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SSC MOCK TEST – 140 (SOLUTION)

1. (C) As, Ram Naik is the governor of Uttar Pradesh.
Similarly, Krishna kant Paul is the governor of Uttarakhand.

2. (D) As, B C D → D F H (×2, ×2, ×2)

Similarly, J K L → **T V X** (×2, ×2, ×2)

3. (B) As, $\frac{0.05}{10} = 0.005$

Similarly, $\frac{1}{9\times10} = \mathbf{\frac{1}{90}}$

4. (D) Except **Geeta Phogat,** other are Olympics medalist.

5. (C) 170 ⇒ 1 + 7 + 0 = 8
224 ⇒ 2 + 2 + 4 = 8
290 ⇒ 2 + 9 + 0 = 11
323 ⇒ 3 + 2 + 3 = 8

6. (B) L J H **X U S** (−2, −2, −3, −2)
V T R F D B (−2, −2, −2, −2)

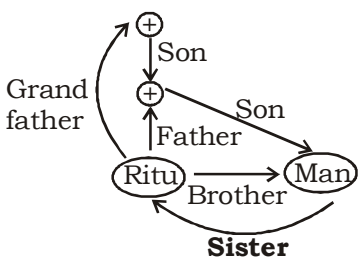
7. (D) Pitiful → Pitiless → Plague → Plankton→ Plaque

8. (B) V U S P L **G** (−1, −2, −3, −4, −5)

9. (C) −7.5, −3.5, −1.5, −0.5, **0**, +0.25 (+4, +2.0, +1, +0.50, +0.25; ÷2, ÷2, ÷2, ÷2)

10. (C) DEF **IJK** OPQ VWX (+5, +6, +7; +1, +1)

11. (B)

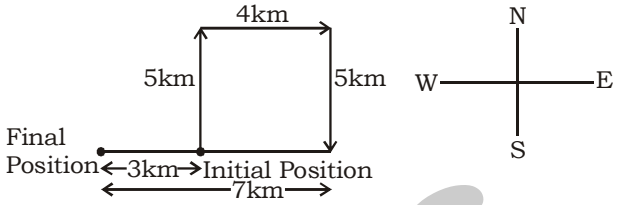


12. (A) BLUE

13. (D) As, M A S T E R and S T A M P
6 8 2 1 4 5 2 1 8 6 9
Similarly, P A S T U R E
9 8 2 1 7 5 4

14. (B) 44M24K56L14J64
= 44 – 24 × 56 ÷ 14 + 64
= 108 – 24 × 4
= 108 – 96
= **12**

15. (D)

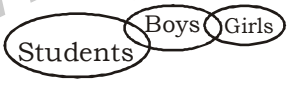


∴ Required distance & direction = 3 km, west

16. (B) **13** × 7 – 1 = 90
23 × 13 – 1 = 298
29 × 17 – 1 = 492

17. (B) 3 + 2 + 5 + 4 + 2 + 7 = 23
1 + 3 + 6 + 8 + 3 + 2 = 23
2 + 4 + 3 + 11 + **1** + 2 = 23

18. (C)



I. False II. False

19. (C) 48 triangles
20. (A) Number of carboard boxes = 8
21. (A) 22. (B) 23. (A) 24. (D)
25. (D) C R E E D
32 76 65 56 77
26. (A) Goa chief minister Manohar Parrikar in December 2017 launched the country's first-ever mobile food testing laboratory. Built at a cost of ₹41 lakh, the laboratory is mounted on a bus which will travel across the state checking food samples on the spot.
27. (C) Dance in India comprises numerous styles of dances, generally classified as classical or folk. The dance forms recognized by the Indian origin:
- Bharatanatyam, from Tamil Nadu.
- Bhangra, from punjab.
- Kathakali, from Kerala.
- Kuchipudi, from Andhra Pradesh and Telangana.
- Odissi, from Odisha.
- Chhau, from eastern Indian states of

Odisha, Jharkhand and West Bengal.

29. (D) Kesari is a Marathi newspaper which was founded in 1881 by Lokmanya Bal Gangadhar Tilak, a prominent leader of the Indian Independence movement.

30. (B) The Academy Awards, also known as the Oscars, are a set of 24 awards for artistic and technical merit in the American film industry, given annually by the Academy of Motion Picture Arts and Sciences (AMPAS).The awards were first presented in 1929.

31. (A) The 2020 Summer Olympics will be hosted in Tokyo, Japan. It will be Tokyo's second time hosting the Summer Olympics; they previously hosted the 1964 Summer Olympics. The games are scheduled to be held from July 24 to Aug. 9 in 2020.

32. (B) The Kempegowda International Airport will become the first airport in the country to have a helicopter-taxi (heli-taxi) service for those who cannot afford to spend time battling traffic to travel across the city.

33. (B) The original throne, built for the Mughal emperor Shah Jahan in the early 17th century, was reportedly one of the most splendorous thrones ever made. It was ascended by silver steps and stood on golden feet set with jewels, and it was backed by representations of two open peacocks' tails, gilded, enamelled, and inset with diamonds, rubies, and other stones.

35. (B) Darwin's finches are a group of about fifteen species of passerine birds. They are well known for their remarkable diversity in beak form and function. They are often classified as the subfamily Geospizinae or tribe Geospizini.

39. (A) Article 360 states that if the President is satisfied that a situation has arisen whereby the financial stability or the credit of India or any part there of is threatened, President may declare a state of financial emergency.

40. (C) JPEG is a term for any graphic image file produced by using a JPEG standard. JPEG is stands for "Joint Photographic Experts Group." JPEG is a popular image file format.

42. (C) Tibetan New year, also known as Losar, is the most important festival in the Tibetan calendar. It is mainly celebrated over a period of 3 days in late January or February, according to the Tibetan calendar.

43. (D) Acharya Vinoba Bhave was the first Indian to win the Ramon Magsaysay Award in 1958. AcharyaVinoba Bhave is considered as spiritual successor of Mahatma Gandhi and is regarded as the National Teacher of India. Magsaysay Award is given in six different fields, and Vinoba Bhave was awarded for Community Leadership.

44. (D) The sperm whale or cachalot is the largest of the toothed whales and the largest toothed predator. The sperm whale is a pelagic mammal with a worldwide range.

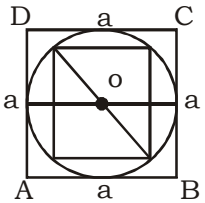
45. (A) The purpose of the inclusion of Directive Principles of State Policy in the Indian Constitution is to establish: Social and Economic Democracy.

48. (A) Apple juice tends to have a low pH, which means it is acidic. Apple juice ranges in pH from 3.35 to 4, as different types of apples have different pH levels.

49. (C) Nitrous oxide (N_2O), also known as laughing gas, was first discovered in 1772 by Joseph Priestley. A key step towards this was the design of experimental apparatus to collect gas over water, by Stephen Hales in the early 1700s.

50. (A) A factor of production is an economic term that describes the inputs that are used in the production of goods or services in order to make an economic profit. The factors of production include land, labor, capital and entrepreneurship. These production factors are also known as management, machines, materials and labor.

51. (B)



Let the side of the original square = x unit
So, area of this square = x^2 unit^2
$\therefore$ Diameter of circle = x unit
Now , the diagonal of square cut from this circle = x unit

So, the side of this square = $\frac{x}{\sqrt{2}}$ unit

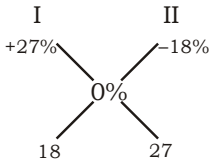
Area of this final square = $\frac{x^2}{2}$ unit^2

Required area = $\frac{\frac{x^2}{2}}{x^2} \times 100 = 50\%$

Therefore, the area of the new square will be **50%** of the area of the original square.

52.(C) When $(x^5 - 3x^4 + x^3 + 5x - 1)$ divided by $(x-2)$
Remainder = $2^5 - 3 \times 2^4 + 2^3 + 5 \times 2 - 1$
$= 32 - 48 + 8 + 10 - 1$
$= \mathbf{1}$

53.(C)



Ratio of the C.P. = 18 : 27 = 2 : 3
ATQ,
5 units ⟶ 800
1unit ⟶ 160
C.P. of the Ist article = ₹ 320
C.P. of the IInd article = ₹ 480

The S.P. of the IInd article = $480 \times \frac{82}{100}$
= **₹393.6**

54.(A) Let they meet after t hour.
ATQ,

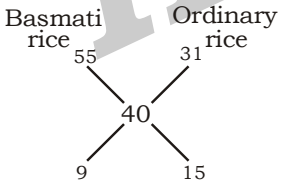
time (t) = $\frac{835}{150+50} = \frac{835}{200}$ hours

∴ Lines written by Ist boy = $150 \times \frac{835}{200}$

$= \frac{2505}{4} = 626\frac{1}{4}$ lines

Therefore, they meet at **627th** line.

55.(D) C.P. of the total mixture = $50 \times \frac{100}{125}$
= ₹40 per kg



Ratio of their quantity = 9 : 15
= 3 : 5
ATQ, 5 units = 25
1 unit = 5
So, the quantity of Basmati rice 3 × 5 = 15 kg

56.(B) Ram does 60% work in 12 days

He completes the whole work = $\frac{12 \times 100}{60}$
= 20 days

	Ram		Atul		Mayank
Efficiency -	4	:	2	:	1

Total work = 20 × 4 = 80 units

They complete rest 40% work = $\frac{80 \times \frac{40}{100}}{7}$

$= \frac{32}{7} = \mathbf{4\frac{4}{7}}$ **days**

57.(C) Let the side of the square = a unit
ATQ,
Base perimeter of cylinder = Side of the square
$\Rightarrow 2\pi r = a$

$\Rightarrow \frac{r}{a} = \frac{1}{2\pi}$

$\Rightarrow \boldsymbol{r : a = 1 : 2\pi}$

58.(D) Given that,
$a^2 - by - cz = ax - b^2 + cz = ax + by - c^2 = 0$
or $a^2 - by - cz = b^2 - ax - cz = c^2 - ax - by = 0$
Now we take,

$a^2 - by - cz = 0$

$\Rightarrow a^2 = by + cz$

$\Rightarrow a = \frac{by + cz}{a}$

$\Rightarrow a + x = \frac{by + cz + ax}{a}$

Similarly,

$b + x = \frac{by + cz + ax}{b}$

And, $c + x = \frac{by + cz + ax}{c}$

Now, $\frac{x}{a+x} + \frac{y}{b+y} + \frac{z}{c+z} = \frac{ax}{ax+by+cz}$

$+ \frac{by}{ax+by+cz} + \frac{cz}{ax+by+cz}$

$= \frac{ax+by+cz}{ax+by+cz} = \mathbf{1}$

59. (C) Let the original speed of the cyclist = x km/h
We have,

Distance = $\frac{S_1 \times S_2}{(S - S_2)} \times$ time

$\Rightarrow 52 = \frac{x \times (x-1)}{1} \times \frac{20}{60}$

$\Rightarrow x\ (x-1) = 52 \times 3$
$\Rightarrow x\ (x-1) = 13 \times 12$
$\Rightarrow x = 13$
So, the original speed will be **13 km/h**

60. (A) Given number
$N = 90 \times 66 \times 441 \times 324 \times 77$
$N = 3^2 \times 10 \times 3 \times 22 \times 3^2 \times 49 \times 3^4 \times 4 \times 77$
$N = 3^9 \times 10 \times 22 \times 49 \times 4 \times 77$
$\therefore$ This number N is divisible by 3^n. So n should be **9**

61. (C) ATQ,

Speed of B $= \frac{100}{10} = 10\text{m/sec}$

Time taken by B to cover 1000m race $= \frac{1000}{10}$
$= 100$ sec

$\therefore$ Time taken by A to complete the race
$= 100 - 10 = 90$ sec

Now, time taken by B till injured $= \frac{570}{10} = 57$ sec

And, time taken by B after he gets injured
$= \frac{430}{5} = 86$ sec

$\therefore$ Total time taken by B = 57 + 86 = 143 sec
So, A beats B = 143 – 90 = **53 sec**

62. (B) Given that

$$\frac{x}{a} - \frac{y}{b}\cot\theta = 1 \text{--------(i)}$$

$$\frac{x}{a}\cot\theta + \frac{y}{b} = 1 \text{--------(ii)}$$

By adding the square of equation (i) & (ii)

$$\frac{x^2}{a^2} + \frac{y^2}{b^2}\cot^2\theta - \frac{2xy}{ab}\cot\theta + \frac{x^2}{a^2}\cot^2\theta + \frac{y^2}{b^2} + \frac{2xy}{ab}\cot\theta = 1 + 1$$

$$\Rightarrow \frac{x^2}{a^2}(1 + \cot^2\theta) + \frac{y^2}{b^2}(1 + \cot^2\theta) = 2$$

$$\Rightarrow \frac{x^2}{a^2}\operatorname{cosec}^2\theta + \frac{y^2}{b^2}\operatorname{cosec}^2\theta = 2$$

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

63. (A) $\sqrt{\frac{x}{y}} = 6 - \sqrt{\frac{y}{x}}$

$$\Rightarrow \sqrt{\frac{x}{y}} + \sqrt{\frac{y}{x}} = 6$$

$$\Rightarrow \frac{x+y}{\sqrt{xy}} = 6$$

$$\Rightarrow \frac{x^2+y^2+2xy}{xy} = 36$$

Now we have, $x - y = 8$

$$x^2 + y^2 = 64 + 2xy$$

Now the expression becomes,

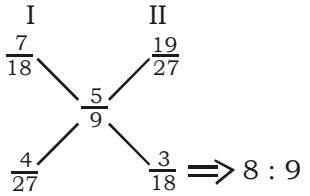
$$\frac{64 + 4xy}{xy} = 36$$

$$\Rightarrow \frac{64}{xy} = 36 - 4 = 32$$

$$\Rightarrow xy = \mathbf{2}$$

64. (D) ATQ,

$$55\frac{5}{9}\% = \frac{500}{900} = \frac{5}{9}$$



Required Ratio = 8 : 9

65. (A) A $\longrightarrow \frac{32}{3}$ days
B $\longrightarrow \frac{48}{5}$ days
9, 10 → 96

Hence, required time $= \frac{96 - 9 \times 4}{10}$

$$= \frac{60}{10} = \mathbf{6\ days}$$

66. (B) We know that,
$\tan 3x = \tan(2x + x)$

$$\Rightarrow \tan 3x = \frac{\tan 2x + \tan x}{1 - \tan 2x \times \tan x}$$

$$\Rightarrow \tan 3x - \tan 3x \,.\, \tan 2x \,.\, \tan x = \tan 2x + \tan x$$

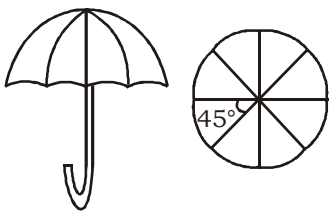
$\therefore$ $\tan 3x \,.\, \tan 2x \,.\, \tan x = \tan 3x - \tan 2x - \tan x$

67. (C) $\frac{\sin\theta - 2\sin^3\theta}{2\cos^3\theta - \cos\theta} = \frac{\sin\theta(1 - 2\sin^2\theta)}{\cos\theta(2\cos^2\theta - 1)}$

$$= \frac{\sin\theta\cos 2\theta}{\cos\theta\cos 2\theta}$$

$$= \mathbf{\tan\theta}$$

68. (D)



$\therefore$ There are 8 ribs in an umberella. The angle between two consecutive ribs

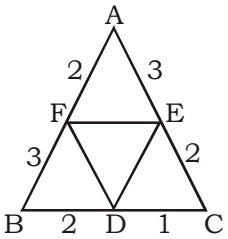
$= \frac{360°}{8} = 45°$

$\therefore$ Area between two consecutive ribs of the circle

$= \frac{45°}{360°} \times \pi r^2$

$= \frac{1}{8} \times \frac{22}{7} \times 14 \times 14 =$ **77 cm²**

69. (B)



Let ΔABC is an equilateral triangle. So the ratio becomes.

$\frac{BD}{DC} = \frac{2_{\times 5}}{1_{\times 5}} = \frac{10}{5}$ (15)

$\frac{AE}{EC} = \frac{3_{\times 3}}{2_{\times 3}} = \frac{9}{6}$ (15)

$\frac{AF}{FB} = \frac{2_{\times 3}}{3_{\times 3}} = \frac{6}{9}$ (15)

$\therefore$ AB = BC = CD = 15 units

Area of $\Delta ABC = \frac{\sqrt{3}}{4} \times (15)^2$

$= \frac{\sqrt{3} \times 225}{4}$ unit²

Area of ΔDEF = Area of ΔABC – (Area of ΔAFE + Area of ΔBDF + Area of ΔDCE)

$= \frac{\sqrt{3}}{4} \times 225 - \left(\frac{1}{2} \times 6 \times 9 \sin 60° + \frac{1}{2} \times 10 \times 9 \sin 60° + \frac{1}{2} \times 5 \times 6 \sin 60° \right)$

$= \frac{\sqrt{3}}{4} \times 225 - \frac{1}{2} \times 174 \times \frac{\sqrt{3}}{2}$

$= \frac{51\sqrt{3}}{4}$ unit²

$\therefore$ Required ratio $= \frac{51\sqrt{3}}{4} : \frac{225\sqrt{3}}{4}$

= **17 : 75**

70. (C) Given that, a + b + c = 0

Let a = 1, b = –1 and c = 0

$\therefore \frac{a^2}{2a^2 + bc} + \frac{b^2}{2b^2 + ac} + \frac{c^2}{2c^2 + ab}$

$= \frac{1^2}{2 \times 1^2 + 0} + \frac{(-1)^2}{2 \times (-1)^2 + 0} + 0$

$= \frac{1}{2} + \frac{1}{2} =$ **1**

71. (A) $y = \cfrac{1}{2 + \cfrac{1}{3 + \cfrac{1}{2 + \cfrac{1}{3 + ...}}}}$

$\Rightarrow y = \cfrac{1}{2 + \cfrac{1}{3 + y}}$

$\Rightarrow y = \frac{3 + y}{2y + 7}$

$\Rightarrow 2y^2 + 7y = 3 + y$

$\Rightarrow 2y^2 + 6y - 3 = 0$

$\Rightarrow y = \frac{-6 \pm \sqrt{6^2 + 4 \times 2 \times 3}}{2 \times 2}$

$\Rightarrow y = \frac{-6 \pm \sqrt{60}}{4}$

$\Rightarrow y = \frac{-3 \pm \sqrt{15}}{2}$

or $y = \frac{\sqrt{15} - 3}{2}$ (As y can't be negative)

72. (A) Required percentage $= \frac{211 - 138}{138} \times 100$

= **52.89%**

73. (C) Bank 1, Bank 4 and Bank 5

74. (B) I $= \frac{265}{143} = 1.85$

II $= \frac{211}{109} = 1.93$

$\therefore$ I < II

75. (C) Required average amount

$= \frac{109 + 123 + 125 + 142 + 157}{5}$

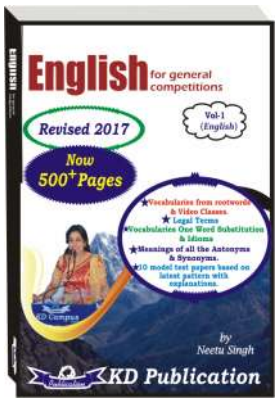
= **131.2**

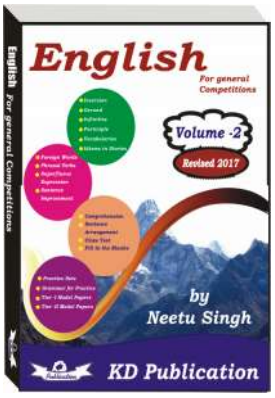
MEANINGS IN ALPHABETICAL ORDER

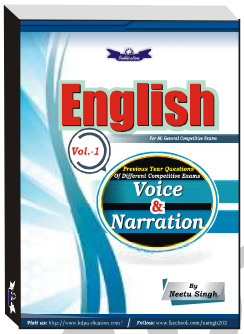
Word	Meaning in English	Meaning in Hindi
Acquiesce	To accept tacitly	मौन स्वीकृति
Austere	Somber, simple	सादगी पसंद
Brute	Of relating to beasts, inanimate, cruel	क्रूर, निर्दयी
Canonize	To treat as illustrious, preeminent or sacred.	संत बनाना
Cease	To bring an activity or action to an end	रोकना, अंत करना
Dabble	To take part in an activity in a casual way	ऊपरी तौर से दिलचस्पी लेना
Eternize	To make eternal, immortalize	अमर बनाना
Hog	A selfish, gluttonous, person	स्वार्थी आदमी
Inimical	Likely to cause damage or have a bad effect	हानिकारक
Officiate	To perform a ceremony, function or duty	कर्तव्य अदा करना
Ostracise	To exclude from a society or group	बहिस्कार करना
Perpetuate	To cause (something that should be stopped) to continue	बनाये रखना
Preside	To exercise guidance	संचालन करना
Reconciliation	To restore to friendship or harmony	समझौता करना
Slob	An ordinary or boorish person	आलसी
Solemn	Marked by the evocation of a religious sanction	पवित्र
Therapeutic	Producing good effect on your body and mind medicinal	उपचारात्मक

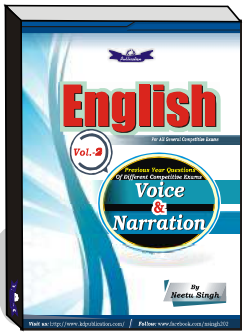
SSC MOCK TEST - 140 (ANSWER KEY)

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







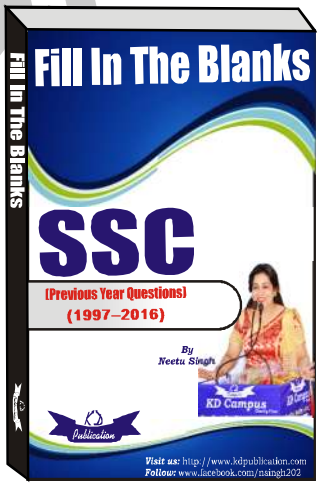


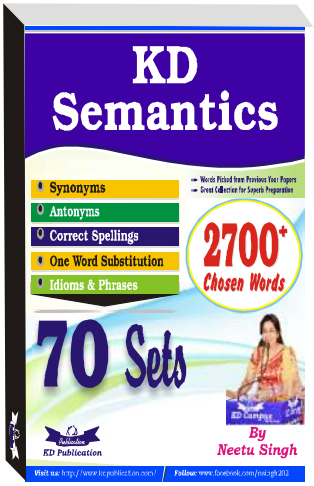
78. **(A)** 'Pull in' means '(of a bus or train) arrive to take passengers'.

79. **(B)** 'Plural nouns take plural verb' and word 'now' shows that the action is still going on, so replace 'had waited' with 'have been waiting'

80. **(A)** Change 'directly' to 'direct'. Here 'direct' means 'straight'. Both don't take 'ly'.

81. **(B)** Article 'an' comes before a word which has vowel sound at the starting. Hence replace 'a' with 'an'.





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