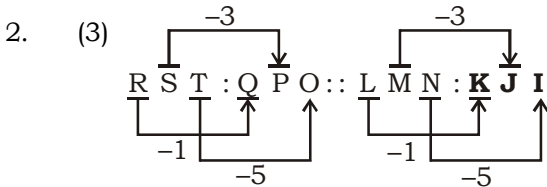


SSC MOCK TEST - 371 (SOLUTION)

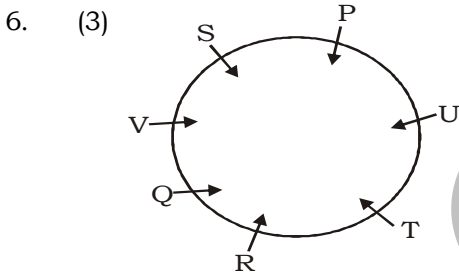
1. (1) Kilogram is used to measure Fruits, similarly Liter is used to measure Milk.



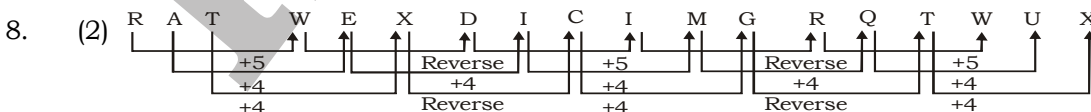
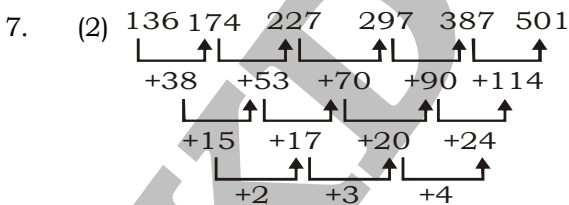
3. (1) (1) $V \xrightarrow{+4} Z \xrightarrow{+4} D \xrightarrow{+4} H \xrightarrow{+6} N$ (2) $K \xrightarrow{+4} O \xrightarrow{+4} S \xrightarrow{+4} W \xrightarrow{+4} A$
 (3) $B \xrightarrow{+4} F \xrightarrow{+4} J \xrightarrow{+4} N \xrightarrow{+4} R$ (4) $Q \xrightarrow{+4} U \xrightarrow{+4} Y \xrightarrow{+4} C \xrightarrow{+4} G$

4. (1) Except Football, all are indoor games.

5. (1) As, $(3)^4 + 3 = 84$
 And, $(5)^4 + 5 = 630$
 Similarly, $(4)^4 + 4 = 260$



V is sitting immediate right of S.



9. (4) LOCTQ/LODTQ/LOETQ / LOFTQ

10. (3) As, TEARS $\Rightarrow 20 + 5 + 1 + 18 + 19 = 63 \Rightarrow 63 \times 5$ (Number of letters in word) = 315
 And, CHARGER $\Rightarrow 3 + 8 + 1 + 18 + 7 + 5 + 18 = 60 \Rightarrow 60 \times 7$ (Number of letters in word) = 420
 Similarly, SPOON $\Rightarrow 19 + 16 + 15 + 15 + 14 = 79 \Rightarrow 79 \times 5$ (Number of letters in word) = 395

11. (3) Let the age of T and S was $5x$ and $2x$ years five years ago.

Present age of T = $(5x + 5)$ years

Present age of S = $(2x + 5)$ years

ATQ,

$$\frac{5x + 5 + 5}{2x + 5 + 5} = \frac{3}{2}$$

$$10x + 20 = 6x + 30$$

$$4x = 10$$

$$x = 2.5$$

∴ Present age of S = $2.5 + 5 = 7.5$ years

12. (3) $(14 + 8) \times (14 - 8) = 132$

$$(17 + 11) \times (17 - 11) = \mathbf{168}$$

$$(21 + 16) \times (21 - 16) = 185$$

13. (4) $9 + 81 \div 3 \times 4 - 25 = 14$

Change 9 and 3,

$$3 + 81 \div 9 \times 4 - 25 = 14$$

$$3 + 9 \times 4 - 25 =$$

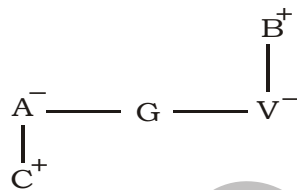
$$39 - 25 = 14$$

$$14 = 14$$

14. (2) 2. Junction → 5. Junctures → 1. Junketeered → 4. Junketeering → 3. Junketers

15. (4)

16. (4)

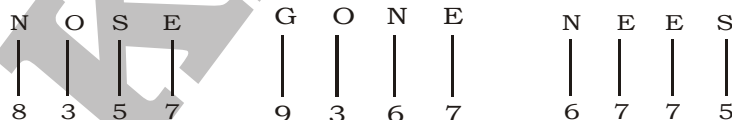


Hence, B is maternal grand-father of C.

17. (3)

18. (2)

19. (3) As, And, Similarly,



20. (3) 29 February means it is a leap year and in a leap year the month February and August month have the same calendar.

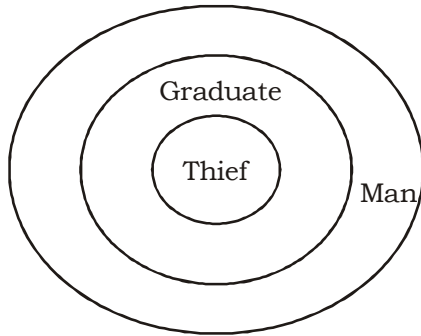
So, on 29th August it is Monday.

21. (3) As, $6^2 \times 2 = 72$

Similarly, $5^3 \times 3 = 375$

22. (4) 23. (2)

24. (4)



I. True II. True
Hence, both I and II follow.

25. (3)

26. (2) Emerald, the green variety of Beryl. Its green color, durability and rarity, make it one of the most expensive gemstones. Deep green is the most desired color in Emeralds.

27. (1) Lezim or lazium is a folk dance form, from the state of Maharashtra in India.

29. (3) The members are elected in the elections held in 1952. As per the Fourth Schedule to the Constitution of India, the Rajya Sabha was first constituted 3 April 1952.

30. (3) Bombay Stock Exchange became the first stock exchange in India to launch commodity derivatives contracts in gold and silver.

32. (2) When an electric circuit gets overloaded or short-circuited, due to low melting point, the fuse in the live wire gets heated up and melts which in turn produces a gap in the live wire, so the current cannot flow through it, hence further damage will be prevented and the appliances will be saved.

33. (2) US scientists announced a major scientific breakthrough in the research to harness nuclear fusion energy.

35. (4) Sidhu Murmu and Kanhu Murmu were brothers and the leaders of the Santhal rebellion, which started in 1855, in present-day Jharkhand and Bengal (Purulia and Bankura) in eastern India against both the British colonial authority and the corrupt 'zamindari' system.

37. (2) Meteoroids, Meteors and Meteorites: Throughout space, millions and millions of rock-like materials wander about at terrific speed of approximately 150000 to 160000 miles per hour. These rocklike materials in space are called Meteoroids.

38. (1) Val Vil Ori Festival (vizha) celebrated in a grand manner in Kollihills during the month of August (17th and 18th of Adi in Tamil Month) every year.

40. (2) The Supreme Court Collegium recommended five High Court judges for appointment as judges of the top court. This is the first set of recommendations by the Collegium.

41. (2) Vande Matram was written by Bankim Chandra Chattopadhyaya. It is the National song of India. It was first composed in the Sanskrit language in the year of 1870s (1875).

42. (2) On 12 August 1765, the Mughal emperor appointed the East India Company as the Diwan of Bengal.

44. (2) Yeast is single-celled microorganisms that are classified, along with moulds and mushrooms, as members of the Kingdom Fungi. It is also known as sugar eating fungus.

45. (1) Plants grown in Desert places take up carbon dioxide during the night.

46. (4) Sandalwood grows in Tropical deciduous forests.

47. (3) Sigmund Freud, the father of psychoanalysis, was a physiologist, medical doctor, psychologist and influential thinker of the early twentieth century.

48. (2) IFSC or Indian Financial System Code is an alpha-numeric code that uniquely identifies a bank-branch participating in the NEFT system. It's a 11-digit code with the first 4 alpha characters representing the bank, and the last 6 characters representing the branch.
50. (1) Fought between 8 March and 18 July 1944, these were the turning point of one of the most gruelling campaigns of the Second World War (1939-45). The decisive Japanese defeat in north-east India became the springboard for the Fourteenth Army's subsequent re-conquest of Burma.
51. (1) $A : B = 160 : 100 = 8 : 5$
 $B : C = 100 : 140 = 5 : 7$
 Now, ratio of efficiency of $A : B : C = 8 : 5 : 7$
 Total work = $15 \times (8 + 5 + 7) = 300$
 \therefore B alone $\frac{2}{3}$ work completed in $300 \times \frac{2}{3} \times \frac{1}{5} = 40$ days
52. (2) For managing, P received = 10% of ₹ 7000 = ₹ 700
 Remaining profit = ₹ (7000 - 700) = ₹ 6300
 Ratio of their investments = $(4500 \times 6) : (6600 \times 5) : (8000 \times 3)$
 = 27000 : 33000 : 24000 = 9 : 11 : 8
 Share of Q = $\frac{6300}{28} \times 11 = ₹ 2475$
53. (1) $P = ₹ 15000$
 $R = 12\%$
 $T = 5$ years
 $SI = \frac{15000 \times 12 \times 5}{100} = ₹ 9000$
 Amount for both A and B = $15000 + 9000 = ₹ 24000$
 For A,
 $P = ₹ 24000$
 $R = 15\%$
 $T = 2$ years
 $A = 24000 \times \left(1 + \frac{15}{100}\right)^2 = 24000 \times \frac{115}{100} \times \frac{115}{100} = ₹ 31740$
 $CI = 31740 - 24000 = ₹ 7740$
 For B,
 $P = ₹ 24000$
 $R = 20\%$
 $T = 2$ years
 $A = 24000 \times \left(1 + \frac{20}{100}\right)^2$
 $A = 24000 \times \frac{120}{100} \times \frac{120}{100} = ₹ 34560$
 $CI = 34560 - 24000 = ₹ 10560$
 \therefore Required difference = $10560 - 7740 = ₹ 2820$

54. (4) Let the total distance covered by him be x km.

$$\text{Distance covered by car} = x \times \frac{1}{3} = \frac{x}{3} \text{ km}$$

$$\text{Distance covered by train} = x - \frac{x}{3} = \frac{2x}{3} \text{ km}$$

ATQ,

$$\frac{x}{3 \times 80} + \frac{2x}{3 \times 75} = 23 \frac{1}{2}$$

$$\frac{15x + 32x}{3600} = \frac{47}{2}$$

$$\frac{47x}{3600} = \frac{47}{2}$$

$$47x \times 2 = 3600 \times 47$$

$$x = \frac{3600 \times 47}{47 \times 2} = 1800 \text{ km}$$

\therefore Distance travelled by him = 1800 km

$$55. (1) \frac{3 \div \{5 - 5 \div (6 - 7) \times 8 + 9\}}{4 + 4 \times 4 \div 4 \text{ of } 4} = \frac{3 \div \{5 - 5 \div -1 \times 8 + 9\}}{4 + 4 \times 4 \div 16} = \frac{3 \div \{5 + 5 \times 8 + 9\}}{4 + 1}$$

$$= \frac{3 \div \{5 + 49\}}{5} = \frac{3 \div 54}{5} = \frac{3}{54 \times 5} = \frac{1}{90}$$

56. (2) We know that,

$$(a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$$

$$8^2 = 66 + 2(ab + bc + ca)$$

$$2(ab + bc + ca) = 64 - 66$$

$$ab + bc + ca = \frac{-2}{2} = -1$$

Now,

$$a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$$

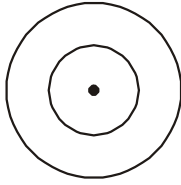
$$563 - 3abc = 8 [66 - (-1)]$$

$$563 - 3abc = 8 \times 67$$

$$3abc = 563 - 536$$

$$abc = \frac{27}{3} = 9$$

57. (3)



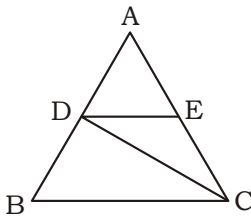
$$\pi(R^2 - r^2) = 3520$$

$$\frac{22}{7}(R + r)(R - r) = 3520$$

$$(R + r) = \frac{3520}{22 \times 10} \times 7$$

$$R + r = 112 \text{ cm}$$

58. (1)



$$\text{Area of } \triangle CED = 12 \text{ cm}^2$$

$$\text{Ratio of area of } \triangle CED \text{ and area of } \triangle DEC = 1 : 3 \quad (\text{By mid-point theorem})$$

$$\therefore \text{Area of } \triangle DEC = 12 \times 3 = 36 \text{ cm}^2$$

59. (3) Let the average we get be x kg.

$$1820 - 97.5 + 2x = 1768 - 2x + 97.5$$

$$4x = 14.3$$

$$x = \frac{143}{4} = 35.75 \text{ kg}$$

60. (1)

$$\frac{\sin^2 \theta}{\tan^2 \theta - \sin^2 \theta} = 5$$

$$\sin^2 \theta = 5 \tan^2 \theta - 5 \sin^2 \theta$$

$$6 \sin^2 \theta = 5 \tan^2 \theta$$

$$\frac{6}{5} = \frac{\sin^2 \theta}{\cos^2 \theta \cdot \sin^2 \theta}$$

$$\frac{6}{5} = \frac{1}{\cos^2 \theta}$$

$$\cos^2 \theta = \frac{5}{6}$$

$$\sin^2 \theta = \frac{1}{6}$$

$$\sec^2 \theta = \frac{6}{5}$$

$$\cot^2 \theta = \frac{5}{6} \times \frac{6}{1} = 5$$

$$\operatorname{cosec}^2 \theta = 6$$

$$\therefore \frac{24 \sin^2 \theta - 15 \sec^2 \theta}{6 \cos^2 \theta - 7 \cot^2 \theta} = \frac{24 \times \frac{1}{6} - 15 \times \frac{6}{5}}{6 \times 6 - 7 \times 5}$$

$$= \frac{4-18}{36-35} = -14$$

61. (1) Let the speed of A be x km/hr and speed of B be y km/hr.

ATQ,

$$\frac{160}{x} - \frac{160}{y} = 8 \quad \dots\dots\dots(i)$$

$$\frac{160}{2x} - \frac{160}{y} = 3 \quad \dots\dots\dots(ii)$$

Let $\frac{1}{x} = u$ and $\frac{1}{y} = v$

$$160u - 160v = 8 \quad \dots\dots\dots(iii)$$

$$80u - 160v = 3 \quad \dots\dots\dots(iv)$$

Subtracting the equation (iii) from (iv),

$$80u = 5$$

$$u = \frac{1}{16}$$

Put the value of u in equation (iii),

$$v = \frac{1}{80}$$

Now,

$$\frac{1}{y} = v = \frac{1}{80}$$

$$y = 80 \text{ km/hr}$$

\therefore The speed of B is 80 km/hr.

62. (4) $10 \times \left[\frac{2M+3W+4C}{10} \right] = D \left[\frac{6M+4W+7C}{16} \right]$

$$[2 \times 5 + 3 \times 4 + 4 \times 2] = D \left[\frac{6 \times 5 + 4 \times 4 + 7 \times 2}{16} \right]$$

$$[10 + 12 + 8] = D \left[\frac{30+16+14}{16} \right]$$

$$D = \frac{30 \times 16}{60} = 8 \text{ days}$$

63. (1) $y = mx + c$

where $m = \text{slope}$ $c = \text{intercept on } y \text{ axis}$

$$-\frac{mx}{c} + \frac{y}{c} = 1$$

$$\frac{-2(5)}{3}x + \frac{2}{3}y = 1$$

$$-10x + 2y = 3 \quad \dots(i)$$

$$5x + 4y = 1 \quad \dots(ii)$$

$$\frac{-10}{3}x + \frac{2}{3}y = 1$$

By solving equation (i) and (ii),

$$x = \frac{-1}{5}, y = \frac{1}{2}$$

By using values of x and y in $4x + 3y = k$

$$k = \frac{7}{10}$$

64. (3) M.P of article = ₹ 600

Discount = 25%

$$\text{S.P of article} = 600 - 600 \times \frac{25}{100} = ₹ 450$$

$$\text{C.P of article} = \frac{450}{90} \times 100 = ₹ 500$$

New S.P = ₹ 530

Profit = 530 - 500 = ₹ 30

$$\text{Profit \%} = \frac{30}{500} \times 100 = 6\%$$

65. (4) Let the expenditure on grocery products and other items be $3x$ and $7x$ respectively.

So, $3x + 7x = 3570$

$$10x = 3570$$

$$x = 357$$

Thus, expenditure on grocery products = ₹ $3 \times 357 = ₹ 1071$

Expenditure on other items = 7×357

= ₹ 2499

New expenditure = 112% of ₹ 1071 + 115% of ₹ 2499

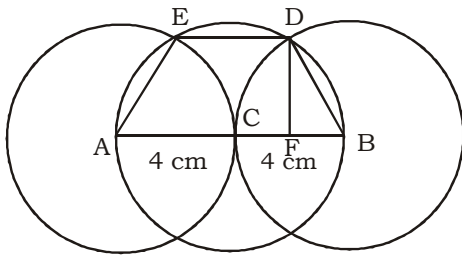
$$= 1.12 \times 1071 + 1.15 \times 2499$$

$$= 1199.52 + 2873.85$$

= ₹ 4073.37 = New salary

Increase in income = New salary - Old salary = 4073.37 - 3570 = ₹ 503.37

66. (3)



ABDE is trapezium.

$$AB = 8 \text{ cm}$$

$$DE = \frac{1}{2} AB = \frac{1}{2} \times 8 = 4 \text{ cm}$$

In $\triangle BDF$,

$$BD = 4 \text{ cm and } BF = 2 \text{ cm}$$

$$DF = \sqrt{4^2 - 2^2} = \sqrt{16 - 4}$$

$$= \sqrt{12} = 2\sqrt{3} \text{ cm}$$

$$\text{Area of ABDE} = \frac{1}{2}(AB + DE) \times DF$$

$$= \frac{1}{2}(8 + 4) \times 2\sqrt{3}$$

$$= \frac{1}{2} \times 12 \times 2\sqrt{3} = 12\sqrt{3} \text{ cm}^2$$

67. (2) $(x - a)^3 - \frac{1}{(x - a)^3} = \left(x - a - \frac{1}{x - a}\right)^3 + 3\left(x - a - \frac{1}{x - a}\right)$

$$= (x - a - x + b)^3 + 3(x - a - x + b)^3 \quad \left(\because \frac{1}{x - a} = x - b\right)$$

$$= (b - a)^3 + 3(b - a)$$

$$= (5)^3 + 3 \times 5 \quad (\because b - a = 5)$$

$$= 125 + 15 = 140$$

68. (1) Let the length of train A and B be $7x$ and $3x$ respectively.

$$\text{Speed of train A} = \frac{7x}{8} \text{ m/s}$$

$$\text{Length of one bogie of train A} = \frac{7x}{4} \text{ m}$$

$$\text{Relative speed of trains} = \left(\frac{7x}{8} + 40\right) \text{ m/s}$$

ATQ,

$$\frac{3x + \frac{7x}{4}}{\frac{7x}{8} + 40} = 4$$

$$\frac{\frac{12x + 7x}{4}}{\frac{7x + 320}{8}} = 4$$

$$\frac{19x}{4} \times \frac{8}{7x + 320} = 4$$

$$\frac{38x}{7x + 320} = 4$$

$$38x = 28x + 1280$$

$$10x = 1280$$

$$x = \frac{1280}{10} = 128 \text{ m/s}$$

$$\therefore \text{Speed of train A} = 7 \times \frac{128}{8} = 112 \text{ m/s}$$

69. (2) Let the speed of boat be u km/hr and speed of stream be v km/hr.

ATQ,

$$\frac{32}{u+v} + \frac{32}{u-v} = 6$$

$$\frac{1}{u+v} + \frac{1}{u-v} = \frac{3}{16} \quad \dots\dots(i)$$

And, $\frac{4}{u+v} = \frac{2}{u-v}$

$$4u - 4v = 2u + 2v$$

$$2u = 6v$$

$$u = 3v \quad \dots\dots(ii)$$

Put the value of u in equation (i),

$$\frac{32}{u+v} + \frac{32}{u-v} = 6$$

$$\frac{32}{3v+v} + \frac{32}{3v-v} = 6$$

$$\frac{8}{v} + \frac{16}{v} = 6$$

$$\frac{24}{v} = 6$$

$$v = 4 \text{ km/hr}$$

Put the value of v in equation (ii),

$$u = 3v$$

$$u = 3 \times 4 = 12 \text{ km/hr}$$

$$\therefore \text{Speed of boat} = 12 \text{ km/hr}$$

70. (4) Let for 'n' numbers the average be 'x'.
 So, the total sum of 'n' numbers would be 'nx'.
 If 2 is subtracted from each 'n' numbers, then the resulted value to be subtracted becomes
 $= 2n$
 Thus, value of the total sum $= (nx - 2n)$
 Given that, this value equals to 102.
 So, $nx - 2n = 102$ (i)
 Again when 5 is subtracted from each 'n' numbers, then the resulted value to be subtracted becomes $= 5n$
 Thus, value of the total sum $= (nx - 5n)$
 Given that, this value equals to 12.
 So, $nx - 5n = 12$ (ii)
 Subtracting equation (ii) from (i), we get
 $nx - 2n - (nx - 5n) = 102 - 12$
 $-2n + 5n = 90$
 $3n = 90$
 $n = \frac{90}{3} = 30$
 There are 30 numbers.
 Putting $n = 30$, in equation (i), we get
 $(30)x - 2(30) = 102$
 $30x - 60 = 102$
 $30x = 162$
 $30x = 162$
 $x = \frac{162}{30} = 5.4$
 \therefore The average of 30 numbers is 5.4
71. (2) Cost price of item D = ₹ 350
 Marked price of item D = ₹ 350
 Discount offered = 20%
 Selling price of item D = ₹ 280

$$\text{Loss\%} = \frac{\text{C.P} - \text{S.P}}{\text{C.P}} \times 100$$

$$\text{Loss\%} = \frac{350 - 280}{350} \times 100$$

$$\text{Loss\%} = \frac{70}{350} \times 100 = 20\%$$
72. (1) Cost price of item A = ₹ 100
 Cost price of item B = ₹ 100
 Marked price of item B $= 100 \times \frac{107}{100}$
 $= ₹ 107$

For no loss or profit :

Selling price of item B = ₹ 100

Discount offered for no loss or profit

$$= \frac{M.P - S.P}{M.P} \times 100$$

Discount offered for no loss or profit

$$= \frac{107 - 100}{170} \times 100 = 6.54\%$$

73. (3) Marked price of item C = ₹ 220

Discount offered = 20%

Selling price of item C = ₹ 176

$$\text{Profit\%} = 17 \frac{1}{3} \%$$

$$\text{Profit\%} = \frac{S.P - C.P}{C.P} \times 100$$

$$\frac{52}{3} = \frac{176 - C.P}{C.P} \times 100$$

$$52 C.P. = 52800 - 300 C.P.$$

$$352 C.P. = 52800$$

$$C.P. = ₹ 150$$

74. (4) Marked price of item E = ₹ 620

Cost price of item E = ₹ 310

Discount offered = 25%

$$\text{Selling price of item E} = 620 \times \frac{75}{100}$$

$$= ₹ 465$$

$$\text{Profit\%} = \frac{S.P - C.P}{C.P} \times 100$$

$$= \frac{465 - 310}{310} \times 100 = 50\%$$

75. (4) Cost price of item D = ₹ 350

Profit = 40%

$$\text{Selling price of item D} = 350 \times \frac{140}{100}$$

$$= ₹ 490$$

Discount offered = 20%

$$\text{Marked price} \times \frac{80}{100} = \text{Selling price}$$

$$\text{Marked price} = \frac{490 \times 100}{80} = ₹ 612.5$$



K D Campus Pvt. Ltd

1997, GROUND FLOOR OPPOSITE MUKHERJEE NAGAR POLICE STATION, OUTRAM LINES, GTB NAGAR, NEW DELHI - 09

SSC MOCK TEST - 371 (ANSWER KEY)

- | | | |
|---------|---------|---------|
| 1. (1) | 26. (2) | 51. (1) |
| 2. (3) | 27. (1) | 52. (2) |
| 3. (1) | 28. (4) | 53. (1) |
| 4. (1) | 29. (3) | 54. (4) |
| 5. (1) | 30. (3) | 55. (1) |
| 6. (3) | 31. (1) | 56. (2) |
| 7. (2) | 32. (2) | 57. (3) |
| 8. (2) | 33. (2) | 58. (1) |
| 9. (4) | 34. (1) | 59. (3) |
| 10. (3) | 35. (4) | 60. (1) |
| 11. (3) | 36. (2) | 61. (1) |
| 12. (3) | 37. (2) | 62. (4) |
| 13. (4) | 38. (1) | 63. (1) |
| 14. (2) | 39. (4) | 64. (3) |
| 15. (4) | 40. (2) | 65. (4) |
| 16. (4) | 41. (2) | 66. (3) |
| 17. (3) | 42. (2) | 67. (2) |
| 18. (2) | 43. (2) | 68. (1) |
| 19. (3) | 44. (2) | 69. (2) |
| 20. (3) | 45. (1) | 70. (4) |
| 21. (3) | 46. (4) | 71. (2) |
| 22. (4) | 47. (3) | 72. (1) |
| 23. (2) | 48. (2) | 73. (3) |
| 24. (4) | 49. (3) | 74. (4) |
| 25. (3) | 50. (1) | 75. (4) |

76. (3) Here again will not come, because repeat means to do again.
77. (1) 'I' will be in place of 'me'.