# SSC MOCK TEST - 240 (SOLUTION)

1. (B) $23 : 527 :: 19 : \mathbf{359}$
$23^2-2$ ; $19^2-1$

2. (A) As,
Donkey Brays.
Similarly,
Monkey Chatters.

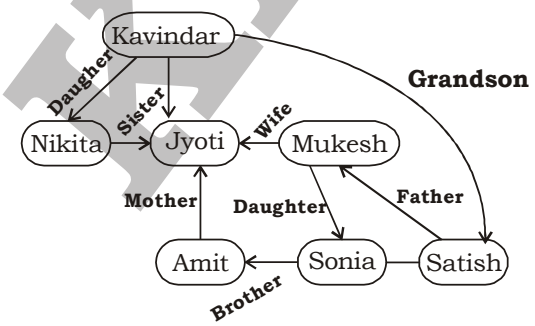
3. (A) As, A B D E F G I J
+1 +2 +1 +1 +1 +2 +1
Similarly,
I J L M **N O Q R**
+1 +2 +1 +1 +1 +2 +1

4. (D) As, R G T F M L O K
−1 −1
+2 +2
Similarly,
C T E S **V D Z C**
−1 −1
+2 +4

5. (B) Except Spinach, others are root vegetables.

6. (C) $6^3 - 6^2 + 6 = 216 - 36 + 6 = 186$
$5^3 - 5^2 + 5 = 125 - 25 + 5 = 105$
$7^3 - 7^2 = 343 - 49 = \mathbf{294}$
$8^3 - 8^2 + 8 = 512 - 64 + 8 = 456$

7. (B) As,
B L A C K S M I T H
+1 +2 +1 +2 +1 +2 +1 +2 +1 +2
C N B E L U N K U J
Similarly,
C H I L D R E N
+1 +2 +1 +2 +1 +2 +1 +2
D J J N E T F P

8. (D)



9. (D) 17 21 30 46 71 **107**
+4 +9 +16 +25 +36

10. (D) $5^2 + 4^2 = 25 + 16 = 41$
$15^2 + 6^2 = 225 + 36 = \mathbf{261}$
$9^2 + 11^2 = 81 + 121 = 202$

11. (B) $36 \div 2 \times 12 + 3 - 6 = 24$
After interchanging the signs,
$\Rightarrow 36 \div 2 - 12 + 3 \times 6 = 24$
$\Rightarrow 18 - 12 + 18 = 24$
$\Rightarrow 24 = 24$

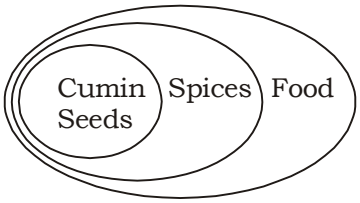
12. (C) From figure II and III
$\% \rightarrow \%$, $@ \rightarrow <$, $\$ \rightarrow \&$
Hence '@' is opposite to '<'.

13. (A) Total questions = 80
Attempted questions = $80 \times \frac{80}{100} = 64$
Let number of questions he answered correctly = $x$
A.T.Q.,
$\Rightarrow x + (64 - x) \times (-1) = 32$
$\Rightarrow x - 64 + x = 32$
$\Rightarrow 2x = 32 + 64$
$\Rightarrow 2x = 96 \Rightarrow x = 48$
Hence number of questions he answered correctly = 48

14. (D)

15. (B) **w**s/wws**s**/wwws**s**s/wwww**s**sss

16. (D)

17. (D)



18. (A) 23

19. (B) Uttar Pradesh, Madhya Pradesh, Andhra Pradesh, Himachal Pradesh, Arunachal Pradesh

20. (D) As,
$17 \xrightarrow{+7} 24 \xrightarrow{+21} 45$
Similarly,
$12 \xrightarrow{+7} 19 \xrightarrow{+21} 40$

21. (A) Meena's birthday = 25th June (Wednesday)
No. of days between 25 June and 15 Aug.
= 5 + 31 + 15 = 51
Remainder = $\frac{51}{7} = 2$
15 Aug → Friday
Hence, Satya's birthday falls on = **Friday**

22. (A) Number of persons who can speak two languages = 2 + 5 + 11 = 18
23. (A)
24. (C)
25. (D)
27. (B) Svapnavasavadattam is a Sanskrit play in six acts written by the ancient Indian poet Bhasa.

Malavikagnirnitra is a Sanskrit play by Kalidasa. It is his first play.

Meghadata is a lyric poem written by Kalidasa.

Ratnavali is a Sanskrit drama about a beautiful princess named Ratnavali, and a great king named Udayana. It is attributed to the Indian emperor Harsha (606-648). It is a Natika in four acts.It is Buddhist philosophical work by Nagarjuna.

28. (B) Objectives of National Development Council are -
    1. to secure cooperation of the states in the execution of the plan
    2. to strengthen and mobilize the effort and resources of the nation in support of the Plan
    3. to promote common economic policies in all vital spheres and
    4. to ensure the balanced and rapid development of all parts of the country
29. (D) The Committees on Banking Sector Reforms, Narasimham Committee-I (1991) was appointed by Manmohan Singh as India's Finance Minister on 14 August 1991 and the second one Narasimham-II Committee(1998) was appointed by P.Chidambaram as Finance Minister in December 1997.

Jilani Committee - a Working group to review the internal control and inspection and audit system in banks. The working Group which was set up in February 1995.

30. (C) Article 72 - Power of President to grant pardons, etc, and to suspend, remit or commute sentences in certain cases.

Article 73 - Extent of executive power of the Union

Article 78 - Duties of Prime Minister with respect to the furnishing of information to the President, etc .

33. (D) Nilgiri Mountains form part of the Western Ghats in western Tamil Nadu of Southern India.

Anaimalai Hills (Elephant Mountains) form the southern portion of the Western Ghats and span the border of Tamil Nadu and Kerala in Southern India.

The Nallamalas are a section of the Eastern Ghats which stretch primarily over Kurnool, Nellore, Guntur, Prakasam, Kadapa and Chittoor districts of the state of Andhra Pradesh and Mahabubnagar, Nalgonda districts of the state of Telangana.

35. (C) Non-ohmic device - the resistance is different for different currents passing through it. Examples - thermistors, crystal rectifiers, vacuum tube etc.
36. (B) Hydrochloric acid - HCL

Methanoic acid(Formic acid) - $CH_2O_2$

Citric acid - C6H8O7

Sulphurie acid - $H_2SO_4$

38. (B) Bronchi are the airways that lead from the trachea into the lungs, and then branch into smaller bronchioles.

Bowman's capsule is a cup-like sack at the beginning of the tubular component of a nephron in the mammalian kidney that performs the first step in the filtration of blood to form urine.

Diaphragm is a dome-shaped muscular partition separating the thorax from the abdomen in mammals. It plays a major role in breathing, as its contraction increases the volume of the thorax and so inflates the lungs.

Trachea (windpipe), is a tube about 4 inches long and less than an inch in diameter in most people. The trachea begins just under the larynx (voice box) and runs down behind the breastbone (sternum).

40. (C) Kaveri tributaries - Shimsha, Hemavati, Arkavati, Honnuhole, Lakshmana Tirtha, Kabini, Bhavani River, Lokapavani, Noyyal and Amaravati River.

Indravati River is a tributary of the Godavari River.

44. (A) Manipur and Tripura have also become COVID - 19 free.
45. (C) Theme of the year - The enormous challenges - but also the vast opportunities.
46. (C) Arunachal Pradesh shares borders with Nepal, China and Myanmar.
47. (D) Kalbelia - Rajasthan

Gatka - Punjab
Huyen langlon - Manipur
Mardani khel - Maharashtra

50. (C) Sonitpur Elephant Reserve is located in the eastern hill forests of Arunachal Pradesh and Assam.

51. (C) ATQ, $x^4 + y^4 = 17$ and $x + y = 1$
Put $x = 2$ & $y = -1$
Now, $x^2y^2 - 2xy = (2)^2 \times (1)^2 - 2\times2(-1)$
$= 4 + 4$
$= 8$

52. (C) $3\tan\theta + 4 = 0 \Rightarrow \tan\theta = \frac{-4}{3}$
$\because$ $\theta$ is in 2rd quadrant,
then $\cot\theta = \frac{-3}{4}$, $\cos\theta = \frac{-3}{5}$ and $\sin\theta = \frac{4}{5}$
$\Rightarrow 2\cot\theta - 5\cos\theta - \sin\theta$
$= 2\times\left(\frac{-3}{4}\right) - 5\times\left(\frac{-3}{5}\right) - \frac{4}{5}$
$= \frac{-3}{2} + 3\ \frac{-4}{5}$
$= \frac{7}{10}$

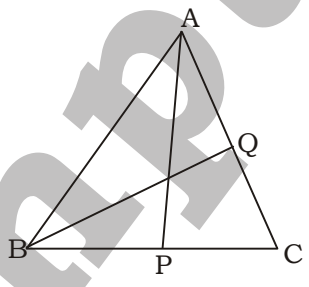
53. (C) $\angle CBA = \frac{1}{2}\angle COA$
$= \frac{1}{2}\times120°$
$\therefore \angle CBA = 60°$
$\Rightarrow \angle CBE = 180° - \angle CBA$
$= 180° - 60°$
$\therefore \angle CBE = 120°$

54. (A) $A + B = 135°$
$\tan(A+B) = \tan135°$
$\frac{\tan A + \tan B}{1 - \tan A\tan B} = -1$
$\tan A + \tan B = -1 + \tan A\tan B$
$\frac{1}{\cot A} + \frac{1}{\cot B} = \frac{1}{\cot A\cot B} - 1$
$\frac{\cot B + \cot A}{\cot A\cot B} = \frac{1 - \cot A + \cot B}{\cot A\cot B}$
$\cot A + \cot B + \cot A\cot B$
$= 1$
Adding 1 both sides
$(1 + \cot A) + \cot s(1 + \cot A)$
$(1 + \cot A)(1 + \cot B) = 1$

55. (A) ATQ, $a + b + c = 8$ and $ab + bc + ca + 15$
$a^3 + b^3 + c^3 - 3abc$
$= (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$
$= (a + b + c)[(a + b + c)^2 - 3(ab + bc + ca)]$
$= 8(8^2 - 3 \times 15)$
$= 8 \times 19$
$= 152$

56. (C) $(3x + 2y)^3 = 27x^3 + 8y^3 + 18xy(3x + 2y)$
$= 27x^3 + 8y^3 + 54x^2y\ 36xy^2$
Hence, coefficient of $y^2$ is $36x$

57. (A)




$AP = \frac{1}{2}\times\sqrt{(2AB^2 + 2AC^2 - BC^2)}$
$5.5\times2 = \sqrt{2\times25 + 2\times49 - BC^2}$
$121 = 50 + 98 - BC^2$
$BC = 3\sqrt{3}$ cm
$BQ = \frac{1}{2}\times\sqrt{(2AB^2 + 2BC^2 - AC^2)}$
$BQ = \frac{1}{2}\times(2\times25 + 2\times27 - 49)$
$BQ = \frac{\sqrt{55}}{2}$ cm

58. (D) Let CP of 1 L of milk = 1
Total CP = 80
SP of (60% of 80 L) milk = 140% of 48
= 67.2
SP of remaining milk
$= 32 - 28\left(\frac{3}{4}\right)\%$ of $32 = 22.8$
Total SP = 67.2 + 22.8 = 90
Total profit percent $= \left[\frac{(90 - 80)}{80}\right] \times 100$
$= 12\left(\frac{1}{2}\right)\%$

59. (B) Let first and second part of the sum is '$x$' and '$y$' respectively.
Interest on second part = 3996

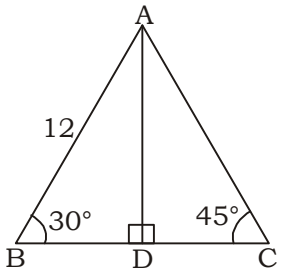
$$= \frac{\left[y \times \left(\frac{37}{3}\right) \times 4\right]}{100}$$

$y$ = ₹8100
Interest on first part = 3996 + 3879

$$= \frac{\left[x \times \left(\frac{50}{3}\right) \times \left(\frac{7}{2}\right)\right]}{100}$$

$x$ = 13500
Required sum = 8100 + 13500 = 21600

60. (A)




In ΔABD, $\sin 30° = \frac{AD}{12} \Rightarrow AD = 6$ cm

$\cos 30° = \frac{BD}{12} \Rightarrow BD = 6\sqrt{3}$ cm

In ΔACD

$\tan 45° = \frac{AD}{CD} = \frac{6}{CD}$

CD = 6 cm

BC = BD + CD = $(6\sqrt{3} + 6)$ cm

Area = $\frac{1}{2}B \times 4$

$= \frac{1}{2} \times 6(\sqrt{3}+1) \times 6$

$= 18\sqrt{3}$ cm$^2$

61. (B) $1.\overline{77} = \frac{16}{9}$

$\Rightarrow \sqrt{\frac{16}{9}} = \frac{4}{3} = 1.333$

$\Rightarrow 1.333 = 1.\overline{3}$

62. (A) Suppose r = radius of cone and h = height of the cone

Volume of cone = $\frac{1}{3} \times \pi r^2 h$

then,

$\Rightarrow 8800 = \frac{1}{3} \times \frac{22}{7} \times 20^2 \times h$

Height of the cone = 21 cm
Using Pythagoras theorem,
$\Rightarrow$ (slant Height)$^2$ = (height)$^2$ + radius)$^2$
Slant height of cone = 29 cm

63. (A) $\sqrt[3]{A} = \sqrt[3]{9} + \sqrt[3]{28} + \sqrt[3]{65}$

$\Rightarrow \sqrt[3]{A} > \sqrt[3]{8} + \sqrt[3]{27} + \sqrt[3]{64}$

$\Rightarrow \sqrt[3]{A} > 2 + 3 + 4 \Rightarrow \sqrt[3]{A} > 9$

$\Rightarrow \sqrt[3]{A} > 729$

64. (A) a83 + 734 = 1b17
As 1b17 is divisible by 11
(b + 17) – (1 + 1) =11
b = 6
a83 = 1617 – 734 = 883
So, $a$ = 8
$\therefore$ (a + b) = 8 + 6 = 14

65. (B) $M = 135\frac{K}{100}$

$L = \frac{80M}{100}$

$L = \frac{140N}{100}$

$M = \frac{100L}{80} = \frac{100}{80} \times \frac{140N}{100}$

$\Rightarrow M = \frac{7}{4} \times N$

$\Rightarrow M = \frac{175N}{100}$

$\Rightarrow M = 1.75N$

and, $L = \frac{80}{100} \times \frac{135}{100} \times K = \frac{108K}{100}$

$\Rightarrow L = 1.08K$

66. (D) As the trains are moving in opposite direction, the relative speeds of the train = 50 km/hr + 30 km/hr = 80 km/hr
Time taken by the faster to cross the slower train = 18 seconds

Length of the train = $80 \times \frac{5}{18} \times 18$

= 400 m

67. (C) Height = $\frac{11}{2}$ cm and radius = $\frac{10}{3}$ cm

So, volume of the cylinder = $\pi r^2 h$

$= \pi \times \frac{10}{3} \times \frac{10}{3} \times \frac{11}{2} = \left(\frac{550}{9}\right)\pi$ cm$^3$

68. (A) $78 + 47 + 55 = 180$
$78 + 55 = 180 - 47$
$\tan(78 + 55) = \tan(180 - 47)$

$$\Rightarrow \frac{(\tan 78 + \tan 55)}{(1 - \tan 78 \tan 55)} = \frac{(\tan 180 - \tan 47)}{(1 + \tan 180 \tan 47)}$$

$\Rightarrow (\tan 78 + \tan 55) = (1 - \tan 78 \tan 55)(-\tan 47)$
$\Rightarrow (\tan 78 + \tan 55 + \tan 47 = \tan 78 \tan 55 \tan 47)$

$$\Rightarrow \frac{(\tan 78 + \tan 55 + \tan 47)}{(\tan 78 \tan 55 \tan 47)} = 1$$

$$\Rightarrow \frac{1}{(\tan 55 \tan 47)} + \frac{1}{(\tan 78 \tan 47)}$$

$$+ \frac{1}{(\tan 78 \tan 55)} = 1$$

$\Rightarrow \cot 78 \cot 47 + \cot 55 \cot 47 + \cot 55 \cot 78 = 1$

69. (C) Let the investments of Nitesh and Jitesh be ₹ 'n' and ₹(n + 3000) respectively,
Ratio of investments = n : (n + 3000)

$$\text{Given, } \left(\frac{n}{2n + 3000}\right) \times 18000 = n + 3000$$

$\Rightarrow 18000n = 2n^2 + 9000n + 9000000$
$\Rightarrow 2n^2 - 9000n + 900000 = 0$
$\Rightarrow n^2 - 4500n + 4500000 = 0$
$\Rightarrow (n - 1500)(n - 3000) = 0$
$\Rightarrow n = 1500$ or $3000$
Investment by Jitesh can be ₹4500 or ₹6000
But it has to be greater than ₹5000
investment by Jitesh = ₹6,000

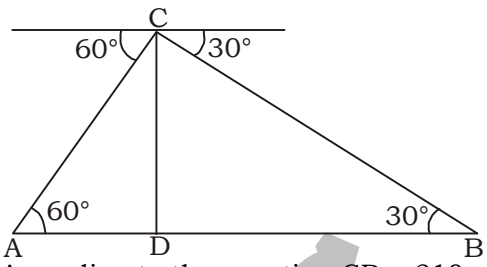
70. (D) Since, we know that
Men × Days × Hours × Efficiency = Constant
Now,
$15 \times 40 \times 7 \times 1 = 12 \times d \times 5 \times 2$
d = 35 days
Required time = 40 – 35 = 5 days

71. (A) Mean proportion = $\sqrt{(x + 9)(x - 9)} = 12$
$x^2 - 81 = 144$
x = 15
Now,
(x + 6) : 14 = (2x + 6) : y
21 : 14 = 36 : y

$$y = \frac{(36 \times 14)}{21}$$

y = 24

72. (A)




According to the question CD = 210 m

Now in triangle ACD, $\tan 60 = \frac{CD}{AD}$

$$\Rightarrow AD = \frac{CD}{\tan 60} = 210\sqrt{3}$$

Similarly in triangle BCD, $BD = \frac{CD}{\tan 30}$

$= 210\sqrt{3}$
So the distance AB = AD + DB

$$= \frac{210}{\sqrt{3}} + 210\sqrt{3} = \frac{840}{\sqrt{3}} = 280\sqrt{3}$$

73. (C) Sales of Maruti in May 2019 = 153298
Sales of Hyundai in May 2019 = 43007
Market share of Maruti in May 2019 = 51.8%
∴ Market share of Hyudai in May 2019

$$= \left(\frac{43007}{153298}\right) \times 51.8 = 14.5\%$$

74. (C) Sales of Nissan in May 2018 = 6418
Sales of Nissan in May 2019 = 4360
Decrease in sales = 6418 – 4360 = 2058
∴ Percentage decrease in sales

$$= \left(\frac{2058}{6418}\right) \times 100 = 32.07 \cong 32.1\%$$

75. (B) Percentage growth in sales of Tata

$$= \left[\frac{(14933 - 13578)}{13578}\right] \times 100 = 9.98 \cong 10\%$$

Percentage growth in sales of Hyundai

$$= \left[\frac{(14007 - 41201)}{41201}\right] \times 100 = 4.4\%$$

Percentage growth in sales of Ford

$$= \left[\frac{(8418 - 7076)}{7076}\right] \times 100 = 18.97 \cong 19\%$$

Percentage growth in sales of Volkswagen

$$= \left[\frac{(4753 - 4301)}{4301}\right] \times 100 = 10.5\%$$

∴ Hyundai had minimum growth in their sales

# MEANINGS IN ALPHABETICAL ORDER

| | | |
|---|---|---|
| Adhesive | tending to remain in association, that stricks | चिपकाने वाला |
| Avocation | a hobby or minor occupation | लघु व्यापार, खाली समय में जो करते है। |
| Barrier | formation that hinders movement or action | रूकावट |
| Bisection | the division of something into two equal parts | दो बराबर भागों में बाटना |
| Calcivorous | living upon limestone | चूने पत्थर पर आश्रित |
| Clergy | the body of all people ordained for religious duties, especially in the Christian Church | पादरी वर्ग |
| Companion | a person with whom one spends time worried, | साथी |
| Concerned | troubled, or anxious | चिंतित |
| Creed | a system of religious belief, a faith | विश्वास |
| Declension | a condition of decline or moral deterioration | अवनति |
| Deed | an action that is performed intentionally | कार्य |
| Distress | to subject to great strain or difficulties | तनाव (विपत्ति) |
| Dysphemism | a unpleasant term used instead of a pleasant or neutral one | अप्रिय शब्दों का प्रयोग करना |
| Enamoured | to be filled with love for | मंत्रमुग्ध |
| Equivorous | feeding on horseflesh | घोड़े का माँस खाने वाला |
| Euphemism | bombastic style of writing | आडंबर शैली |
| Feisty | lively, determined, and courageous | उत्साही |
| Fructivorous | eating fruit | जो फल खाता हो |
| Iconomachy | opposition to the worship of images or icons | मूर्ति पूजा विरोध |
| Imbue | inspire with a feeling or quality | किसी भावना या गुण से प्रेरित |
| Immensity | the extremely large size, scale, or extent of something | अधिकता |
| Indissolubly | permanent, enduring or firm | स्थिर (अनंत) |
| Individually | separately; one by one | व्यक्तिगत रूप से |
| Irrefutable | impossible to deny or disprove | खंडन न करने योग्य |
| Irrepressible | not able to be controlled or restrained | जिसे नियंत्रित न किया जा सके |
| Irresistible | too attractive and tempting to be resisted | कभी न थकने वाला |
| Irrevocable | not able to be changed, final | जिसे बदला न जा सके |
| Labyrinth | a complicated irregular network of passages in which it is difficult to find one's way | भूल-भूलैया (उलझन) |
| Obsess | be constantly worrying about something | किसी चीज के बारे मे लगातार सोचना |
| Pandemonium | wild and noisy disorder; uproar | शोरगुल |
| Petrify | make someone so frightened that they are unable to move | बहुत अधिक डरा देना |
| Predisposition | a tendency to suffer from a particular condition, | प्रवत्ति |
| Quintessence | the most perfect example of a quality | सटीक उदाहरण |
| Steadily | in an even manner | व्यस्थित रूप से |
| Vaguely | not clearly | अस्पष्ठ |
| Virtuously | in a way that shows good moral qualities and behaviour | अच्छे आचरण वाला |

# SSC MOCK TEST - 240 (ANSWER KEY)

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

76. (C) When two activities take place in past, one after another, then first action is in past perfect and other is in simple past.
change made in to 'had made'.

77. (C) Superlative form of the verb is used when one is compared with all the others.
use 'greatest' in place of 'greater'.
Change 'modem' into 'modern'.

78. (D) Stroll - walk in a leisurely way
Scurry - move hurriedly with short quick steps
Parade - display something while moving around a place
Plod - walk slowly with heavy steps

79. (C) Come out - emerge; become known
Pull out - withdraw from an undertaking
Pull through - get through an illness or other difficult situation
Go out - be extinguished

86. (A) Norm - a principle of right action binding upon the members of a group