# SSC MOCK TEST – 188 (SOLUTION)
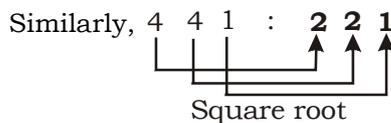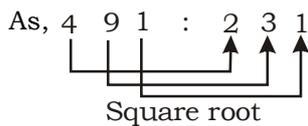
1.  (A)  As,



(Opposite alphabets)+2

Similarly,



(Opposite alphabets)+2
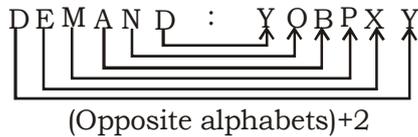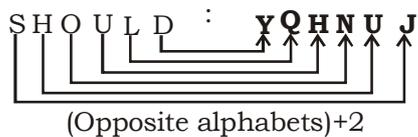
2.  (C)  Here, each digit in second number is the square root of each digit in first number,

As, 4  9  1  :  2  3  1



Square root

Similarly, 4  4  1  :  **2  2  1**



Square root

3.  (B)  The study of Animals is called zoology and the study of **Virus** is called virology.

4.  (A)  6 + 9 + 6 = 21
    7 + 8 + 6 = 21
    9 + 8 + 4 = 21
    **7 + 4 + 5 ≠ 21**

5.  (D)  Except **Praise**, others are synonym of one-another.

6.  (A)  **B  C**          C  L
    **2 +3 = 5**      3+12 = 15
    I  F              G  H
    9 +6 = 15        7 +8 = 15

7.  (B)  **41325**

8.  (B)  $\underline{FEDC}$ , $\underline{JIHG}$ , $\underline{NMLK}$ , **RQPO**
    +4        +4        +4

9.  (D)  3 , 6 , 15 , 42 , **123**
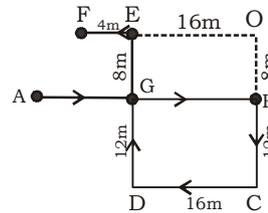    ×3-3  ×3–3  ×3-3  ×3–3

10. (B)  A.T.Q.,
    Numbers formed using 3$^{rd}$, 5$^{th}$ and 8$^{th}$ digit of given number are 6, 1, 3 and 361 is a perfect square.
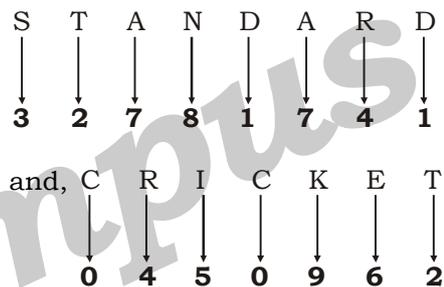    361 = (19)$^2$
    ∵ 19 is an odd number so,

11. (B)



Let FE and CB meet at point O.
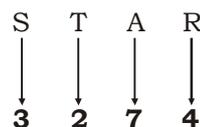
∴  Required Distance = $\sqrt{(FO)^2 + (OC)^2}$

= $\sqrt{20^2 + 20^2}$

= **$20\sqrt{2}$ cm**

12. (C)  **'NAMES'** cannot be written.

13. (C)  As,

| S | T | A | N | D | A | R | D |
|---|---|---|---|---|---|---|---|
| **3** | **2** | **7** | **8** | **1** | **7** | **4** | **1** |

and, C  R  I  C  K  E  T

| C | R | I | C | K | E | T |
|---|---|---|---|---|---|---|
| **0** | **4** | **5** | **0** | **9** | **6** | **2** |

Similarly,

| S | T | A | R |
|---|---|---|---|
| **3** | **2** | **7** | **4** |

14. (B)  19 – 48 ÷ 702 + 18 × 338
    After changing the signs as per given details,
    19 × 48 + 702 ÷ 18 – 338
    ⇒  912 + 39 – 338 = **613**

15. (C)  As, $90 \sim 5 = 23 \rightarrow \dfrac{90}{5} + (5) = 18 + 5 = 23$

    and $88 \sim 4 = 26 \rightarrow \dfrac{88}{4} + (4) = 22 + 4 = 26$

    Similarly,

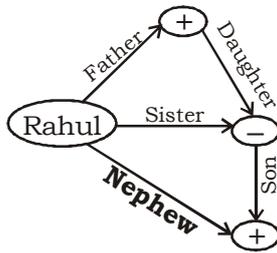    $77 \sim 7 = 18 \rightarrow \dfrac{77}{7} + (7) = 11 + 7 = $ **18**

16. (C)  As, 16 + 36 + 38 = 90
    and, 49 + 25 + 16 = 90
    Similarly, 64 + 6 + **20** = 90
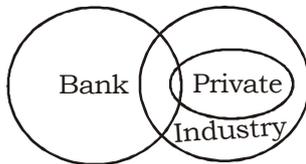
17. (C)  **20 triangles**

18. (A)



19. (C) Option **'C'** is correct answer because on this shows some part of rectange, square and hexagon is common and some part of circle, triangle and rectange is common.

20. (C) Teachers who are either swimmers or nurses = **A, B, G.**

21. (A)



   I. True
   II. False

   ∴ Only **conclusion I** follows.

22. (C)
23. (B)
24. (C)
25. (A)

   G   R   E   A   T
   ↓   ↓   ↓   ↓   ↓
   **33  96  89  57  21**

30. (A) ARTICLE 61: PROCEDURE FOR IMPEACHMENT OF THE PRESIDENT

   (1) When a President is to be impeached for violation of the Constitution, the charge shall be preferred by either House of Parliament.

   (2) No such charge shall be preferred unless-
   - the proposal to prefer such charge is contained in a resolution which has been moved after at least fourteen days' notice in writing signed by not less than one-fourth of the total number of members of the House has been given of their intention to move the resolution, and
   - such resolution has been passed by a majority of not less than two-thirds of the total membership of the House.

   (3) When a charge has been so preferred by either House of Parliament, the other House shall investigate the charge or cause the charge to be investigated and the President shall have the right to appear and to be represented at such investigation.

   (4) If as a result of the investigation a resolution is passed by a majority of not less than two-thirds of the total membership of the House by which the charge was investigated or caused to be investigated, declaring that the charge preferred against the President has been sustained, such resolution shall have the effect of removing the President from his office as from the date on which the resolution is so passed.

31. (B) Key functions of the Election Commission of India are as under:
   The Election Commission of India is considered the guardian of free and reasonable elections.
   It issues the Model Code of Conduct in every election for political parties and candidates so that the decorum of democracy is maintained.
   It regulates political parties and registers them for being eligible to contest elections.
   It publishes the allowed limits of campaign expenditure per candidate to all the political parties, and also monitors the same.
   The political parties must submit their annual reports to the ECI for getting tax benefit on contributions.
   It guarantees that all the political parties regularly submit their audited financial reports.

34. (D) A sudden violent shaking of the ground, typically causing great destruction, as a result of movements within the earth's crust or volcanic action.
   Top 10 Indian cities which are observed as high earthquake prone zones:
   Guwahati - Assam
   Srinagar - Jammu and Kashmir.
   Delhi.
   Mumbai - Maharashtra.
   Chennai - Tamil Nadu.
   Pune - Maharashtra.
   Kochi - Kerala.
   Kolkata - West Bengal.
   Thiruvananthapuram - Kerala
   Patna - Bihar
   Earthquakes are caused by tectonic movements in the Earth's crust. The main cause is when tectonic plates ride one over the other, causing orogeny (mountain building), and severe earthquakes. The boundaries between moving plates form the largest fault surfaces on Earth. These are called collapse earthquakes.

36. **(B)** A tsunami is a large ocean wave that is caused by sudden motion on the ocean floor. This sudden motion could be an earthquake, a powerful volcanic eruption, or an underwater landslide. The impact of a large meteorite could also cause a tsunami.

About 30% of Pacific tsunamis occurs in the region of Japan-Taiwan and the coasts of Japan are particularly prone to tsunami due to the occurrence of a relevant number of submarine earthquakes. Nevertheless, both destructive and minor tsunamis occur also in the Indian ocean, Atlantic ocean and in the Mediterranean sea.

38. **(C)** First Five Year Plan:
   I.   It was made for the duration of 1951 to 1956.
   II.  It was based on the Harrod-Domar model.
   III. Its main focus was on the agricultural development of the country.
   IV.  This plan was successful and achieved growth rate of 3.6% (more than its target)

41. **(C)** The National Stock Exchange of India Limited is the leading stock exchange of India, located in Mumbai. The NSE was established in 1992 as the first demutualized electronic exchange in the country.
   CEO: Vikram Limaye
   Currency: Indian rupee
   Headquarters: Mumbai

43. **(B)** In 1905 AD, the Viceroy of India Lord Curzon carried out the partition although there was a strong opposition from majority of Indians. The government announced its final decision on 19th July 1905 and partition was completed with effect from 16th October 1905. The partition made original Bengal province to two separate provinces, 1) Bengal 2) Eastern Bengal and Assam. East Bengal was added with Assam and formed the Eastern Bengal and Assam province. Dhaka became the capital of Eastern Bengal and Assam. Chittagong, Dhaka Divisions, Rajshahi Division (excluding Darjeeling) and Malda District were separated from Bengal and transferred to the new province. State of Hill Tripura came under Eastern Bengal and Assam province.

44. **(C)** The Swadeshi movement, part of the Indian independence movement and the developing Indian nationalism, was an economic strategy aimed at removing the British Empire from power and improving economic conditions in India by following the principles of swadeshi which had some success

When Lord Curzon, then Viceroy of India, announced the partition of Bengal in July 1905, Indian National Congress, initiated Swadeshi movement in Bengal. Swadeshi movement was launched as a protest movement which also gave a lead to the Boycott movement in the country.

It was the most successful of the pre-Gandhian movement. Its chief architects were Aurobindo Ghosh, Lokmanya Bal Gangadhar Tilak, Bipin Chandra Pal and Lala Lajpat Rai.

48. **(D)** Renewable energy, also called alternative energy, usable energy derived from replenishable sources such as the Sun (solar energy), wind (wind power), rivers (hydroelectric power), hot springs (geothermal energy), tides (tidal power), and biomass (biofuels).

49. **(C)** A supercomputer is a computer with a high level of performance compared to a general-purpose computer. The performance of a supercomputer is commonly measured in floating-point operations per second instead of million instructions per second.

As of January 2018, Pratyush and Mihir are the fastest supercomputer in India with a maximum speed of 6.8 Peta Flops.

51. **(B)**
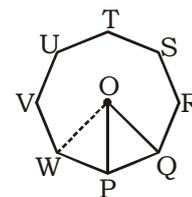


Joint OW,
Internal angle of polygon

$$= \frac{(n-2)180}{n} = \frac{(8-2)180}{8} = 135°$$

$\therefore$  $\angle WPQ = 135°$

$\angle OPQ = 60°$ (equilateral $\Delta$)

$\angle WPO = 135° - 60° = 75°$

$\because$ PQ = OP (sides of equilateral $\Delta$)
and, PW = PQ (Sides of regular pentagon)

$\therefore$ PW = PO

Now in $\Delta$ POW,
$\angle$ POW + $\angle$ PWO + $\angle$ WPO = 180°

$\Rightarrow$ 2$\angle$ POW + 75° = 180° ($\because$ PW = PO)

$\Rightarrow$ $\angle$ POW = **52.5°**

52. (C) Speed of train A

$$= \frac{170+230}{25} = \frac{400}{25} = 16 m/s$$

Ratio of speed of train B and train A = 5 : 4

Speed of train B = $\frac{5}{4} \times 16 = 20$ m/sec

When train crosses a stationary object. Then it covers the distance equal to its length.

D = S × T

∴ Length of train B = 20 × 20 = **400m**

53. (A) A.T.Q.,

```
     Acid : Water
 I    2  :  1 → 3 ╲          ╱ 15
                   ╲        ╱
 II   3  :  2 → 5 ── 45 ──── 9
                   ╱        ╲
 III  5  :  4 → 9 ╱          ╲ 5
```

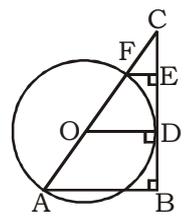| Acid | : | Water |
|------|---|-------|
| 30 | : | 15 |
| 27 | : | 18 |
| 25 | : | 20 |
| 82 | : | 53 |

Required Ratio = **53 : 82.**

54. (C) Let the sum be P.

A.T.Q.,

$$11988 = P\left(1+\frac{20}{100}\right)^2 \quad \left(\because amount = P\left(1+\frac{r}{100}\right)^n\right)$$

⇒ P = **₹8325**

55. (C) Given that,

$$x^4 + \frac{1}{x^4} = 727$$

$$\Rightarrow x^4 + \frac{1}{x^4} + 2 = 727 + 2$$

$$\Rightarrow \left(x^2 + \frac{1}{x^2}\right)^2 = 729 \quad [\because (a+b)^2 = a^2+b^2+2ab]$$

$$\Rightarrow x^2 + \frac{1}{x^2} = 27$$

and, $\left(x - \frac{1}{x}\right)^2 = x^2 + \frac{1}{x^2} - 2$

$$[\because (a-b)^2 = a^2+b^2-2ab]$$

$$\Rightarrow \left(x - \frac{1}{x}\right) = \sqrt{27-2} = 5$$

Now, $\left(x - \frac{1}{x}\right)^3 = x^3 - \frac{1}{x^3} - 3\left(x - \frac{1}{x}\right)$

$$[\because (a-b)^3 = a^3 - b^3 - 3ab(a-b)]$$

$$\Rightarrow (5)^3 = x^3 - \frac{1}{x^3} - 3(5)$$

$$\therefore x^3 - \frac{1}{x^3} = 125 + 15 = \mathbf{140}$$

56. (B)



Given FE ⊥ BC and AB ⊥ BC

Let the side CF be 'x'

In $\triangle COD \sim \triangle CAB$

$$\frac{OD}{AB} = \frac{OC}{AC} \Rightarrow \frac{12}{20} = \frac{12+x}{24+x}$$

⇒ 72 + 3x = 60 + 5x

⇒ 2x = 12

⇒ x = 6

Now, $\triangle CFE \sim \triangle COD$

$$\frac{FE}{OD} = \frac{CF}{CO} \Rightarrow \frac{FE}{12} = \frac{6}{18}$$

⇒ FE = 4cm or **0.04m.**

57. (B) Given,

x = a (sinβ + cosβ)

Squaring both sides,

$$\frac{x^2}{a^2} = \sin^2\beta + \cos^2\beta + 2\sin\beta.\cos\beta$$

$$\Rightarrow \frac{x^2}{a^2} = 1 + \sin 2\beta \quad..........(i)$$

Similarly,

y = b (sinβ - cosβ)

Squaring both sides,

$$\frac{y^2}{b^2} = \sin^2\beta + \cos^2\beta - 2\sin\beta.\cos\beta$$

$$\Rightarrow \frac{y^2}{b^2} = 1 - \sin 2\beta \quad........(ii)$$

Adding equation (i) and equation (ii),

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = \mathbf{2}$$

**58. (B)** A.T.Q.,

| | CP | SP |
|---|---|---|
| I | (10 | 7)$_{\times 7}$ |
| II | 50 | 70 |

(CP of first item = SP of second item)

| | | |
|---|---|---|
| I | 70 | 49 |
| II | 50 | 70 |
| Total | 120 | 119 |

Now,

119 units = 9520

1 units = 9520/119 = 80

Loss = SP - CP = 120 - 119 = 1

Required loss = 1 × 80 = **₹80**

**59. (B)**

A — 12 ⟍ 3
A + B — 18 ⟋ 36 ⟍ 2

Now, time taken by B to fill the tank

$= \dfrac{36}{3-2}$

= 36 hrs.

∴ Capacity of tank = 36 × 8 = **288 ltr.**

**60. (B)** Given that,

$x = 2$ is the root of $f(x)$.

∴ $f(x)$ in divisible by $(x - 2)$.

$\dfrac{x^3 + 3x^2 - 4x - 12}{x - 2} = x^2 + 5x + 6$

Now, find root of quadratic equation

$x^2 + 5x + 6$

$= x^2 + 3x + 2x + 6$

$= x(x +3) + 2(x + 3)$

$= (x + 2)(x + 3)$

∴ Required roots are **(–2, –3)**

**61. (D)** LCM of 2, 3, 5 and 7 = 210

```
      210)999999(4761
          840
          ────
          1599
          1470
          ────
          1299
          1260
          ────
           399
           210
          ────
Remainder→ 189
```

Required number = 999999 - 189 + 1

= **999811**

**62. (A)** $\operatorname{cosec}^4\theta - \cot^4\theta = \dfrac{5}{3}$

$\Rightarrow (\operatorname{cosec}^2\theta - \cot^2\theta)(\operatorname{cosec}^2\theta + \cot^2\theta) = \dfrac{5}{3}$

$\Rightarrow \operatorname{cosec}^2\theta + \cot^2\theta = \dfrac{5}{3}$

$\Rightarrow 1 + 2\cot^2\theta = \dfrac{5}{3}$

$\Rightarrow 2\cot^2\theta = \dfrac{5}{3} - 1 = \dfrac{2}{3}$

$\Rightarrow \cot^2\theta = \dfrac{1}{3}$

$\Rightarrow \cot\theta = \dfrac{1}{\sqrt{3}}$

∴ $\theta = \dfrac{\pi}{3}$.

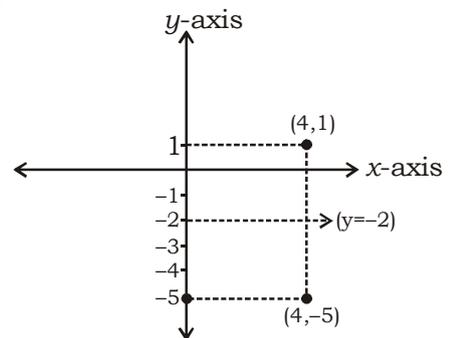**63. (C)** $\dfrac{(998)^2 - (997)^2 - 45}{(98)^2 - (97)^2}$

$= \dfrac{\left[(998+997)(998-997)\right] - 45}{(98+97)(98-97)}$

$= \dfrac{1995 - 45}{195}$

$= \dfrac{1950}{195} = \mathbf{10}$

**64. (C)**



∴ Reflection of (4,-5) in the line (y = -2) = **(4,1)**

**65. (A)** Let the number of each type of notes = $x$

ATQ.,

$10x + 5x + x = 640$

$\Rightarrow 16x = 640$

$\Rightarrow x = 40$

∴ Total number of notes = 40 + 40 + 40

= **120**

**66. (C)** Let the speed of boat be $x$ m/min.

Let the speed of stream be $y$ m/min.

A.T.Q.,

$x + y = 350$ ...(i)

$x - y = 250$ ...(ii)
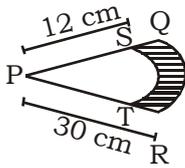
From equation (i) and (ii), we get

$2y = 100$

$\Rightarrow y = 50$ m/min.

$\therefore$ In km/hour = $50 \times \dfrac{60}{1000}$ = **3km / hour**

**67. (B)**



Area of shaded portion

$= \dfrac{\angle QPR}{360}$ [(area of sector PQR) - (area of sector PST)]

$= \dfrac{\dfrac{\pi}{12}}{360} \left[ \pi (30)^2 - \pi(12)^2 \right]$

$= \dfrac{1}{24} \times \dfrac{22}{7} \times 42 \times 18 =$ **99 $cm^2$**

**68. (D)** Required difference

$= \dfrac{92 + 96 + 100}{3} - 94 = 2$

**69. (C)** Required ratio = 90 + 88 : 90 + 96

= 178 : 186

= **89 : 93**

**70. (B)** 
A 92 + 96 + 100 = 288
B 90 + 94 + 88 = 272
C 85 + 92 + 88 = 265
D 100 + 97 + 94 = 291
E 90 + 94 + 96 = 280

Lowest marks = 265

$\therefore$ **C** obtained minimum marks.

**71. (C)** Total marks obtained by A and B together

= 288 + 272 = 560

Now, 50% of A and B

$= \dfrac{50}{100} \times 560 = 280$

$\therefore$ Student **E** scored 50% of the total marks obtained by A and B.

**72. (C)** Area of paper = $\pi(15)^2 = 225\pi$ $cm^2$.

Area of cut portion = $4\pi \left( \dfrac{5}{2} \right)^2 = 25\pi$ $cm^2$.

Area of remaining paper = $225\pi - 25\pi$

= $200\pi$ $cm^2$

$\therefore$ Required ratio = $200\pi : 25\pi$

**= 8 : 1**

**73. (C)** H.C.F. = 8

$\therefore$ Let the numbers are 8x and 8y respectively.

L.C.M $\Rightarrow 8\ x.y = 240$ (given)

$\Rightarrow xy = \dfrac{240}{8} = 30$

Also given,

$8x + 8y = 88$

$\Rightarrow x + y = 11.$

$\therefore$ Sum of reciprocal of numbers

$= \dfrac{1}{8x} + \dfrac{1}{8y} = \dfrac{x + y}{8(xy)}$

$= \dfrac{11}{8(30)} = \dfrac{\mathbf{11}}{\mathbf{240}}$

**74. (A)** $x = \sin^2\theta - \cos^4\theta$

$\Rightarrow x = 1 - \cos^2\theta - \cos^4\theta$

$\Rightarrow x = 1 - \cos^2\theta (1 - \cos^2\theta)$

$\Rightarrow x = 1 - \cos^2\theta. \sin^2\theta$

$\Rightarrow x = 1 - \dfrac{1}{4} (2 \cos\theta \sin\theta)^2$

$\Rightarrow x = 1 - \dfrac{1}{4} (\sin2\theta)^2$

we know that $0 \leq \sin^2 2\theta \leq 1$

When $\sin^2 2\theta = 0$

$x = 1 - \dfrac{1}{4} (0) = 1$

when $\sin^2 2\theta = 1$

$x = 1 - \dfrac{1}{4} (1) = \dfrac{3}{4}$

$\therefore$ Least value of $\sin^2\theta - \cos^4\theta = \dfrac{\mathbf{3}}{\mathbf{4}}$

**75. (B)** Required ratio of profit distribution among A, B and C

$= 19 + 38 : 21 + 21 \times \dfrac{2}{3} : 23 + 23$

= **57 : 35 : 46**

# MEANINGS IN ALPHABETICAL ORDER

| Word | Meaning in English | Meaning in Hindi |
|---|---|---|
| Vanish | disappear suddenly and completely | गायब होना |
| Exquisite | extremely beautiful and delicate | अति सुंदर |
| Disgorge | pour something out | निकाल देना |
| Mellifluous | pleasingly smooth and musical to hear | मधुर |
| Odious | extremely unpleasant | घिनौना |
| Catalogue | list of books and other items | नामसूची |
| Catapult | launch something with or as if with a catapult | गुलेल |
| Catalyst | A person or thing that precipitate in an event | उत्प्रेरक |
| Cataclysm | A large scale and violent event in the natural world | प्रलय |
| Anecdote | A short amusing or interesting story about a real incident or person | दंतकथा |
| Assassination | murder of a important or famous person | हत्या |
| Avaricious | having or showing extreme greed for wealth or material gain | लालची |
| Armistice | An agreement made by opposing sides in a war to stop fighting for a certain time | युद्धविराम |
| Parricide | the pilling of a parent or other near relative | पितृहत्या |
| Mutilation | the infliction of serious damage on something | विकृत करना |
| Narcotic | A drug affecting mood or behaviour | नशीला पदार्थ |
| Numismatic | relating to or consisting of coins or medals | मुद्राशास्त्र |
| Pandemonium | wild and noisy disorder or confusion | उपद्रव |
| Prejudice | preconceived opinion that is not based on reason or actual experience | पक्षपात |
| Prerogative | a right exclusive to a particular individuals or class | विशेषाधिकार |
| Posthumous | occuriring after the death of the originator | मरणोपरान्त |
| Extinction | a situation in which something no longer exists | लुप्त होना |
| Eager | strongly wanting to do or have something | उत्सुक |

# SSC MOCK TEST - 188 (ANSWER KEY)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | (A) | 26. | (D) | 51. | (B) | 76. | (B) |
| 2. | (C) | 27. | (B) | 52. | (C) | 77. | (C) |
| 3. | (B) | 28. | (B) | 53. | (A) | 78. | (B) |
| 4. | (A) | 29. | (D) | 54. | (C) | 79. | (A) |
| 5. | (D) | 30. | (A) | 55. | (C) | 80. | (D) |
| 6. | (A) | 31. | (A) | 56. | (B) | 81. | (C) |
| 7. | (B) | 32. | (C) | 57. | (B) | 82. | (B) |
| 8. | (B) | 33. | (B) | 58. | (B) | 83. | (B) |
| 9. | (D) | 34. | (D) | 59. | (B) | 84. | (A) |
| 10. | (B) | 35. | (B) | 60. | (B) | 85. | (D) |
| 11. | (B) | 36. | (B) | 61. | (D) | 86. | (C) |
| 12. | (C) | 37. | (C) | 62. | (A) | 87. | (B) |
| 13. | (C) | 38. | (C) | 63. | (C) | 88. | (D) |
| 14. | (B) | 39. | (C) | 64. | (C) | 89. | (C) |
| 15. | (C) | 40. | (B) | 65. | (A) | 90. | (A) |
| 16. | (C) | 41. | (C) | 66. | (C) | 91. | (C) |
| 17. | (C) | 42. | (B) | 67. | (B) | 92. | (D) |
| 18. | (A) | 43. | (B) | 68. | (D) | 93. | (A) |
| 19. | (C) | 44. | (C) | 69. | (C) | 94. | (B) |
| 20. | (C) | 45. | (D) | 70. | (B) | 95. | (C) |
| 21. | (A) | 46. | (A) | 71. | (C) | 96. | (B) |
| 22. | (C) | 47. | (D) | 72. | (C) | 97. | (D) |
| 23. | (B) | 48. | (D) | 73. | (C) | 98. | (A) |
| 24. | (C) | 49. | (C) | 74. | (A) | 99. | (D) |
| 25. | (A) | 50. | (A) | 75. | (B) | 100. | (B) |
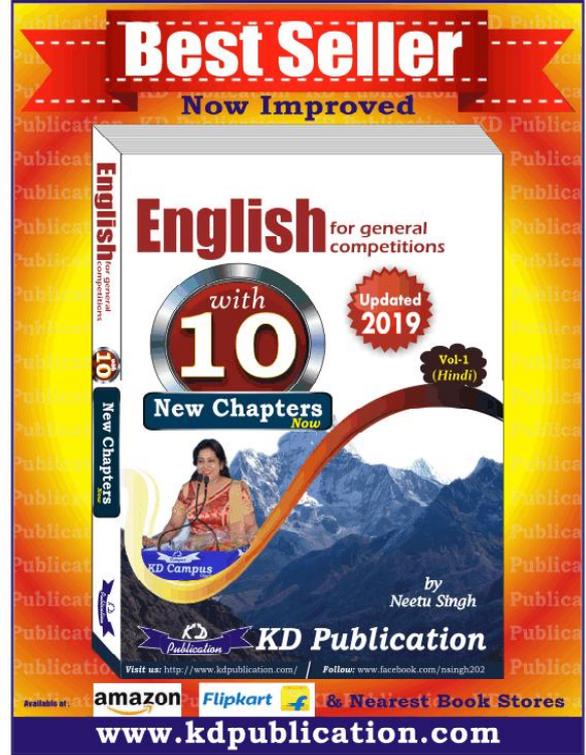
76. (B) Exact pronoun for 'one' is one's not 'their'. So use 'at least attended one's graduation'.

77. (C) 50 billion dollars is represented as a whole quantity which is uncountable. Use 'as much as' instead of 'as many as'.

78. (B) Position of 'either' is wrong in the sentence. Use the expression 'able to either'.

79. (A) Here meaning of **'break up'** is the seperation of something into smaller parts or pieces. (टूटना)

- **Break out:–** an escape from a prison, jail etc. (भाग निकलना)
- **Break in:–** the act or crime of illegally entering a house, building etc. (बलपूर्वक प्रवेश करना)

80. (D) 'Worsen' is the correct option. 'Worsene' means 'to get worse' (और बिगड़ जाना)

81. (C) 'Foundation' is the correct option.
**Foundation** is what you put after the makeup **base**.

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