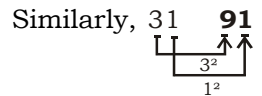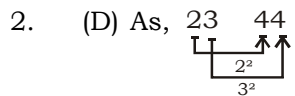## DP HEAD CONSTABLE – 09 (SOLUTION)

1. (B) As, Hockey is the National game of India. Similarly, **cricket** is the National game of England.
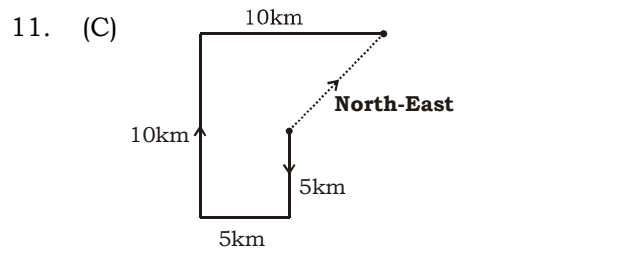
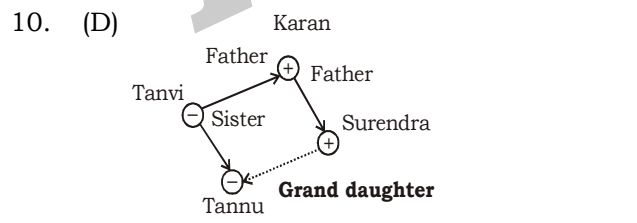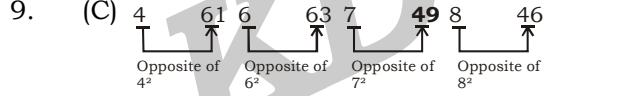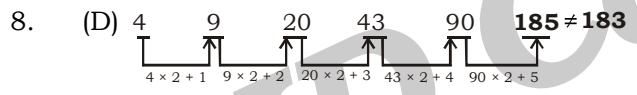2. (D) As, 23   44

   Similarly, 31   **91**

3. (D) As,
   BANANA $\Rightarrow$ 2 + 1 + 14 + 1+ 14 + 1 = 33
   Similarly,
   MANGO $\Rightarrow$ 13 + 1 + 14 + 7+ 15 = **50**

4. (C) Group Captain, Squadron Leader and wing commander $\Rightarrow$ Indian Airforce
   Vice Admiral $\Rightarrow$ Indian Navy

5. (A) **MN $\Rightarrow$ 13 + 14 = 27**
   LN $\Rightarrow$ 12 + 14 = 26
   FT $\Rightarrow$ 6 + 20 = 26
   JP $\Rightarrow$ 10 + 16 = 26

6. (D) Except **14-22** all others are odd.

7. (A) Sunil Gavaskar$\rightarrow$Kapil Dev$\rightarrow$Ravi Shatri $\rightarrow$ Saurav Ganguli$\rightarrow$Virat Kohli

8. (D) 4   9   20   43   90   **185 $\neq$ 183**
   $4 \times 2 + 1$ $9 \times 2 + 2$ $20 \times 2 + 3$ $43 \times 2 + 4$ $90 \times 2 + 5$

9. (C) 4   61   6   63   7   **49**   8   46
   Opposite of 4^2 Opposite of 6^2 Opposite of 7^2 Opposite of 8^2

10. (D)

11. (C)

12. (B) Required sum

    $= 1^3 + 2^3 + 3^3 + 4^3 + 5^3 + 6^3$

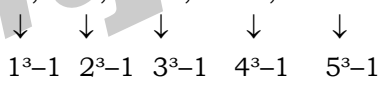 $= \left[\dfrac{n(n+1)}{2}\right]^2 = \left[\dfrac{6 \times 7}{2}\right]^2 =$ **441**

13. (C) As, 2008 is a leap year. So, Feburary has 29 days

    1 + 7 + 7 + 7 + 7 = 29

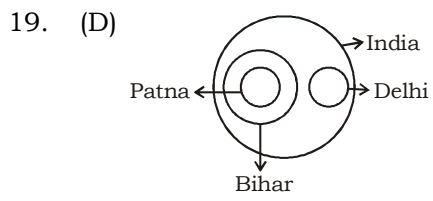 $\therefore$ If **tuesday** is on, then **tuesday** is on 29 also.

14. (A) 4 5 12 A 60 M 12 D 2
    On changing the sign
    4 + 12 – 60 ÷ 12 × 2
    = 4 + 12 – 5 × 2
    = 4 + 12 –10 = **6**

15. (B) ATQ,
    17 * = 17 + 16 + 15 +...+2 + 1

    $= n\left(\dfrac{n+1}{2}\right)$

    $= \dfrac{17 \times 18}{2} =$ **153**

16. (D) 0,   7,   26,   63,   **124**
    $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$
    $1^3 - 1$ $2^3 - 1$ $3^3 - 1$ $4^3 - 1$ $5^3 - 1$

17. (B) As,
    22 + 26 = 48
    and, 17 + 41 = 58
    Similarly,
    42 + **22** = 68

18. (C) P Q **R S** S/**P** Q R S **S**/**P** Q R S S/P Q R

19. (D)

20. (C)

21. (C) Changing the sign according to question
    8 × 5 + 10 = 25 × 2
    $\Rightarrow$ 50 = 50
    $\therefore$ Option C is correct

22. (D) Ram

23. (B)

24. (B)
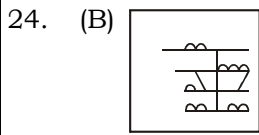
25. (D)

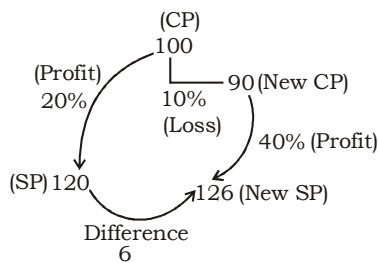56. (B) Let the number of students = x

ATQ,

$(x)(3x) = 1728$

$\Rightarrow x^2 = 576$

$\Rightarrow x = 24$

57. (D) Let cost price = ₹100

Now,

6 units = 6

100 units = 100

Hence, cost price

= ₹100

Required selling price

$= 100 \times \dfrac{135}{100} = ₹135$

58. (D) Let capital = ₹P and interest rate = R%

ATQ,

$\dfrac{P \times R \times 5}{100} + 1050 = \dfrac{P(R+7) \times 5}{100}$

$\Rightarrow \dfrac{35P}{100} = 1050$

$\Rightarrow P = ₹3000$

59. (B) $r = \dfrac{35}{4}\% = \dfrac{35}{400} = \dfrac{7}{80}$

ATQ,

$13360 = (\text{Installment}) \times \left(\dfrac{80}{87} + \dfrac{(80)^2}{(87)^2} \right)$

$\Rightarrow 13360 = (\text{Installment}) \times \left(\dfrac{80}{87} + \dfrac{6400}{7569} \right)$

$\Rightarrow 13360 = (\text{Installment}) \times \dfrac{13360}{7569}$

$\Rightarrow (\text{Installment}) = ₹7569$

60. (D)

Milk	Water		Milk	Water
(Sample 1)				
1 → 1	: 3	$\xrightarrow{\times 77}$	77	: 231
(Sample 2)				
2 → 2	: 5	$\xrightarrow{\times 44}$	88	: 220
(Sample 3)				
3 → 4	: 7	$\xrightarrow{\times 28}$	112	: 196

Required ratio = 231 + 220 + 196 : 77 + 88 + 112 = 647 : 277

61. (A) Total waste water

$= (3 \times 60 \times 60 \times 24 \times 500) \times \dfrac{100}{750 \times 1000}$

= 17280 litre

62. (C) Let initial speed = x km/hr

ATQ,

$40x - \left(x - \dfrac{x}{10} \right) 40 = 24$

$\Rightarrow 40x - 36x = 24$

$\Rightarrow x = 6$

63. (B) Total age at birth of child = 33 × 2 = 66 years

Total present age = 25 × 3 = 75 years

Age of child = $\dfrac{75 - 66}{3}$ = 3 years

64. (A) Let the side of a cube = a cm

Diagonal of cube

$= \sqrt{3}\,a = \sqrt{12}$

$\Rightarrow a = 2$ cm

Volume of cube

$= a^3 = 2^3 = 8$ cm³

65. (B) ATQ,

$\dfrac{5A}{100} = \dfrac{10B}{100} = \dfrac{15C}{100}$

$A = 2B = 3C$

$A : B : C = 6 : 3 : 2$

Income of B = $\dfrac{12100}{11} \times 3$

= ₹3300

66. (A) Total passed student

$= \left(300 \times \dfrac{60}{100} \right) + \left(250 \times \dfrac{38}{100} \right)$
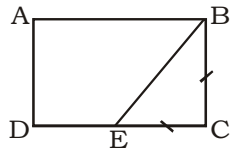
= 180 + 95 = 275

Required average

$= \dfrac{275}{300 + 250} \times 100$

= 50%

67. (D) Marked price of Jeep

$= 19500 \times \dfrac{100}{65} = $ ₹30,000

Paid after two successive discounts

$= 30000 \times \dfrac{85}{100} \times \dfrac{80}{100}$

$= $ ₹20,400

68. (A) Total number of men initially $= x$

ATQ,

$\Rightarrow (x \times 40) = (x + 8) \times 30$

$\Rightarrow 40x - 30x = 240$

$x = 24$

69. (D) Ratio of shares of A, B and C

$= 1200 \times 6 : 800 \times 9 : 1800 \times 4$

$= 1 : 1 : 1$

Share of B

$= \dfrac{1}{3} \times 696 = $ ₹232

70. (D) Side of rhombus

$= \dfrac{200}{4} = 50$ cm

$d_1^2 + d_2^2 = 4a^2$

$\Rightarrow 80^2 + d_2^2 = 4 \times 50 \times 50$

$\Rightarrow d_2 = 60$ cm

Area of rhombus

$= \dfrac{1}{2} d_1 d_2 = \dfrac{1}{2} \times 80 \times 60 = 2400$ cm²

71. (B) $11^1 + 12^2 + 13^3 + 14^4 + 15^5 + 16^6$

$1 + 4 + 97 + 6 + 5 + 6 = 29$ & unit digit $= 9$

72. (A) $\dfrac{a-b}{3} = \dfrac{a+b}{7} = \dfrac{ab}{4} = K$

So, $a - b = 3K$ and $a + b = 4K$

then $a = 5K$, $b = 2K$

$ab = 4K$

$5K \times 2K = 4K$

$K = \dfrac{2}{5}$

then, $ab = 4 \times \dfrac{2}{5} = \dfrac{8}{5}$

73. (B) $x^{y+z} = 1$

$\Rightarrow x^{y+z} = 1^{x+z}$

$\Rightarrow x = 1$

(As, x, y & z are natural number)

and, $y^{x+z} = 1024$

$\Rightarrow y^{1+z} = (2)^{10} = (4)^5$

$\Rightarrow (y = 2$ and $z = 9)$ or $(y = 4$ and $z = 4)$

and, $z^{x+y} = 729$

$z^{1+y} = (3)^6 = (9)^3$

$\Rightarrow (y = 2$ and $z = 9)$ or $(y = 5$ and $z = 3)$

As, $(y = 2$ and $z = 9)$ satisfies both equation,

$x = 1$, $y = 2$ and $z = 9$ is solution of the above equations.

Now, $(z + 1)^{x+y+1} = (9+1)^{1+2+1} = (10)^4$

$= 10000$

74. (A) $\tan 30° = \dfrac{h}{x}$

$\Rightarrow \dfrac{1}{\sqrt{3}} = \dfrac{h}{x}$

$\Rightarrow x = h\sqrt{3}$

$\tan 60 = \dfrac{h}{100 - x}$

$\Rightarrow h = (100 - x) \times \sqrt{3} = (100 - h\sqrt{3}) \times \sqrt{3}$

$\Rightarrow 4h = 100\sqrt{3}$

$\Rightarrow h = 25\sqrt{3}$ m

75. (B)

Area of $\triangle BCE = \dfrac{1}{2} \times BC \times EC$

$14 = \dfrac{1}{2} EC^2$

$EC = 2\sqrt{7}$

Area of $\square ABCD = (CE + EC) \times BC$

$= 4 EC \times BC$

$= 4 \times 2\sqrt{7} \times 2\sqrt{7}$

$= 112$ unit².

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Demitted	to withdraw from office	निकलना
Veto	the right or power of a person in authority to decide that something such as a new law will not be approved	निषेधाधिकार
Nod	something done to show that someone or something has been chosen, approved, etc.	औपचारिक स्वीकृति
Dissent	to publicly disagree with an official opinion, decision, or set of beliefs	असहमत होना
Antediluvian	very old or old-fashioned	पुराना
Antiquated	very old and no longer useful, popular, or accepted	अप्रचलित
Parched	very dry especially because of hot weather and no rain	सूखा
Nonsectarian	not affiliated with or restricted to a particular religious group	गैर-साम्प्रदायिक
Mendicant	someone such as a member of a religious group who lives by asking people for money or food	भिक्षु
Wastrel	a person who wastes time, money, etc.	पैसा, समय बर्बाद करने वाला
Tender	to present for acceptance	निविदा
Aerate	to supply with oxygen	वायु-प्रसार करना
Placate	to cause someone to feel less angry about something	सांत्वना देना
Gainsay	to deny or disagree with something	प्रतिवाद करना
Prudent	having or showing careful good judgement	विवेक, नीतिज्ञ
Anachronism	something such as a word, an object, or an event that is mistakenly placed in a time where it does not belong in a story, movie, etc.	कालभ्रम
Desecration	to treat a holy place or object with disrespect	अपवित्रता
Malapropism	an amusing error that occurs when a person mistakenly uses a word that sounds like another word but that has a very different meaning	शब्द का बेतुका और हास्यास्पद प्रयोग
Catechism	a collection of questions and answers that are used to teach people about the Christian religion	कटहिजम
Aphorism	a short phrase that expresses a true or wise idea	कहावत
Epigram	a short and clever poem or saying	चुटकुला
Innuendo	a statement which indirectly suggests that someone has done something immoral, improper, etc	वक्रोक्ति
Palate	the top part of the inside of your mouth	तालु
Glower	to look at someone or something in an angry way	गुस्सैल निगाह
Proffer	to offer or give something to someone	प्रस्ताव करना

DP HEAD CONSTABLE – 09 (ANSWER KEY)

1.	(B)	26.	(B)	51.	(C)	76.	(A)
2.	(D)	27.	(C)	52.	(A)	77.	(B)
3.	(D)	28.	(D)	53.	(D)	78.	(D)
4.	(C)	29.	(C)	54.	(A)	79.	(C)
5.	(A)	30.	(A)	55.	(D)	80.	(A)
6.	(D)	31.	(A)	56.	(B)	81.	(D)
7.	(A)	32.	(C)	57.	(D)	82.	(C)
8.	(D)	33.	(C)	58.	(D)	83.	(C)
9.	(C)	34.	(D)	59.	(B)	84.	(C)
10.	(D)	35.	(D)	60.	(D)	85.	(D)
11.	(C)	36.	(A)	61.	(A)	86.	(C)
12.	(B)	37.	(A)	62.	(C)	87.	(D)
13.	(C)	38.	(C)	63.	(B)	88.	(C)
14.	(A)	39.	(B)	64.	(A)	89.	(A)
15.	(B)	40.	(B)	65.	(B)	90.	(B)
16.	(D)	41.	(D)	66.	(A)	91.	(C)
17.	(B)	42.	(B)	67.	(D)	92.	(A)
18.	(C)	43.	(A)	68.	(A)	93.	(A)
19.	(D)	44.	(D)	69.	(D)	94.	(C)
20.	(C)	45.	(A)	70.	(D)	95.	(B)
21.	(C)	46.	(D)	71.	(B)	96.	(B)
22.	(D)	47.	(C)	72.	(A)	97.	(D)
23.	(B)	48.	(D)	73.	(B)	98.	(C)
24.	(B)	49.	(B)	74.	(A)	99.	(D)
25.	(D)	50.	(A)	75.	(B)	100.	(C)
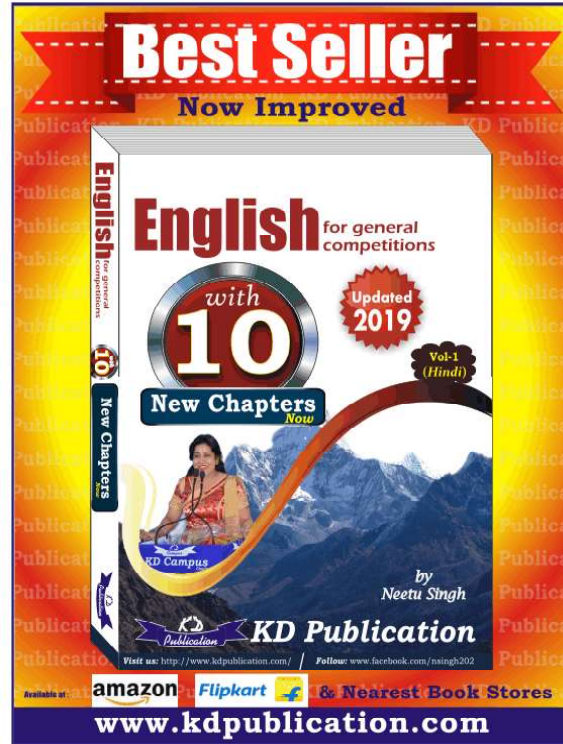
76. (A) Add 'has' before recently and change 'describes' into 'described'. According to the meaning of the sentence, the sentence should be in Present Perfect Tense where 'recently', 'already', 'yet' are used in Present Perfect Tense.

77. (B) Change 'with' into 'upon' because 'snoop upon' means 'to look around a place secretively'.

90. (B) Change 'off' into 'from' because 'indistinguishable' takes fixed preposition 'from' after it. Indistinguishable means 'unable to be recognized as different'.

91. (C) Change 'picked up' into 'picked at'.
    Pick up: to increase or improve.
    Pick out: to choose, find or recognize something or someone in a group.
    Pick on : to criticize, annoy or punish
    Pick at: to eat food in small pieces and without enjoyment.

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