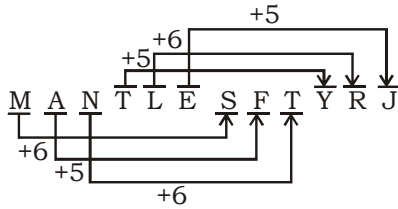
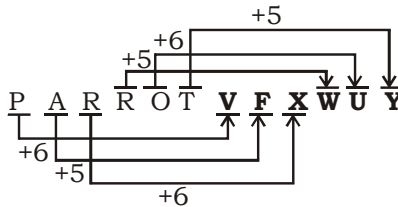


SSC MOCK TEST - 282 (SOLUTION)

1. (B) As, 'Goiter' is caused by a shortage of 'Iodine' in the body, similarly 'Anemia' is caused by a shortage of 'Iron' in the body.
2. (A) As,

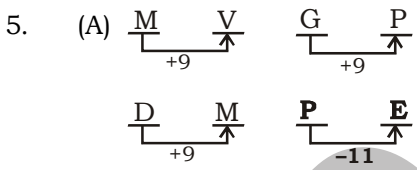


Similarly,



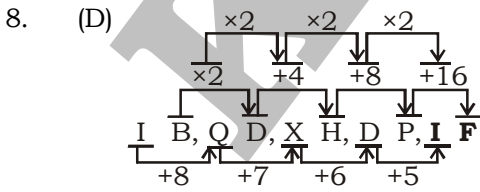
3. (B) As,
 $545 \Rightarrow (5 + 4 + 5)^2 = 14^2 = 196$
 Similarly,
 $173 \Rightarrow (1 + 7 + 3)^2 = 11^2 = \mathbf{121}$

4. (C) Huge is different from others.



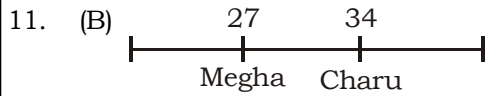
6. (C) $2543 \Rightarrow 2 + 5 + 4 + 3 = 14$
 $2192 \Rightarrow 2 + 1 + 9 + 2 = 14$
 $3713 \Rightarrow 3 + 7 + 1 + 3 = 14$
 $\mathbf{9362} \Rightarrow 9 + 3 + 6 + 2 \neq 14$

7. (C) 5. Flinchers \rightarrow 1. Flinching \rightarrow 3. Flinrites \rightarrow 2. Flintlock \rightarrow 4. Flintlocks



9. (C) $13, 25, 49, 85, \mathbf{133}$
-

10. (A) MN/MNO/MNOP/MNOPQ



Total girls in the row = 74

Charu's position from the left end = $27 + 7 = 34^{\text{th}}$

Charu's position from the right end = $74 - 34 + 1 = 41^{\text{th}}$

12. (D) $99 \times 15 = 1485$

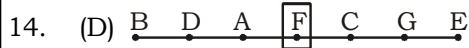
$31 \times 17 = 527$

$91 \times 18 = \mathbf{1638}$

13. (C) $45 + 50 + 60 = 155$

$55 + 51 + 49 = 155$

$26 + 65 + \mathbf{64} = 155$



15. (D) $30 \times 5 - 4 \div 10 + 5 = 41$

Changing the notations as per question,

$30 \div 5 + 4 \times 10 - 5 = 41$

$6 + 40 - 5 = 41$

$46 - 5 = 41$

16. (B) Day on 1 March 1997 = Friday

Day on 1 March 2000

= Friday + [(2000 - 1997) + leap years]

= Friday + [(3 + 1)]

= Friday + 4 = Tuesday

17. (C)

18. (C) $R = 2S$ (i)

$R - 10 = 4(S - 10)$ (ii)

Taking R as 2S

$2S - 10 = 4(S - 10)$

$2S - 10 = 4S - 40$

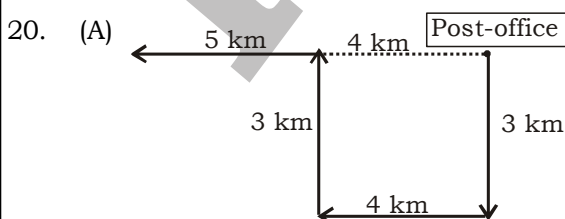
$2S = 30$

$S = 15$ years

$R = 2S$

$R = 2 \times 15 = 30$ years

19. (C)



Required distance = $4 + 5 = 9$ km

21. (D) 22. (C)
23. (D) After reading the question, we have :
- $B + 8 = C$ (i)
 $A - 8 = C - 3$ (ii)
 $A + 6 = 2D$ (iii)
 $B + D = 50$ (iv)
- Putting $C = A - 5$ from (ii) into (i), we have :
- $B + 8 = A - 5$ or $A - B = 13$ - (v)
- Putting $D = 50 - B$ from (iv) into (iii), we have :
- $A + 6 = 100 - 2B$ or $A + 2B = 94$ -(vi)
- Solving (v) and (vi), we get
- $B = 27$ and $A = 40$
24. (C) 25. (A)
26. (B) The nominal exchange rate E is defined as the number of units of the domestic currency that can purchase a unit of a given foreign currency. A decrease in this variable is termed nominal appreciation of the currency.
29. (B) The main components of Bronze alloy are copper and tin. In such combination copper is the main element accompanied by other metals like Tin and some cases even aluminum, manganese and so on. These combination gives out different ranges of Bronze which is often harder than copper alone.
31. (C) Right to Equality in the Indian Constitution includes abolition of untouchability.
32. (D) Static friction is the friction that exists between a stationary object and the surface on which it's resting. Sliding friction refers to the resistance created by any two objects when sliding against each other. This friction is also known as kinetic friction. The sliding friction is less than static friction because of the interlocking of irregularities in the two surfaces.
33. (A) Indian Mughal paintings originated during the rule of Mughal Emperor, Humayun (1530-1540).
35. (B) India's first official census operation was undertaken in 1881. It has been conducted after every 10 years and it has been conducted 15 times from then. It includes acquiring and recording information about the members of a given population.
37. (C) Mycology is a branch of biology which is concerned with the study of fungi, their genetic and biochemical properties, their taxonomy and their use to humans as a source for medicines and food.
38. (A) Fog, clouds and mists are example of Aerosol. These are colloid of fine particles or liquid droplets in air or another gas.
41. (A) One tesla is equal to one weber per square metre.
42. (D) Nur jahan was the last and 20th wife of Mughal emperor Jahangir and she was the daughter of minister under Akbar regime.
44. (B) The Delhi Cabinet has approved over Rs 40 crore to provide medical insurance to lawyers, who are residents of the national capital.
46. (B) Zoji La is 9 km (5.6 mi) from Sonamarg and provides a vital link between Ladakh and Kashmir Valley.
47. (D) Cancer is non-communicable in nature. It is caused by an uncontrolled division of abnormal cells in a part of the body. It is cured by chemotherapy.
48. (B) Rayon is a manufactured fiber made from regenerated cellulose fiber.
49. (D) The orbit of a planet around the Sun is not a perfect circle, it is an ellipse.

51. (A) Given that:

$$PD = 17.4 \text{ cm}$$

$$CD = 13.8 \text{ cm}$$

$$AP = 34.8 \text{ cm}$$

$$PC = PD + CD = 17.4 + 13.8 = 31.2 \text{ cm}$$

$$AP \times PB = PD \times PC$$

$$34.8 \times PB = 17.4 \times 31.2$$

$$PB = \frac{17.4 \times 31.2}{34.8} = 15.6 \text{ cm}$$

$$\text{Now, } AB = AP - PB$$

$$= 34.8 - 15.6 = 19.2 \text{ cm}$$

$$\text{Radius of circle} = \frac{19.2}{2} = 9.6 \text{ cm}$$

52. (C) Area of rectangular plot = $50 \times 8 = 400 \text{ m}^2$

$$\text{Area of square plot} = 400 \text{ m}^2$$

$$\text{Side of square plot} = \sqrt{400} = 20 \text{ m}$$

$$\text{Now, perimeter of square plot} = 4 \times 20 = 80 \text{ m}$$

53. (D) Total work = $6 \times 24 = 144$

$$\text{Work done by 6 persons in 4 days} = 6 \times 4 = 24$$

$$\text{Remaining work} = 144 - 24 = 120$$

$$\text{Required number of persons to complete the work in next 12 days} = \frac{120}{12} = 10$$

$$\therefore \text{Number of persons should join the group} = 10 - 6 = 4$$

54. (A)
$$\frac{5(1 - 2\sin^2 70^\circ)}{\cos^2 70^\circ - \sin^2 70^\circ}$$

$$= \frac{5[(1 - \sin^2 70^\circ) - \sin^2 70^\circ]}{\cos^2 70^\circ - \sin^2 70^\circ}$$

$$= \frac{5(\cos^2 70^\circ - \sin^2 70^\circ)}{\cos^2 70^\circ - \sin^2 70^\circ} = 5$$

55. (B)
$$\frac{\text{Volume of sphere A}}{\text{Volume of sphere B}} = \frac{216}{125}$$

$$\frac{\frac{4}{3}\pi R^3}{\frac{4}{3}\pi r^3} = \frac{216}{125}$$

$$\left(\frac{R}{r}\right)^3 = \left(\frac{6}{5}\right)^3$$

$$\frac{R}{r} = \frac{6}{5} = 6 : 5$$

Let the radius of sphere A and B are $6x$ and $5x$ respectively.

ATQ,

$$6x + 5x = 33$$

$$11x = 33$$

$$x = 3$$

Radius of sphere B = $5x$

$$= 5 \times 3 = 15 \text{ cm}$$

\therefore Surface area of sphere B = $4\pi r^2$

$$= 4 \times 3.14 \times 15 \times 15 = 2826 \text{ cm}^2$$

56. (A) Let the CP of second article is ₹ x .

ATQ,

$$x \times \frac{90}{100} + (1200 - x) \times \frac{120}{100} = ₹ 1200$$

$$\frac{90x}{100} + 1440 - \frac{120x}{100} = 1200$$

$$\frac{30x}{100} = 1440 - 1200$$

$$\frac{30x}{100} = 240$$

$$x = \frac{240 \times 100}{30} = ₹ 800$$

\therefore SP of second article = $800 \times \frac{90}{100} = ₹ 720$

57. (C) $A + B = 45^\circ$

Taking tan both sides,

$$\tan(A + B) = \tan 45^\circ$$

$$\frac{\tan A + \tan B}{1 - \tan A \cdot \tan B} = 1$$

$$\tan A + \tan B = 1 - \tan A \cdot \tan B$$

$$\tan A + \tan B + \tan A \cdot \tan B = 1$$

Adding 1 both sides,

$$1 + \tan A + \tan B + \tan A \cdot \tan B = 1 + 1$$

$$(1 + \tan A) + \tan B(1 + \tan A) = 2$$

$$(1 + \tan A)(1 + \tan B) = 2$$

$\therefore 3(1 + \tan A)(1 + \tan B) = 3 \times 2 = 6$

58. (A) $x^{2a} = y^{2b} = z^{2c} \neq 0$

$$x^{2a} = k$$

$$x = k^{\frac{1}{2a}}$$

Similarly,

$$y = k^{\frac{1}{2b}}$$

$$z = k^{\frac{1}{2c}}$$

Now,

$$x^2 = yz$$

$$\left(k^{\frac{1}{2a}}\right)^2 = k^{\frac{1}{2b}} \cdot k^{\frac{1}{2c}}$$

$$k^{\frac{1}{a}} = k^{\frac{1}{2b} + \frac{1}{2c}}$$

$$\frac{1}{a} = \frac{1}{2b} + \frac{1}{2c}$$

By adding $\frac{1}{2a}$ both sides,

$$\frac{1}{a} + \frac{1}{2a} = \frac{1}{2a} + \frac{1}{2b} + \frac{1}{2c}$$

$$\frac{3}{2a} = \frac{ab + bc + ca}{2abc}$$

$$\frac{ab + bc + ca}{bc} = 3$$

59. (B) Let the length of train be x m.
ATQ,

$$\frac{x}{16} = \frac{x + 240}{36}$$

$$36x = 16x + 3840$$

$$36x - 16x = 3840$$

$$20x = 3840$$

$$x = \frac{3840}{20} = 192 \text{ m}$$

Now, speed of train = $\frac{192}{16} = 12 \text{ m/s}$

60. (D) A can complete a work = 20 days

B can complete a work = $\frac{20}{125} \times 100 = 16$ days

C can complete a work = $\frac{16}{160} \times 100 = 10$ days

Let the total work = 80

A's 1 day work = $\frac{80}{20} = 4$

B's 1 day work = $\frac{80}{16} = 5$

C's 1 day work = $\frac{80}{10} = 8$

(A + B + C)'s 4 days work = $4 \times (4 + 5 + 8) = 68$

Remaining work = $80 - 68 = 12$

\therefore Remaining work can be done by B alone = $\frac{12}{5} = 2\frac{2}{5}$ days

61. (D) Let the five numbers be $x, y, z, u,$ and v

According to question,

$$x + y + z + 6 = u + v \quad \dots\dots\dots(i)$$

$$x + y + z = 2v \quad \dots\dots\dots(ii)$$

From (i) and (ii),

$$2u + 6 = u + v$$

$$v - u = 6$$

Neither u nor v can be calculated with the help of the above relation

\therefore Data inadequate. Cases could be many.

62. (A)

Sita : Neeta : Ramesh

For 1st 6 months	45000 × 6	80000 × 6
For next 6 months	45000 × 6	80000 × 6
For next 12 months	45000 × 12	80000 × 12

270		480		1440
270		960		1440
540		960		1440
1080	:	1440	:	1440

3 : 4 : 4

\therefore Required ratio = 3 : 4 : 4

63. (B)

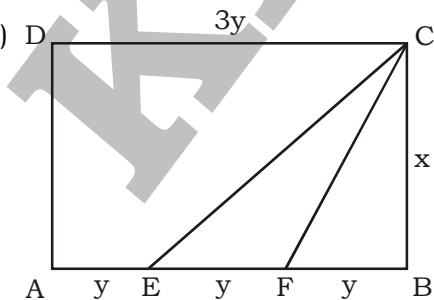
A	B	C	D
15×4	12×2	18×6	16×5
60	24	108	80

A's share of rent = ₹ 1020 = 60 unit

$$\therefore 108 \text{ units} = \frac{1020}{60} \times 108$$

Now, C's rent = ₹ 1836

64. (B)



Let $BC = x, FB = y = EF = AE$

$CD = 3y$

From (i) and (ii),

$$\frac{40}{100} = \frac{100}{AM}$$

$$AM = 250 \text{ m}$$

$$\text{Now, } AB = 250 + 40 = 290 \text{ m}$$

67. (B) $\frac{7 + \sqrt{5}}{7 - \sqrt{5}} - \frac{7 - \sqrt{5}}{7 + \sqrt{5}} = a + \frac{7}{11}\sqrt{5}b$

$$\frac{(7 + \sqrt{5})^2 - (7 - \sqrt{5})^2}{49 - 5} = a + \frac{7}{11}\sqrt{5}b$$

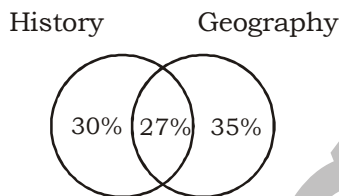
$$\frac{49 + 5 + 14\sqrt{5} - 49 - 5 + 14\sqrt{5}}{44} = a + \frac{7}{11}\sqrt{5}b$$

$$\frac{28\sqrt{5}}{44} = a + \frac{7}{11}\sqrt{5}b$$

$$\frac{7}{11}\sqrt{5} = a + \frac{7}{11}\sqrt{5}b$$

$$\therefore a = 0 \text{ and } b = 1$$

68. (B) Venn-Diagram of Failed Students



$$\text{Percentage of failed students} = 30\% + 35\% - 27\% = 38\%$$

$$\text{Percentage of passed students} = 100\% - 38\% = 62\%$$

Now, Let total number of students be x .

$$62\% \text{ of } x = 248$$

$$\therefore x = 248 \times \frac{100}{62} = 400$$

69. (D) Only the option (D) gives the difference of votes between two candidates as 308.

70. (D) Let the speed of train be x km/h.

As both the persons are walking in the same direction of train.

ATQ,

$$(x - 4.5) \times 8.4 = (x - 5.4) \times 8.5$$

$$0.1x = 8.1$$

$$x = 81 \text{ km/h}$$

71. (D) $\frac{\cos^4 \alpha}{\cos^2 \beta} + \frac{\sin^4 \alpha}{\sin^2 \beta} = 1$

By taking,

$\alpha = \beta$, it satisfies the above equation

$$\therefore \frac{\cos^4 \beta}{\cos^2 \alpha} + \frac{\sin^4 \beta}{\sin^2 \alpha} = 1$$

72. (D) Given

$$\text{Income} - \text{Expenditure} = ₹ 1.5 \text{ lakh}$$

$$\therefore \text{Profit \%} = \frac{\text{Income} - \text{Exp.}}{\text{Exp.}} \times 100$$

$$40 = \frac{1.5}{\text{Exp.}} \times 100$$

$$\text{Expenditure} = \frac{15}{4} = ₹ 3.75 \text{ lakh}$$

73. (D) Required average percentage = $\frac{40 + 45 + 40 + 35 + 30 + 45}{6} = 39.16\% \approx 40\%$

74. (C) Let the income of company A and B in the year 2008 is ₹ 100 lakh.

$$\text{Expenditure of company A} = ₹ \left(\frac{100}{150} \times 100 \right) \text{ lakh}$$

$$\text{Expenditure of company B} = ₹ \left(\frac{100}{130} \times 100 \right) \text{ lakh}$$

$$\therefore \text{Required ratio} = \frac{10000}{150} \times \frac{130}{10000} = 13 : 15$$

75. (D)

MEANINGS IN ALPHABETICAL ORDER

Abdicate	(of a monarch) renounce one's throne	त्यागना
Abundance	a very large quantity of something	प्रचुरता
Bequeath	leave (a personal estate or one's body) to a person or other beneficiary by a will	वसीयत
Clumsy	awkward in movement or in handling things	अनाडी
Complacent	showing smug or uncritical satisfaction with oneself or one's achievements	आत्मसंतुष्ट
Conscious	aware of and responding to one's surroundings; awake	सचेत
Contemptible	deserving contempt; despicable	घिनौना
Corrigible	capable of being corrected, rectified, or reformed	योग्य
Eloquent	fluent or persuasive in speaking or writing	सुवक्ता
Fluent	(of a person) able to express oneself easily and articulately	धाराप्रवाह
Illicit	forbidden by law, rules, or custom	अवैध
Inapt	not suitable or appropriate in the circumstances	अयोग्य
Inarticulate	unable to speak distinctly or express oneself clearly	धीरे से बोलना
Incoherent	(of spoken or written language) expressed in an incomprehensible or confusing way; unclear	बेतुका
Inept	having or showing no skill; clumsy	अयोग्य
Inevitable	certain to happen; unavoidable	अपरिहार्य
Mercy	compassion or forgiveness shown toward someone whom it is within one's power to punish or harm	दया
Pardon	the action of forgiving or being forgiven for an error or offense	क्षमा
Usurp	take (a position of power or importance) illegally or by force	हड़पना

SSC MOCK TEST - 282 (ANSWER KEY)

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

76. (C) Replace 'arising' by 'rising'.
77. (B) Replace 'are' by 'is', as the verb will follow the subject and the sentence i.e, 'Duke's collection' which is singular in nature.
90. (D) The correct spelling of 'Concious' is 'Conscious', 'Corigible' is 'Corrigible' and 'Complascnt' is 'Complacent'.
91. (B) The correct spelling of 'Attendence' is 'Attendance', 'Arrogence' is 'Arrogance' and 'Apearance' and 'Appearance'.