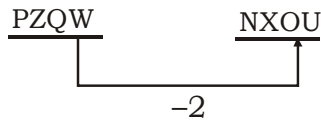
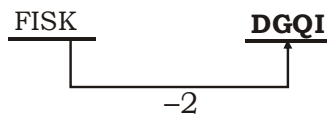


**SSC MOCK TEST - 270 (SOLUTION)**

1. (B) As 'Justice' is done in 'Court'. Similarly, 'Education' is imparted in 'School'.
2. (C) As,



Similarly,



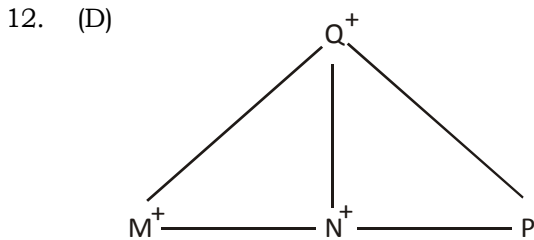
3. (A)  $7 \Rightarrow (7 \times 2) + 5 = 19$   
 $10 \Rightarrow (10 \times 2) + 5 = 25$
4. (D) Except option (D), all others are the types of work and their related workfields.
5. (D) (A)  $\begin{matrix} 32 & \text{---} & 41 \\ \downarrow & & \downarrow \\ 3+2=5 & & 4+1=5 \end{matrix}$   
 (B)  $\begin{matrix} 62 & \text{---} & 44 \\ \downarrow & & \downarrow \\ 6+2=8 & & 4+4=8 \end{matrix}$   
 (C)  $\begin{matrix} 46 & \text{---} & 28 \\ \downarrow & & \downarrow \\ 4+6=10 & & 2+8=10 \end{matrix}$   
 (D)  $\begin{matrix} 33 & \text{---} & 56 \\ \downarrow & & \downarrow \\ 3+3=6 & & 5+6=11 \end{matrix}$
6. (C) 'UVWX' are four consecutive letters. The same relationship is not found in others.
7. (B) 2. REPAIR  $\rightarrow$  5. RESCUE  $\rightarrow$  4. RESEARCH  $\rightarrow$  3. RESIDUE  $\rightarrow$  1. RESIGN

8. (C) RIAHC : CHAIR :: OGNAM : MANGO
- 

9. (C) PNS : OOT :: DBH : CCI
- 

10. (A)
-

11. (C)  $(6 + 5) - (7 + 4) = 0$   
 and  $(7 + 6) - (8 + 4) = 1$   
 Therefore  $(11 + 2) - (2 + 0) = 11$



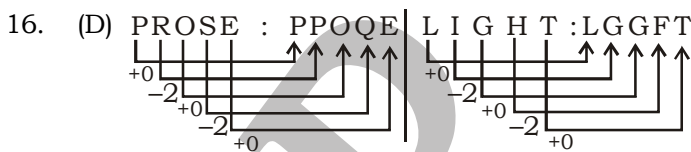
Here, the gender of P is not known, So we can't say that P is the brother of M.

13. (A) Let A, B and C has ₹ x, ₹ y and ₹ z respectively.  
 When A taxes ₹ 6 from C will have ₹  $(z - 6)$  which will be equal to y.  
 Also,  $x + y = 74$  (Given)  
 $y = 74 - x$   
 We know that,  $y = x + 6$   
 So,  $x + 6 = 74 - x$   
 $2x = 68$   
 $x = 34$

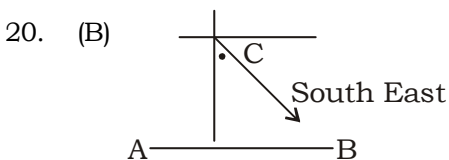
∴ B has =  $74 - 34 = ₹ 40$

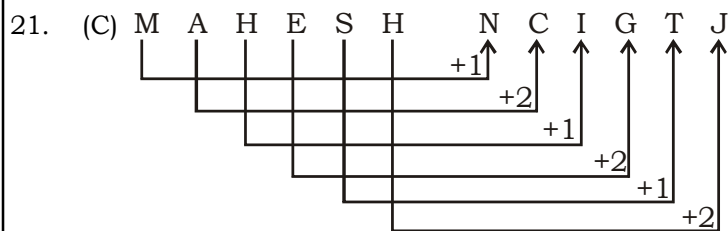
14. (C)  $15 + 5 - 2 \div 6 \times 3 = 3$   
 After change symbols  
 $15 \div 5 \times 2 - 6 + 3$   
 $= 3 \times 2 - 6 + 3$   
 $= 6 - 6 + 3 = 3$

15. (A)  $\frac{73+17}{2} = 45$ ;  $\frac{68+40}{2} = 54$ ;  $\frac{83+15}{2} = 49$

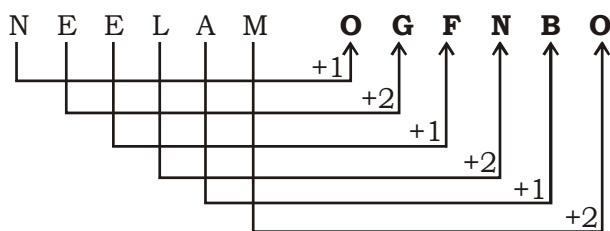


17. (A) 34  
 18. (A) CONFIRM can be formed from the given letters





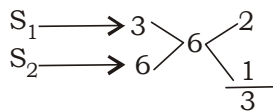
Similarly,



22. (D)                      23. (C)                      24. (B)
25. (D) A M A Z E  
31 58 57 41 13
26. (A) The Red fort of Delhi was constructed during the reign of Shah Jahan. Jama Masjid, Delhi and Taj Mahal of Agra was also built by Shah Jahan. Shah Jahan shifted capital to Delhi and a new city of Shahjahanabad was developed. And Red Fort was constructed to fortify the capital of Shahjahanabad.
27. (C) Guru Arjan Dev was the fifth guru of Sikhs. He compiled the first official edition of the Guru Granth Sahib. He completed the construction of Darbar Sahib in Amritsar. Guru Arjan was arrested under the Mughal Emperor Jahangir and asked to convert to Islam and he was executed in 1606 CE on refusing.
28. (B) Majuli island is situated in Assam in Brahmaputra river, it is the largest river island in the world. It is also the first island in India to be declared as district. Sarbananda Sonowal won constituency of Majuli in 2016 Assam Legislative Assembly election and presently Chief Minister of Assam.
29. (D) The Friendship Highway is an 800-kilometre route connecting China and Nepal. It includes the National Highway 318 of China. From Lhasa, the Friendship Highway follows the Kyi Chu river and reaches confluence with the Yarlung Tsangpo River at Chushul.
30. (A) Article 44 deals with Uniform Civil Code. It is mentioned under Directive Principles of State Policy. It is not justiciable. Article 44 says that The State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India.
31. (B) The Indian Navy has taken two MQ-9B Sea Guardian drones from an American defence company, on lease for 1 year.
33. (A) Butane or C<sub>4</sub>H<sub>10</sub> has two structural isomers called normal butane and isobutane, or i-butane.
34. (A) Vaporization is the process in which element is converted from a liquid or a solid to a gas.
36. (D) Pituitary gland is also known as Master gland because it controls functioning of other glands.
37. (D) Night Blindness is caused by the deficiency of Vitamin A.
38. (B) The Khadi and Village Industries Commission (KVIC) is a statutory body formed by the Government of India.
40. (C) Puducherry will have its first woman Director General of Police (DGP) with S Sundari Nanda being appointed to the top post in 2019.
41. (A) Kazakhstan has renamed its capital Astana as Nur-Sultan in honour of the country's longtime president who resigned in a surprise move.

44. (D) Mihira Bhoja was a ruler of the Gurjara-Pratihara dynasty of India.
45. (C) Its name "laughing gas", coined by Humphry Davy, is due to the euphoric effects upon inhaling it.
47. (C) Ribs are long curved bones located in thorax surrounding the chest, enabling the lungs to expand and thus facilitate breathing.
48. (D) The sun is composed of of the sun is 75 percent hydrogen and 25 percent helium by mass.
50. (A) Pupil is a small aperture in the iris that regulates the amount of light entering the eye.
51. (B) Efficiency of father = Efficiency of two sons

∴ Time taken by father = time taken by two sons



$$\text{Time taken by father} = \frac{6}{3} = 2 \text{ hours}$$

52. (B) Perimeter =  $\frac{240}{4} = 60 \text{ m}$

Height = 20 m

Area =  $60 \times 20 = 1200 \text{ m}^2$

53. (D) Selling Price = ₹ 2700

Discount = 10%

$$\text{Marked Price} = 2700 \times \frac{100}{90} = ₹ 3000$$

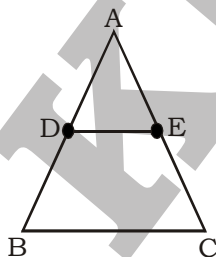
54. (D) AB = 6 cm

BC = 8 cm

$$\text{So, AC} = \sqrt{(8)^2 + (6)^2} = 10 \text{ cm}$$

$$\text{Radius of incircle} = \frac{6 + 8 - 10}{2} = 2 \text{ cm}$$

55. (A)



Area of ADE = Area of BCDE

$$\text{So, } \frac{AD}{AB} = \sqrt{\frac{\text{Area of } \triangle ADE}{\text{Area of } \triangle ABC}} = \frac{1}{\sqrt{2}}$$

$$AD = \frac{AB}{\sqrt{2}}$$

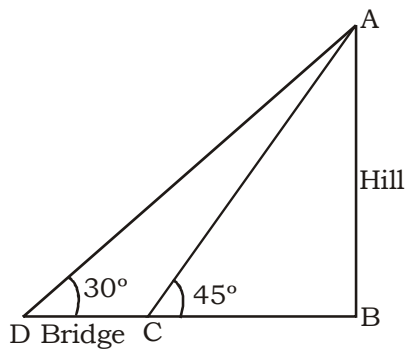
$$\sqrt{2} AD = AD + DB$$

$$DB = AD(\sqrt{2} - 1)$$

$$\frac{DB}{AB} = \frac{AB}{\sqrt{2}} \times \frac{1}{AB} (\sqrt{2} - 1)$$

$$DB : AB = (\sqrt{2} - 1) : \sqrt{2}$$

56. (C)

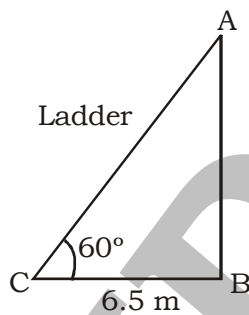


$$BC = AB \cdot \cot 45^\circ = 300 \text{ m}$$

$$BD = AB \cdot \cot 30^\circ = 300\sqrt{3} \text{ m}$$

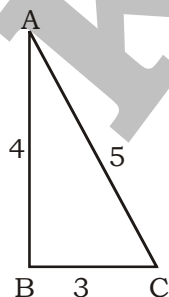
$$\text{Length of bridge (CD)} = 300(\sqrt{3} - 1) \text{ m}$$

57. (D)



$$\text{Length of ladder (AC)} = BC \sec 60^\circ = 6.5 \times 2 = 13 \text{ m}$$

58. (D)



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

$$\text{So, } AB = \sqrt{(5)^2 + (3)^2} = 4$$

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

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

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

$$\sin \theta \cdot \sec \theta \cdot \tan \theta = \frac{4}{5} \times \frac{5}{3} \times \frac{4}{3} = \frac{16}{9}$$

59. (C) Let the length of the square =  $2a$

$$\text{Area of square} = 4a^2$$

$$\text{So, radius of circle} = a$$

$$\text{Area of circle} = \pi a^2 = \frac{22}{7} a^2$$

$$\text{Required ratio} = 4a^2 : \frac{22}{7} a^2 = 14 : 11$$

60. (A)

61. (C) Let length of side of equilateral triangle =  $a$

$$\text{Then, height of triangle} = \frac{\sqrt{3}}{2} a$$

$$\text{Area of triangle} = \frac{\sqrt{3}}{4} a^2$$

ATQ,

$$\frac{\sqrt{3}}{2} a^2 = \frac{\sqrt{3}}{2} a$$

$$\text{So, } a = 2$$

62. (D) Let length of parallelopiped =  $5x$  cm

$$\text{So, breadth of parallelopiped} = 3x \text{ cm}$$

$$\text{Height} = 6 \text{ cm}$$

ATQ,

$$2[5x \times 3x + 5x \times 6 + 3x \times 6] = 558$$

$$15x^2 + 48x - 279 = 0$$

$$(x - 3)(15x + 93) = 0$$

$$x = 3$$

$$\text{So, length of parallelopiped} = (5 \times 3) \text{ cm} = 15 \text{ cm} = 1.5 \text{ dm}$$

63. (D) Required area of paper used =  $2\pi rh$

$$= 2 \times \frac{22}{7} \times 3.5 \times 25 = 550 \text{ cm}^2$$

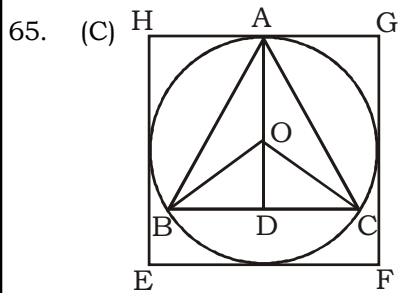
64. (A) Area of metal used in hollow sphere =  $\frac{4}{3} \pi (R^3 - r^3)$

$$= \frac{4}{3} \times \frac{22}{7} (5^3 - 3^3) = \frac{1}{4} \times \frac{22}{7} \times 98 \text{ cm}^3$$

$$\text{Area of new circular cone} = \frac{1}{3} \pi r^2 h$$

$$\frac{1}{3} \times \frac{22}{7} \times 4 \times 4 \times h = \frac{4}{3} \times \frac{22}{7} \times 98$$

$$h = 24.5 \text{ cm}$$



$$\text{Area of equilateral triangle } ABC = \frac{\sqrt{3}}{4} \times (4\sqrt{3})^2$$

$$= (4\sqrt{3})^2 = 12\sqrt{3} \text{ cm}^2$$

Again, AD is the height and O is the centre of the circle

$$\therefore \text{Area of } \triangle ABC = \frac{1}{2} \times BC \times AD$$

$$12\sqrt{3} = \frac{1}{2} \times 4\sqrt{3} \times AD \Rightarrow AD = \frac{12\sqrt{3}}{2\sqrt{3}} = 6$$

$$OD = \frac{1}{3} AD = 2 \text{ cm}$$

$$OB = \sqrt{BD^2 + OD^2} = \sqrt{(2\sqrt{3})^2 + 2^2}$$

$$= \sqrt{16} = 4 \text{ cm}$$

$$\text{Side of square} = 2 \times OB = 2 \times 4 = 8 \text{ cm}$$

$$\text{Diagonal of square} = \sqrt{2} \times \text{side} = 8\sqrt{2} \text{ cm}$$

66. (D)  $2\sqrt{x} = \frac{\sqrt{5} + \sqrt{3}}{\sqrt{5} - \sqrt{3}} - \frac{\sqrt{5} - \sqrt{3}}{\sqrt{5} + \sqrt{3}}$

$$2\sqrt{x} = \frac{(\sqrt{5} + \sqrt{3})^2 - (\sqrt{5} - \sqrt{3})^2}{\sqrt{5}^2 - \sqrt{3}^2}$$

$$2\sqrt{x} = \frac{(5 + 3 + 2\sqrt{15}) - (5 + 3 - 2\sqrt{15})}{5 - 3}$$

$$2\sqrt{x} = \frac{4\sqrt{15}}{2} = 2\sqrt{15}$$

$$\sqrt{x} = \sqrt{15}$$

$$x = 15$$

67. (A)  $\frac{\alpha}{\beta} + \frac{\beta}{\alpha} = \frac{\alpha^2 + \beta^2}{\alpha\beta}$

$$2x^2 - 7x + 12 = 0$$

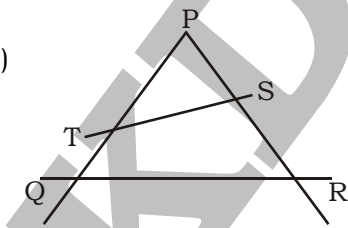
$$\alpha + \beta = \frac{-b}{a} = \frac{7}{2}$$

$$\text{and } \alpha\beta = \frac{12}{2} = 6$$

$$\text{then, } \frac{\alpha^2 + \beta^2}{\alpha\beta} = \frac{(\alpha + \beta)^2 - 2\alpha\beta}{\alpha\beta}$$

$$= \frac{\left(\frac{7}{2}\right)^2 - 6 \times 2}{6} = \frac{\frac{49}{4} - 12}{6} = \frac{1}{24}$$

68. (C)



$$PT = 5, QT = 3, PS = 3$$

$$\text{Let } SR = x$$

$\angle PQR = \angle PST$  and  $\angle P$  is common.

So,  $\angle PRQ = \angle PTS$

$$\text{Hence, } \frac{PS}{PQ} = \frac{PT}{PR}$$



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

$$\frac{3}{8} = \frac{5}{3+x}$$

$$40 = 9 + 3x = \frac{31}{3}$$

69. (D) For the publisher to earn a profit of 25%, S.P. = 125% of C.P.

Also transportation Cost = 10% of C.P.

Let the S.P. of 5500 books be ₹  $x$ .

$$10 : 125 = 82500 : x$$

$$x = \frac{125 \times 82500}{10}$$

$$x = 1031250$$

$$\text{S.P. of one book} = \frac{1031250}{5500} = ₹187.50$$

70. (B) Printing cost of book = 20% of C.P.

Royalty on book = 15% of C.P.

Difference = (20% - 15%) = 5% of C.P.

$$\% \text{ Difference} = \left( \frac{\text{Difference}}{\text{Printing Cost}} \times 100 \right) \%$$

$$= \left( \frac{5\% \text{ of C.P.}}{20\% \text{ of C.P.}} \times 100 \right) \% = 25\%$$

71. (D) Let the royalty to be paid for these books be ₹  $r$ .

then,

$$20 : 15 = 30600 : r$$

$$r = \frac{30600 \times 15}{20}$$

$$r = 22950$$

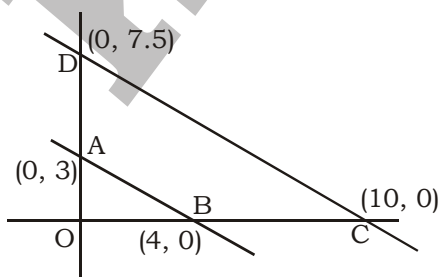
∴ Amount of royalty to be paid = ₹ 22950

72. (D) Loss % =  $\frac{40^2}{100} = 16\%$

73. (B) Line  $3x + 4y = 12$  inter-sects the Y-axis at A (0, 3) and X-axis at B = (4, 0)

Line  $6x + 8y = 60$  intersects the Y-axis at D (0, 7.5) and X-axis at C = (10, 0)

Hence ABCD is the trapezium for which the area is to calculate



Area of trapezium ABCF = Area of  $\triangle ODC$  - area of  $\triangle OAB$

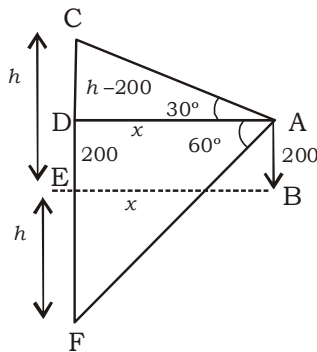
$$= \frac{1}{2} (10 \times 7.5) - \frac{1}{2} (4 \times 3)$$

$$= 37.5 - 6 = 31.5 \text{ sq. unit}$$

74. (B) LCM of A and B = 200

Hence, After 200 sec, they will reach at starting point simultaneously.

75. (D)



In  $\triangle ACD$ ,

$$x = \sqrt{3} (h - 200) \quad \dots\dots(i)$$

In  $\triangle ADF$ ,

$$x = \frac{h + 200}{\sqrt{3}} \quad \dots\dots(ii)$$

From (i) & (ii),

$$\sqrt{3} (h - 200) = \frac{h + 200}{\sqrt{3}}$$

$$3h - 600 = h + 200$$

$$2h = 800$$

$$h = 400 \text{ m}$$

**MEANINGS IN ALPHABETICAL ORDER**

Elocution	a style of speaking especially in public	वक्तृत्व
Grotesque	horrible	भयावह
Harmony	agreement, accord	अनुरूपता
Indisputable	unquestionable	निर्विवाद
Inevitable	incapable of being avoided or evaded	अनिवार्य
Irreparable	irremediable, that can not be repaired	जो सुधार योग्य न हो
Melody	a sweet or agreeable succession or arrangement of sounds	स्वर माधुर्य
Orchestra	a group of musicians who play music together	वादक समूह
Pacify	to allay the anger or agitation of, soothe	शांत करना
Rectify	to correct	सुधारना
Reduce	to diminish in size, amount, extent, or number	कम करना
Rites	a ceremonial act or action	अनुष्ठान
Surrender	to give up completely	समर्पण करना
Trample	to crush	कुचलना
Vanish	to pass quickly from sight, disappear	अदृश्य हो जाना
Vanquish	to defeat in a conflict or contest	पराजय करना

KD

**SSC MOCK TEST - 270 (ANSWER KEY)**

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

79. (C) Correct usage is 'wear something for the party'. Hence replace 'on' with 'for'.
80. (A) Phrase 'for all' means 'in spite of' and 'all for' means 'strongly in favour of something'. According to the meaning of the sentence 'all for' should be there hence replace 'for all' with 'all for'.
81. (C) When two actions are compared with each other 'as' is used. Hence replace 'like' with 'as'.
82. (C) 'Without fail' is a phrase which means 'for certain, absolutely'. Hence option (3) is correct.
83. (D) 'Gives off' is a phrasal verb which means 'to emit'.
89. (A) Given sentence is in simple present tense hence replace 'you will' with 'you want to'.
92. (C) 'Aim' is used for shorter duration whereas 'ambition' is used for longer duration. Hence replace 'ambition' with 'aim'.