SSC MOCK TEST – 191 (SOLUTION)

1. (B) As, Smile is done by Lips.
   Similarly, **Wink** is done by Eyes.

2. (C) As, I G E : V T R (+13)

   Similarly, L J H : **Y W U** (+13)

3. (B) 2423 : 47 → $(24)^2 - (23)^2 = 47$
   Similarly, 4342 : 85 → $(43)^2 - (42)^2$ = **85**

4. (B) Except **Dates**, others have no seed.

5. (D) I L P   P S W
       (+3 +4)   (+3 +4)

   E H L   **L N Q**
   (+3 +4)   (**+2 +3**)

6. (D) Except **33**, others are prime numbers.

7. (D) Queen, Aqua, Pique, Torque, Antique, **Prerequisite**

8. (A) 17 , 24 , 36 , 58 , 95 , **152**
       (+7) (+12) (+22) (+37) (+57)
       (+5) (+10) (+15) (+20)

9. (C) BcF, dEh , FgJ, hIl , **JkN**
       +2   +2   +2   +2

10. (D) **290**

11. (D) First we count the number of odd days left in the given period.
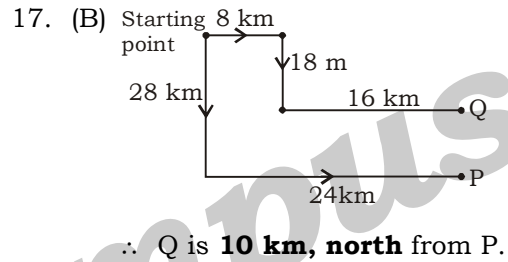   Here, given period is 27th April to 20th Oct.

	April	May	June	July	Aug	Sep	Oct
(Days left)	3	31	30	31	31	30	20
(odd days)	3	3	2	3	3	2	6 = 22

    Here, there are 1 odd day.
    So, given day is Wednesday + 1 day
    = **Thursday**

12. (C) **'STONE'**
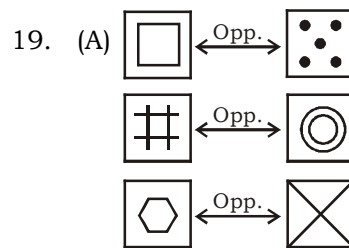
13. (A) As, S U M M E R   V R P J H O
        +3
        –3
        +3
        –3
        +3
        –3

    Similarly,

    D R I V E   **G O L S H**
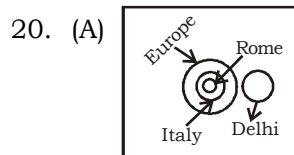   +3
    –3
    +3
    –3
    +3

14. (D) $30 + 10 - 3 \times 3 \div 12$
    After inter-changing the signs as per given details.
    $30 \div 10 + 3 \times 3 - 12$
    $= 3 + 3 \times 3 - 12$
    $= 12 - 12$
    = 0

15. (C) As, 13@5 = 36 → $(13 + 5) \times 2 = 36$
        6@7 = 26 → $(6 + 7) \times 2 = 26$
    and, 5@3 = 16 → $(5 + 3) \times 2 = 16$
    Similarly, 7@8 = x → $(7 + 8) \times 2 = x$
    $\Rightarrow x$ = **30**

16. (C) As, $7^3 - 7 = 336$
    and, $11^2 - 11 = 110$
    Similarly, $8^3 - 8$ = **504**

17. (B)

    Starting point 8 km
    28 km
    18 m
    16 km → Q
    24 km → P

    ∴ Q is **10 km, north** from P.

18. (B)

    Lions — Wild — Carnivores

    I. False
    II. True
    ∴ **Only conclusion II follows**.

19. (A)

    □ ←Opp.→ (5 dots)
    ⊞ ←Opp.→ (circle)
    hexagon ←Opp.→ ⊠

    ∴ ' ' can not be formed by the given figure.

20. (A)

    Europe, Rome, Italy, Delhi

21. (D)
22. (A)

23. (B)

24. (D)

25. (C)
T	I	G	H	T
↓	↓	↓	↓	↓
31	**40**	**32**	**02**	**87**

26. (B) Sound under water is measured using a hydrophone.

    A Hydrometer (Areometer) is an instrument that measures the relative density of liquids.

    Relative density of liquids

    $= \dfrac{\text{density of liquid}}{\text{density of water}}$

28. (D) Malacca city is the capital of the coastal state of Malacca.

    The Bosporus is a narrow, natural strait and internationally significant waterway located in north-western Turkey.

    Bab-al-Mandeb is a strait that separates Asia from Africa.

29. (D) Environmental Performance Index (EPI) is a method of qualifying and numerically marking the environmental performance of state's policy.

		Rank
EPI	–	177th
Forests	–	68th
Water Resources	–	107th
Fisheries	–	53rd
Climate and Energy	–	120th

30. (A) The Panchsheel Agreement was an agreement on Trade and Intercourse between China and India, signed on 29th April 1954 in Beijing by Indian Ambassador N. Raghavan and Chinese Deputy Foreign Minister Chang Han-Fu.

31. (B) Polystyrene $(C_8H_8)_n$

    IUPAC name – Poly (1-phenylethene)

    Density – (0.96-1.04) g/cm^3

    Melting point – $\sim 240°\,C$

    It is soluble in acetone and non bio-degradable.

33. (C) Dr. Verghese Kurien was the father of Operation Flood, which was launched in 1970 by India's National Dairy Development Board (NDDB).

34. (B) Nike – Just do it

    Puma – Forever Faster

37. (D) Badruddin Tyabji was the founding member of Bombay presidency association and INC. He presided over the 3rd Congress session in Madras in 1987.

38. (C) The English Crown is an example of the nominal executive and the council of Ministers headed by the Prime Minister, is the real executive. All the power are legally the powers of the nominal executive but in practise these are exercised by the real executive.

39. (B) Supreme court of India along with these three functions with Autonomy and freedom.

40. (C) Right to Information (RTI) offers all invaluable tool, which every person in India can use to find out the information that can make their lives better. It has been designed to assist and guide the citizens of India to use the RTI Act 2005. This Act received Presidential assent on 15 June, 2005. It come into force on 12 October, 2005.

41. (A)
Capital		**Nation**
Ulaanbaatar	–	Mongolia
Nairobi	–	Kenya
Khartoum	–	Sudan

42. (D) International Red Cross Organization was formed by Henry Dunant the winner of first nobel prize in 1901. Frederic Passy was also awarded by Nobel prize in 1901.

43. (A) Men's singles 2019 Malaysian Open Badminton tournament was held at Axiata Arena.

    Li Junhui and Liu Yuchen are the winners of Men's double 2019 Malaysian Open Badminton tournament. All three are from China.

46. (A) Terylene was first created in 1941 by chemist JR Whinfield. It is produced as the name Dacron.

47. (B) Fallopian tube, also called oviduct or uterine tube, either of a pair of long narrow ducts located in the human female abdominal cavity that transport the male sperm cells to the egg, provide a suitable environment for fertilization and transport the egg from the ovary, where it is produced.

48. (B) The normal atomspheric pressure is 760mm Hg and the normal human blood pressure is around 120/80mm Hg. The measurement of blood pressure is done with respect to atmospheric pressure. It means that our blood pressure is 120mm Hg more than that of atmospheric pressure of that place. Atompheric pressure is measured with respect to vaccum. Hence, the actual blood pressure is 880mm Hg with respect to vaccum.

49. (C) After the Second Battle of Tarain and the foundation of Muslim rule in India, Muhammad Ghori returned west to Ghazni to deal with the threat to his western frontiers from the unrest in Iran, where he appointed Qutb-ud-din Aibak as his regional governor for northern India. His armies, mostly under Turkic generals continued to advance through northern India, raiding as far east as Bengal. Aibak ransacked Ayodhya temples in 1193, followed by his conquest of Delhi.

51. (A)
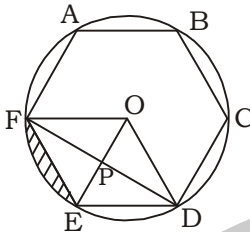
Let the side of regular hexagon be x.
The shortest diagnal is FD.
FD = FP + PD
ΔFOE and ΔEOD are equilateral triangles.
So, FP and PD are altitudes of equilateral triangles.

$$FP = \frac{\sqrt{3}}{2}x$$

Shortest diagonal = FP+PD=FD= $\left(\frac{\sqrt{3}}{2}x\right)\times 2$

$$=\sqrt{3}\,x$$

A.T.Q,

$$\sqrt{3}\,x = 4\sqrt{3}\text{ cm}$$

$\Rightarrow$ x = 4cm.
Radius of circle = 4cm.

Area of shaded region = $\dfrac{1}{6}$
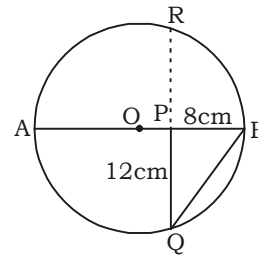
(Area of circle – Area of hexagon)

$$= \frac{1}{6}\left(\pi(4)^2 - 6\times\frac{\sqrt{3}}{4}(4)^2\right)$$

$$= \frac{1}{6}\left(16\pi - 24\sqrt{3}\right)$$

$$= \frac{4}{3}\left(2\pi - 3\sqrt{3}\right)\text{cm}^2$$

52. (C)

Let's produce the QP to meet circle at R.
∴ PQ = PR = 12cm (As perpendicular to diameter)
Now, AP × PB = PQ × PR
$\Rightarrow$ AP × 8 = 12 × 12
$\Rightarrow$ AP = 18 cm
AB = AP + PB = 18 + 8 = 26cm

and, radius of circle = $\dfrac{26}{2}$ cm = 13cm

Area of circle = πr^2 = $\dfrac{22}{7}\times 13\times 13$

= 531.14 ≅ **531cm²**

53. (D)
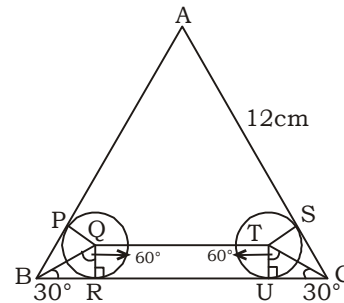
In ΔTUC,

$$\angle TCU = \frac{\angle C}{2} = \frac{60°}{2} = 30°$$

$$\tan 30° = \frac{TU}{UC}$$

$\Rightarrow \dfrac{1}{\sqrt{3}} = \dfrac{3}{UC}$
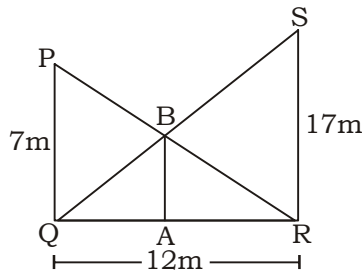
$\Rightarrow$ UC = $3\sqrt{3}$ cm.

Similarly,

In ΔBRQ

$\angle$QBR = $\dfrac{\angle B}{2} = \dfrac{60°}{2} = 30°$

$\tan 30° = \dfrac{QR}{BR} \Rightarrow \dfrac{1}{\sqrt{3}} = \dfrac{2}{BR} \Rightarrow$ BR = $3\sqrt{3}$ cm.

Side of new triangle = $12 - (3\sqrt{3} + 3\sqrt{3})$

= $12 - 6\sqrt{3}$

= **$6(2 - \sqrt{3})$ cm.**

54. (C)

In ΔPQR,

ΔRBA ~ ΔRPQ

$\dfrac{RA}{RQ} = \dfrac{AB}{PQ} \Rightarrow \dfrac{RA}{12} = \dfrac{AB}{7}$ ...(i)

Similarly, In ΔSRQ,

ΔQAB ~ ΔQRS

$\dfrac{AB}{RS} = \dfrac{QA}{QR} \Rightarrow \dfrac{QA}{12} = \dfrac{AB}{17}$ ...(ii)

Adding eq(i) and eq(ii),

$\dfrac{QA}{12} + \dfrac{RA}{12} = \dfrac{AB}{17} + \dfrac{AB}{7}$

$\Rightarrow \dfrac{12}{12} = AB\left(\dfrac{1}{7} + \dfrac{1}{17}\right)$

$\Rightarrow 1 = AB\left(\dfrac{24}{119}\right)$

$\Rightarrow$ AB = **$\dfrac{119}{24}$ cm**.

55. (B) Required percentage = $\dfrac{100 - 30}{30} \times 100$

= **233.33%**

56. (C) A.T.Q,

$a_5 = a_1 + 4d$ and $a_{13} = a_1 + 12d$

$\Rightarrow -16 = a_1 + 4d$ ...(i)

$\Rightarrow 24 = a_1 + 12d$ ...(ii)

Subtracting eq. (i) and from eq. (ii),

$24 - (-16) = a_1 + 12d - a_1 - 4d$

$\Rightarrow 40 = 8d$

$\Rightarrow d = 5$

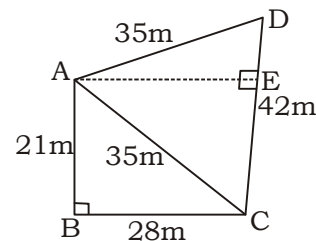Putting 'd' in eq (i),

$-16 = a_1 + 4(5)$

$\Rightarrow -36 = a_1$

Now,

$a_{15} = a_1 + 14d$

$= -36 + 14(5)$

= **34**

57. (B)

$\angle$ABC = 90°

AC = $\sqrt{AB^2 + BC^2} = \sqrt{21^2 + 28^2}$ = 35 m

Now, area of ΔABC = $\dfrac{1}{2} \times AB \times BC$

$= \dfrac{1}{2} \times 28 \times 21 = (14 \times 21) = 294$ m²

Now, In ΔADC,

AC = AD

$\therefore$ CE = $\dfrac{42}{2}$ = 21 cm

and, AE = $\sqrt{35^2 - 21^2}$ = 28m

Now area of ΔADC = $\dfrac{1}{2} \times 42 \times 28 = 588$ m²

$\therefore$ Required Area = 294 + 588 = **882 m²**

58. (A) Let the unit digit and tens digit of number be x and y.

Number = $10y + x$

A.T.Q

$10x + y = 10y + x + 36$

$\Rightarrow x - y = 4$ ...(i)

$\Rightarrow x + y = 10$ ...(ii) ...(given)

From eq. (i) and eq. (ii), we get

$x = 7$

and, $y = 3$

$\therefore$ Required number = 10(3) + 7

= **37**

59. (C) L.C.M of 56 and 40 = 280
H.C.F of 56 and 40 = 8
Required product = 280 × 8 = **2240**

60. (A) 6 × 0.6 × 0.06 × 0.006 × 0.0006 × 60

$$= \left(\frac{36}{1000}\right)^3 = \textbf{(0.036)}^3$$

61. (B) Required average height$=\dfrac{35\times135+45\times155}{35+45}$

= **146.25 cm**.

62. (A) Average speed = $\dfrac{\text{Total Distance}}{\text{Total time}}$

$=\dfrac{65+80}{\dfrac{65}{13}+\dfrac{80}{16}}=\dfrac{145}{10}=$**14.5km/h**.

63. (D) Shopkeeper makes 25% profit.

So, CP = $\dfrac{4}{5}$ × 35 = ₹ 28

A.T.Q, Basmati rice   Ordinary rice
          38   24

              28

        4   10
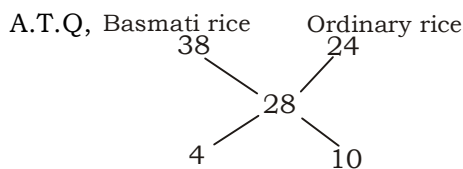
They were mixed in ratio 2 : 5
Given 5 units → 35 kg
       1 units → 7 kg
Required quantity = 2 × 7 = **14kg**.

64. (C)
              Days   Efficiency
Ajay – 16   5

Vijay – 20 — 80 — 4

Ajay + Vijay + Suraj – 8   10
Efficiency of Suraj to complete the work
= 10 – 5 – 4 = 1

∴ Required Amount = $\dfrac{1}{10}$ × 14475

= **₹1447.5**

65. (B) C.I = $P\left(\left(1+\dfrac{r}{100}\right)^T -1\right)$

C.I = $45000\left(\left(1+\dfrac{10}{100}\right)^3 -1\right)$

$= 45000\left(\dfrac{1331}{1000}-1\right)$

= ₹14895

S.I = $\dfrac{63000\times10\times6}{100}$ = ₹37800

Required percentage = $\dfrac{14895}{37800}$×100

= **39.4%**

66. (C) 2 sin$x$ + cos$x$ = $\dfrac{1}{2}$

sin$x$ – 2 cos$x$ = $\sqrt{(2)^2+(1)^2-\left(\dfrac{1}{2}\right)^2}$

$= \sqrt{5-\dfrac{1}{4}} = \dfrac{\sqrt{\textbf{19}}}{\textbf{2}}$

67. (C) A.T.Q,
$x^2 + 2(2 + k)x + k^2 = 0$
If it has equal roots, then D = 0.

$(2(2+k))^2 - 4(1)k^2 = 0$
⇒ $4(4 + k^2 + 4k) - 4k^2 = 0$
⇒ $16 + 4k^2 + 16k - 4k^2 = 0$
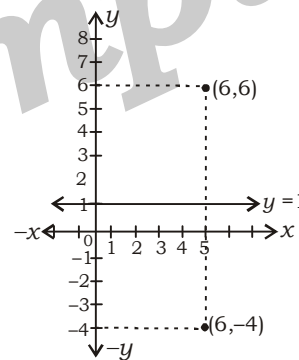⇒ **$k = -1$**

68. (B) $\dfrac{x}{y} = \dfrac{7}{5}$ ...given

Putting x and y in $\dfrac{5x-3y}{7x+4y-2xy}$

$= \dfrac{5(7)-3(5)}{7(7)+4(5)-2(7)(5)}$

$= \dfrac{35-15}{49+20-70}$

= **–20**

69. (A)

∴ Reflection of the point (6, –4) on y =1 is **(6, 6)**.

70. (C) $x = a (b - c) \Rightarrow \dfrac{x}{a} = (b - c)$

$y = b (c - a) \Rightarrow \dfrac{y}{b} = (c - a)$

$z = c (a - b) \Rightarrow \dfrac{z}{c} = (a - b)$

∴ $\left(\dfrac{x}{a}\right)^3 + \left(\dfrac{y}{b}\right)^3 + \left(\dfrac{z}{c}\right)^3$
= $(b - c)^3 + (c - a)^3 + (a - b)^3$
              [∵ $b - c + c - a + a - b = 0$]
= 3 . $(b - c)$. $(c - a)$. $(a - b)$
⇒ $3\cdot\dfrac{x}{a}\cdot\dfrac{y}{b}\cdot\dfrac{z}{c} = \dfrac{3xyz}{abc}$

71. (C) $\dfrac{(\sin x + \sin y)(\sin x - \sin y)}{(\cos x + \cos y)(\cos y - \cos x)}$

Putting $x = 90°$ and $y = 0°$

We get

$= \dfrac{(\sin 90° + \sin 0°)(\sin 90° - \sin 0°)}{(\cos 90° + \cos 0°)(\cos 0° - \cos 90°)}$

$= \dfrac{(1+0)(1-0)}{(0+1)(1-0)} = \textbf{1}$

72. (A) Amount spent on rent = 15%

Amount spent on transport and food

= 22% + 8% = 30%

A.T.Q,

30% – 15% = ₹4500

$\Rightarrow$ 15% = 4500

$\Rightarrow$ 1% = $\dfrac{4500}{15}$ = ₹300

$\therefore$ His monthly expenses = 300 × 100

= **₹30,000**.

73. (B) Expenditure on picnic

= 20% of 'others' = $\dfrac{20}{100}$ × 35 = 7% of total

expenses.

A.T.Q.

7% = ₹2100.

$\therefore$ Expenditure on transport = $\dfrac{2100}{7}$ × 8

= **₹2400**.

74. (A) Total expenditure of education and 'transport'

= 22% + 8% = 30%

$\therefore$ Required angle = $\left(\dfrac{30}{100} \times 360°\right)$ = **108°**

75. (C) Decrease in expenditure on 'others'

= 10500 – 10290 = ₹210

Initial expenditure on clothes

= $210\left(\dfrac{100}{10}\right)$ = ₹2100.

$\therefore$ Required percentage = $\left(\dfrac{2100}{10,500}\right) \times 100$

= **20%**

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Accord	agreement of opinion	सहमति
Apiary	a place where bees are kept	मधुशाला
Aviary	a place where many birds are kept	पक्षीशाला
Bush	a usually low shrub with many branches	झाड़ी
Calumniate	to utter maliciously false statements, charges	निंदा करना
Chafe	injury caused by friction	रगड़ लगाना
Comply	to do what you have been asked or ordered to do	पालन करना
Confer	to discuss something important in order to make a decision, grant a title etc.	विचार विमर्श करना, नवाज़ना
Ditch	a long narrow channel or trench dug in the earth	गढ्ढा
Dupe	to cheat	धोखा देना
Frown	to make a frown in anger, concentration, etc.	त्योरी चढ़ाना
Fume	a disagreeable smoke, vapour, or gas, to becomes angry	धुआं, गुस्सा होना
Hutch	an enclosed area or cage for an animal	काष्ठपिंजर
Refusal	the act of showing unwillingness	अस्विकार
Renegade	to desert one's faith, cause or allegiance to another	स्वधर्मत्भागी, पाखण्डी
Ripple	a very small wave on the surface of a liquid	लहर, तरंग
Rumble	a low heavy rolling sound	घरघराहट
Zealot	a fanatic	कट्टरपंथी

SSC MOCK TEST - 191 (ANSWER KEY)

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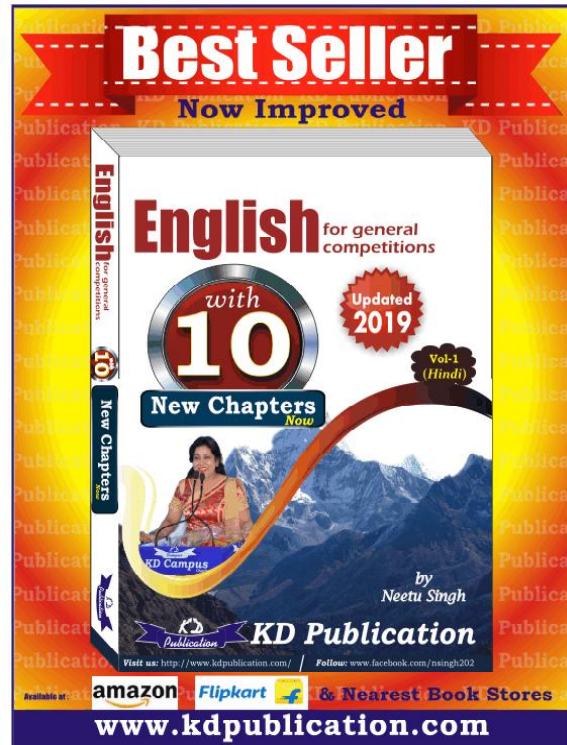
76. (A) Replace 'help' with helping. We use 'V + ing' form after 'with a view to'.

77. (C) Correct preposition will be 'with' in place of 'in'. 'Finding fault with you'.

78. (B) Replace 'true' with 'truthful' person.

79. (B) 'Degrade' means 'to treat without respect.

80. (B) We 'pour' drinks for oneself.

81. (B) You take 'brisk walk' when you are empty stomach.

88. (B) 'Rattle' means 'to make a rapid succession of short sharp noises'.

89. (D) No improvement. After but the object form of Pronoun comes.

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