

SSC MOCK TEST - 432 (SOLUTION)

1. (2) Pragmatic is antonym of Quixotic, while Bright is antonym of Murky.

2. (3) As,

$$736 \longrightarrow \begin{array}{c} 2 \ 3 \times 3 \ 2 \\ \text{┌───┐} \\ \text{└───┘} \end{array}$$

Similarly,

$$1300 \longrightarrow \begin{array}{c} 5 \ 2 \times 2 \ 5 \\ \text{┌───┐} \\ \text{└───┘} \end{array}$$

3. (3) As, $(2^2 + 2^2) + (2^2 + 9^2) = 93$

And, $(2^2 + 8^2) + (4^2 + 5^2) = 109$

Similarly, $(5^2 + 1^2) + (1^2 + 3^2) = 36$

4. (3) Except option (3), the sum of all the digits are odd number.

5. (4) Chandigarh, Lakshadweep and Puducherry are Union territories of India, while Panji is a capital of Goa.

6. (3) R $\xrightarrow{-5}$ M $\xrightarrow{-3}$ J

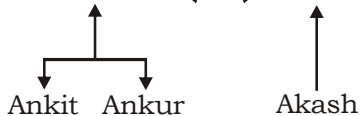
C $\xrightarrow{-5}$ X $\xrightarrow{-3}$ U

L $\xrightarrow{+5}$ **Q** $\xrightarrow{-3}$ **N**

T $\xrightarrow{-5}$ O $\xrightarrow{-3}$ L

7. (3) 4. Insignificant \rightarrow 3. Interpretable \rightarrow 2. Interpretation \rightarrow 5. Involved \rightarrow 1. Involvement

8. (3) Shakuntala \longleftrightarrow Prabhat



Hence, Prabhat has three children.

9. (3) $12 - 8 = 4 \rightarrow 2 \times 2$

$28 - 12 = 16 \rightarrow 4 \times 4$

$64 - 28 = 36 \rightarrow 6 \times 6$

$128 - 64 = 64 \rightarrow 8 \times 8$

$100 \rightarrow 10 \times 10 = 128 + 100 = \mathbf{228}$

10. (4) $P \xrightarrow{+3} S \xrightarrow{+3} V \xrightarrow{+3} \mathbf{Y}$
 $T \xrightarrow{+3} W \xrightarrow{+3} Z \xrightarrow{+3} \mathbf{C}$
 $R \xrightarrow{+3} U \xrightarrow{+3} X \xrightarrow{+3} \mathbf{A}$

11. (3) A $\xleftarrow{\text{opposite}}$ T

Q $\xleftarrow{\text{opposite}}$ R

P $\xleftarrow{\text{opposite}}$ Z

12. (2) From option (2),

$$8 + 5 = 13,$$

$$8 - 5 = 3$$

$$6 + 5 = 11,$$

$$6 - 5 = 1$$

$$8 + 6 = 14,$$

$$8 - 6 = 2$$

13. (1) The weight of R is 7.5 kg.

The weight of T is 4 times the weight of R.

$$\text{Weight of T} = 4R = 4 \times 7.5 = 30 \text{ kg}$$

The weight of S is 3 times the weight of T.

$$\text{Weight of S} = 3T$$

$$\text{Weight of S} = 3 \times 30 = 90 \text{ kg}$$

The weights of Q and R are equal.

$$\text{Weight of Q} = \text{Weight of R} = 7.5 \text{ kg}$$

The weight of P is twice the weight of Q.

$$\text{Weight of P} = 2Q = 2 \times 7.5 = 15 \text{ kg}$$

Order of weight is: $S > T > P > R = Q$

So, T is the second heaviest object.

14. (3) As,

R	O	S	H	N	I	
↓	↓	↓	↓	↓	↓	
18	+ 15	+ 19	+ 8	+ 14	+ 9	= 83 → 38

Similarly,

S	U	S	H	M	A	
↓	↓	↓	↓	↓	↓	
19	+ 21	+ 19	+ 8	+ 13	+ 1	= 81 → 18

15. (4)

16. (1) There are 10 triangles in the given figure.

17. (4) Q R S / R S T / S T U / T U V / U V W

18. (3) $n^3 = 125$

$$n = (5)^3$$

$$n = 5$$

$$\therefore \text{Number of cubes which is painted on only one face} = (n - 2)^2 \times 6$$

$$= (5 - 2)^2 \times 6 = 9 \times 6 = 54$$

19. (1) Odd day in the year 2000 = $\frac{2000}{400} = 0$ odd day

Total years between 2000 to 2020 = 20 years = 5 leap years + 15 Normal year

$$= 5 \times 2 + 15 \times 1 = 25 \text{ odd days}$$

$$= \frac{25}{7} = 4 \text{ odd days}$$

Now total odd day between January 2021 to 30 December 2021 = January + February + March + April + May + June + July + August + September + October + November + December.

$$= \frac{31}{7} + \frac{28}{7} + \frac{31}{7} + \frac{30}{7} + \frac{31}{7} + \frac{30}{7} + \frac{31}{7} + \frac{31}{7} + \frac{30}{7} + \frac{31}{7} + \frac{30}{7} + 5$$

$$= 3 + 0 + 3 + 2 + 3 + 2 + 3 + 3 + 2 + 3 + 2 + 5 \text{ and 4 odd days} = \frac{31+4}{7} = \frac{35}{7} = 0 \text{ odd days}$$

∴ Required day was Sunday.

20. (2) 1023 1020 1026 1017 **1029** 1014

$\begin{array}{cccccc} \curvearrowright & & \curvearrowright & & \curvearrowright & & \curvearrowright & & \curvearrowright \\ -3 & & +6 & & -9 & & +12 & & -15 \end{array}$

21. (3) $20 \div 20 + 20 - 25 \times 25 = 419$
 After changing the signs we have,
 $20 \times 20 + 20 - 25 \div 25 = 419$
 $400 + 20 - 1 = 419$
 $419 = 419$

22. (3)

23. (4) EMAIL

MAIL

AIM

LIE

LIME

MILE

24. (4) 25. (1)

26. (2) One of the most remarkable features of the Indus valley civilization is that the city was provided with an excellent closed drainage system. Thus Indus people had a perfect underground drainage system. No other contemporary civilization gave so much attention to cleanliness.

28. (1) The constitution as adopted on November 26, 1949, contained a preamble, 395 Articles and 8 Schedules. The Indian Constitution came into force on January 26, 1950 and this date is referred to in the Constitution as the Date of its Commencement.

29. (3) When a fast moving train takes a curved path, it tends to move away tangentially off the track. In order to prevent this, the curved tracks are banked on the outside to produce the necessary centripetal force required to keep the train moving in a curved path.

30. (2) Eugenics is the selection of desired heritable characteristics in order to improve future generations, typically in reference to humans. The term eugenics was coined in the 1880s.

33. (4) Lal Bahadur Shastri National Academy of Administration, Mussoorie-248179 (Uttarakhand), Govt of India.

34. (1) Ozone is a allotrope of oxygen comprised of three oxygen atoms. Ozone in the Earth's upper atmosphere shields many living organisms by blocking the ultraviolet light from reaching the surface.

35. (4) The Zafarnama (Epistle of Victory) was a spiritual victory letter sent by Guru Gobind Singh Ji in 1705 to the Mughal Emperor of India, Aurangzeb after the Battle of Chamkaur. The letter is written in Persian verse.

36. (2) Senior Indian diplomat Abhay Thakur, a 1992-batch officer of the Indian Foreign Service (IFS), has been appointed as India's next ambassador to Myanmar. This was announced by the Ministry of External Affairs (MEA) on March 26.

37. (3) Kabir was one of the most influential saints. He was considered to be the contemporary of Guru Nanak and Sultan Sikander Lodhi.

38. (1) The mercury column in the barometer fall rapidly before a severe storm, It is due to Fall in the atmospheric pressure. In general, a falling barometer indicates the approach of a storm.
40. (1) Each year, trees add on extra layer to their trunks. Each ring corresponds to roughly one year. We can obtain the age by literally counting the number of rings in the trunk.
41. (4) Kanak Rele (born 11 June 1937) is an Indian dancer, choreographer and academic best known as an exponent of Mohiniyattom. She is the founder-director of the Nalanda Dance Research Centre and the founder-principal of the Nalanda Nritya Kala Mahavidyalaya in Mumbai.
42. (1) Kumar Ram Narain Karthikeyan (born 14 January 1977) is a racing driver who was the first Formula One driver from India. He has previously competed in A1GP, and the Le Mans Series.
43. (3) World Water Day, held on 22 March every year since 1993, focuses on the importance of freshwater.
47. (1) Only brass is an alloy of copper and zinc; whereas common salt, cane sugar and water are compounds.
48. (1) Tilak (April) and Annie Besant & S Subramaniam Iyer (September) established Home Rule Leagues in 1916. Tilak's league was to work in Maharashtra, Kamataka, Central Provinces and Berar and Annie Besant in the rest of India.
49. (2) Write once, run anywhere (WORA), or sometimes Write once, run everywhere (WORE), was a 1995slogan created by Sun Microsystems to illustrate the cross-platform benefits of the Java language.
50. (2) According to data released by the National Statistical Office (NSO) in its latest Twenty Point Programme (TPP) progress report, only 9,753 km of roads could be constructed Pradhan Mantri Gram Sadak Yojana (PMGSY) in the first six months of FY23.
51. (2) Ratio of profit between Priti and Raghav = $5000 \times 12 : 8000 \times 5$
 $= 60 : 40 = 3 : 2$

$$\therefore \text{Share of Raghav in profit} = \frac{1500}{5} \times 2 = ₹ 600$$

52. (3) Let the maximum marks be x.
 ATQ,

$$x \times \frac{20}{100} + 10 = x \times \frac{42}{100} - x \times \frac{12}{100}$$

$$\frac{20x}{100} + 10 = \frac{30x}{100}$$

$$\frac{30x}{100} - \frac{20x}{100} = 10$$

$$\frac{10x}{100} = 10$$

$$\therefore x = 100$$

53. (3) Let the quantity of first, second and third variety be 2x, 4x and 3x kg respectively.

$$\text{Total cost price} = 50 \times 2x + 20 \times 4x + 30 \times 3x = 100x + 80x + 90x = ₹ 270x$$

$$\text{Total selling price} = 33 \times (2x + 4x + 3x) = 33 \times 9x = ₹ 297x$$

$$\therefore \text{Profit}\% = \left(\frac{297x - 270x}{270x} \times 100 \right) \% = 10\%$$

54. (2) $P = ₹ 15625$

$R = 4\%$

$A = ₹ 17576$

$T = ?$

We know that,

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

$$17576 = 15625 \left(1 + \frac{4}{100} \right)^T$$

$$\frac{17576}{15625} = \left(1 + \frac{4}{100} \right)^T$$

$$\left(\frac{26}{25} \right)^3 = \left(\frac{26}{25} \right)^T$$

$\therefore T = 3 \text{ years}$

55. (2) 50% of $(x - y) = 30\%$ of $(x + y)$

$$\frac{50}{100}(x - y) = \frac{30}{100}(x + y)$$

$$\frac{x - y}{2} = \frac{3x + 3y}{10}$$

$$10x - 10y = 6x + 6y$$

$$4x = 16y$$

$$\frac{x}{y} = \frac{16}{4}$$

$\therefore \text{Required}\% = \left(\frac{4}{16} \times 100 \right)\% = 25\%$

56. (3) $\left(1 - \frac{1}{3} \right) \left(1 - \frac{1}{4} \right) \left(1 - \frac{1}{5} \right) \dots \dots \left(1 - \frac{1}{99} \right) \left(1 - \frac{1}{100} \right)$

$$= \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \dots \dots \times \frac{98}{99} \times \frac{99}{100} = 2 \times \frac{1}{100} = \frac{1}{50}$$

57. (4) Let the M.P be ₹ 100.

$\therefore \text{Cost price} = 100 \times \frac{3}{4} = ₹ 75$

$\text{Selling price} = 100 \times \frac{120}{100} = ₹ 120$

$\text{Profit}\% = \left(\frac{120 - 75}{75} \times 100 \right)\% = \left(\frac{45}{75} \times 100 \right)\% = 60\%$

58. (1) Let the original speed of the aircraft be x km/hr.

Then new speed = $(x - 200)$ km/hr

Duration of flight at original speed = $\left(\frac{600}{x}\right)$ hour

Duration of flight at reduced speed = $\left(\frac{600}{x - 200}\right)$ hour

ATQ,

$$\frac{600}{x - 200} - \frac{600}{x} = \frac{1}{2}$$

$$\frac{600x - 600(x - 200)}{x(x - 200)} = \frac{1}{2}$$

$$\frac{120000}{x^2 - 200x} = \frac{1}{2}$$

$$x^2 - 200x - 240000 = 0$$

$$x^2 - 600x + 400x - 240000 = 0$$

$$(x - 600)(x + 400) = 0 \quad (\text{Ignore the -ve value of } x)$$

$$x = 600 \text{ or } x = -400$$

$$\therefore x = 600$$

So, the original speed of the aircraft was 600 km/hr.

Hence, duration of flight = $\left(\frac{600}{x}\right)$ hour = $\left(\frac{600}{60}\right)$ hour = 1 hour

59. (2) Volume of the sphere = Volume of the cylinder

$$\frac{4}{3}\pi r^3 = \pi r^2 h \quad [\because \text{Their radii are equal}]$$

$$\frac{r}{h} = \frac{3}{4}$$

$$r : h = 3 : 4$$

60. (4) $l = 28$ cm

$$r = 14$$
 cm

$$l = \frac{\pi r \theta}{180}$$

$$28 = \frac{22}{7} \times \frac{14 \times \theta}{180}$$

$$\theta = \frac{28 \times 180 \times 7}{22 \times 14} = \frac{7 \times 180}{11}$$

$$\text{Area of Sector} = \frac{\pi r^2 \theta}{360} = \frac{22}{7} \times \frac{14 \times 14}{360} \times \frac{7 \times 180}{11} = 196 \text{ cm}^2$$

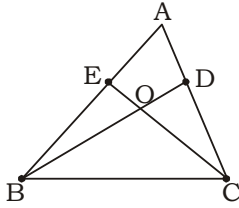
61. (1) Area of the paper = Surface area of the cylinder

$$22 \times 10 = 2 \times \frac{22}{7} \times r \times 10$$

$$r = \frac{7}{2} \text{ cm}$$

$$\text{Volume of the cylinder} = \pi r^2 h = \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times 10 = 385 \text{ cm}^3$$

62. (4)



Median BD = median CE (given)

$$\frac{2}{3} BD = \frac{2}{3} CE$$

$$BO = CO$$

$\angle OBC = \angle OCB$ (Angles opposite to equal sides of a Δ are equal)

In ΔBCD and ΔCBE ,

$$BD = CE \text{ (given)}$$

$$BC = CB \text{ (Common)}$$

$$\angle DBC = \angle ECB \text{ (proved above)}$$

$$\Delta BCD \cong \Delta CBE$$

$$DC = BE \text{ (by CPCT)}$$

$$2DC = 2BE$$

$$(AC = AB = 4 \text{ cm})$$

63. (2) $\sin \theta + \cos \theta = \sqrt{2} \sin (90^\circ - \theta)$

$$\sin \theta = \sqrt{2} \cos \theta - \cos \theta$$

$$\frac{\sin \theta}{\cos \theta} = \sqrt{2} - 1$$

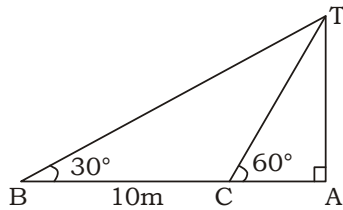
$$\frac{\cos \theta}{\sin \theta} = \frac{1}{\sqrt{2} - 1}$$

$$\cos \theta = \frac{1}{\sqrt{2} - 1} = \frac{\sqrt{2} + 1}{(\sqrt{2} - 1)(\sqrt{2} + 1)} = \sqrt{2} + 1$$

64. (2)
$$\frac{x^4 + 1}{x^5 - \frac{1}{x}} = \frac{\frac{x^4 + 1}{x^2}}{\frac{x^5 + \frac{1}{x}}{x^2}}$$

$$= \frac{x^2 - \frac{1}{x^2}}{x^3 - \frac{1}{x^3}} = \frac{\left(x - \frac{1}{x^2}\right)^3 + 2}{\left(x - \frac{1}{x}\right)^3 + \left(x - \frac{1}{x}\right)} = \frac{3^2 + 2}{3^3 + 9} = \frac{11}{36}$$

65. (2)



Speed of the train = 60 km/h

$$BC = 60 \times \frac{10}{60} = 10 \text{ km}$$

In $\triangle TAC$,

$$\tan 60^\circ = \frac{TA}{CA}$$

$$\sqrt{3} = \frac{TA}{CA}$$

$$CA = \frac{TA}{\sqrt{3}} \text{ km}$$

In $\triangle TAB$,

$$\tan 30^\circ = \frac{TA}{BA}$$

$$\frac{1}{\sqrt{3}} = \frac{TA}{BC + CA}$$

$$\frac{1}{\sqrt{3}} = \frac{TA}{\frac{TA}{\sqrt{3}} + 10}$$

$$3TA = TA + 10\sqrt{3}$$

$$TA = 5\sqrt{3} \text{ km}$$

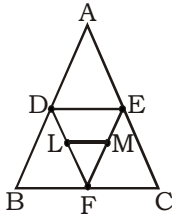
66. (1) $\frac{a+2\sqrt{ab}+b}{\sqrt{a}+\sqrt{b}} + \frac{a-2\sqrt{ab}+b}{\sqrt{a}-\sqrt{b}}$

$$= \frac{(\sqrt{a}+\sqrt{b})^2}{\sqrt{a}+\sqrt{b}} + \frac{(\sqrt{a}-\sqrt{b})^2}{\sqrt{a}-\sqrt{b}}$$

$$= \sqrt{a} + \sqrt{b} + \sqrt{a} - \sqrt{b}$$

$$= 2\sqrt{a} = 2\sqrt{9} = 6$$

67. (1)



$$\frac{AB}{AD} = \frac{BC}{DE} \quad [\text{By Similar triangles}]$$

$$\frac{2}{1} = \frac{BC}{DE}$$

$$BC = 2DE$$

$$\frac{LM}{DE} = \frac{LF}{DF} \quad [\text{ By Similar triangles}]$$

$$\frac{LM}{DE} = \frac{1}{2}$$

$$DE = 2LM$$

$$2 \times 2 LM = BC$$

$$LM : BC = 1 : 4$$

68. (3) Length of tree having 80 m shadow = $\frac{24}{18} \times 60 = 80$ m

69. (1) Fourth proportional = $\frac{9}{16} \times 8 = 4.5$

70. (1) Let selling price of a chair = ₹ x

$$\text{So total selling price} = 30x + 20x \times \frac{3}{4} = ₹ 45x$$

$$\text{Selling price} = 5000 + \frac{35}{100} \times 5000 = ₹ 6750$$

$$\text{Selling price of each a chair} = \frac{6750}{45} = ₹ 150$$

71. (1) Total number of employees of KD Defence in the year 2010, 2012 and 2014
 = $(4.8 + 5.2 + 7.2) \times 100 = 1720$

Total number of employees joining KD tech over all the year together
 = $(0.75 + 1.2 + 1.8 + 1.65 + 4.25 + 5.2) \times 100 = 1485$

$$\therefore \text{ Required \%} = \left(\frac{1720}{1485} \times 100 \right) \% = 115.82\% \approx 116\%$$

72. (3) Total number employees joining KD publication in the year 2010 and 2012
 = $(4.5 + 6.5) \times 100 = 1100$

Total number of employees joining same organisation in the the year 2013 and 2014
 = $(7.8 + 6.2) \times 100 = 1400$

$$\therefore \text{ Required ratio} = 1100 : 1400 = 11 : 14$$

KD

Campus

K D Campus Pvt. Ltd

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73. (4) Total number of employees joining Kd campus in the year 2010, 2012 and 2015

$$= (2.8 + 4.5 + 6.5) \times 100 = 1380$$

$$\therefore \text{Required difference} = 1380 - 425 = 955$$

74. (2)

$$75. (3) \text{ Required average} = \frac{(7.8 + 1.65 + 5.2) \times 100}{3} = \frac{1465}{3} = 488.33 \approx 488$$

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MEANINGS IN ALPHABETICAL ORDER

Acquainted	make someone aware of or familiar with	परिचित
Acquitted	free from a criminal charge by a verdict of not guilty affairs of state or diplomatic occasions	बरी, दोषमुक्त
Affluent	wealthy against surprise attack	धनी
Circuitous	longer than the most direct way	घुमावदार
Congenial	pleasant because of similar to one's interest faults or weaknesses from the main force, used especially as a guard	अनुकूल, सौहार्दपूर्ण
Gradual	taking place or progressing slowly	क्रमिक
Indulge	allow oneself to enjoy the pleasure of something institution in which you use humour to show their	लिप्त होना
Mechanism	a natural or established process by which something	तंत्र
Mellow	pleasantly smooth or soft; free from harshness	कोमल
Monotonous	dull, tedious, and repetitious	नीरस, उबाऊ
Outpost	a small military camp or position at some distance	चौकी
Plaintive	sounding sad and mournful	शोक भरा, विलापी
Protocol	the official procedure or system of rules governing	अनुशासन तंत्र की क्रियाविधि
Sap	gradually weaken or destroy	कमजोर करना
Satire	a way of criticizing a person, an idea or an takes place or is brought about	व्यंग्य

SSC MOCK TEST - 432 (ANSWER KEY)

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

76. (2) The correct answer is (1). With 'one of' use noun in plural form.
Correct sentence: Public speaking is one of the most feared forms of communication.
77. (3) The correct answer is (3). Use 'what' instead of 'that.'
Correct sentence: After a long gap, we went shopping last Sunday and bought what we wanted.
87. (1) The correct answer is (1). Unless is a conjunction which we use in conditional phrase.
Correct sentence: I cannot help you unless you tell me your problem.
90. (1) The correct spelling is 'Accessibility'.
91. (3) The correct spelling is 'Reiterated'.