SSC MOCK TEST - 372 (SOLUTION)

1. (3) A 'Pulmonologist' is a doctor who diagnoses and treats diseases of the 'Lungs' and 'Endocrinologist is a doctors who treats diseases of the 'Glands'.

2. (2) As,   Similarly,

    P S ⇒ $19^2 - 16^2 = 105$ J T ⇒ $20^2 - 10^2$ = **300**

3. (4) (1) A —— $+2$ —— C —— Reverse —— X   (2) R —— $+2$ —— T —— Reverse —— G

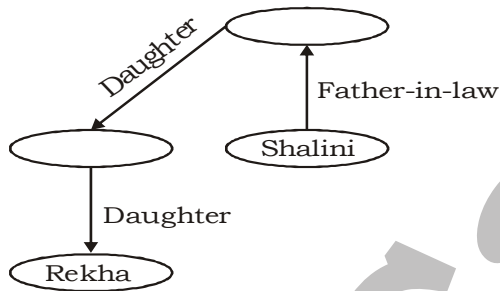   (3) D —— $+2$ —— F —— Reverse —— U   (4) L —— $+3$ —— N —— Not Reverse —— P

4. (3) Except Ounce, others are currencies, while Ounce is a unit of weight.

5. (1) As, $9 \times 2 + 6 = 24$

    And, $5 \times 2 + 9 = 19$

    similarly, $8 \times 2 + 6 = 22$

6. (4)

    Hence, Rekha is Niece of Shalini.

7. (4) 78   79   83   92   108   133

    $+1^2$ $+2^2$ $+3^2$ $+4^2$ $+5^2$

8. (1) R $\xrightarrow{+1}$ S $\xrightarrow{+1}$ T $\xrightarrow{+1}$ U $\xrightarrow{+1}$ V

    B $\xrightarrow{+0}$ B $\xrightarrow{+0}$ B $\xrightarrow{+0}$ B $\xrightarrow{0}$ B

    C $\xrightarrow{+1}$ D $\xrightarrow{+1}$ E $\xrightarrow{+1}$ F $\xrightarrow{+1}$ G

9. (2) As,   Similarly

    14,   169,   225   19,   324,   400

    14 $\xrightarrow{-1}$ $(13)^2$ $\xrightarrow{+2}$ $(15)^2$ 19 $\xrightarrow{-1}$ $(18)^2$ $\xrightarrow{+2}$ $(20)^2$

10. (3)   A   :   B   :   C

    Let Income → 12x : 9x : 7x

    Expenditure → 15y : 9y : 8y

    According to question,

    $12x \times \dfrac{75}{100}$ = 15y (Because A saves 25% of Income)

    3x = 5y

    $\dfrac{x}{y} = \dfrac{5}{3}$

Now New Ratio will be

	A	:	B	:	C
Income $\rightarrow$	12×5	:	9×5	:	7×5
	60	:	45	:	35
Expenditure $\rightarrow$	15×3	:	9×3	:	8×3
	45	:	27	:	24
Saving $\rightarrow$	15	:	18	:	24
	15	:	18	:	11

11. (2)

12. (4) $16 + 36 + 38 = 90$
$49 + 25 + 16 = 90$
$64 + 6 + \mathbf{20} = 90$

13. (2) $54 * 32 * 64 * 18 * 1 * 7$
Put the sign,
$52 \times 32 \div 64 = 18 - 1 + 9$
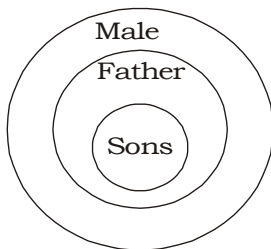
$52 \times \dfrac{32}{64} = 27 - 1$

$26 = 26$

14. (1) 5. Callous $\rightarrow$ 3. Cardiac $\rightarrow$ 1. Cardinal $\rightarrow$ 6. Careless $\rightarrow$ 4. Carrot $\rightarrow$ 2. Cartography

15. (1) Code is the number of letters in the given word.

16. (3) I P **C** L D/**I** P **C** M D/I **P** C **N** D/**I** P C **O** D

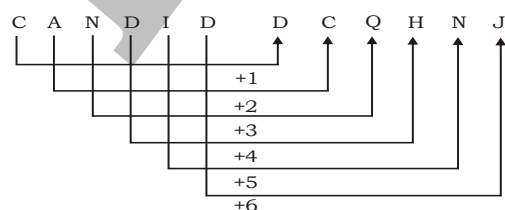17. (2)

18. (2)
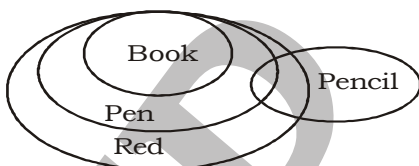
I. True   II. True
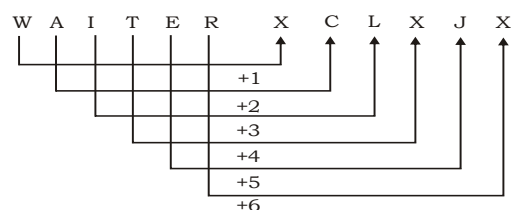Hence, both the conclusions follow.

19. (3)

20. (4) As,   Similarly,

21. (3)   22. (2)
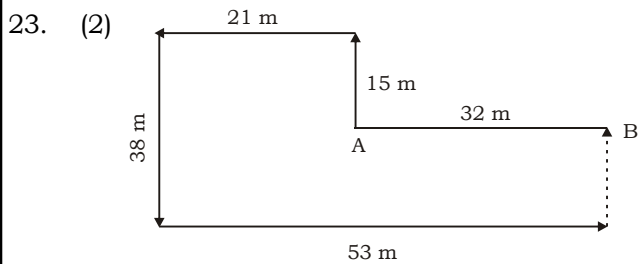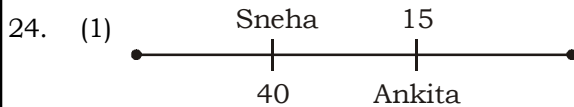
23. (2)

Hence, from the above diagram he should walk (38 – 15) = 23 m to the left.

24. (1)

Required value of n = 40 + 15 + 25 = 80

25. (3)

27. (2) After a general election and formation of a new government, a list of senior Lok Sabha members prepared by the Legislative Section is submitted to the Minister of Parliamentary Affairs, who selects a pro tem speaker.

28. (3) Indian Mutiny began in Meerut on 10 May 1857 and ended in Gwalior on 20 June 1858 by Indian troops (sepoys) in the service of the British East India Company. ?Indian Mutiny, also called Sepoy Mutiny or First War of Independence, widespread but unsuccessful rebellion against British rule in India from 1857-59.

29. (1) The lowest temperature at which a substance catches fire is called its ignition temperature.

30. (2) India ranks at Number 5 as 20 Indian companies feature in 500 most valuable ones in the world, as per the 2022 Hurun Global list.

31. (3) The new symbol is an amalgamation of Devanagri 'Ra' and the Roman 'R' without the stem. The new symbol designed by D Udaya Kumar, a post-graduate of IIT Bombay was finally selected by the Union Cabinet on 15th July 2010.

32. (4) Gotamiputa Satakarni was a ruler of the Satavahana Empire in present-day Deccan region of India.

33. (3) Young Indian cricketer Ishan Kishan created many records in the third and final ODI match of the series against Bangladesh.

34. (3) Prime Minister Narendra Modi on Saturday launched the country's first seaplane service between the Statue of Unity near Kevadiya in Gujarat's Narmada district and Sabarmati Riverfront in Ahmedabad.

35. (4) Dalkhai: Mainly dalkhai is named after a goddess "dalkhai Devi". Though Dusserah is the occasion of Sambalpuri folk dance Dalkhai, it's the most popular folk-dance of Odisha, its performance is very common on all other festivals such as Bhaijiuntia, Phagun Puni, Nuakhai, etc.

36. (4) Potassium permanganate has a molar mass of 158.04 g/mol. This figure is obtained by adding the individual molar masses of four oxygen atoms, one manganese atom and one potassium atom, all available on the Periodic Table of the Elements (see the "Additional Resources" section).

38. (4) Rishabh Pant hit the winning run as India won by three wickets to win fourth Test and the Border-Gavaskar Trophy vs Australia.

42. (2) Jaundice is a yellow color of the skin and eyes that results from excess bilirubin deposited in the skin, and dark urine results from excess bilirubin excreted by the kidneys.

43. (2) A law was sought to limit such frequent defections in India. In 1985, the Tenth Schedule of the 52nd amendment to the Constitution of India was passed by the Parliament of India to achieve this.

44. (1) The Battle of Khanwa was fought near the village of Khanwa, in Bharatpur District of Rajasthan, on March 16, 1527. It was fought between the forces of the first Mughal Emperor Babur and the Rajput forces led by Rana Sanga of Mewar, after the Battle of Panipat.

47. (1) The eardrum is like a stretched rubber shee

48. (2) Ostrich, Emu, Kiwi all are flightless birds.

49. (4) Akbar declared or issued Mahzarnama to take all the religious matters into his own hands. This made him supreme in the religious matters. He issued Mahzarnama to curb the dominance of Ulema. It was written by Faizi in 1579.

51. (1) $2x + \dfrac{2}{x} = 4$

$x + \dfrac{1}{x} = 2$

$\left(x + \dfrac{1}{x} \right)^3 = x^3 + \dfrac{1}{x^3} + 3 \times x \times \dfrac{1}{x} \left(x + \dfrac{1}{x} \right)$

$2^3 = x^3 + \dfrac{1}{x^3} + 3 \times 2$

$x^3 + \dfrac{1}{x^3} = 2$

$\therefore \quad x^3 + \dfrac{1}{x^3} + 2 = 2 + 2 = 4$

52. (2) Let CP = ₹ 100

SP = $100 \times \dfrac{130}{100}$ = ₹ 130

Now, CP = ₹ 50

SP = ₹ 130

$\therefore$ Profit% = $\left(\dfrac{80}{50} \times 100 \right)\%$ = 160%

53. (3) Given 10-digit number 6220x558y2 is divisible by 88.

Hence it should be divisible by 88 = 8 × 11

Divisibility of 8: Last three digits must be divisible by 8

Hence, 8y2 must be divisible by 8

So, y = 3, i.e. 832

Divisibility of 11: The difference of the sum of the alternate numbers is divisible by 11.

Sum of odd places = 6 + 2 + x + 5 + 3 = 16 + x
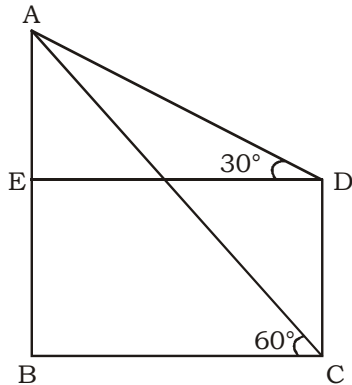
Sum of even places = 2 + 0 + 5 + 8 + 2 = 17

Difference = (16 + x) – 17

x = 1

As 0 is divisible by 11.

$\therefore$ 4x + 3y = 4 × 1 + 3 × 3 = 13

54. (2)

In ΔABC,

$\tan 60° = \dfrac{AB}{BC}$

$\sqrt{3} = \dfrac{400}{BC}$

$BC = \dfrac{400}{\sqrt{3}}$ ......(i)

In ΔAED,

$\tan 30° = \dfrac{AE}{ED}$

$\dfrac{1}{\sqrt{3}} = \dfrac{AE}{\dfrac{400}{\sqrt{3}}}$ ($\because$ BC = ED)

$AE = \dfrac{400}{3} m$ .....(ii)

$\therefore$ CD = AB – AE ($\because$ BE = CD)

$= 400 - \dfrac{400}{3} = \dfrac{800}{3} m$

55. (2) $12 + 20 \times 4 \div (36 \div 9 \times 5) + 17$ of $13 + 4$

$= 12 + 20 \times 4 \div (20) + 221 + 4$

$= 12 + 20 \times 4 \div 20 + 225$

$= 12 + 20 \times \dfrac{1}{5} + 225$

$= 12 + 4 + 225 = 241$

56. (3) $\dfrac{\cos 29° \operatorname{cosec} 61° \tan 45° + 2\sin 35° \sec 55°}{3\sin^2 42° + 3\sin^2 48°}$

$= \dfrac{\cos(90° - 61°)\operatorname{cosec} 61° \tan 45° + 2\sin(90° - 55°)\sec 55°}{3\sin^2(90° - 48°) + 3\sin^2 48°}$

$= \dfrac{\sin 61° \operatorname{cosec} 61° \tan 45° + 2\cos 55° \sec 55°}{3\sin^2 48° + 3\sin^2 48°}$

$= \dfrac{\dfrac{1}{\operatorname{cosec} 61°}\operatorname{cosec} 61° \tan 45° + 2\dfrac{1}{\sec 55°}\sec 55°}{3\left(\cos^2 48° + \sin^2 48°\right)}$

$= \dfrac{1+2}{3} = \dfrac{3}{3} = 1$

57. (4) Average speed of three equal distance = $\dfrac{(3 \times S_1 \times S_2 \times S_3)}{(S_1 \times S_2 \times S_2 \times S_3 + S_1 \times S_3)}$

$= \dfrac{3 \times 25 \times 30 \times 40}{25 \times 30 + 30 \times 40 + 25 \times 40} = \dfrac{90000}{2950}$ = 30.50 km/hr

58. (2)
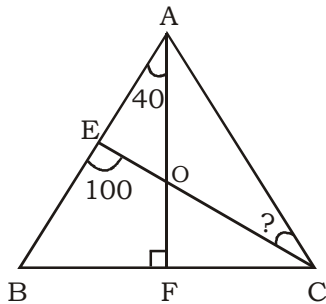
In ΔABF,

$\angle ABF + \angle AFB + \angle BAF = 180°$

$\angle ABF = 180° - 40° - 90° = 50°$

Now, in $\square BEFO$,

$\angle EBF + \angle BFO + \angle FOE + \angle OEB = 360°$

$\angle EOF = 360° - 100° - 90° - 50° = 120°$

Because, lines EC and AF intersect each other.

So,

$\angle AOC = \angle EOF$

$\angle AOC = 120°$

Now, as given, OA = OC

So, $\angle OAC = \angle ACO$ (Let x)

Now, in ΔOAC,

$\angle AOC + \angle OCA + \angle OAC = 180°$

$120° + 2x = 180°$

$x = 30°$

$\therefore \quad \angle ACE = x = 30°$

59. (1) Let the number of boys = 100

Number of girls = 40

$\therefore$ Average age of class = $\dfrac{100 \times 24 + 40 \times 24 \times \dfrac{75}{100}}{140}$ = $\dfrac{2400 + 720}{140}$ = $\dfrac{3120}{140}$ = $22\dfrac{2}{7}$ years

60. (4) A can do a work = $\dfrac{15}{50} \times 100 = 30$ days

B can do a work = $\dfrac{9}{20} \times 100 = 45$ days

Let the total work = 90 units

(A + B)'s 1 day work = $\left(\dfrac{90}{30} + \dfrac{90}{45}\right)$ = 5 units

$\therefore$ They can do 80% work = $\dfrac{90}{5} \times \dfrac{80}{100}$ = 14.4 days

61. (4) P = ₹ 4800

A = ₹ 5520

T = 3 years

SI = 5520 – 4800 = ₹ 720

R = $\dfrac{720 \times 100}{4800 \times 3}$ = 5%
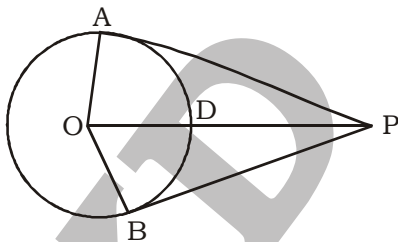
Now, A = ₹ 12000

R = 5%

T = 5 years

$\therefore$ P = $\dfrac{A \times 100}{100 + (R \times T)}$ = $\dfrac{12000 \times 100}{100 + 25}$ = ₹ 9600
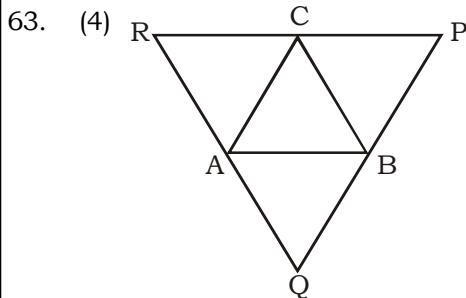
62. (2)

OA = OB = r

OP = 2r

AP = PB = $\sqrt{4r^2 - r^2}$ = $\sqrt{3}r$

$\sin \angle APO = \dfrac{OA}{OP} = \dfrac{r}{2r} = \dfrac{1}{2}$

$\sin \angle APO = \sin 30°$

$\angle APO = 30°$

$\therefore$ $\angle APB = 60°$

63. (4)

AQ $\parallel$ CB and AC $\parallel$ QB

AQBC is a parallelogram.

BC = AQ

Again, AR $\parallel$ BC and AB $\parallel$ RC

ARCB is a parallelogram.

BC = AR

AQ = AR

AQ = AR = $\frac{1}{2}$ QR

Similarly, AB = $\frac{1}{2}$ PR and AC = $\frac{1}{2}$ PQ

$\therefore$ Required ratio = (PQ + QR + PR) : (AB + BC + AC) = 2 : 1

64. (2) $$\left[\left(\sqrt[5]{x^{-\frac{3}{5}}}\right)^{-\frac{5}{3}}\right]^5$$

$$= \left(x^{-\frac{3}{5}}\right)^{\frac{1}{5}\times-\frac{5}{3}\times5} = x^{-\frac{3}{5}\times-\frac{5}{3}} = x$$

65. (3) Let the numbers be 7x and 7y.

Where x and y are co-primes.

Now, LCM of 7x and 7y = 7xy

7xy = 140

xy = $\frac{140}{7}$ = 20

Now, required values of x and y, whose product is 50 and are co-prime will be 4 and 5.

Numbers are 28 and 35, which lie between 20 and 45.

$\therefore$ Required sum = 28 + 35 = 69

66. (4) Original rate = ₹ x per lemon

New rate = $x \times \dfrac{120}{100} = ₹\dfrac{6x}{5}$

ATQ,

$\dfrac{48}{x} - \dfrac{48 \times 5}{6x} = 4$

$\dfrac{48}{x} - \dfrac{40}{x} = 4$

$\dfrac{8}{x} = 4$

x = 2

New rate = $\dfrac{6 \times 2}{5} = ₹\dfrac{12}{5}$ per lemon

∴ Rate of lemon per dozen = $\dfrac{12}{5} \times 12$ = ₹ 28.80

67. (1) Volume of the hemispherical ditch = $\dfrac{2}{3}\pi r^3 = \dfrac{2}{3}\pi \times (15)^3 = 2250\pi\,\text{m}^3$

Volume of the cylindrical ditch = Volume of each dug out = $\pi r^2 h = \pi \times 8^2 \times 4 = 256\pi\,\text{m}^3$

So, extraction of hemispherical ditch by the earth dug out from the cylindrical ditch

$= \dfrac{256\pi}{2250\pi} = \dfrac{128}{1125}$

68. (2) $\sin 17° = \dfrac{x}{y}$

$\cos 17° = \sqrt{1 - \sin^2 17°} = \sqrt{1 - \dfrac{x^2}{y^2}} = \sqrt{\dfrac{y^2 - x^2}{y^2}} = \dfrac{\sqrt{y^2 - x^2}}{y} = \sec 17° = \dfrac{y}{\sqrt{y^2 - x^2}}$

$\sin 73° = \sin(90° - 17°) = \cos 17°$

∴ $\sec 17° - \sin 73° = \dfrac{y}{\sqrt{y^2 - x^2}} - \dfrac{\sqrt{y^2 - x^2}}{y} = \dfrac{y^2 - y^2 + x^2}{y\sqrt{y^2 - x^2}} = \dfrac{x^2}{y\sqrt{y^2 - x^2}}$

69. (2) Slope of line passing through points (4, – 2) and (– 3, 5) = $\dfrac{5 + 2}{-3 - 4} = \dfrac{7}{-7} = -1$

Slope of two parallel lines is always equal.

∴ Slope of the line parallel to the line having slope –1 = –1

70. (4) Given, Investment of P = ₹ 28000

Duration of P = 8 months

Hence, Total investment amount of P = ₹ 28000 × 8

Investment of Q = ₹ 42000

Duration of Q = 12 months

Hence, Total investment amount of Q = ₹ 42000 × 12

Ratio of profits = Ratio of investments = 28000 × 8 : 42000 × 12 = 4 : 9

Given, Total profit = ₹ 21125

∴ Profit of A = $\dfrac{4}{13} \times 21125$ = ₹ 6500

71. (4) Number of fresh items = 15600 – 1200 = 14400

Required more number = $14400 \times \dfrac{5}{100}$ = 720

72. (1) Required ratio = 16 : 17

73. (3) Number of items manufactured by India = 75600 – 4200 = 71400

∴ Required average = $\dfrac{71400}{2} \times \dfrac{31}{100}$ = ₹ 11067

74. (1) Required more% = $\left(\dfrac{17-15}{15} \times 100 \right)\%$ = 13.33% ≈ 13%

75. (2) Number of items manufacture by India = $\dfrac{59800}{130} \times 100$ = 46000

∴ Required difference = $46000 \times \dfrac{4}{100}$ = 1840

MEANINGS IN ALPHABETICAL ORDER

Animosity	strong hostility	बैर
Ballad	a poem or song narrating a story in short stanzas	गाथागीत
Borough	a town or district which is an administrative unit	नगर
Bough	a main branch of a tree	शाखा
Camaraderie	mutual trust and friendship among people who spend a lot of time together	सौहार्द
Contemporary	living or occurring at the same time	समकालीन
Devour	eat (food or prey) hungrily or quickly	लालच से खाना
Dirge	a lament for the dead, especially one forming part of a funeral rite	शोकगीत
Ferocity	the state or quality of being ferocious	क्रूरता
Imposition	the action or process of imposing something or of being imposed	आरोपण
Inundation	an overwhelming abundance of people or things	सैलाब
Masquerade	a false show or pretense	बहाना
Ode	a lyric poem in the form of an address to a particular subject, often elevated in style or manner and written in varied or irregular meter	स्रोत
Perseverance	persistence in doing something despite difficulty or delay in achieving success	दृढ़ता
Pristine	in its original condition; unspoiled	प्राचीन

SSC MOCK TEST - 372 (ANSWER KEY)

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

76. (2) 'Each of the' takes a plural verb after it, but it represents a singular subjects and thus takes a singular verb or singular pronoun. Change 'their' into 'his'.
77. (2) Change 'him' into 'he'. 'It' is used as a subject to emphasize a noun or a pronoun of nominative case.
87. (4) 'Once for all' is the correct phrase meaning 'completely and finally'.
90. (1) The correct spelling is 'Masquerade'.
91. (3) The correct spelling is 'Perseverance'.