

SSC MOCK TEST – 196 (SOLUTION)

1. (C) As, Pardon and Exonerate are synonyms.
Similarly, Connoisseur and specialist are synonyms

2. (B) As, $5 \times 6 = 30$
 $6 \times 7 = 42$

Similarly, $10 \times 11 = 110$
 $11 \times 12 = \mathbf{132}$

3. (C) As,

Similarly,

4. (D) Except "Plant," others are parts of a plant.

5. (B)

6. (B) Except '35 - 51', others are pairs of reverse digits.

7. (A) **4, 2, 3, 1, 5**

8. (D) HAT, IBT, JCT, KDT, LET

9. (C)

10. (A)

∴ Manoj is **son** of Om.

11. (B) Number of days from 18th may to 19 August = $13 + 30 + 31 + 19 = 93$

∴ Required day = Thursday + 93
= Thursday + $13 \times 7 + 2$
= **Saturday**

12. (C) **REALM**

13. (B) As, NATIONAL → ONALNATI

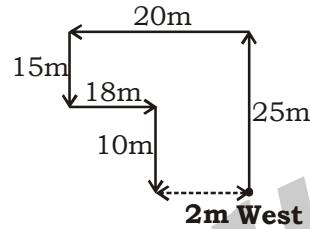
Similarly, ZENITH → ITHZEN

14. (D) 80D16A4C2E8

After changing the signs as per the given details,

$$80 \div 16 - 4 \times 2 + 8 = 5 - 8 + 8 = \mathbf{5}$$

15. (A)



16. (A) As, $215 - 21 = 194$

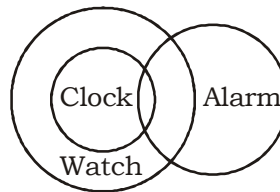
and, $113 - 13 = 100$
Similarly, $79 - 29 = \mathbf{50}$

17. (A) $(2 + 5) - 1 = 6$

$$(6 + 8) - 9 = 5$$

$$(7 + 9) - 8 = \mathbf{8}$$

18. (A)



I. ✓

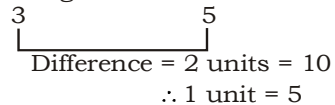
II. ✗

Hence, **Only conclusion I follows**

19. (C)

20. (D) **adcbadcbadcbadcb**

21. (B) 10 years Ago : Now



∴ Reena's present age = $5 \times 5 = 25$ years
and, Reena's mother present age = $25 \times 2 = 50$ years

10 years ago, mother's age = $50 - 10 = \mathbf{40}$ years.

22. (D)
23. (B)
24. (D)
25. (D)
26. (D) Sabira Merchant is a Miss India trainer. Padma Lakshmi is an American author, actress, model, television host and executive producer.
27. (B) Guruvayoor Temple is a Hindu Temple dedicated to Hindu God Guruvayurappan in Kerala. It is referred to Holy Abode of Vishnu on Earth.
Chottanikkara Temple is famous Temple of Mother Goddess Laxmi Devi known as Shree Bhagavati..
29. (D) Kamini is a research reactor at Indira Gandhi Center for Atomic Research (IGCAR) in Kalpakkam. It is designed and built jointly by the Bhabha Atomic Research Centre (BARC) and IGCAR (1996). It produces 30 KW of thermal energy.
Circus was research reactor at BARC in Trombay. It was supplied by Canada in 1954. It was the second nuclear reactor to be built in India.
Dhruva reactor (India's largest nuclear research reactor) at BARC in Trombay. It was completely built in 1985.
Apsara reactor was designed by BARC and built with assistance from U.K. It was completely built in 1956.
31. (C) Paryushan festival is celebrated in August or september in the calender bhadrapada month Shukla Paksha. It lasts 8 days for Svetambara and 10 days for Digambara of Jains.
33. (C) Khelo India Youth Games held for two categories, namely U-17 and U-21. Every year best 1000 kids will be given school ship of ₹ 500000 for 8 year to prepare them for the International sporting events.
In 2018, Haryana (38 golds, 28 silvers and 38 bronzes), Maharashtra (36 golds, 32 silvers and 43 bronzes) and Delhi (25 golds, 29 silver and 40 bronzes)
In 2019, Maharashtra (65 golds, 62 silvers and 81 bronzes), Haryana (62 golds, 56 silvers and 60 bronzes) and Delhi (48 golds, 37 silvers and 51 bronzes).
35. (C) BRI also called 21st Century Silk Road or China Marshall plan, was proposed by China in 2013. India boycotted the both two summits (2017 and 2019) due to the violation of territorial sovereignty as China Pakistan Economic Corridor (CPFC), which passes through POK.
36. (C) The Arthashastra is an Indian treatise on statecraft, economic policy and military strategy, written in Sanskrit by Kautilya (Chanakya).
Raghuvamsha is a Sanskrit Mahakavya by Kalidasa. He is presumed to have flourished in 5th century CE.
Abhijnana Shakuntalam is a Sanskrit play by Kalidas.
37. (A) Tangible Heritage of Humanity of India are- Tradition of vedic chanting, Ramlila, Kutiyattam, Ramman, Mudiyetta, Kalbelia folk songs and dances of Rajasthan, Chhau dance, Buddhist Chanting of Ladakh, Sanskriti, Yoga, Nowruz and Kumbh Mela.
40. (A) Arterioles are small arteries that deliver food to capillaries. Its diameter is less than 100 to 300 μ m.
Venule is small vein, that collect blood from the capillaries. It diameter is in the range of 7 μ m to 1 mm.
Diameter of Lymphatic capillaries is in range from 15-75 microns. Capillaries diameter around 3-4 μ m.
The largest capillaries are found in liver. Capillaries connect arterioles to Venules.
42. (C) Gravity separation process (Hydraulic washing) is method of concentration of the ore is based on difference in specific gravity of metallic ore and gangue particles.
Magnetic process is a process in which magnetically susceptible material is extracted from a mixture using magnetic force. It is useful in mining iron ore. Forth flotation is for selectively separating hydrophobic materials from hydrophilic. This is used for sulphide ores of Copper, Lead and Zinc.
44. (C) The Indus River system comprises the main river Indus and its major tributaries the Kabul and Kurram (right) and Jhelum, Chenab, Ravi, Beas and Sutlej River (left).

46. (D) Dia Mirza is the Brand Ambassador of Swachh Saathi (Student Internship programme)

48. (B) 6th schedule deals with controls of Assam, Meghalaya, Tripura and Mizoram.

51. (B) Let $x = 8 + \frac{1}{8 + \frac{1}{8 + \frac{1}{8 + \dots \infty}}}$

So, $x = 8 + \frac{1}{x}$

$\Rightarrow x^2 = 8x + 1$

$\Rightarrow x^2 - 8x = 1$

Adding '16' to both sides,

$\Rightarrow x^2 - 8x + 16 = 1 + 16$

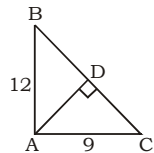
$\Rightarrow (x - 4)^2 = 17$

$\Rightarrow x - 4 = \pm \sqrt{17} \Rightarrow x = 4 \pm \sqrt{17}$

But we can't take $x = 4 - \sqrt{17}$ because it gives negative value.

Hence, $x = 4 + \sqrt{17}$

52. (A)



$BC^2 = AB^2 + AC^2 = 12^2 + 9^2 = 15^2$

$\Rightarrow BC = 15 \text{ km.}$

AD is the shortest distance from A to BC.

So, we have to find AD.

Area of $\triangle ABC = \frac{1}{2} \times AD \times BC = \frac{1}{2} \times AB \times AC$

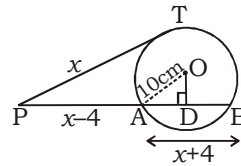
$\Rightarrow AD \times 15 = 12 \times 9$

$\Rightarrow AD = \frac{12 \times 9}{15} \text{ km.}$

$\therefore \text{Required time} = \frac{\text{Distance}}{\text{Speed}}$

$= \frac{12 \times 9 \times 60}{15 \times 12} = \mathbf{36 \text{ min.}}$

53. (C)



We know that,

$PT^2 = PA \cdot PB$

$\Rightarrow x^2 = (x - 4) \cdot 2x$

$\Rightarrow x = 2(x - 4)$

$\Rightarrow x = 2x - 8$

$\Rightarrow x = 8 \text{ cm}$

$\therefore AB = x + 4 = 8 + 4 = 12 \text{ cm}$

$\therefore OD \perp AB$ and AB is a chord.

So, $AD = DB = \frac{AB}{2} = \frac{12}{2} = 6 \text{ cm}$

Now, $OD = \sqrt{OA^2 - AD^2}$

$OD = \sqrt{10^2 - 6^2} = \mathbf{8 \text{ cm}}$

54. (B) $1 + \left(\frac{1}{2}\right) + \left(\frac{1}{3}\right) + \dots + \left(\frac{1}{20}\right) = k$

$\Rightarrow \left(\frac{1}{2}\right) + \left(\frac{1}{3}\right) + \left(\frac{1}{4}\right) + \dots + \left(\frac{1}{20}\right) = k - 1$

Multiplying both sides by $\frac{1}{3}$,

$\Rightarrow \left(\frac{1}{6}\right) + \left(\frac{1}{9}\right) + \left(\frac{1}{12}\right) + \dots + \left(\frac{1}{60}\right) = \frac{(k-1)}{3}$

55. (B) Slope (m) = 3/7, point = (0, -3) = (x_1, y_1)

Equation of line = $(y - y_1) = m(x - x_1)$

$\Rightarrow (y + 3) = \frac{3}{7}(x - 0)$

$\Rightarrow 7y + 21 = 3x$

$\Rightarrow \mathbf{3x - 7y = 21}$

56. (C) Profit = Time \times Capital invested

$\Rightarrow \text{Time} = \frac{\text{Profit}}{\text{Capital invested}}$

\therefore Required Ratio of time

$= \frac{3}{\frac{1}{2}} : \frac{4}{\frac{1}{3}} : \frac{6}{\frac{1}{5}}$

$\Rightarrow 6 : 12 : 30$

$\Rightarrow \mathbf{2 : 4 : 10}$

57. (B) $10 \sin^4 \theta + 15 \cos^4 \theta = 6$

Dividing by $\cos^4 \theta$ both sides, we get

$$10 \frac{\sin^4 \theta}{\cos^4 \theta} + 15 \frac{\cos^4 \theta}{\cos^4 \theta} = \frac{6}{\cos^4 \theta}$$

$$\begin{aligned} \Rightarrow 10 \tan^4 \theta + 15 &= 6 \sec^4 \theta \\ \Rightarrow 10 \tan^4 \theta + 15 &= 6 (\sec^2 \theta)^2 \\ \Rightarrow 10 \tan^4 \theta + 15 &= 6 (1 + \tan^2 \theta)^2 \\ \Rightarrow 10 \tan^4 \theta + 15 &= 6 (1 + \tan^4 \theta + 2 \tan^2 \theta) \\ \Rightarrow 10 \tan^4 \theta + 15 &= 6 + 6 \tan^4 \theta + 12 \tan^2 \theta \\ \Rightarrow 4 \tan^4 \theta - 12 \tan^2 \theta + 9 &= 0 \\ \Rightarrow (2 \tan^2 \theta - 3)^2 &= 0 \\ \text{So, } 2 \tan^2 \theta - 3 &= 0 \end{aligned}$$

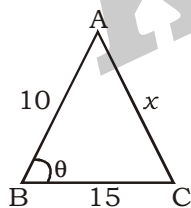
$$\Rightarrow \tan^2 \theta = \frac{3}{2}$$

and, $\cot^2 \theta = \frac{2}{3}$

Now, $(27 \operatorname{cosec}^6 \theta + 8 \sec^6 \theta)$

$$\begin{aligned} &= 27 (\operatorname{cosec}^2 \theta)^3 + 8 (\sec^2 \theta)^3 \\ &= 27 (1 + \cot^2 \theta)^3 + 8 (1 + \tan^2 \theta)^3 \\ &= 27 \left(1 + \frac{2}{3}\right)^3 + 8 \left(1 + \frac{3}{2}\right)^3 \\ &= 27 \left(\frac{5}{3}\right)^3 + 8 \left(\frac{5}{2}\right)^3 \\ &= 27 \left(\frac{125}{27}\right) + 8 \left(\frac{125}{8}\right) = 125 + 125 = \mathbf{250} \end{aligned}$$

58. (A)



$$\text{Area } (\Delta ABC) = \frac{1}{2} \times a \times b \times \sin \theta$$

$$\Rightarrow 60 = \frac{1}{2} \times 10 \times 15 \times \sin \theta$$

$$\Rightarrow \sin \theta = \frac{4}{5}$$

$$\therefore \cos \theta = \frac{3}{5}$$

Now, we know that

$$\cos \theta = \frac{a^2 + b^2 - c^2}{2ab}$$

$$\Rightarrow \frac{3}{5} = \frac{10^2 + 15^2 - x^2}{2 \times 10 \times 15}$$

$$\Rightarrow 180 = 325 - x^2$$

$$\Rightarrow x^2 = 145$$

$$\Rightarrow x = \sqrt{145} \text{ unit}$$

59. (A) $\frac{12 - \sqrt{12} + \sqrt{20}}{\sqrt{27} - \sqrt{45} - 18} = \frac{12 - 2\sqrt{3} + 2\sqrt{5}}{3\sqrt{3} - 3\sqrt{5} - 18}$

$$= \frac{2(6 - \sqrt{3} + \sqrt{5})}{3(\sqrt{3} - \sqrt{5} - 6)} = \frac{2(6 - \sqrt{3} + \sqrt{5})}{-3(6 - \sqrt{3} + \sqrt{5})} = -\frac{2}{3}$$

60. (B) ATQ,

$$A = B \left(1 - \frac{x}{100}\right) \text{-----(i)}$$

$$A = C \left(1 - \frac{y}{100}\right) \text{-----(ii)}$$

$$C = B \left(1 + \frac{k}{100}\right) \text{-----(iii)}$$

By Substituting equations (i) and (iii) in equation (ii), we get

$$B \left(1 - \frac{x}{100}\right) = B \left(1 + \frac{k}{100}\right) \left(1 - \frac{y}{100}\right)$$

$$\Rightarrow 1 + \frac{k}{100} - \frac{y}{100} - \frac{ky}{(100)^2} = 1 - \frac{x}{100}$$

$$\Rightarrow \frac{k}{100} \left(1 - \frac{y}{100}\right) = \left(\frac{y-x}{100}\right)$$

$$\Rightarrow k = \frac{(y-x)100}{100-y}$$

61. (A) A.T.Q,

Interior Angle - Exterior Angle = 108°

$$\Rightarrow \left[\left(\frac{x-2}{x}\right)180^\circ - \frac{360^\circ}{x}\right] = 108^\circ, \text{ where } x \text{ is the}$$

no. of sides of polygon

$$\Rightarrow \left[\left(\frac{x-2}{x}\right) - \frac{2}{x}\right]180^\circ = 108^\circ$$

$$\Rightarrow \left[\frac{(x-2-2)}{x}\right]5 = 3$$

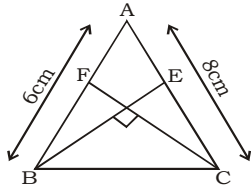
$$\Rightarrow 5x - 20 = 3x$$

$$\Rightarrow 2x = 20$$

$$\Rightarrow x = 10$$

So, number of sides = **10**

62. (A)



∴ BE and CF intersect each other at 90° .

$$\therefore 5 BC^2 = AB^2 + AC^2$$

$$\Rightarrow 5 BC^2 = 6^2 + 8^2$$

$$\Rightarrow 5 BC^2 = 100$$

$$\Rightarrow BC^2 = \frac{100}{5} = 20$$

$$\Rightarrow BC = \sqrt{20} = 2\sqrt{5} \text{ cm}$$

63. (D) Let CP = 100%

So, 1st SP = $100 - 8 = 92\%$

Required SP = $100 + 16 = 116\%$

ATQ,

$$92\% = 69$$

$$\therefore 116\% = \frac{69}{92} \times 116 = \text{₹}87$$

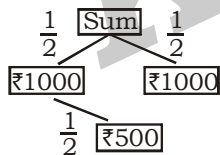
64. (D) ATQ,

Volume of tetrahedron

$$= \frac{\sqrt{2}}{12} (\text{Side})^3$$

$$= \frac{\sqrt{2}}{12} (6)^3 = 18\sqrt{2} \text{ cm}^3$$

65. (C)



$$\text{Required Rate} = \frac{1}{2} \times 100 = 50\%$$

$$66. (A) \frac{(\cos 50^\circ - \cos 130^\circ)}{(\sin 70^\circ + \sin 10^\circ)}$$

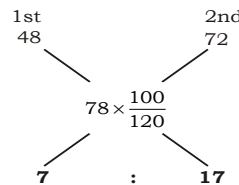
$$= \frac{\cos 50^\circ - (-\cos 50^\circ)}{2 \sin \left(\frac{70^\circ + 10^\circ}{2} \right) \cos \left(\frac{70^\circ - 10^\circ}{2} \right)}$$

$$= \frac{\cos 50^\circ + \cos 50^\circ}{2 \sin 40^\circ \cos 30^\circ}$$

$$= \frac{2 \cos 50^\circ}{2 \sin 40^\circ \cos 30^\circ}$$

$$= \frac{2 \cos 50^\circ}{2 \cos 50^\circ \times \frac{\sqrt{3}}{2}} = \frac{2}{\sqrt{3}}$$

$$67. (A) \text{ CP of resulting mixture} = 78 \times \frac{100}{120}$$



Required ratio = **7 : 17**

$$68. (D) A = 2^3 \times 3^{10} \times 5 \times 10$$

$$= 2^3 \times 3^{10} \times 5 \times 5 \times 2$$

$$= 2^4 \times 3^{10} \times 5^2$$

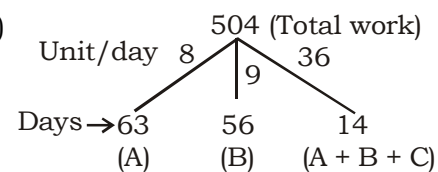
$$B = 2^5 \times 3^2 \times 21 = 2^5 \times 3^2 \times 3 \times 7$$

$$= 2^5 \times 3^3 \times 7$$

∴ HCF of (A, B) = Common factor of A and B

$$= 2^4 \times 3^3 = 432$$

69. (C)



C's one day work

$$= (A + B + C) - (A + B)$$

$$= 36 - (8 + 9) = 19 \text{ units/day}$$

So, C will complete $\frac{19}{21}$ part of work in

$$\frac{504}{19} \times \frac{19}{21} = 24 \text{ days}$$

70. (B) $a^n - b^n$ is divisible by $(a-b)$ and $(a+b)$

if n = even

$$(12)^{512} - (1)^{512}$$

So, Required number

$$= 12 + 1 = 13 \text{ and}$$

$$12 - 1 = 11$$

71.(D) Let us say the maximum marks be 100%
ATQ,
If a student secures 29 marks more, then
he will get minimum marks (24%) to pass
the exam

$$\therefore 24\% = 61 + 29$$

$$\Rightarrow 24\% = 90$$

$$\Rightarrow 1\% = \frac{90}{24}$$

$$\Rightarrow 100\% = \left[\frac{90}{24} \times 100 \right] = \mathbf{375}$$

72. (D) Number of players in Archery

$$= \frac{5}{100} \times 800 = 40$$

$$\text{Number of females} = 40 - 12 = 28$$

$$\text{Required ratio} = 28 : 40 = \mathbf{7 : 10}$$

73. (B) Number of players in wrestling

$$= \frac{24}{100} \times 800 = 192$$

$$\therefore \text{Required percentage} = \frac{165}{192} \times 100$$

$$= \mathbf{86\%}$$

74. (A) Number of players in shooting

$$= 800 \times \frac{20}{100} = 160$$

$$\text{Number of females} = 160 - 74 = 86$$

$$\therefore \text{Required percentage} = \frac{86}{160} \times 100$$

$$= \mathbf{53.75\%}$$

75. (C) Total players in wrestling = 192

$$\text{Males} = 165$$

$$\text{Females} = 192 - 165 = 27$$

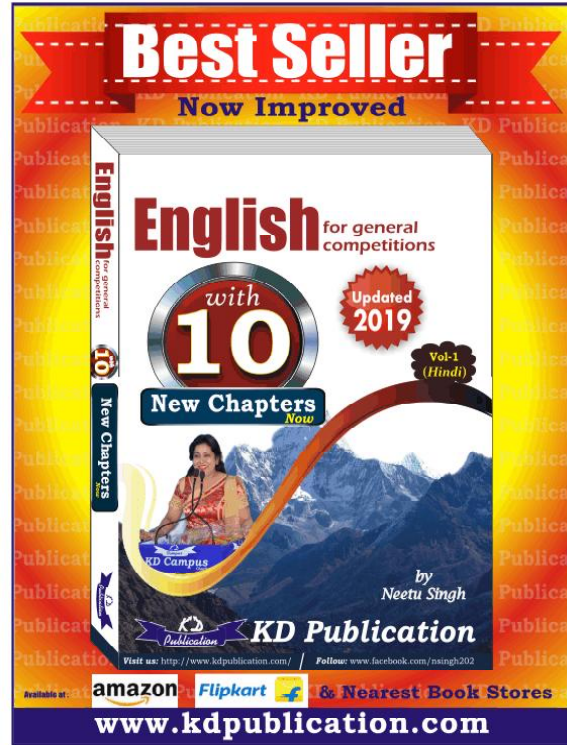
$$\therefore \text{Required ratio} = 165 : 27 = \mathbf{55 : 9}$$

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Exasperating	causing strong feelings of irritation or annoyance	चिढ़ाना
Exalting	to raise in rank, power, or character	उत्कृष्ट करना
Saddening	to make sad	उदास करना
Exhaust	to use all of someone's mental or physical energy	बुरी तरह थका देना
Contravene	to fail to do what is required by (a law or rule)	उल्लंघन करना
Broach	to bring up as a subject for discussion	आरम्भ करना
Flaunt	to show (something) off	दिखावा करना
Perpetrate	to carry out or bring about (as a crime)	पाप या दोष करना
Perpetuate	to cause to last a long time	स्थायी बनाना, जारी रखना
Exile	a situation in which you are forced to leave your country or home and go to live in a foreign country	देश से निकालना
Excavate	to uncover (something) by digging away and removing the earth that covers it	खोदना
Extradite	to obtain the extradition of	प्रत्यर्पण करना
Altar	a raised place on which sacrifices and gifts are offered in some religions	पूजा-पाठ करने का स्थान
Equitable	dealing fairly and equally with everyone	न्यायसंगत
Magnanimous	having or showing a generous and kind nature	दिलदार
Eloquent	having or showing the ability to use language clearly and effectively	अच्छा वक्ता

SSC MOCK TEST - 196 (ANSWER KEY)

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



- | | |
|---|---|
| 76. (A) Change 'Scarcely she had' into 'Scarcely had she'. If a sentence starts with 'Hardly', Scarcely, No sooner etc., it takes inversion form. i.e helping verb + sub + main verb. (But this does not make the sentence interrogative in meaning). | 81. (C) 'imperative' is the correct option. Imperative means expressing a command in a forceful and confident way (अनिवार्य). |
| 77. (C) Change 'were' into 'was'. Singular verb is used with the word which denotes groups.
Ex: A board of directors.
A bevy of girls, women, officers.
A flock of geese, sheep and birds. | 89. (C) 'locked up' is the correct option.
• Lock up – the state of being locked (बन्द करना) |
| 78. (B) Change 'from' into 'for'. | 92. (D) 'existensial' is incorrectly spelt word. 'Existential' is the correct word. Existential means affirming existence (अस्तित्व संबंधी) |
| 79. (C) 'with' is the correct option. Equip with 'something'. is the correct formation. | 93. (B) 'excitement' is incorrectly spelt word. 'Excitement' is the correct word. Excitement means a quality that causes feeling of eager enthusiasm (उत्तेजना) |

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003

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