarrow x^2 + \sqrt{2}\,xy + 2y = Ax^2 + Bxy + Cy^2$
On comparing,
$A = 1, B = \sqrt{2}, C = 2$
Now, $2A + 4\sqrt{2}\,B - 4C$
$\Rightarrow 2 \times 1 + 4\sqrt{2} \times \sqrt{2} - 4 \times 2$
$\Rightarrow 2 + 8 - 8 = 2$

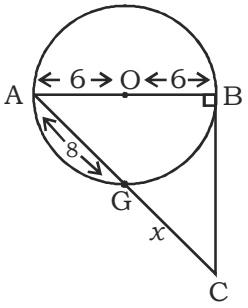
52. (A) $\sin\theta = \frac{a}{\sqrt{a^2+b^2}}$



Now, $\sec\theta + \tan\theta$

$\Rightarrow \frac{\sqrt{a^2+b^2}}{b} + \frac{a}{b} = \frac{\sqrt{a^2+b^2}+a}{b}$

53. (D)



Let GC = x
Now, $BC^2 = GC \times CA$
$\Rightarrow BC^2 = x \times (x+8)$
$\Rightarrow BC^2 = x^2 + 8x$ ...(i)
In ΔABC,
$BC^2 = (8+x)^2 - (12)^2$
$\Rightarrow BC^2 = 64 + x^2 + 16x - 144$
$\Rightarrow BC^2 = x^2 + 16x - 80$ ...(ii)
From eq. (i) and (ii),
$x^2 + 8x = x^2 + 16x - 80$
$\Rightarrow 8x = 80 \Rightarrow x = 10$
From eq. (i),
$BC^2 = 10^2 + 8 \times 10$
$\Rightarrow BC^2 = 180 \Rightarrow BC = 6\sqrt{5}$ cm

54. (B) Triangular field having sides 50m, 70m and 80m

$S = \frac{50+70+80}{2} = 100$

Area
$= \sqrt{100 \times (100-50)(100-70)(100-80)}$
$= \sqrt{100 \times 50 \times 30 \times 20} = 1000\sqrt{3}$ m
A.T.Q,

$\frac{\sqrt{3}}{4}x^2 = 1000\sqrt{3}$
$\Rightarrow x^2 = 4000 \Rightarrow x = 63.2$

55. (A) ATQ.,
S.P = ₹492

$M.P = ₹492 \times \frac{100}{82} = ₹600$

$C.P = ₹600 \times \frac{100}{120} = ₹500$

56. (C) Putting $x = 5$, $y = 8$, number $897359y7x2$ is divisible by 72.
Now $3x - y = 3 \times 5 - 8$
$\Rightarrow 3x - y = 15 - 8 = 7$

57. (A) ATQ.,

$\frac{\sqrt{3}}{4}a^2 = 121\sqrt{3}$

$\Rightarrow a = 11 \times 2$
Perimeter of equilateral traingle = $11 \times 2 \times 3$
Perimeter of circle = Perimeter of equilateral traingle
$\pi d = 11 \times 2 \times 3$
$d = 21$
$r = 10.5$

Hence, area of circle = $\pi r^2 = \frac{22}{7} \times 10.5 \times 10.5$
$= 346.5$ cm^2

58. (D) r = 27cm, R = 27 + 9 = 36cm
h = 1m = 100cm
Volume of cylindrical road roller
$V = \pi h(R^2 - r^2)$
$V = \pi \times 100\,(36^2 - 27^2)$
$V = 100\pi \times 567\text{cm}^3$
$V = 56700\,\pi\text{cm}^3$
Weight of the roller = $8 \times 56700\pi$ gm
[$\because$ 1cm^3 = 8g]

$= \frac{8 \times 56700}{1000}\pi$ kg $= 453.6\pi$ kg

59. (A)

	Income	Savings	expenditure
Initial	100	25	75
	↓ 20% increase	↓ 1%decrease	
Later	120	24.75	120-24.75 = 95.25

Percentage increase in the expenditure

$= \frac{95.25 - 75}{75} \times 100$

$= \frac{20.25}{3} \times 4 = 27\ \%$

60. (B) Let avarage speed of A = x km/hr
average speed of B = $(x - 16)$ km/hr
A.T.Q,

$\frac{96}{x-16} - \frac{96}{x} = 1$
On solving,
$x = 48$ km/hr

61. (D) A : B = 7 : 12, B : C = 8 : 5

A	:	B	:	C
7	:	12	→	**12**
8	←	8	:	5
56	:	96	:	60
14	:	24	:	15

ATQ.,
(15 – 14) units = 214
1 unit = 214
$\therefore$ $x = (14 + 24 + 15) \times 214$
$x = 53 \times 214 = 11342$

62. (A) P = 8100,

$$n = \frac{1\frac{1}{4} \times 12}{5} = \frac{15\text{months}}{5} = 3$$

$$r = \frac{8}{12} \times 5 = \frac{10}{3}$$

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

$$\Rightarrow A = 8100\left(1+\frac{10}{300}\right)^3$$

$$\Rightarrow A = 8100 \times \left(1+\frac{1}{30}\right)^3$$

$$\Rightarrow A = 8100 \times \frac{31}{30} \times \frac{31}{30} \times \frac{31}{30}$$

$\Rightarrow A = 8937.3$

Interest = 8937.3 – 8100

= 837.3 ≅ 837

63. (A) Let the larger number be x and smaller be y

$$\therefore x - \frac{y}{2} = \left(y - \frac{y}{2}\right) \times 5$$

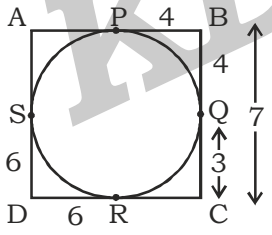
$$\Rightarrow \frac{2x-y}{2} = \frac{y}{2} \times 5$$

$\Rightarrow 2x - y = 5y$

$\Rightarrow 2x = 6y \Rightarrow \frac{x}{y} = \frac{6}{2}$

$\Rightarrow x : y = 3 : 1$

64. (B)



SD = 6cm, thenDR = 6cm (because SD and DR are tangents on the circle)

BP = 4cm, then BQ = 4

BC = 7cm, then QC = 7 – 4 = 3cm = RC

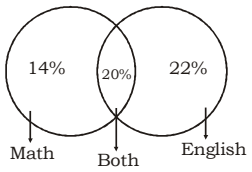
Now,

DC = DR + RC = 6 + 3 = 9 cm

65. (B) Let the no. be 30 and 28 respectively. then, the sum of no. = 30 + 28 = 58

Now, divide the no. by 17, then we have 7 as the remainder.

66. (A)



100% – 56% = 44%

67. (B) $(x^4 + x^{-4}) = 322$

$$\therefore x^4 + \frac{1}{x^4} = 322$$

the value of $x^2 + \frac{1}{x^2} = 18$

$$\Rightarrow x^2 + \frac{1}{x^2} - 2 = 16$$

$$\therefore \left(x - \frac{1}{x}\right)^2 = 4$$

$x - x^{-1} = 4$

68. (A) $27 \times \frac{64}{27} - 108 \times \frac{16}{9} + 144 \times \frac{4}{3} - 317$

= 64 – 192 + 192 – 317

= – 253

69. (C) Efficiencies of A, B and C = 7 : 5 : 8

Total work = 42 × (7 + 5 + 8) = 840

Work done by B and C in 21 days = 21 × (5 + 8) = 273

Remaining work = 840 – 273 = 567

Remaining work done by A in days = $\frac{567}{7} = 81$

Total time = 21 + 81 = 102 days

70. (A) Let radius = $5x$ cm and height = $12x$ cm

$$V = \frac{1}{3}\pi \times (5x)^2 \times 12x$$

$$\Rightarrow 314 = \frac{1}{3} \times 3.14 \times 25 \times 12 \times x^3$$

$$\Rightarrow \frac{300}{25 \times 12} = x^3$$

$x = 1$

$l = \sqrt{h^2 + r^2} = \sqrt{5^2 + 12^2} = 13$ cm

71. (A) No. of teachers in Physics

$$= 1800 \times \frac{17}{100} = 306$$

No. of female teachers in Physics

$$= \frac{2}{9} \times 306 = 2 \times 34 = 68$$

No. of male teachers = 306 – 68 = 238

Required percentage = $\frac{238}{23 \times 18} \times 100 \approx 57\%$

72. (B) Required number of teachers = 62% of 1800 = 1116

73. (B) Teachers who teach English + Physics = 44% of 1800

Teachers who teach Mathematics + Biology together = 25% of 1800

Required difference = 19% of 1800 = 342

74. (D) Required ratio = 13 : 8

75. (C) New strength of Mathematics teachers

$= 234 + (\frac{1}{2} \times 13\% \text{ of } 1800 = 117) = 351$

New strength of Hindi teachers = $\frac{3}{4} \times 8\%$ of 1800 = 108

Collective strength of both subject teachers = 357 + 108 = 459

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Coniferous	(of a tree) producing cones, and having leaves that do not fall off in the winter	शंकुधार
Compatriots	a person living in or originally from the same country as another	हमवतन
Cosmopolitan	having a wide and refined knowledge of the world especially from personal experience	सर्वदेशीय
Cobbler	a mender or maker of shoes	मोची
Entice	to attract artfully by arousing hope or desire	लुभाना
Dubious	Doubtful	संदिग्ध
Ensue	to strive to attain	पीछा करना
Entail	to impose, involve	मिलना
Enrage	to fill with anger	क्रुद्ध करना
Meagre	deficient in quality or quantity	अल्प
Meadow	land that is covered or mostly covered with grass	घास का मैदान
Rendezvous	a place for spending time or for socializing	मिलन स्थल
Renaissance	a period of high artistic or cultural development	पुनर्जागरण काल
Remuneration	a period of high artistic or cultural development	पारिश्रमिक
Remonstrate	to present an opposing opinion or argument	विरोध करना
Steady	firm in position	स्थिर
Truce	a temporary stopping of fighting	युद्धविराम

SSC MOCK TEST - 220 (ANSWER KEY)

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

76. (B) Use 'Who' in place of 'which'. Which refers to things while who refers to people.

77. (B) Use 'for' in place of 'since'. We use 'for' for a period of time and 'since' when starting point of time is given.

86. (B) 'too...to' is a pair of conjunction followed by 'to'.

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