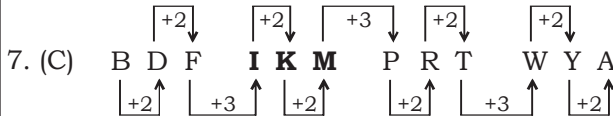
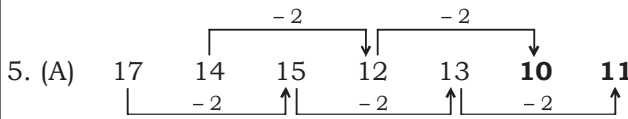
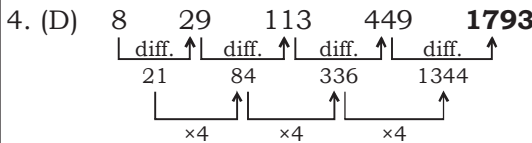
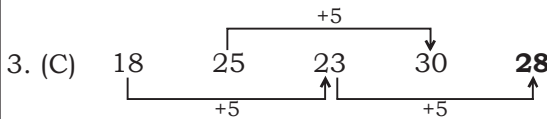
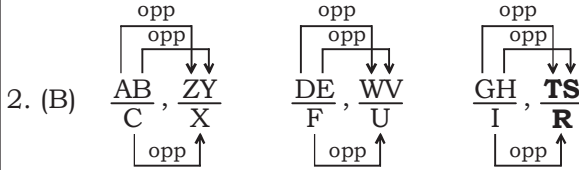
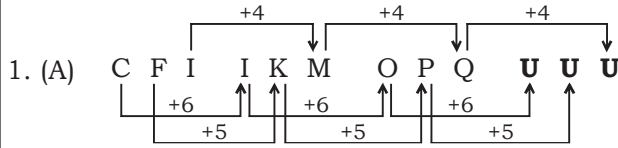




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### SOLUTION - MOCK TEST - 34

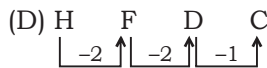
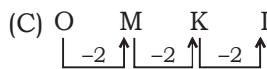
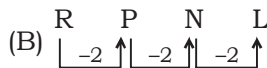
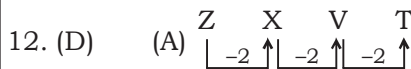


8. (D)

9. (B)

10. (B) All the other months are of 31 days.

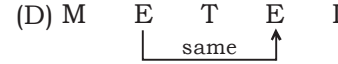
11. (B)



13. (A) (A) 
$$\begin{array}{ccccccc} M & O & N & J & K \\ \text{No letter is same} \end{array}$$

(B) 
$$\begin{array}{ccccc} A & C & A & Z & V \\ \text{same} \end{array}$$

(C) 
$$\begin{array}{ccccc} G & M & R & G & S \\ \text{same} \end{array}$$

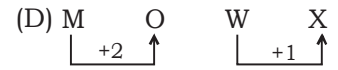
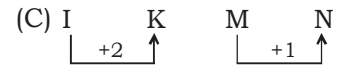
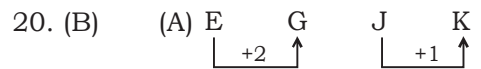
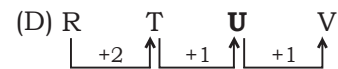
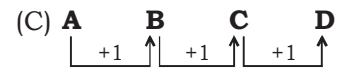
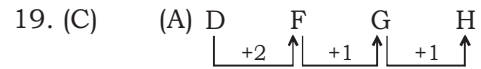
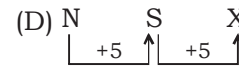
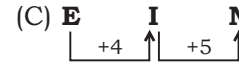
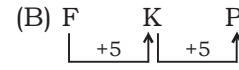
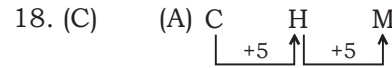


14. (A) Except (A) all digits are square numbers.

15. (A) Except (A) all digits are odd numbers.

16. (B)

17. (C)



21. (A) The sum of first digit + last digit = middle digit in all the options except A.

22. (A)

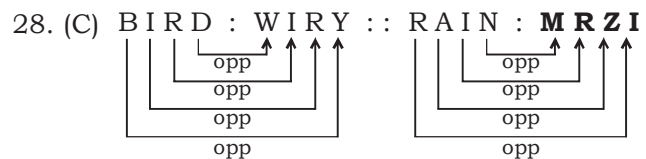
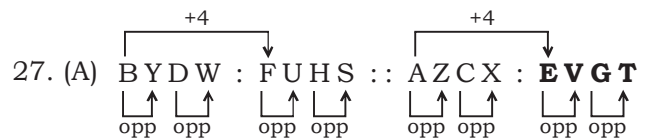
23. (C)

24. (A)

25. (B) Yesterday : Tomorrow :: March : **May**



26. (C)





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29. (A)  $7 : 17 :: 23 : 50$



30. (C)  $\frac{16}{48} : \frac{13}{39} :: \frac{22}{66} : \frac{14}{42}$



31. (B)

32. (C)

33. (C) 

<u>Open</u>	<u>Type</u>	<u>Save</u>	<u>Print</u>	<u>Close</u>
3	1	4	2	5

34. (B)  $3 \times 4 \times 5 = 60$  and  $7 \times 2 \times 4 = 56$

Then,  $5 \times x \times 6 = 90$

$30x = 90$

$x = 90 \div 30$

$x = 3$

35. (B) Let present ages of Hema and Geeta will be  $x$  years and  $y$  years respectively.

According to 1<sup>st</sup> condition of the question.

$(x - 10) = 2(y - 10)$

$x - 2y = -10 \dots(1)$

According to 2<sup>nd</sup> condition of the question

$x + 10 = 40$

$x = 30$

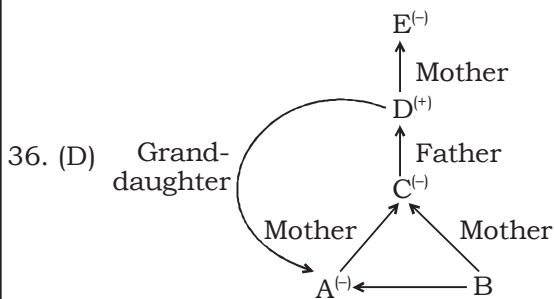
Put the value of  $x$  in eq. (1)

$30 - 2y = -10$

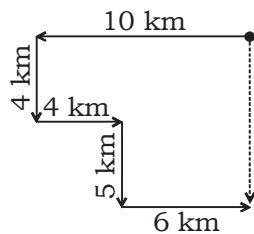
$-2y = -40$

$y = 20$

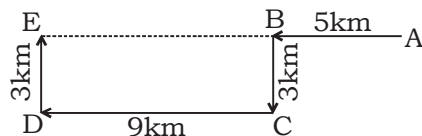
□ Present age of Geeta = 20 years.



37. (D)



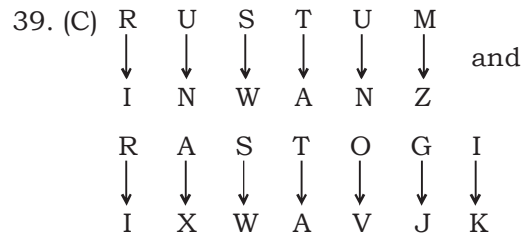
38. (D)



According to question,  
 $AB = 5\text{ km}$

$CD = 9\text{ km}$  (Here,  $CD = BE$ )

□  $AE = AB + BE$   
 $= 5 + 9 = 14\text{ km}$

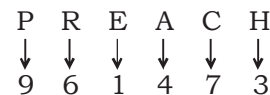
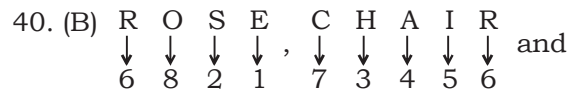
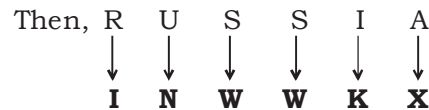


According to question

$R = I, U = N, S = W$

$T = A, M = Z, A = X$

$O = V, G = J$  and  $I = K$



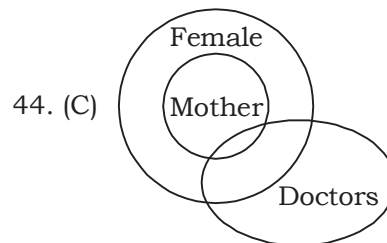
According to question,  $R = 6, O = 8, S = 2, E = 1, C = 7, H = 3, A = 4, I = 5$  and  $P = 9$



41. (C) The HCF of given set (12, 18, 27) is 3.

Similarly, HCF of 15, 27, 30 is also 3.

42. (B) 1. (D) Garrison  
2. (A) Gastritis  
3. (B) Gatecrash  
4. (C) Gauntlet
43. (B) 1. (D) Hay  
2. (A) Hick  
3. (B) Hide  
4. (C) High



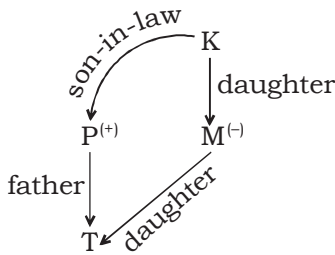
46. (D)



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47. (B)

48. (D)



49. (D) P E N C I L                  P A P E R  
 ↓ ↓ ↓ ↓ ↓                  ↓ ↓ ↓ ↓ ↓  
 ? @ , = ; 7                  ? 9 ? @ 5

Then, C L I P  
 ↓ ↓ ↓ ↓  
 = 7 ; ?

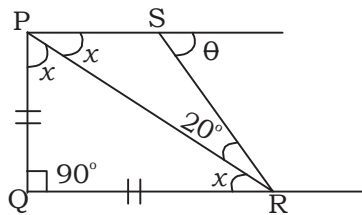
50. (C) According to English Alphabet the ranking value of J = 10

and J A S M I N E  
 ↓ ↓ ↓ ↓ ↓ ↓ ↓  
 10+1+19+13+9+14+5=71

Similarly, the ranking value of  
 E S T I M A T E  
 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
 5+19+20+9+13+1+20+5=92

### ARITHMETIC

51. (A)



$$x = \frac{180 - 90}{2} = 45^\circ$$

$$\angle PSR = 180^\circ - (45^\circ + 20^\circ) = 115^\circ$$

$$\text{so, } \theta = 180^\circ - 115^\circ = 65^\circ$$

52. (C)

In  $\triangle ACE$

$$\begin{aligned} \Rightarrow \angle AEC &= 180 - (40 + 60) \\ &= 180^\circ - 100^\circ \\ &= 80^\circ \end{aligned}$$

$$\begin{aligned} \angle AEC &= \angle AED \\ &= 80^\circ \end{aligned}$$

53. (B) Volume of the copper wire

$$\begin{aligned} &= \pi(1)^2 \times 36 \\ &= 36\pi \end{aligned}$$

According to the question:

$$\frac{4}{3} \pi r^3 = 36\pi$$

$$r = 3 \text{ cm}$$

54. (B) Ratio of radii = 3 : 4

$$\text{Ratio of circumference} = 2\pi r_1 : 2\pi r_2 = 3:4$$

55. (C) If P(x, 0) is the point of division and if the ratio is k : 1 then,

$$x = \frac{k \times 4 + 1(-3)}{k+1}; \quad 0 = \frac{k(-4) + 1(-2)}{k+1}$$

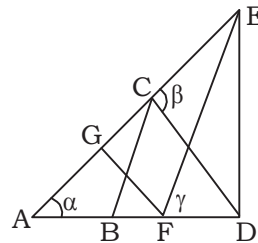
$$\therefore -4k - 2 = 0 \quad \therefore k = -1/2$$

$$\text{so, ratio } k : 1 = -\frac{1}{2} = -1 : 2$$

Here negative sign implies that the division is external,

Hence, Ratio = (1 : 2)

56. (D)



Let,  $\angle EAD = \alpha$  then  $\angle AFG = \alpha$

and  $\angle ACB = \alpha$

so,  $\angle CBD = 2\alpha$  (external angle of  $\triangle ABC$ )

$$\therefore GF = EF$$

$$\angle FEG = 2\alpha$$

$$\angle DCE = \angle DEC = \beta \quad (\text{assume})$$

$$\angle DEF = \beta - 2\alpha$$

then,  $\angle DCB = 180^\circ - (\alpha + \beta)$

$$180^\circ - (\alpha + \beta) + 2\alpha + 2\alpha = 180^\circ$$

$$\text{or } \beta = 3\alpha$$

$$\angle EFD = \angle EDF = \gamma$$

$$\angle EDC = \gamma - 2\alpha$$

If CD and EF meets at P then

$$\angle FPD = 180^\circ - 5\alpha$$

In  $\triangle PED$

$$180^\circ - 5\alpha + \gamma + 2\alpha = 180^\circ \Rightarrow \gamma = 3\alpha$$

Hence, In  $\triangle QFB$

$$\alpha + 2\gamma = 180^\circ \text{ or } \alpha + 6\alpha = 180^\circ$$

$$\alpha = 25^\circ \text{ (approx)}$$

57. (D) Given:

$$\Rightarrow 24000 = 1200 \left(1 + \frac{R}{100}\right)^5$$

$$\Rightarrow 2 = \left(1 + \frac{R}{100}\right)^5$$

$\Rightarrow$  Powering 4 both the sides:

$$\Rightarrow 2^4 = \left(\left(1 + \frac{R}{100}\right)^5\right)^4$$



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$$\Rightarrow 16 = \left(1 + \frac{R}{100}\right)^{20}$$

so, after 20 years sum will be 16 times

$$\Rightarrow 16 \times 12,000 = 1,92,000$$

58. (D) According to the question:

$$\frac{4}{3} \pi r^3 = \pi r^2 h$$

$$\Rightarrow \frac{4}{3} r = h$$

$$d = 2r \quad \Rightarrow \quad r = d/2$$

$$\text{so, } \frac{4}{3} \times \frac{d}{2} = h \quad \Rightarrow \quad 2d = 3h$$

59. (\*) Given:

$$2\pi r = 100$$

$$2r = \frac{100}{\pi}$$

$$\Rightarrow d = \frac{100}{\pi} \quad (d = 2r)$$

Now, diameter of the circle will be the diagonal of the square. Let the side of the square is a.

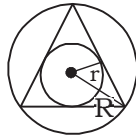
$$\text{then, } a\sqrt{2} = d = \frac{100}{\pi}$$

$$a = \frac{100}{\pi\sqrt{2}} \quad \text{or} \quad \frac{100\sqrt{2}}{2\pi}$$

$$a = \frac{50\sqrt{2}}{\pi}$$

60. (B)  $R = \frac{2}{3} \times h = \frac{2}{3} \times \frac{\sqrt{3}}{2} \times 8$

$$r = \frac{1}{3} \times h = \frac{1}{3} \times \frac{\sqrt{3}}{2} \times 8$$



$$\text{Area} = \pi \left( \left(\frac{8}{\sqrt{3}}\right)^2 - \left(\frac{4}{\sqrt{3}}\right)^2 \right)$$

$$= \frac{22}{7} \times \frac{48}{3} = \frac{352}{7} \Rightarrow 50 \frac{2}{7} \text{ cm}^2$$

61. (A) The mid point of the segment

$$= \left( \frac{4+a}{2}, \frac{3-5}{2} \right) \quad 2x + 3y = 6 \quad \text{---} \quad (4, 3)$$

$$= \left\{ \frac{a+4}{2}, -1 \right\}$$

The point satisfies the equation

$$2x + 3y = 6$$

$$\therefore 2 \left( \frac{a+4}{2} \right) - 3 = 6 \Rightarrow a = 5$$

(a, -5)

62. (C)  $\frac{8 \otimes (-6) - 4}{-3 \otimes -4}$

$$\Rightarrow \frac{\sqrt{100} - 4}{5} = \frac{10 - 4}{5} = \frac{6}{5}$$

63. (B) Rational number between

$$\frac{1}{2} \text{ and } \frac{3}{5}$$

$$\Rightarrow 0.5 \text{ and } 0.6$$

(a)  $2/5 = 0.4$  (no)

(b)  $4/7 = 0.55$  (yes)

(c)  $2/3 = 0.66$  (no)

(d)  $1/3 = 0.33$  (no)

64. (B) According to the question

$$x = P(d) + 4375 \quad \dots (i)$$

$$y = q(d) + 2986 \quad \dots (ii)$$

$$\Rightarrow (x + y) = (P + q)d + 7361$$

Now,  $\frac{x+y}{d}$  gives remainder 2361.

$$\text{so, } d = 7361 - 2361$$

$$= 5000$$

65. (B) LCM (24, 32, 36, 54) = 864

$$\text{so, the number is } (864 - 5) = 859$$

66. (A)  $\frac{2}{\sqrt{5} + \sqrt{3}} + \frac{3}{\sqrt{6} - \sqrt{3}} + \frac{1}{\sqrt{6} + \sqrt{5}}$

after rationalizing:

$$\Rightarrow \frac{2(\sqrt{5} - \sqrt{3})}{2} + \frac{3(\sqrt{6} + \sqrt{3})}{3} + \frac{\sqrt{6} - \sqrt{5}}{1}$$

$$\Rightarrow \sqrt{5} - \sqrt{3} + \sqrt{6} + \sqrt{3} + \sqrt{6} - \sqrt{5}$$

$$\Rightarrow 2\sqrt{6}$$

67. (D) According to the question:

$$\text{Now, price of mango} = \frac{40 \times 20}{100}$$

$$\text{Original price was: } \Rightarrow 8/4 = ₹ 2$$

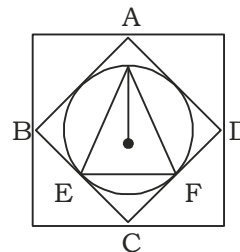
$$\text{So, } 120\% = 2$$

$$\therefore 100\% = \frac{2}{120} \times 100$$

$$= \frac{10}{6} = \frac{5}{3}$$

$$\text{so, price of 15 mangos} = \frac{5}{3} \times 15 \Rightarrow ₹ 25$$

68. (B)





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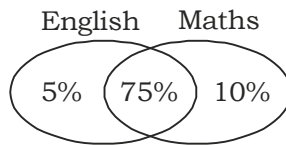
$$AB = \sqrt{\left(\frac{a}{2}\right)^2 + \left(\frac{a}{2}\right)^2} = \frac{a}{\sqrt{2}}$$

$$EF = \sqrt{\left(\frac{a}{2\sqrt{2}}\right)^2 + \left(\frac{a}{2\sqrt{2}}\right)^2} = \frac{a}{2}$$

Area of the equilateral triangle:

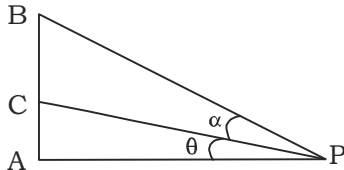
$$\frac{\sqrt{3}}{4} \times \left(\frac{9}{2}\right)^2 = \frac{\sqrt{3}}{16} a^2$$

69. (B)



Total students who failed  
 $= 100\% - (5\% + 75\% + 10\%) \Rightarrow 10\%$   
 so,  $10\% = 45$   
 $\therefore 100\% = 450$

70. (A) Given:



$$AP = n AB$$

Let  $\angle APC = \theta$

$$\tan \theta = \frac{AC}{AP} \Rightarrow \tan \theta = \frac{AB/2}{AP}$$

$$\frac{AB}{AP} \times \frac{1}{2} = \frac{1}{2n} \Rightarrow \tan(\theta + \alpha) = \frac{AB}{AP}$$

$$\Rightarrow \frac{\tan \theta + \tan \alpha}{1 - \tan \theta \tan \alpha} = \frac{AB}{AP}$$

$$\Rightarrow \frac{\frac{1}{2n} + \tan \alpha}{1 - \frac{1}{2n} \tan \alpha} = \frac{1}{n}$$

$$\Rightarrow \frac{1 + 2 \tan \alpha}{2n - \tan \alpha} = \frac{1}{n}$$

$$\Rightarrow \tan \alpha (2n^2 + 1) = n$$

$$\Rightarrow \tan \alpha = \frac{n}{2n^2 + 1}$$

71. (B) Given:

Diameter of the cone = 4 cm.  
 radius = 2 cm.  
 height =  $2\sqrt{3}$  cm.

$$\begin{aligned} \text{Slant height} &= \sqrt{(2)^2 + (2\sqrt{3})^2} \\ &= \sqrt{4 + 12} = \sqrt{16} = 4 \text{ cm.} \end{aligned}$$

72. (D) According to the question:

$$120 \times \frac{x}{100} = 110$$

$$\Rightarrow x = \frac{275}{3}$$

$$\text{so, discount} = 100 - \frac{275}{3} = \frac{25}{3} = 8\frac{1}{3}\%$$

73. (A) Let the market price is A

$$\text{so, } A \times \frac{90}{100} = 120$$

$$A = \frac{120 \times 100}{90}$$

$$A = \frac{400}{3}$$

If allows 20% discount then

$$\frac{400}{3} \times \frac{80}{100} = \frac{320}{3} = 100 \frac{20}{3}$$

$$\text{profit} = \frac{20}{3} = 6\frac{2}{3}\%$$

74. (B) Total = (300 + 200) = 500

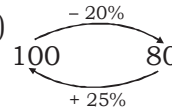
$$\text{Total marks} = 500 \times \frac{46}{100} = 230$$

$$\text{Got in science} = 300 \times \frac{32}{100} = 96$$

$$\Rightarrow \text{score should be in language paper} \\ = 230 - 96 = 134$$

$$\% = \frac{134}{200} \times 100 = 67\%$$

75. (D)



76. (C) According to the question:

$$T = \frac{137 + 163}{90 \times \frac{5}{18}} = \frac{300}{25}$$

$$= 12 \text{ sec.}$$

77. (A) According to the question:

$$6 = \frac{45}{10 - x}$$

$$\Rightarrow 60 - 6x = 45$$

$$\Rightarrow 6x = 15$$

$$\Rightarrow x = 2.5 \text{ km/hr}$$

78. (A) According to the question:



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$$SI = P \text{ at the rate } = 16\frac{2}{3}\%$$

$$\text{So, } P = \frac{P \times 50 \times T}{2 \times 100}$$

$$T = 4$$

79. (C)  $x = (\sqrt{2} + 1)^{-1/3}$

$$\text{So, } x^3 = (\sqrt{2} + 1)^{-1} = \frac{1}{\sqrt{2} + 1} = \sqrt{2} - 1$$

$$\text{so, } x^3 - \frac{1}{x^3} \Rightarrow (\sqrt{2} - 1) - (\sqrt{2} + 1) \Rightarrow -2$$

80. (A) Given:

$$P = 101$$

$$\Rightarrow \sqrt[3]{P(P^2 - 3P + 3)} - 1$$

$$\Rightarrow \sqrt[3]{101((101)^2 - 3(101) + 3)} - 1$$

$$\Rightarrow \sqrt[3]{1000000} \Rightarrow 100$$

81. (D)  $a = \sqrt{7 + 2\sqrt{12}}$

$$b = \sqrt{7 - 2\sqrt{12}}$$

$$\Rightarrow a = \sqrt{(\sqrt{4} + \sqrt{3})^2} = \sqrt{4} + \sqrt{3}$$

$$b = \sqrt{(\sqrt{4} - \sqrt{3})^2} = \sqrt{4} - \sqrt{3}$$

$$a^3 + b^3 = (a+b)(a^2 + b^2 - ab)$$

$$= (2\sqrt{4})(7 + 2\sqrt{12} + 7 - 2\sqrt{12} + 4 - 3)$$

$$= (4)(14 - 1) = 13 \times 4 = 52$$

82. (B)  $\sqrt{(0.6)^3 + (0.4)^3 + 3 \times 0.6 \times 0.4}$

$$\Rightarrow \sqrt{(0.6 + 0.4)^3} \Rightarrow (0.6 + 0.4) = 1$$

$$\text{so, } \sqrt{1^3} = 1$$

83. (D)  $x = \frac{\sqrt{3}}{2}$

$\Rightarrow$  Rationalizing:

$$\Rightarrow \frac{\sqrt{1+x} + \sqrt{1-x}}{\sqrt{1+x} - \sqrt{1-x}} \times \frac{\sqrt{1+x} + \sqrt{1-x}}{\sqrt{1+x} + \sqrt{1-x}}$$

$$\Rightarrow \frac{1+x+1-x+2\sqrt{1-x^2}}{2x}$$

$$\Rightarrow \frac{2+2\sqrt{1-x^2}}{2x} = \frac{1+\sqrt{1-x^2}}{x}$$

$$\Rightarrow \frac{1+\sqrt{1-\frac{3}{4}}}{\frac{\sqrt{3}}{2}} = \frac{\frac{3}{2}}{\frac{\sqrt{3}}{2}} = \sqrt{3}$$

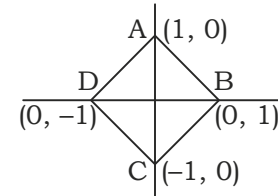
84. (B) According to the question:

$$x : y = 5 : 3$$

$$y : z = 4 : 5$$

$$x : y : z = 20 : 12 : 15$$

85. (B) Area of  $|x| + |y| = 1$   
area of ABCD



$$\Rightarrow 2 \left( \frac{1}{2} \times 2 \times 1 \right) \Rightarrow 2 \text{ unit}$$

86. (D) According to the question:

$$5x + 5y = 700$$

$$3x + 7y = 500$$

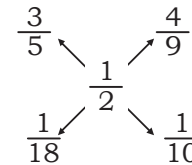
after solving  $y = 20$

$$\text{so, } 5x = 700 - 100 = 600$$

$$3x = 500 - 140 = 360$$

$$\text{Total } 5x + 3x = 960$$

87. (A) First Mixture      Second Mixture



$$\therefore \frac{1}{18} \rightarrow 3l$$

$$\text{then } \frac{1}{10} \rightarrow \frac{3 \times 18}{10} = 5\frac{2}{5}l$$

88. (C) Let A = x Rs. B = y Rs C = z Rs

$$\text{Now } \frac{2}{5}x + 40 = \frac{2}{7}y + 20 = \frac{9}{17}z + 10 = k$$

$$\Rightarrow x = (k - 40) \times \frac{5}{2} \quad y = \frac{7}{2}(k - 20)$$

$$\Rightarrow z = (k - 10) \times \frac{17}{9}$$

Now

$$(k - 40) \times \frac{5}{2} + \frac{7}{2}(k - 20) + \left( \frac{k - 10}{9} \right)^{17} = 600$$

$$k = 100$$

$$\text{so, part of A} = \frac{5}{2}(100 - 40)$$

$$= \frac{5}{2} \times 60 = ₹ 150$$



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89. (D)  $AM = \frac{8}{2} = 4 \text{ cm}$

$CN = \frac{6}{2} = 3 \text{ cm}$

$OM = x$

$ON = x + 1$

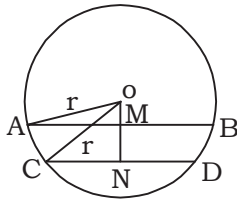
$r^2 = x^2 + 4^2 \dots\dots(i)$

$r^2 = (x + 1)^2 + 3^2 \dots\dots(ii)$

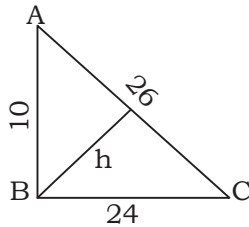
$x^2 + 16 = x^2 + 2x + 10$

$2x = 6 \Rightarrow x = 3 \text{ cm}$

$r^2 = 3^2 + 4^2 \Rightarrow r = 5 \text{ cm}$



90. (B) Triangle is right angled triangle



$\Rightarrow$  Altitude on BC = 10 cm

Altitude on AB = 24 cm

Now Altitude on AC =

$\Rightarrow \frac{1}{2} \times 10 \times 24 = \frac{1}{2} \times 26 \times h$

$h = \frac{10 \times 24}{26} = \frac{120}{13} = 9 \frac{3}{13} \text{ cm}$

91. (D) Diameter of the base of the cone = 42 cm  
Radius = 21 cm

$\Rightarrow$  Volume = 12936

$\Rightarrow \frac{1}{3} \times \pi (21)^2 \times h = 12936$

$h = \frac{12936 \times 3 \times 7}{(21)^2 \times 22}$

$h = \frac{271656}{9702} = 28 \text{ cm}$

$l = \sqrt{(21)^2 + (28)^2} = \sqrt{1225} = 35 \text{ cm}$

92. (C)  $x^2 + y^2 = 41$   
 $xy = 20$

$\Rightarrow (x + y)^2 = 41 + 2 \times 20 = 81$

$x + y = 9 \dots\dots(i)$

$\Rightarrow (x - y)^2 = 41 - 2 \times 20 = 1$

$x - y = 1 \dots\dots(ii)$

$\Rightarrow$  solving (i) and (ii)

$2x = 10 \Rightarrow x = 5 \quad \text{so, } y = 4$

Average =  $\frac{x+y}{2} = \frac{9}{2} = 4.5$

93. (C) Total age =  $28 \times 3 = 84$  years.

4 years ago

Present total should be =  $84 + 12 = 96$

But according to the question

a daughter joins so total

$= \frac{49}{2} \times 4 = 98$

so, Age of the daughter =  $98 - 96 = 2$  yrs.

94. (B)  $3x - 4y = 25$

$\left(x, \frac{3x-25}{4}\right)$  and origin (0, 0)

Distance from origin:

$\Rightarrow x^2 + \left(\frac{3x-25}{4}\right)^2 = 25$

$\Rightarrow x^2 + \frac{9x^2 + 625 - 150x}{16} = 25$

$\Rightarrow 16x^2 + 9x^2 + 625 - 150x = 400$

$\Rightarrow 25x^2 - 150x + 225 = 0$

$\Rightarrow x^2 - 6x + 9 = 0$

$\Rightarrow (x - 3)^2 = 0$

$\Rightarrow x - 3 = 0$

$\Rightarrow x = 3$

$y = \frac{3 \times 3 - 25}{4} = \frac{-16}{4} = -4$

so point are (3, -4)

95. (D)  $AB = 2 EC$

$EC = \frac{1}{2} AB$

DC || AB and AC is transversal line to DC & AB.

$\angle ECO = \angle BAO$

$\triangle EOC \text{ \& } \triangle BAO$

$\angle ECO = \angle BOA$

$\angle EOC \sim \triangle BAC$

$\frac{AO}{OC} = \frac{AB}{EC} = \frac{2}{1}$

so,  $AO : OC = 2 : 1$

96. (A)  $\sin^4 \theta + \cos^4 \theta$

for some value of  $\theta$  the max value of  $\sin \theta$  or  $\cos \theta$  is 1 so max value will be 1.

97. (C)  $\tan 1^\circ \cdot \tan 2^\circ \tan 88^\circ \tan 89^\circ$

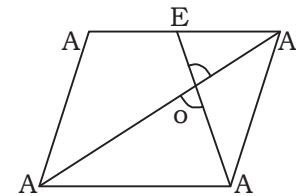
$\Rightarrow \tan(90 - 89^\circ) \tan(90 - 88^\circ) \dots \dots \tan 88^\circ \tan 89^\circ$

$\Rightarrow \cot 89^\circ \cdot \cot 88^\circ \dots \dots \tan 88^\circ \cdot \tan 89^\circ$

$\Rightarrow \tan 45^\circ = 1$

98. (D)  $\frac{\sec \theta + \tan \theta}{\sec \theta - \tan \theta} = 7 + 4\sqrt{3}$

$\Rightarrow \frac{(\sec \theta + \tan \theta)(\sec \theta + \tan \theta)}{\sec^2 \theta - \tan^2 \theta} = 7 + 4\sqrt{3}$







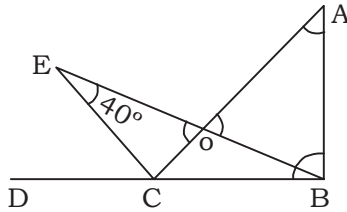
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$$\Rightarrow (\sec \theta + \tan \theta)^2 = 7 + 4\sqrt{3}$$

$$\Rightarrow (\sec \theta + \tan \theta)^2 = (2 + \sqrt{3})^2$$

$$\Rightarrow \sec \theta + \tan \theta = 2 + \sqrt{3}$$

99. (C)



Let  $\angle CAB = a$

$\angle ABO = x^\circ$

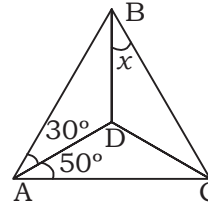
and  $\angle OBC = x^\circ$

$$\text{so } 40^\circ + 100^\circ - (a + x) + a/2 + x = 180^\circ$$

$$a/2 = 40 \Rightarrow a = 80^\circ$$

100.(A) D is the circum center then

$$BD = AD = DC$$



radius

so, In  $\triangle ADB$

$$\angle DAB = 30^\circ \text{ and } \angle ABD = 30^\circ$$

$$\text{so, } \angle BDA = 180^\circ - 60^\circ = 120^\circ$$

and In  $\triangle ADC$

$$\angle ADC = 180^\circ - (50 + 50) = 80^\circ$$

$$\text{so, } \angle BDC = 360^\circ - (200^\circ) = 160^\circ$$

$$\text{so, } \angle x^\circ = \frac{180^\circ - 160^\circ}{2} = \frac{20^\circ}{2} = 10^\circ$$

## SSC MOCK TEST - 34

### ANSWER

- |         |         |         |         |          |          |          |          |          |          |
|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|
| 1. (A)  | 21. (A) | 41. (C) | 61. (A) | 81. (D)  | 101. (D) | 121. (B) | 141. (A) | 161. (A) | 181. (D) |
| 2. (B)  | 22. (A) | 42. (B) | 62. (C) | 82. (B)  | 102. (A) | 122. (B) | 142. (B) | 162. (B) | 182. (A) |
| 3. (C)  | 23. (C) | 43. (B) | 63. (B) | 83. (D)  | 103. (D) | 123. (D) | 143. (D) | 163. (A) | 183. (A) |
| 4. (D)  | 24. (A) | 44. (C) | 64. (B) | 84. (B)  | 104. (B) | 124. (B) | 144. (B) | 164. (A) | 184. (D) |
| 5. (A)  | 25. (B) | 45. (B) | 65. (B) | 85. (B)  | 105. (C) | 125. (B) | 145. (B) | 165. (D) | 185. (C) |
| 6. (C)  | 26. (C) | 46. (D) | 66. (A) | 86. (D)  | 106. (D) | 126. (B) | 146. (C) | 166. (A) | 186. (A) |
| 7. (C)  | 27. (A) | 47. (B) | 67. (D) | 87. (A)  | 107. (C) | 127. (A) | 147. (B) | 167. (A) | 187. (D) |
| 8. (D)  | 28. (C) | 48. (D) | 68. (B) | 88. (C)  | 108. (D) | 128. (D) | 148. (A) | 168. (B) | 188. (A) |
| 9. (B)  | 29. (A) | 49. (D) | 69. (B) | 89. (D)  | 109. (D) | 129. (A) | 149. (A) | 169. (A) | 189. (A) |
| 10. (B) | 30. (C) | 50. (C) | 70. (A) | 90. (B)  | 110. (B) | 130. (B) | 150. (B) | 170. (B) | 190. (C) |
| 11. (B) | 31. (B) | 51. (A) | 71. (B) | 91. (D)  | 111. (C) | 131. (A) | 151. (B) | 171. (A) | 191. (A) |
| 12. (D) | 32. (C) | 52. (C) | 72. (D) | 92. (C)  | 112. (C) | 132. (C) | 152. (A) | 172. (B) | 192. (B) |
| 13. (A) | 33. (C) | 53. (B) | 73. (A) | 93. (C)  | 113. (C) | 133. (D) | 153. (B) | 173. (B) | 193. (A) |
| 14. (A) | 34. (B) | 54. (B) | 74. (B) | 94. (B)  | 114. (D) | 134. (C) | 154. (C) | 174. (D) | 194. (A) |
| 15. (A) | 35. (B) | 55. (C) | 75. (D) | 95. (D)  | 115. (A) | 135. (A) | 155. (B) | 175. (D) | 195. (C) |
| 16. (B) | 36. (D) | 56. (D) | 76. (C) | 96. (A)  | 116. (B) | 136. (A) | 156. (A) | 176. (C) | 196. (A) |
| 17. (C) | 37. (D) | 57. (D) | 77. (A) | 97. (C)  | 117. (B) | 137. (D) | 157. (B) | 177. (C) | 197. (B) |
| 18. (C) | 38. (D) | 58. (D) | 78. (A) | 98. (D)  | 118. (B) | 138. (C) | 158. (A) | 178. (B) | 198. (B) |
| 19. (C) | 39. (C) | 59. (*) | 79. (C) | 99. (C)  | 119. (D) | 139. (C) | 159. (C) | 179. (B) | 199. (D) |
| 20. (B) | 40. (B) | 60. (B) | 80. (A) | 100. (A) | 120. (B) | 140. (B) | 160. (D) | 180. (B) | 200. (A) |

151. (B): remove 'he'

152. (A): add 'understand' after 'did not'

153. (B): 'does' in place of 'do'

154. (C): 'affected' in place of 'effected'

155. (B): 'not only' in place of 'not even'

187. A devil's advocate originally means is a person who expresses an opinion that he doesn't really hold in order to encourage a discussion about a subject.

**Regarding any corrections in this solution or test paper pls sms test**

**no. and question no. on 8860330003**