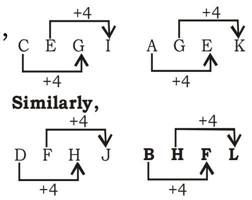
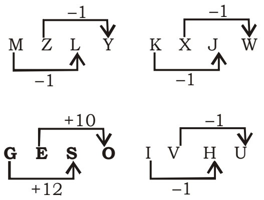
SSC MOCK TEST - 241 (SOLUTION)

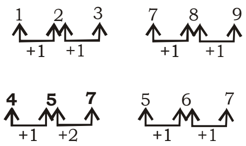
1. (D) As,
'Howl' is the sound of 'Jackal'.
Similarly,
'Patter' is the sound of 'Rain'.

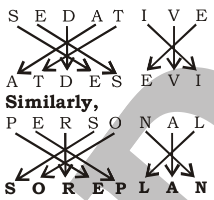
2. (D) 6 : 252 : : 5 : **150**
6^3+6^2 5^3+5^2

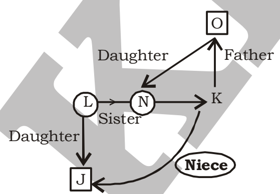
3. (C) As,


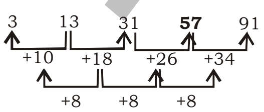
4. (A) Except groundnut, others are spices.

5. (C)


6. (C)


7. (C) As,


8. (C)


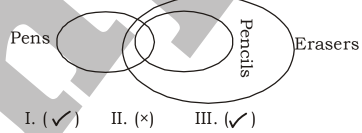
9. (D)


10. (D) As, 2 × 3 × 1 × 5 + 1 = 31
and 2 × 4 × 6 × 3 + 1 = 145
Similarly, 1 × 2 × 7 × 5 + 1 = **71**

11. (B) 32 ÷ 6 × 3 + 1 – 6 × 2 = 13
After interchanging the numbers,
⇒ 32 ÷ 2 × 3 + 1 – 6 × 6 = 13
⇒ 16 × 3 + 1 – 36 = 13
⇒ 48 – 35 = 13
⇒ 13 = 13

12. (A) From figure 2 and 3
V   III   I
↓   ↓   ↓ opposite
V   II   VI
Hence, 'VI' is opposite to 'I'.

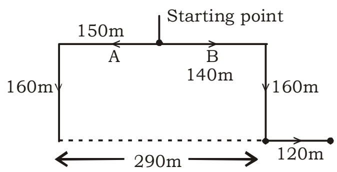
13. (A) Number of pens which are blue
= 19 + 4 = 23

14. (C)


Hence, Only conclusion I and III follow.

15. (C) **t**uvw/uv**t**w/vtuw/**t**uvw/uv**t**w/v**t**uw

16. (C) WALLER

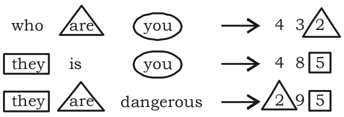
17. (B)


Position of B from A = (290 +120) East
= 410 East

18. (B) 11

19. (A) Carnation, Counter, Create, Creator, Crop

20. (C) As, 343 → 7^3, 98 → $2×7^2$, 98 → 3×7
Similarly,
1331 → 11^3, 242 → $2×11^2$, 33 → 3×11

21. (D)


Here, they ⟶ 5, you ⟶ 4
are ⟶ 2, who ⟶ 3
is ⟶ 8, dangerous ⟶ 9
Hence, code for dangerous is 9.

22. (A)
23. (B)
24. (C)
25. (B)
26. (D) Puhar(Kaveripatnam) was the Sangam port of South India.

Rajendra Chola I succeeded his father Rajaraja Chola I to the throne in 1014 CE. He defeated Mahipala (Pala king) and to commemorate his victory he assumed the title of 'Gangaikondachola'.

Karikala is recognised as the greatest of the Early Cholas.

27. (A) The Wheeler Island is located in Odisha.
28. (D) Sarkaria Commission was set up in 1983. The Commission was so named as it was headed by Justice Ranjit Singh Sarkaria (Chairman of the commission), a retired judge of the Supreme Court. The other members of the committee were Shri B. Sivaraman (Cabinet Secretary), Dr S.R. Sen (former Executive Director of IBRD) and Rama Subramaniam (Member Secretary).

Three-language formula was recommended by Kothari Commission.

29. (C) Article 54 - The President shall be elected by the members of an electoral college consisting of the elected members of both the Houses of Parliament; and the elected members of the Legislative Assemblies of the States.

Seventieth Amendment Act, 1992 would include the National Capital Territory of Delhi and the Puducherry.

32. (A) Public Accounts Committee (PAC) is a committee of selected members of parliament, for the purpose of auditing the revenue and the expenditure of the Government of India. It was founded in 1921. It has 22 members (15 Lok Sabha and 7 Rajya Sabha). Its Chairperson is Adhir Ranjan Chowdhury.

Estimates Committee is a committee of selected members of parliament, for the purpose of scrutinising the functioning of government ministries and departments in terms of expenditure and utilisation of funds. It was founded in 1950. It has 30 members (all from Lok Sabha). Its is Chairperson Girish Bapat.

33. (D) Champaner-Pavagadh Archaeological Park was made by Sultan Mahmud Begada. It was inscribed by UNESCO as a World Heritage Site in 2004.
34. (A) The G20 is an international forum for the governments and central bank governors from 19 countries and the European Union (EU), founded in 1999. Its chairman is Saudi Arabia King Salman bin Abdulaziz Al Saud.

Economic Co-operation and Development is an intergovernmental economic organisation with 37 member countries.

Formation - 16 April 1948 (as the OEEC) a reformed in september 1961 (as OECD).

36. (C) 1st - English

3rd - Spanish

37. (D) Bharat Ratna in music - M. S. Subbulakshmi, Ravi Shankar, Lata Mangeshkar, Bismillah Khan, Bhimsen Joshi, Bhupen Hazarika
38. (C) Central Drug Research Institute is in Lucknow.
39. (A) Trishul range is 9000 km and warhead is 5.5 kg.

K-15 Sagarika is submarine ballistic missile. Its range is 7500 km.

Brahmos is air to surface missile. Its range is 3000 km.

Agni is median and intercontinental missile.

Agni 1 - 700 to 1200 km, Agni 2 - 2000 to 3500 km, Agni 3 - 3000 to 5000 km, Agni 4 - 3500 to 4000 km, Agni 5 - 5000 km

40. (A) 11 July - World Population Day
23 December - Farmer's Day
18 December - International Migrants Day
41. (B) Gynaecology is the medical practice dealing with the health of the female reproductive system.
44. (D) India 2021 men boxing World Championship lost to Serbia.
45. (C) 20th Parallel north - between Libya and

Sudan

22nd Parallel north - between Egypt and Sudan

Curzon Line - between Poland and Russia

48. (B) Aridisols form in an arid or semi-arid climate. Aridisols dominate the deserts and xeric shrublands, which occupy about one third of the Earth's land surface. Aridisols have a very low concentration of organic matter, reflecting the paucity of vegetative production on these dry soils. Water deficiency is the major defining characteristic of aridisols.

50. (A)

Fruit	-	**Botanical name**
Watermelon	-	Pepo
Orange	-	Citrus
Grapes	-	Berry

51. (B) Calcuations:

$\Rightarrow \frac{343}{19} \rightarrow$ remainder $=1$

$\Rightarrow \frac{439}{19} \rightarrow$ remainder $=2$

$\Rightarrow \frac{1044}{19} \rightarrow$ remainder $=18$

$\Rightarrow$ Remainder for above expression $= 1\times2\times18 = 36$ (remainder is greater than denominator)

$\Rightarrow \frac{36}{19} \rightarrow$ remainder $=17$

52. (D) Total cost of sugar = (20×20) + (25×12)

= ₹ 400 + ₹ 300

= ₹ 700

Total quantity of sugar = 20 + 25 + = 45

Required profit = 20%

$S.P = \frac{120}{100}\times700 = 840$

Rate per kg. $= \frac{840}{45} =$ ₹ 18.67

53. (D) $\sqrt{151-\sqrt{882+\sqrt{320+\sqrt[3]{59+5}}}} + \sqrt[3]{214+\sqrt[4]{15+\sqrt{881-900+20}}}$

$= \sqrt{151-\sqrt{882+\sqrt{320+4}}} + \sqrt[3]{214+\sqrt[4]{15+\sqrt{1}}}$

$= \sqrt{151-\sqrt{882+\sqrt{324}}} + \sqrt[3]{214+\sqrt[4]{16}}$

$= \sqrt{151-\sqrt{882+18}} + \sqrt[3]{214+2}$

$= \sqrt{151-\sqrt{900}} + \sqrt[3]{216}$

$= \sqrt{151-30} + 6$

$= \sqrt{121} + 6$

$= 11 + 6$

$= 17$

54. (B) Radius of first circle R_1 = 21cm

Radius of second circle R_2 = 63cm

Area of circle $= \pi r^2$

Area of the first circle $= \pi\times21^2\ cm^2$

Area of the second circle $= \pi\times63^2\ cm^2$

Percentage of area of the first circle with respect to the area of the second circle

$= \frac{(\pi\times21^2)}{(\pi\times63^2)}\times100$

$= \left[\frac{(21\times21)}{(63\times63)}\right]\times100$

$= \left(\frac{1}{9}\right)\times100$

$= 11\frac{1}{9}\%$

55. (D) Given, P = Rs. 500, r = 2% and n = 2 yrs.

$C.I = P\left(1+\frac{r}{100}\right)^n - P$

$C.I = 500\left(1+\frac{2}{100}\right)^2 - 500$

$C.I = 500\ (1+0.02)^2 - 500$

$C.I = 500\times1.02^2 - 500$

$C.I = 520.2 - 500$

$= 20.2$

56. (A) $(130\%\ of\ 396) + \frac{x^2+(20\%\ of\ 40)^2}{5} = 600$

$\Rightarrow 1.3\times396 + \frac{x^2+(0.2\times40)^2}{5} = 600$

$\Rightarrow 514.8 + \frac{x^2+(8)^2}{5} = 600$

$\Rightarrow \frac{2574 + x^2 + (8)^2}{5} = 600$

$\Rightarrow 2575 + x^2 + 8^2 = 600 \times 5$

$\Rightarrow 2575 + x^2 + 8^2 = 3000$

$\Rightarrow x^2 + 8^2 = 3000 - 2574$

$\Rightarrow x^2 + 8^2 = 426$

$\Rightarrow x^2 = 426 - 64$

$\Rightarrow x^2 = 362$

$\Rightarrow x \approx 19$

57. (B) ATQ,

Speed of first train = 63 km/hr

The length of second train = 900 m

$$\text{Time} = \frac{(\text{The length of second trian})}{(S_1 + S_2)}$$

Here, S_1 and S_2 are the speed of first and second trains

$\Rightarrow 11 = \frac{990 \times 18}{(63 + S_2) \times 5}$

$\Rightarrow (63 + S_2) \times 5 \times 11 = 990 \times 18$

$\Rightarrow S_2 = 324 - 63 = 261$ km/hr

$\Rightarrow S_2 = 261 \times \left(\frac{5}{18}\right) = 72.5$ m/s

$\therefore$ The speed of second train is 72.5m/s

58. (D) $5.6 \times 2.5 + 0.75 \times 6.75 + 141.25$

$= 14 + 5.0625 + 141.25$

$= 160.3125$

59. (B) ATQ,

Fist year income = ₹ x

Saving = 20%

Next year, Income increased = 10%

Expenditure decreased = 10%

Income = Saving + Expenditure

Let income = x =100

Fist year,

Income = 100, Saving = 20

Expnediture = 80

Next year,

$\text{Income} = 100 \times \frac{(100)}{100} = 100$

$\text{Expenditure} = 100 \times \frac{(90)}{100} = 72$

Income = saving + Expenditure

$\Rightarrow$ 110 = saving + 72

$\Rightarrow$ Saving = 38

$\therefore$ Required answer = $\left[\frac{(38 - 20)}{20}\right] \times 100$

$= \left[\frac{18}{20}\right] \times 100 = 90\%$

60. (D) 25% of the distance at the speed of 30 km/hr

15% of the distance at 350 km/hr

Remaining distance = (100 – 25– 15)%

= 60%

Calculation:

Let the total distance of the journey by $100x$ km

$\Rightarrow$ Average Speed = $\frac{\text{Total distance}}{\text{Total time}}$

$\Rightarrow$ Average Speed = $\frac{100x}{\frac{25x}{300} + \frac{15x}{350} + \frac{60x}{400}}$

$\Rightarrow$ Average Speed = $\frac{100x}{\frac{5x}{60} + \frac{3x}{70} + \frac{3x}{20}}$

$\Rightarrow$ Average Speed = $\frac{100x}{\frac{(35 + 18 + 63)x}{420}}$

$\Rightarrow$ Average Speed = $\frac{(100 \times 420)}{116}$

= 362.07 km/hr

$\therefore$ Average speed of the aeroplane is 362 km/hr in approximate

61. (D) A invested ₹ 5000 for 12 months

A invested ₹ 5000 for 4 months

$\Rightarrow$ Ratio of total investment of A to B

$= \frac{(5000 \times 12)}{(5000 \times 4)} = 12 : 4$

$= 3 : 1$

$\Rightarrow$ Total income = ₹ 16000

$\Rightarrow$ Total amount given to B = 4000 + 2000

= ₹ 6000

$\Rightarrow$ Gain of A = Total profit – Total profit of B

= ₹ 16000 – ₹ 6000

= ₹ 10000

62. (D) As we know,

⇒ The curved surface area of cylinder = $2\pi rh$

$2\pi rh = 17.5$

$\Rightarrow \quad rh = \frac{17.5}{2\pi}$ .....(i)

Volume of cylinder = $\pi r^2 h$

$\pi r^2 h = 14$

$rh = \frac{14}{\pi r}$ .....(ii)

From equation (i) and equation (ii)

$\frac{17.5}{2\pi} = \frac{14}{\pi r}$

$r = \frac{(14 \times 2)}{17.5}$

$r = 1.6\text{cm}$

63. (B) $\frac{8x^2 - 15y^2}{xy} = \frac{14}{1}$

$\Rightarrow 8\left(\frac{x}{y}\right) - 15\left(\frac{y}{x}\right) = \frac{14}{1}$

$\Rightarrow 8\left(\frac{x}{y}\right)^2 - 15 = 14\left(\frac{y}{x}\right)$

$\Rightarrow 8\left(\frac{x}{y}\right)^2 - 14\left(\frac{x}{y}\right) - 15 = 0$

$\Rightarrow 8\left(\frac{x}{y}\right)^2 - 20\left(\frac{x}{y}\right) + 6\left(\frac{x}{y}\right) - 15 = 0$

$\Rightarrow 4\left(\frac{x}{y}\right)\left(2\left(\frac{x}{y}\right) - 5\right) + 3\left(2\left(\frac{x}{y}\right) - 5\right) = 0$

$\Rightarrow \left(2\left(\frac{x}{y}\right) - 5\right)\left(4\left(\frac{x}{y}\right) + 3\right) = 0$

$\Rightarrow 2\left(\frac{x}{y}\right) - 5 = 0$ (for positive value)

$\Rightarrow \frac{x}{y} = \left(\frac{5}{2}\right)$

Hence, $\frac{x}{y} = \frac{5}{2}$

64. (D) ATQ,

$5a + \frac{1}{3a} = 5$ ...(i)

Multiplying eq(i) by $\frac{3}{5}$ both sides

$3a + \frac{1}{5a} = 3$ ...(ii)

Taking square eq(ii) both sides

$\left(3a + \frac{1}{5a}\right)^2 = 9a^2 + \frac{1}{25a^2} + \frac{6}{5}$

$9a^2 + \frac{1}{25a^2} = 9 - \frac{6}{5}$

$= 9 - 1.2$

$= 7.8$

65. (A) ATQ,

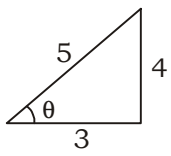
$\frac{3\sin\theta + \sin\theta}{2\sin\theta - \cos\theta} = 3$

$\Rightarrow 3\sin\theta + \cos\theta = 6\sin\theta - 3\cos\theta$

$\Rightarrow 4\cos\theta = 6\sin\theta - 3\sin\theta = 3\sin\theta$

$\Rightarrow 4\cos\theta = 3\sin\theta$

$\Rightarrow \tan\theta = \frac{4}{3}$



$\sin\theta = \frac{4}{5}$

$\cos\theta = \frac{3}{5}$

Now, $\sin^4\theta - \cos^4\theta$

$= (\sin^2\theta + \cos^2\theta)(\sin^2\theta - \cos^2\theta)$

$= \frac{16}{25} - \frac{9}{25} = \frac{7}{25}$

66. (C) $\frac{\cos^2\theta}{\cot^2\theta - \cos^2\theta} = 3$

$\Rightarrow \cos^2\theta = 3\cot^2\theta - 3\cos^2\theta$

$\Rightarrow 4\cos^2\theta = 3\cot^2\theta$

$$4\cos^2\theta = \frac{3\cos^2\theta}{\sin^2\theta}$$

$$\Rightarrow \sin^2\theta = \frac{3}{4}$$

$$\Rightarrow \sin\theta = \frac{\sqrt{3}}{2}$$

$$\Rightarrow \theta = 60°$$

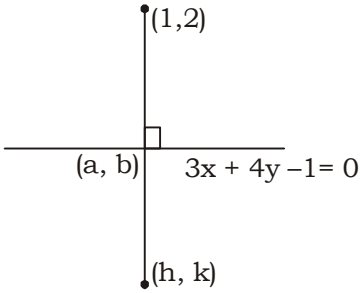
67. (A) Total number of courses in KD Live

$$= \frac{220000 + 130000}{(1200 - 750)}$$

= 778

Hence, In KD Live total number of courses are 778.

68. (A)



For point (a, b)

$$m_1 = \frac{b-2}{a-1}$$

$$m_1 \times m_2 = \frac{-3}{4}$$

$$\left(\frac{b-2}{a-1}\right) \times \frac{3}{4} = 1$$

3b – 6 = 4a – 4

3b – 4a = 2 ...(i)

(a, b) also satisfies the line 3x + 4y = 1

3a + 4b = 1 ...(ii)

from eq(i) and (ii)

$$(a, b) = \left(\frac{-1}{5}, \frac{2}{5}\right)$$

(a, b) will be mid point of (h, k) & (1, 2)

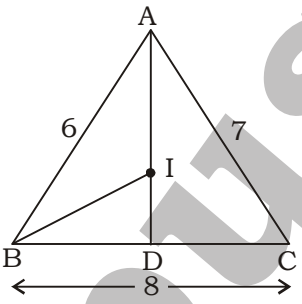
$$\frac{h+1}{2} = \frac{-1}{5} \Rightarrow 5h + 5 = -2$$

$$h = -\frac{-7}{5}$$

$$\frac{k+2}{2} = \frac{2}{5} \Rightarrow 5k + 10 = 4$$

$$(h, k) = \left(\frac{-7}{5}, \frac{-6}{5}\right)$$

69. (C)



AD is angle bisector of $\angle A$, then

$$\frac{AB}{AC} = \frac{BD}{CD}$$

$$\Rightarrow \frac{6}{7} = \frac{BD}{CD}$$

$$BD = \frac{8 \times 6}{13} = \frac{48}{13}$$

I is incentre so, BI is the angle bisetor of $\angle B$ in ΔABD

So, BI will divide AD in the ratio

$$\frac{AB}{BD} = \frac{AI}{ID}$$

$$\Rightarrow \frac{6 \times 13}{48} = \frac{AI}{ID}$$

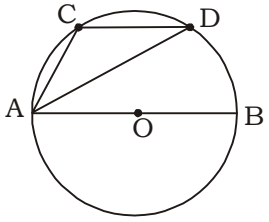
Hence, $\frac{AI}{ID} = \frac{13}{8}$

$\therefore \angle CAD = 180 - 150° = 30°$

70. (A) Both ends included $= \frac{(242 - 122)}{2}$

= 60 + 1 = 61

71. (A) ATQ,



Now, $\angle ADB = 90°$

(angle is semicircle)

$\angle ADC = \angle DAB = 30°$

[Alternate angle]

Now, In ΔABD

$\angle DAB + \angle ABD + \angle ADB = 180°$

$\Rightarrow 30 + \angle ABD + 90° = 180°$

$\angle ABD = 60°$

$\Rightarrow \angle ACD = 180° - \angle ABD = 180° - 60°$

$= 120°$

Now, In ΔCAD

$\angle ACD + \angle CAD + \angle ADC = 180°$

$\therefore \Delta CAD = 180° - 150° = 30°$

72. (D) Average water being consumed

$$= \frac{(1955 + 1524 + 1443 + 1533 + 1588)}{5}$$

$= 1,608.6$

73. (C) Average water being wasted

$$= \frac{(1652 + 1415 + 1154 + 1335 + 1239)}{5}$$

$= 1,359$

74. (B) Water wasted in 2013 = 1652 thousand tonnes

Water wasted in 2014 = 1415 thousand tonnes

$$\text{Percentage decrease} = \frac{(1652 - 1415)}{1652 \times 100}$$

$= 14.35\%$

75. (B) Total water available in 2013

= (1955 + 1652) = 3607 thousand tonnes

Total water available in 2017

= (1588 + 1239) = 2827 thousand tonnes

Percentage decrease

$$= \frac{(3607 - 2827)}{3607} \times 100 = 21.62\%$$

MEANINGS IN ALPHABETICAL ORDER

WORD	MEANING IN ENGLISH	MEANING IN HINDI
Acceleration	increase in speed or rate	गति या दर में वृद्धि
Assault	make a physical attack on	हमला
Bloviate	to talk at length	धारा प्रवाह बोलना
Clam	refuse to talk or reply	चुप होना
Commemorate	to exist or be done in order to remind people of (an important event or person from the past)	किसी उत्सव द्वारा स्मरण करना
Complaisant	marked by an inclination to please or oblige	विनयपूर्ण
Conciliatory	intended to end a disagreement	मैत्रीपूर्ण
Delirious	very excited	उन्मादी
Desecration	violation of what is regarded as sacred	अपवित्र करना
Detrimental	causing damage or injury	हानिकारक
Enervation	a feeling of being drained of energy	बलहीनता, दुर्बलता
Fiercely	in a savagely violent or aggressive manner	उग्रता के साथ
Frazzle	completely exhausted	थका हुआ
Generosity	the quality of being kind	उदारता
Lassitude	lack of energy	सुस्ती

Magnanimity	the virtue of being generous	दरियादिली
Resilience	the capacity to recover quickly from difficulties	कठिनाईयों से जल्द उबरने की क्षमता
Retreat	an act of moving back or withdrawing	पीछे हटना
Sincerity	the absence of pretence	सच्चाई (दिखावे से परे)
Sortie	an attack made by troops coming out from a position of defence	सैनिकों द्वारा हमला किया जाना
Stranded	left in a place or condition that you cannot get away from	फँसा हुआ (किसी जगह या हालात में)
Toleration	allowing or acceptance of an action, idea which one dislikes or disagrees with	सहन शक्ति
Venial	not serious	मामूली
Vigour	physical strength and good health	शक्ति
Xenial	relating to relations between host and guest, hospitable	मेजबान और मेहमान के संबधों से संबंधित, मेहमान जवाज़

SSC MOCK TEST - 241 (ANSWER KEY)

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

76. (A) Use informed in place of noticed. Notice as a verb means to pay attention (ध्यान देना)

77. (C) to + verb will be used.
Replace 'practice$_{(N)}$' with 'practise$_{(V)}$'.

78. (A) Turn up - to arrive somewhere
Turn on - suddenly attack physically or verbally
Turn back - go back in the direction in which they have come
Turn in - go to bed in the evening

79. (B) Powerful is the best option.
Striking - attracting attention by reason of being unusual or prominent
Potent - having great power or effect

90. (C) Contemptuous is the correct word.
Contemptuous - showing contempt; scornful

91. (C) Delineate is the correct word.
Delineate - describe something precisely