SSC MOCK TEST – 151 (SOLUTION)

1. (D) As, steering wheel is used to control the movement of car. Similarly **handle bar** is used to control the movement of motorcycle.

2. (B) As,

E	F	G
Opp. ↓	Opp. ↓	Opp. ↓
V	U	T

Similarly,

J	I	H
Opp. ↓	Opp. ↓	Opp. ↓
Q	**R**	**S**

3. (B) As, $0.02 \div 10 = 0.002$

Similarly, $\dfrac{1}{3} \div 10 = \dfrac{\mathbf{1}}{\mathbf{30}}$

4. (B) Except "**Umpire**", others are the components of cricket while umpire has the authority to make decisions on the field.

5. (B) $E \xrightarrow{-2} C \xrightarrow{-2} A$

$\mathbf{G} \xrightarrow{\mathbf{+2}} I \xrightarrow{\mathbf{+2}} \mathbf{K}$

$Q \xrightarrow{-2} O \xrightarrow{-2} M$

$W \xrightarrow{-2} U \xrightarrow{-2} S$

6. (A) Except "**133**", others are divisible by 11.

7. (B) See position of **r**, it is moving to the next position in the subsequent term.
∴ Next term = **Pusher**

8. (D) $U \xrightarrow{-1} T \xrightarrow{-2} R \xrightarrow{-3} O \xrightarrow{-4} K \xrightarrow{-5} \mathbf{F}$

9. (B) -7.25 -5.75 -4.25 -2.75 **-1.25** 0.25
(+1.50 between each)

10. (B) Number of days = 3 + 31 + 30 + 31 + 31 + 28 = 154
Now, remainder after 154 dividing by 7 = 0
Then, required day
= Thursday + 0 days = **Thursday**

11. (D) 20 + 30 + 40 + 60 = 150
20 + 30 + 60 = 110
30 + 40 + 60 = 130
∴ **140 kg**. can not be the total weight of any combination of these boxes.

12. (A) **BLUE**

13. (D) As,   FOR E IGN
Opposite ↓
    ULIVRTM

Similarly,   SAP
Opposite ↓
    HZK

14. (B) 25 + 10 ÷ 240 × 16
After changing the signs, as per given details,
= 25 × 10 – 240 ÷ 16
= 250 – 15 = **235**

15. (B) $9 \# 3 \Rightarrow \dfrac{9+3}{2} = 6$,

$15 \# 3 \Rightarrow \dfrac{15+3}{2} = 9$,

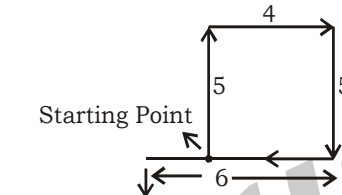$60 \# 4 \Rightarrow \dfrac{60+4}{2} = 32$

Similarly,

$27 \# 3 \Rightarrow \dfrac{27+3}{2} = \mathbf{15}$

16. (A) 7 × **13** = 91
13 × 23 = 299
17 × 29 = 493

17. (B)

Distance between the starting point and finishing point = 6 – 4 = 2km
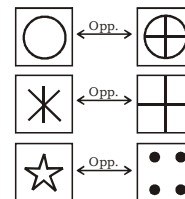∴ Priya is **2 km west** with reference to her starting position.

18. (B)
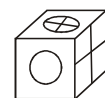

I. False II. True
Hence, only conclusion II follows.

19. (C) From figure,

∴ [figure] can not be made by the question figure.

20. (C) Letters represent the teachers who are either swimmers or nurses = **A, B, G**

21. (D)   22. (D)   23. (D)   24. (D)

25. (D)

N	O	T	E
↓	↓	↓	↓
99	**78**	**75**	**22**

26. (A) Tadoba Andhari Tiger Reserve is a Tiger reserves in Chandrapur district of Maharashtra state in central India. It is

notable as Maharashtra's oldest and largest National Park. It is one of India's 41 "Project Tiger" - Tiger reserves. The Andhari Wildlife Sanctuary was formed in the year 1986 and was amalgamated with the park in 1995 to establish the present Tadoba Andheri Tiger Reserve.

27. (B) Bhanu Athaiya became the first Indian to win an Academy Award (Oscar) in 1983, for designing the costumes for Richard Attenborough's Gandhi.

- Satyajit Ray is the only Indian who has received an Honorary Academy Award.
- A.R.Rahman is the only Indian who has won more than one Academy Award in 2009.

28. (B) The sclera is the part of the eye commonly known as the "white." It forms the supporting wall of the eyeball, and is continuous with the clear cornea. The sclera is covered by the conjunctiva, a clear mucus membrane that helps lubricate the eye.

31. (C) The Mughal Empire, was an empire that at its greatest territorial extent ruled parts of Afghanistan, Balochistan and most of the Indian Subcontinent between 1526 and 1857. The empire was founded by the Mongol leader Babur in 1526.

- Sher Shah Suri or Sher khan, was the founder of Sur dynasty in India. Born in 1486, he was the son of a Jagirdar of Sasaram, Bihar.

32. (B) Catalysis is the increase in the rate of a chemical reaction due to the participation of an additional substance called a catalyst. The first systematic investigation of catalytic reactions was by Jons Jacob Berzelius in 1835, who also coined the term catalysis.

33. (B) Lens formula = $\frac{1}{V} - \frac{1}{U} = \frac{1}{F}$

Given U = –60cm, V = + 20 cm

therefore $\frac{1}{F} = \frac{1}{20} + \frac{1}{60}$

therefore F = $\frac{1}{15}$ cm

P = $\frac{1}{FD}$

= $\frac{100}{15}$ cm = 6.67 Diopters.

34. (B) Heat capacity or thermal capacite is a measurable physical quantity equal to the ratio of the heat added to an object to the resulting temperature change. The unit of heat capacity is Joule per kelvin.

35. (A) The President is empowered with the power to pardon under Article 72 of the Indian Constitution. Article 72 says that the President shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence.

37. (D) Nonsteroidal anti-inflammatory drugs are a type of pain reliever. Examples of the most common NSAIDs include: aspirin salsalate (Amigesic), diflunisal (Dolobid), ibuprofen (Motrin), ketoprofen (Orudis).

38. (A) Ilmenite is the most important ore of the element titanium. Most of the Ilmenite mined worldwide is used to manufacture titanium dioxide, an important pigment, whiting, and polishing abrasive.

39. (C) The Second Battle of Panipat took place on 5th November, 1556, between the Mughal Forces of Akbar and the army of Hemu. The war was ultimately won by Mughal Forces.

40. (A) The slope of a velocity graph represents the acceleration of the object. So, the value of the slope at a particular time represents the acceleration of the object at that instant.

42. (C) Indus Waters Treaty, treaty, signed on September 19, 1960, between India and Pakistan and brokered by the World Bank. The treaty fixed and delimited the rights and obligations of both countries concerning the use of the waters of the Indus River system.

43. (B) The Kailash or Kailasanatha temple is one of the largest rock-cut ancient Hindu temples located in Ellora, Maharashtra, India. Its construction is generally attributed to the 8th century Rashtrakuta king Krishna I in 756-773 CE.

44. (A) Fish's heart pump only deoxygenated blood as it is a two-chambered heart with an atrium and a ventricle. The heart pumps out deoxygenated blood which is oxygenated by the gills and supplied to other body parts, from where deoxygenated blood is returned to the heart.

45. (C) The Padma is a major river in Bangladesh. It is the main distributaries' of the Ganges, flowing generally southeast for 120 kilometres to its confluence with the Meghna River near the Bay of Bengal.

46. (B) The Sampoorna Grameen Rozgar Yojana was launched on 1st September 2001 by merging the provisions of Employment Assurance Scheme (EAS) and Jawahar Gram Samridhi Yojana (JGSY). The programme is self-targeting in nature and aims to provide employment and food to people in rural areas who lives below the poverty line.

48. (C) When it is 12 noon at Greenwich, the time at 15° east of Greenwich will be 1pm which is one hour ahead of Greenwich Mean Time. However, at 15° west of the Prime Meridian the time will be behind GMT by an hour, i.e., 11am. Similarly, it will be midnight at 180° longitudes when it is 12 noon at Greenwich.

50. (C) The Union Government launched a dedicated web portal ShaGun for monitoring the progress of Sarva Shiksha Abhiyan (SSA).'ShaGun' aims to capture and showcase innovations and progress in Elementary Education sector of India by continuous monitoring of the flagship scheme - Sarva Shiksha Abhiyan (SSA).

51. (B)
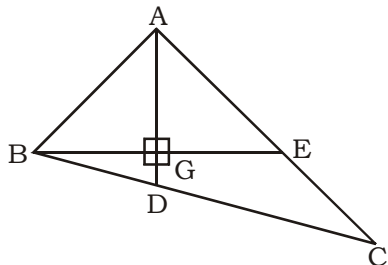
As, AD and BE are medians
and, G is the centroid.

∴ Centroid 'G' divides AD and BE in 2 : 1
So, BG : GE = 2 : 1 and AG : GD = 2 : 1

$BG = \dfrac{2}{3}BE = \dfrac{2}{3}(12) = 8$ cm

and, $GD = \dfrac{1}{3}AD = \dfrac{1}{3}(18) = 6$cm

Hence, Area of $\triangle BGD = \dfrac{1}{2} \times BG \times DG$

$= \dfrac{1}{2} \times 8 \times 6 = $ **24cm²**

52. (D) $x + y + z = 10$
∴ $x + y = 10 - z,$
$y + z = 10 - x$
and, $z + x = 10 - y$

Now, $xy(x + y) + yz(y + z) + zx(z + x) + 3xyz$
Putting the values of $(x + y)$, $(y + z)$ and $(z + x)$ in the above equation, we get

$= xy(10 - z) + yz(10 - x) + zx(10 - y) + 3xyz$

$= 10xy - xyz + 10yz - xyz + 10zx - xyz + 3xyz$

$= 10(xy + yz + zx)$

$= 10 \times 2 = $ **20**

53. (B) sum of a numbers $= a.b^2$
sum of b numbers $= b.a^2$
sum of all numbers $= a.b^2 + b.a^2$

∴ Required Average $= \dfrac{ab^2 + a^2b}{a + b} = $ **a.b**

54. (A) A.T.Q,
Interior Angle − Exterior Angle = 108°

$\Rightarrow \left[\left(\dfrac{x-2}{x}\right)180° - \dfrac{360°}{x}\right] = 108°$, where x is the
no. of sides of polygon

$\Rightarrow \left[\left(\dfrac{x-2}{x}\right) - \dfrac{2}{x}\right]180° = 108°$

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

$\Rightarrow 5x - 20 = 3x$

$\Rightarrow 2x = 20$

$\Rightarrow x = 10$

So, number of sides = **10**

55. (A) Both the arcs are equal   [Given]

and, $\theta = \dfrac{\text{Arc}}{\text{Radius}}$
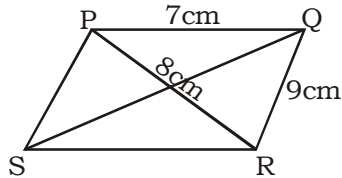
A.T.Q.

$\theta_1 \cdot R_1 = \theta_2 \cdot R_2$

$\Rightarrow 60° \cdot R_1 = 75° \cdot R_2$

$\Rightarrow \dfrac{R_1}{R_2} = \dfrac{\mathbf{5}}{\mathbf{4}}$

56. (A)

In || PQRS,

PQ = 7cm , QR = 9cm, PR = 8cm

$PR^2 + QS^2 = 2\,PQ^2 + 2\,QR^2$

$\Rightarrow (8)^2 + QS^2 = 2\,(7)^2 + 2\,(9)^2$

$\Rightarrow 64 + QS^2 = 2(49) + 2(81)$

$\Rightarrow \qquad QS^2 = (260 - 64)$

$\Rightarrow \qquad QS^2 = 196$

$\Rightarrow \qquad QS = \mathbf{14\ cm}$

57. (B) A.T.Q,

15% of x = 3 × [10% of y]

$\Rightarrow \dfrac{15}{100} \times x = [3 \times \dfrac{10}{100} \times y]$

$\Rightarrow \dfrac{x}{y} = \dfrac{30}{15}$

$\Rightarrow \dfrac{x}{y} = \dfrac{\mathbf{2}}{\mathbf{1}}$

58. (C)

A + B ⟶ 20 ⟍ 6

B + C ⟶ 30 — 4 ⟶ 120

A + C ⟶ 40 ⟋ 3

$2(A + B + C) \xrightarrow{1\text{day}} 13$

$(A + B + C) \xrightarrow{1\text{day}} \dfrac{13}{2} = 6.5$

$A \xrightarrow{1\text{day}} 6.5 - 4 = 2.5$

The above line indicates that 2.5 work is done by A in 1 day.

So, Required number of days = $\dfrac{120}{25} \times 10$

= **48 days**

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

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

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

$\Rightarrow 10\tan^4\theta + 15 = 6\sec^4\theta$

$\Rightarrow 10\tan^4\theta + 15 = 6\,(\sec^2\theta)^2$

$\Rightarrow 10\tan^4\theta + 15 = 6\,(1 + \tan^2\theta)^2$

$\Rightarrow 10\tan^4\theta + 15 = 6\,(1 + \tan^4\theta + 2\tan^2\theta)$

$\Rightarrow 10\tan^4\theta + 15 = 6 + 6\tan^4\theta + 12\tan^2\theta$

$\Rightarrow 4\tan^4\theta - 12\tan^2\theta + 9 = 0$

$\Rightarrow (2\tan^2\theta - 3)^2 = 0$

So, $2\tan^2\theta - 3 = 0$

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

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

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

$= 27\,(\cosec^2\theta)^3 + 8\,(\sec^2\theta)^3$

$= 27(1 + \cot^2\theta)^3 + 8(1 + \tan^2\theta)^3$

$= 27\left(1 + \dfrac{2}{3}\right)^3 + 8\left(1 + \dfrac{3}{2}\right)^3$

$= 27\left(\dfrac{5}{3}\right)^3 + 8\left(\dfrac{5}{2}\right)^3$

$= 27\left(\dfrac{125}{27}\right) + 8\left(\dfrac{125}{8}\right) = 125 + 125 = \mathbf{250}$

60. (A) $\sin(5x - 6) = \cos(7x - 12)$

$\Rightarrow \sin(5x - 6) = \sin(90° - 7x + 12)$

So, $5x - 6 = 90° - 7x + 12$

$\Rightarrow 5x + 7x = (90° + 12 + 6)$
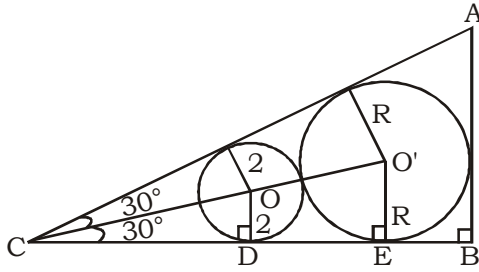
$\Rightarrow 12x = 108°$

$\Rightarrow x = \mathbf{9°}$

61. (B) Let $8315946 = x$

So, $8315945 \times 8315947 = (x - 1)(x + 1)$

$\qquad\qquad\qquad\qquad = x^2 - 1$

So, 1 should be added to the expression to make it a perfect square.

62. (B)

In $\triangle COD$ & $\triangle COE$

$\angle D = \angle E$ (each 90°)

and, $\angle OCD = \angle OCE$ (Common Angle)

$\therefore$ $\triangle COD \sim \triangle CO'E$

In $\triangle COD$,

$\sin 30° = \dfrac{2}{OC}$

$\Rightarrow \dfrac{1}{2} = \dfrac{2}{OC}$

$\therefore$ OC = 4cm and O'C = 6 + R cm

As, $\triangle COD \sim \triangle CO'E$

$\therefore \dfrac{2}{R} = \dfrac{OC}{O'C}$

$\Rightarrow \dfrac{2}{R} = \dfrac{4}{6+R}$

$\Rightarrow 12 + 2R = 4R$

$\Rightarrow 12 = 2R$

$\Rightarrow R = 6$ cm

So, Radius of Bigger circle = **6 cm**

63. (A) Let α and β are the roots of equation $ax^2 + bx + c = 0$

sum of roots = $\alpha + \beta = \dfrac{-b}{a}$
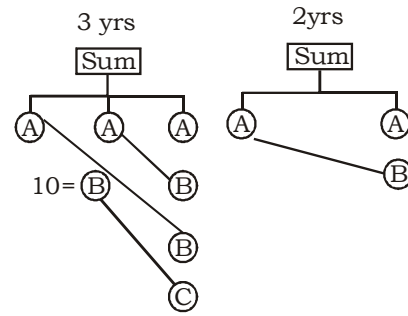
Only option (A) among all options satisfies the equation

$x^2 - 5x + 6 = 0$

$\alpha + \beta = \dfrac{-b}{a} = -\dfrac{(-5)}{1} = 5$

So, sum of roots = **5**

Option (A) is the right answer.

64. (A)

$\dfrac{\text{C.I} - \text{S.I (3 } years)}{\text{C.I} - \text{S.I (2 } years)} =$

$\dfrac{(3A + 3B + C - 3A)}{(2A + B - 2A)} = \dfrac{3B + C}{B} = \dfrac{31}{10}$

If B = 10, C = 1   [as shown in figure]

$\therefore$ Rate = $\dfrac{1}{10} \times 100 = $ **10%**

65. (C) Slope of a line, m = $\dfrac{y_2 - y_1}{x_2 - x_1}$

So, slope of 1st line = $\dfrac{b - 5}{6 + 2} = \dfrac{b - 5}{8} = m_1$

Also, $20x + 5y = 3$

$5y = -20x + 3$

$\Rightarrow y = -4x + \dfrac{3}{5}$

$\qquad\qquad \downarrow \quad \downarrow$

Also, $\quad y = mx + C$

So, slope of line $20x + 5y = 3$ is -4 (m_2)

$\because$ The given lines are perpendicular to each other,

$\therefore m_1 . m_2 = -1$

$\left(\dfrac{b - 5}{8}\right)(-4) = -1$

$\Rightarrow (b - 5) = 2 \Rightarrow b = $ **7**

66. (A) 5A : 13B : 7C = k

$\quad$ A : B : C

$13 \times 7 : 5 \times 7 : 13 \times 7$

$\Rightarrow$ **91 : 35 : 65**

67. (D) Radius of cone = 10.5 cm

Height of cone = 12 cm

$\therefore$ Volume of cone = $\dfrac{1}{3} \pi r^2 h$

ATQ,

Volume of cone = Volume of cylinder

$$\frac{1}{3}\,\pi\, r^2 h = \pi\, r^2\ (H)$$

$$\Rightarrow\quad \frac{1}{3}\pi \times \frac{105}{10} \times \frac{105}{10} \times 12 = \pi \times \frac{105}{10} \times \frac{105}{10} \times (H)$$

$\Rightarrow$ H = **4cm**

68. (C) Let the number be x

ATQ,

$$x + 10\left(\frac{1}{x}\right) = 7$$

$$\Rightarrow\quad x + \frac{10}{x} = 7$$

Put the values of x from the given options, only x = **5** satisfies the equation.
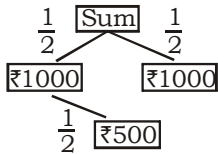
Option (C) is the right answer.

69. (C) Let required number = x

ATQ,

H.C.F × L.C.M = 275 × x

$\Rightarrow$ 11 × 825 = 275 × II

$\Rightarrow\qquad x$ = **33**

70. (C)

```
        1        1
        ─  Sum   ─
        2        2
      ₹1000    ₹1000
        1
        ─   ₹500
        2
```

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

71. (B) ATQ,

90% = ₹18000

$\Rightarrow$ 1% = $\dfrac{18000}{90}$

$\Rightarrow$ 100% = ₹ 200 × 100 = ₹20,000

$\therefore$ M.P. = ₹ 20,000

As, discount = 37.5%

So, selling price = $\left[20000 \times \dfrac{625}{10 \times 100}\right]$

= **₹12500**

72. (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% = $\dfrac{90}{24}$

$\Rightarrow$ 100% = $\left[\dfrac{90}{24} \times 100\right]$ = **375**
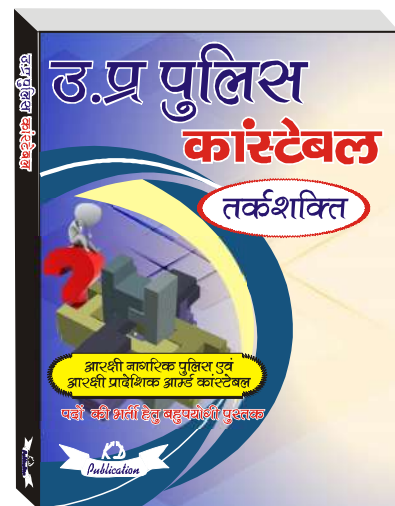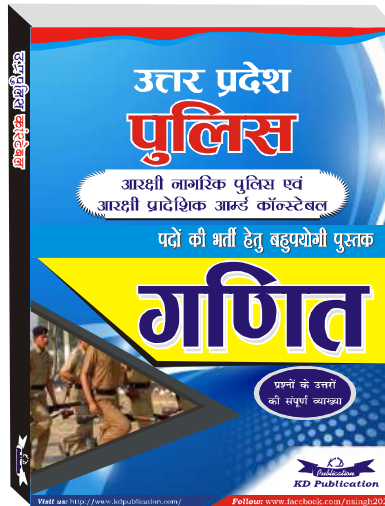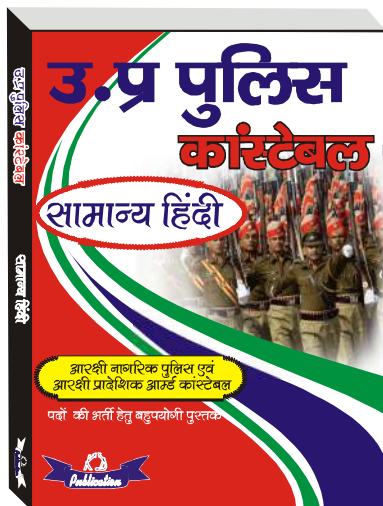
73. (B) Country F has the lowest debt.

74. (B) Required Percentage = $\left[\dfrac{800 - 600}{800}\right] \times 100$

= $\dfrac{200}{800} \times 100$

= **25**

75. (A) 250 × 10,00,000 × $\dfrac{3}{100}$
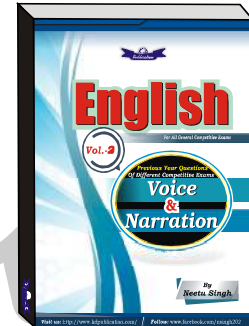
= **75,00,000$**

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Abate	to become weaker, to decrease in strength	मन्द या शान्त हो जाना
Conscience	a sense of right and wrong and a feeling that what is right should be done	विवेक
Conscious	awake and able to understand what is happening around you	जागरूक
Consensus	a general agreement about something	सामंजस्य
Enfeeble	to make feeble; deprive of strength	कमजोर करना
Extenuate	to lessen or to try to lessen the seriousness	कम करना, शांत करना
Fecund	producing or able to produce many babies, young animals or plants	उपजाऊ
Pertinacious	adhering resolutely to an opinion, purpose or design	दृढ़, अटल
Prolific	producing young or fruit in large number	उर्वरा
Resemblance	the state of looking like someone or something else	समानता
Sterile	not able to produce fruit, crops or off spring	बंजर
Treachery	the behaviour of a person who betrays trust or faith	छल, धोखा
Turmoil	a state of confusion or disorder	हलचल
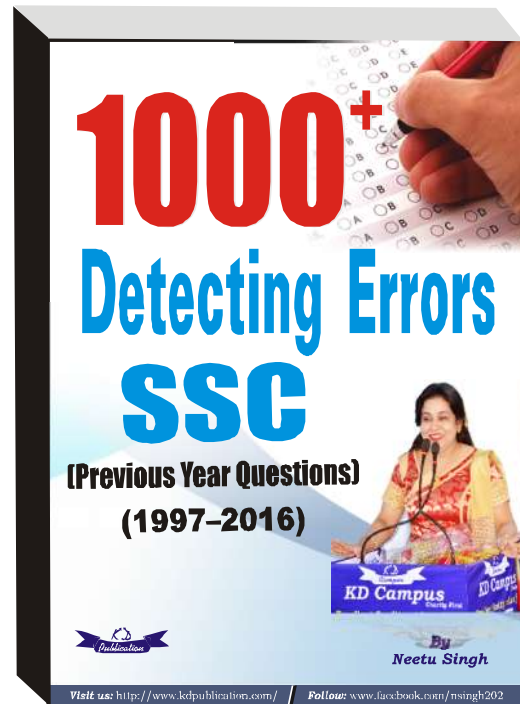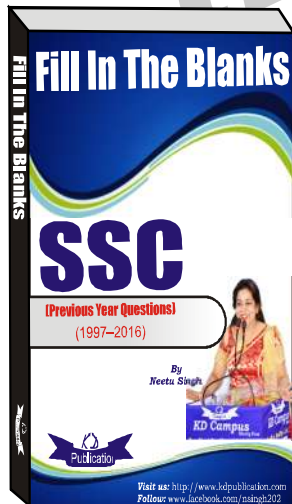
SSC MOCK TEST - 151 (ANSWER KEY)

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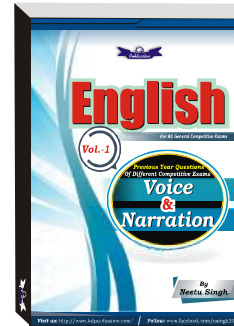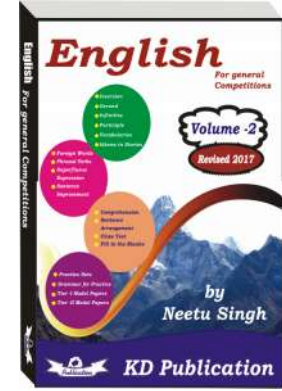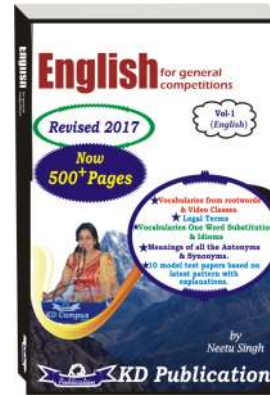
76. (A) Replace 'with' with 'by'. Take (someone or something) by surprise is an idiom which means to happen to (someone or something)

77. (A) Add 'had' before finished. If two actions are in past tense, the first action should be in past perfect tense and the second action should be in simple past tense.

78. (C) 'Conscientious' is the correct option. 'Conscientious' means 'very careful about doing what you are supposed to do'.

79. (A) 'Over' is the correct option. Preside takes preposition over'. Preside over – की अध्यक्षता करना

86. (A) 'Reason for' is the correct option we use 'reason for something' reason with (a person) – तर्क करना/ बहस करना

87. (B) 'Agree with' is the correct option. We use, when we agree with someone/ something, it means we accept the point of someone/ something.

89. (D) 'Sureptitious' is incorrectly spelt word. 'Surreptitious' is the correct word. 'Surreptitious' means done in a secret way.

90. (B) 'Refrendum' is incorrectly spelt word. 'Referendum' is the correct word. 'Referendum' means a public vote on a particular issue.

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