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SSC MOCK TEST – 222 (SOLUTION)

1. (D) We get Heat from Sun, while Vitamins from Fruits.

2. (C) As, C E G I
(−2, +2, −2, +2)
A G E K

Similarly, D F H J
(−2, +2, −2, +2)
B H F L

3. (B) As, $7^4 - 1 = 2400$
Similarly, $8^4 - 1 =$ **4095**

4. (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)

5. (C) 155 ⇒ (15 ÷ 5) (✓)
186 ⇒ (18 ÷ 6) (✓)
306 ⇒ (30 ÷ 6) (×)
279 ⇒ (27 ÷ 9) (✓)

6. (A)

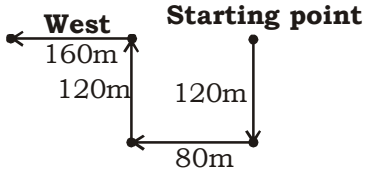
7. (D) Market → Vegetables → Buy → Cook → Dinner

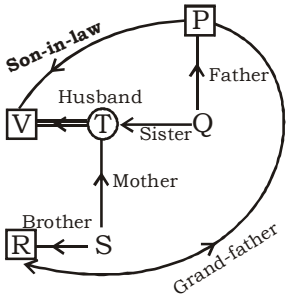
8. (B) 18 + 6 – 6 ÷ 3 × 3 = 6
After interchaning the signs
⇒ 18 ÷ 6 – 6 + 3 × 3 = 6
⇒ 3 – 6 + 9 = 6
⇒ **6 = 6**

9. (B) As, R A C K , M A T E
11 3 1 18 5 20 1 13
Similarly, M A K E
5 11 1 13

10. (A) 2, 5, 11, 23, 44, **77**
(+3, +6, +12, +21, +33)
(+3, +6, +9, +12)

11. (A) ac**b**dd**b**/**a**cbdd**b**/a**c**bddb

12. (C)


13. (D)


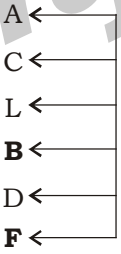
14. (C) ATQ,

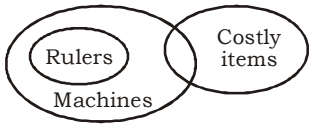
$$\frac{x+6}{x+2+6} = \frac{7}{8}$$

⇒ $x = 8$
Hence, the ages of A and B = 8 years and 10 years respectively

15. (B) As, 2232 ÷ 2 = 1116
and, 1116 ÷ 3 = 372
Similarly, 372 ÷ 4 = **93**

16. (B)

17. (B)


18. (C)


Conclusions
I. (×) II. (✓)
III. (×)

19. (B)
20. (C) **BANE**
21. (A)
22. (D)
23. (D)
24. (D)
25. (D)

26. (B) Individual Satyagarh was the resultant of August offer. It was started with the mass Civil Disobedience Movement but M.K Gandhi on Individual Satyagarh.

27. (C) Dashkumaracharita is the work of Damdin.

28. (B) J M keynes gives an economic theory of total spending in the economy and its effects on output and inflation
David Ricardo – Theory of Profit
Adam Smith – Theory of capital
He is the father of economics. His first book is 'The Theory of Moral Sentiments'.

29. (C) **Perfect Competition** is the situation prevalling in a market in which buyers and sellers are so numerous **Monopolistic Completition** is a type of imperfect competition such that many producers sell products that are differentiated from one another.

30. (C) Loci – A specific fixed postion on a chromosome where a particular gene is located.
Lineage – A sequence of species each of which is considered to have evolved from its precdecessor.

32. (A) In Celsius scale it involves that the water boils at 100 degree and its freezing point is 0, whereas for the Fahrenheit scale, boiling point is 212 degrees and the freezing point stands at 32 degrees. Moreover to convert Celsius scale to Fahrenheit, we can do it with the help of the formula $C \times \frac{9}{5} + 32$.

36. (C)

Jammu and Kashmir	1597
Arunachal Pradesh	1126
Sikkim	220
Himachal Pradesh	200

38. (D) In India, the party whip directs the party members to stick to the party's stand on certain issues and directs them to vote as per the direction of senior party members. Whip cannot be used in all cases. For example, Political parties cannot issue any direction or whip to members to vote or not in Presidential poll. The implication of a not to follow a Whip on Member's part is to risk losing their seat in Parliament on account of defection.

42. (B) Nike – Just do it
Puma – Forever Faster

45. (A) Keibul Lamjao is the only floating National Park in the world.
This National Park is located on the phumdis floating in the Loktak Lake and the largest freshwater lake in India.

State	National Park
Odisha	Bhitarkanika, Kanger Ghati and Similipal
West Bengal	Sundarbans, Jaldapara, Gorumara and Singalila etc.
Arunachal Pradesh	Namdapha, Mouling and Pakke Tiger Reserve

46. (A) The Science and Technolgy, Earth and Science and Health and Family Welfare Minister Dr. Harsh Vardhan informed that the theme for this year's festival is RISEN India/Reasearch, Innovation and Science Empowering the Nation.

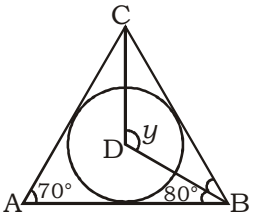
48. (D) Country-India, Bangladesh
Length-2,525 km
Discharge location-Bay of Bengal
Tributaries
left-Ramganga, Gomti, Karnali, Gandaki, Koshi, Mahananda
right-Yamuna, Tamsa, Son, Punpun, Tons

49. (A)

Country	Rank
France	2
India	101
Japan	23

51. (B) Putting $x = 6$, $y = 3$ or $x = 2$, $y = 7$, number $1330x558y2$ is divisible by 88.
Now, $x + y = 6 + 3 = 9$ or $2 + 7 = 9$
Hence, the value of $(x + y) = 9$

52. (B)



$\angle ACB = 180° - 70° - 80° = 30°$
Given $\angle ACB = 2x°$

$x = \frac{1}{2} \angle ACB$

$= \frac{1}{2} \times 30° = 15°$

CD & BD are angle bisector of $\angle C$ & $\angle B$ respectively

$y = 180° - \frac{30}{2} - \frac{80}{2}$

$= 125°$

53. (C) Ratio of the present ages of A and B = 8 : 15

Let A's age = $8x$, B's age = $15x$

A.T.Q,

$$\frac{8x-8}{15x-8} = \frac{6}{13}$$

$\Rightarrow 104x - 104 = 90x - 48$

$\Rightarrow 14x = 56 \Rightarrow x = 4$

A's age = $8 \times 4 = 32$,

B's age = $15 \times 4 = 60$

The required ratio

$= (32 + 8) : (60 + 8) = 40 : 68$

$= 10 : 17$

54. (A) Given PC = 9 cm, BP = 15 cm.

AB = 14 cm.

Now, DP = 14 – 9 = 5 cm.

In ΔBPC,

$BC^2 = 15^2 - 9^2$

BC = 12 cm

In ΔAPD,

$AP^2 = AD^2 + DP^2$

$= 12^2 + 5^2$

= 13 cm

In ΔABP,

$AP < AB < BP$

$\gamma < \beta < \alpha$

55. (A) Let C.P of table = ₹ x

and C.P of chair = ₹ y

$$\text{S.P of table} = x \times \frac{115}{100} = \frac{23x}{20}$$

$$\text{S.P of chair} = y \times \frac{90}{100} = \frac{9y}{10}$$

A.T.Q,

$6x + 12y = 12000$

$x + 2y = 2000$ ...(i)

$$\text{and } \left(6 \times \frac{23x}{20} + 12 \times \frac{9y}{10}\right) - (6x + 12y) = 3000$$

$\Rightarrow 69x + 108y - 60x - 120y = 3000$

$\Rightarrow 9x - 12y = 3000$

$\Rightarrow 3x - 4y = 1000$ ...(ii)

From eq. (i) and (ii)

$x = 1000$, $y = 500$

Total cost of the tables = 6×1000

= ₹ 6000

56. (B) A.T.Q,

$$\frac{105}{100} \times \frac{105}{(105+100)} \times x = ₹35280$$

$$\Rightarrow \frac{21}{20} \times \frac{21}{41} \times x = ₹35280$$

$\Rightarrow x =$ ₹65600

57. (D) $9a^2 + 4b^2 + c^2 + 21 = 4(3a + b - 2c)$

$\Rightarrow (3a)^2 - 12a + 4 + (2b)^2 - 4b + 1 + c^2 + 8c + 16 = 0$

$\Rightarrow (3a - 2)^2 + (2b - 1)^2 + (c + 4)^2 = 0$

$\Rightarrow 3a - 2 = 0,\ 2b - 1 = 0,\ c + 4 = 0$

$$\Rightarrow a = \frac{2}{3},\ b = \frac{1}{2},\ c = -4$$

$$\text{Now, } 9a + 4b - c \Rightarrow 9 \times \frac{2}{3} + 4 \times \frac{1}{2} - (-4)$$

$\Rightarrow 6 + 2 + 4 = 12$

58. (A) Let speed of a person = x km/hr

speed of current = y km/hr

A.T.Q,

$$\frac{4}{x+y} = \frac{80}{60} \Rightarrow x - y = 3 \quad \text{...(i)}$$

$$\text{and } \frac{4}{x+y} = \frac{24}{60} \Rightarrow x + y = 10 \quad \text{...(ii)}$$

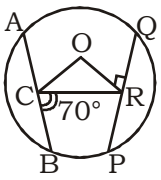
On solving,

$$x = \frac{13}{2} \text{ and } y = \frac{7}{2}$$

Time taken to row 13 km in still water

$$= \frac{13 \times 2}{13} = 2 \text{ hours}$$

59. (B)



$\angle OCR = \angle ORC = \angle OCB - \angle RCB$

$= 90° - 70°$

$= 20°$

$\angle CRQ = \angle ORC + \angle ORQ$

$= 20° + 90°$

$= 110°$

60. (B) $\angle OCD = \angle COE$ (Alternate angles)

$\angle COE = 80°$

$\angle BOE + \angle BOC = \angle COE$

$\angle BOE = 80° - 25° = 55°$

$\angle ABO + \angle BOE = 180°$ (Internal angles)

$\angle ABE = \angle BOE = 180°$

$\theta + 55 = 180°$

$\theta = 125°$

61. (C) Let ratio of sides = $x : 2x$

$$\frac{(x-2)\times 180°}{x} = 120°$$

$x = 6, \qquad 2x = 12$

$$\text{Second polygon angle} = \frac{(12-2)\times 180}{12}$$

$= 150°$

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

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

Area

$$= \sqrt{100\times(100-50)(100-70)(100-80)}$$

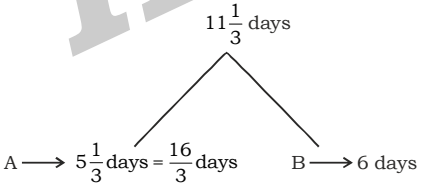
$$= \sqrt{100\times 50\times 30\times 20} = 1000\sqrt{3}$$

A.T.Q,

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

$\Rightarrow x^2 = 4000 \Rightarrow x = 63.2$

63. (C)



Let B will finish the work in x days

A.T.Q,

$$\frac{16}{3}\times\frac{1}{48} + 6\times\frac{1}{x} = 1$$

$$\Rightarrow \frac{1}{9} + \frac{6}{x} = 1$$

$$\Rightarrow \frac{6}{x} = \frac{8}{9} \Rightarrow x = \frac{27}{4} \text{ days}$$

$\therefore$ B alone will finish 4 times the same work

$$= 4\times\frac{27}{4} = 27 \text{ days}$$

64. (A) $\left(\frac{\tan\theta - \sec\theta + 1}{\tan\theta + \sec\theta - 1}\right)\sec\theta = \frac{1}{k}$

Putting $\theta = 30°$

$$\left(\frac{\tan 30 - \sec 30 + 1}{\tan 30 + \sec 30 - 1}\right)\sec 30 = \frac{1}{k}$$

$$\Rightarrow \frac{\frac{1}{\sqrt{3}} - \frac{2}{\sqrt{3}} + 1}{\frac{1}{\sqrt{3}} + \frac{2}{\sqrt{3}} - 1} \times \frac{2}{\sqrt{3}} = \frac{1}{k}$$

$$\Rightarrow \frac{1 - \frac{1}{\sqrt{3}}}{\sqrt{3} - 1} \times \frac{2}{\sqrt{3}} = \frac{1}{k}$$

$$\Rightarrow \frac{\left(\sqrt{3}-1\right)}{\sqrt{3}\left(\sqrt{3}-1\right)} \times \frac{2}{\sqrt{3}} = \frac{1}{k}$$

$$\Rightarrow \frac{1}{k} = \frac{2}{3} \Rightarrow k = \frac{3}{2}$$

From option (A)

$1 + \sin\theta \Rightarrow 1 + \sin 30$

$$\Rightarrow 1 + \frac{1}{2} = \frac{3}{2}$$

$\therefore \quad k = 1 + \sin\theta$

65. (D) ATQ,

A

$\frac{7}{13}$ $\qquad$ $\frac{9}{13}$

$\frac{800}{13\times 100}$

$\frac{1}{13}$ $\qquad$ $\frac{1}{13}$

1 : 1

Hence, Required ratio = **1:1**

66. (B) ATQ,

$l = b + 5$

Then, $lb = b(b + 5) = 150$

$\Rightarrow b^2 + 5b - 150 = 0$

$\Rightarrow (b + 15)(b - 10) = 0$

$\Rightarrow b = -15$ or $b = 10$

But breadth cannot be negative

So, Required perimeter = $2(l + b)$ = **50cm**

67. (D) ATQ,
Required Area = (3 + 4 + 5) × 8
= **96 cm²**

68. (A) P = 8100,

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

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

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

69. (C) Let for different positive numbers
$= a < b < c < d$
A.T.Q,

$$\frac{1}{3} \times \frac{a+b+c+d}{4} = d - 19$$

$\Rightarrow a + b + c + d = 12d - 228$
$\Rightarrow a + b + c - 11d = -228$ ...(i)

and $\frac{a+b+c}{3} = 12$

$a + b + c = 36$ ...(ii)
From eq. (i) and (ii)
$36 - 11d = -228$
$\Rightarrow 11d = 36 + 228$
$\Rightarrow 11d = 264 \Rightarrow d = 24$

70. (B) $\sin^2 30° . \cos^2 45° + 4\tan^2 30° + \frac{1}{2}\sin^2 90°$
$+ 2\cos 90°$

$$\Rightarrow \left(\frac{1}{2}\right)^2 \times \left(\frac{1}{\sqrt{2}}\right)^2 + 4 \times \left(\frac{1}{\sqrt{3}}\right)^2 + \frac{1}{2} \times (1)^2 + 2 \times 0$$

$$\Rightarrow \frac{1}{4} \times \frac{1}{2} + 4 \times \frac{1}{3} + \frac{1}{2}$$

$$\Rightarrow \frac{1}{8} + \frac{4}{3} + \frac{1}{2}$$

$$\Rightarrow \frac{3+32+12}{24} = \frac{47}{24}$$

71. (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 = 428
1 unit = 428
$\therefore$ x = (14 + 24 + 15) × 428
x = 53 × 428 = ₹22684

72. (D) Central angle of the sector

$$= \frac{65}{300} \times 360° = 78°$$

73. (A) The required percent

$$= \frac{(56+64)-65}{56+64} \times 100$$

$$= \frac{120-65}{120} \times 100 = \frac{55}{120} \times 100$$

= 45.8%

74. (B) The required ratio
= (66 + 54) : (46 + 50 + 64)
= 120 : 160 = 3 : 4

75. (A) The required percent

$$= \frac{44+46}{250} \times 100 = \frac{90}{250} \times 100 = 36$$

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Abrasion	an injury caused by something that rubs or scrapes against the skin	खरोंच
Amateur	one lacking in experience and competence	नौसिखिया
Conjurer	a person who performs magic tricks	जादूगर
Covert	made, shown or done in a way that is not easily seen or noticed	अप्रकट
Enunciate	to pronounce words or parts of words clearly	स्पष्ट उच्चारण
Flout	to ignore in an open and disrespectful way	अवज्ञा करना
Freak	not natural, normal or likely	अनूठा
Howl	to make a loud long mournful cry or sound	चीखना
Hypnotist	the act or practice of putting people into a state of hypnosis	सम्मोहित करने वाला
Immaculate	perfectly clean	त्रुटिहीन
Immanent	being within the limits of possible experience or knowledge	अन्तर्निहित
Novice	a person who has just started learning or doing something	नौसिखिया
Obscure	not clearly seen or easily distinguished	अस्पष्ट
Postulate	to suggest (something, such as an idea or theory) especially in order to start a discussion	निर्विवाद मानना
Privy	a small outdoor building that is used as a toilet	शौचालय
Proclaim	to say or state (something) in a public, official, or definite way	घोषित करना
Rebuff	to refuse (something, such as an offer or suggestion) in a rude way	अस्वीकार करना
Rookie	a first-year participant in a major professional sport	नौसिखिया
Schemata	a structured framework or plan	रूपरेखा
Screech	a loud and very high sound	चीख
Smear	a dirty mark, spot, streak etc., made by touching or rubbing something	धब्बा
Spurn	to reject with disdain or contempt	तिरस्कार करना
Streak	a long, thin mark that is a different colour from its background	लम्बी व पतली लकीर
Ulterior	kept hidden in order to get a particular result	परोक्ष

SSC MOCK TEST - 222 (ANSWER KEY)

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

76. (C) All 'fill' before 'last'. The structure will be 'till the last soldier....'.

77. (C) Change 'come' into 'had come'. The I[st] action is in Past Perfect from.

78. (A) replace 'gears' by 'gear'.

79. (B) Eke: manage to make a living with difficulty.

80. (D) Friction: conflict or animosity caused by a clash of wills, temperaments or opinions.

87 (A) We use verb-ing form after mind/not mind.

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