

Grand Test – ICM 180105



- 86.(2)
88.(3)
91-95.

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- 87.(3)
89.(3)

90.(5)

- 91.(3)
93.(2)
96.(3)
98.(2)

- 92.(4)
94.(1)
97.(3)

95.(3)

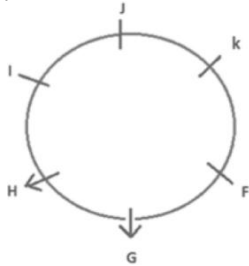
Only 385 will be divisible by 3 when added 2 on first digit of each number.

- 99.(3) 864 521 743 853 962
100.(1) $8 \div 4 = 2$.
101.(5) 786 614 539 487 398
102.(4)
104.(1)
106.(4)
108.(2)
111.(3)

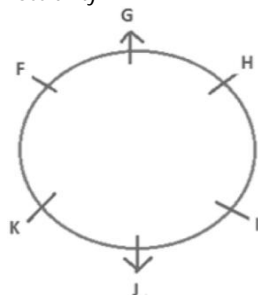
From I. P---B---A---L--- or P---B---L---A
The position of L cannot be determined
Hence I alone is not sufficient.

From II. ----B--T--R-----A. It is clear that there are 11 persons between A and B. Hence II alone is sufficient.

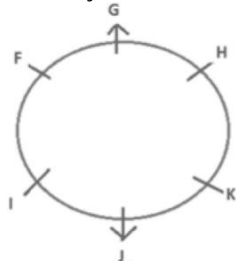
112.(5)



Hence K is second to the left of G.
From II
Possibility i-



Possibility ii-



Thus I alone is sufficient to answer the question.
113.(2) From I.

Person	Floor
U/X	6
Z	5
V	4
W	3
Y	2
U/X	1

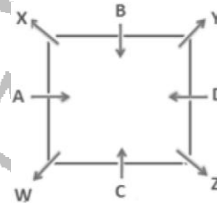
Hence I alone is not sufficient to answer the question.
From II.

Person	Floor
X	6
Z/V	5
V/Z	4
W	3
Y	2
U	1

Hence R lives on the lowermost floor. Thus II alone is sufficient to answer the question.

- 114.(2) From I. Total distance between school and park can't be determined. From II & III we can't determine the distance.
115.(2) From I, II & III we can't determine the number of sports matches.

116-120.



- 116.(3)
118.(2)
121.(2)
123.(2)
125.(2)

- 117.(5)
119.(5)
122.(4)
124.(2)

120.(3)

GATE is the only word that can be made from these 4 letters

126-128.

word	code
do	kile
not	nate
go	miku
to	pila
what	nimu
reason	hibe/chine
man	chine/hibe

- 126.(2)
128.(3)

- 127.(5)
129.(2)

130.(5)

131-135.

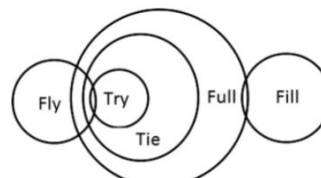
Input : 266 526 119 145 444 179 159 169 199 189
Step I : 199 266 526 119 145 444 179 159 169 189
Step II : 199 189 266 526 119 145 444 179 159 169
Step III : 199 189 179 266 526 119 145 444 159 169
Step IV : 199 189 179 169 266 526 119 145 444 159
Step V : 199 189 179 169 159 266 526 119 145 444
Step VI : 199 189 179 169 159 266 526 444 119 145

- 131.(4)
133.(2)

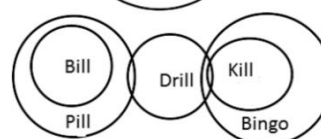
- 132.(1)
134.(3)

135.(5)

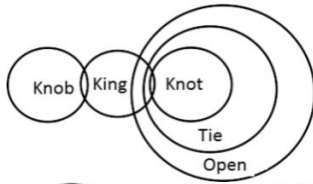
136.(1)



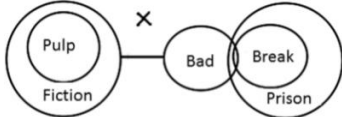
137.(4)



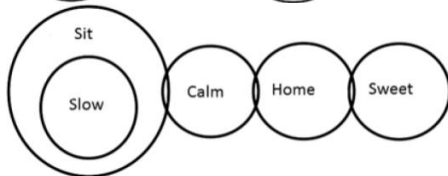
138.(2)



139.(3)



140.(1)



141.(2) Required average = $\frac{45+20+45+42+26+40}{6} = \frac{218}{6}$
 $= 36.3 \approx 36$ (Approx.)

142.(3) Overall ratings of HR = 50 + 45 + 40 + 50 + 46 + 50 = 281
 Overall rating of Finance = 48 + 45 + 35 + 40 + 30 + 41 = 239
 Overall rating of Sales = 50 + 45 + 42 + 35 + 50 + 40 = 262
 Overall rating of Exports = 50 + 45 + 40 + 30 + 50 + 48 = 263
 And Overall ratings of IT = 45 + 20 + 45 + 42 + 26 + 40 = 218
 Hence, 2nd highest overall rating is for exports.

143.(4) Rating for Negotiation = 46 + 30 + 50 + 50 + 26 = 202
 Rating for Creativity = 40 + 35 + 42 + 40 + 45 = 202
 Rating for Team building = 50 + 41 + 40 + 48 + 40 = 219
 Rating for Problem solving = 50 + 40 + 35 + 30 + 42 = 197
 Rating for Leadership = 50 + 48 + 50 + 50 + 45 = 243
 And rating for Interpersonal skills = 45 + 45 + 45 + 45 + 20 = 200
 Hence, Rating is the lowest for problem solving.

144.(5) Required difference = 263 - 239 = 24.

145.(1) Required% = $\frac{20 \times 100}{14+45+45+45}$
 $= \frac{2000 \times 4}{180} = 44.44\%$

146.(4)

$A + B = \frac{1}{10}$
 $B + C = \frac{1}{15}$
 $C + A = \frac{1}{20}$
 $(A + B + C) = \frac{13}{120}$
 6 days work = $\frac{78}{120}$
 Remaining work = $1 - \frac{78}{120}$
 $= \frac{42}{120} = \frac{7}{20}$
 $(B + C)$'s 4 days work = $\frac{4}{15}$
 \therefore Remaining work = $\frac{7}{20} - \frac{4}{15}$
 \therefore Required no. of days = $\frac{\frac{1}{120}}{\frac{1}{120}}$
 $= 10$ days

147.(1) Required time = $\frac{(54-45)}{54} \times 60$
 $= 10$ min.

148.(5)

Let First no = x
 \therefore Second no = $\frac{x}{2}$
 Third no = $\frac{x}{3}$
 Given $x + \frac{x}{2} + \frac{x}{3} = 154 \times 3$
 $x = 252$
 Required difference = $x - \frac{x}{3} = 168$

149.(2) $\frac{PR^2(300+R)}{(100)^3} = \frac{19}{6}$
 $\frac{PR^2}{(100)^2} = \frac{19}{6}$
 $\therefore R = 16\frac{2}{3}\%$

150.(1) $P_1 \left(1 + \frac{4}{100}\right)^5 = P_2 \left(1 + \frac{4}{100}\right)^7$
 $\therefore P_1 : P_2 = 676 : 625$
 $\therefore P_1 = \frac{676}{1301} \times 2602$
 $= 1352$

151.(2) 7144 - 7132 = 12

152.(5) $\frac{22}{7} + \frac{22}{5} - \frac{13}{5} = ?$
 $? = \frac{22}{7} + \frac{9}{5}$
 $= \frac{110+63}{35} = \frac{173}{35}$

153.(2) 5287 - 254.804 = 5032.196

154.(1) 400 × 225 - 70000 = 90000 - 70000 = 20000

155.(1) $\frac{?}{100} \times 170 = 85 \Rightarrow ? = 50.$

156.(3) Total unsold toys in 2012 = $\frac{20}{100} \times 100 + \frac{15}{100} \times 141 = 41.15$ thousand

157.(5) Required difference = 744 - 720 = 24 thousand

158.(1) Required percentage = $\frac{159-78}{78} \times 100 \approx 104\%$

159.(3) Average number of toys in P = $\frac{744}{6} = 124$ thousand

Average number of toys in Q = $\frac{720}{6} = 120$

\therefore Required percentage = $\frac{124-120}{120} \times 100 = 3\frac{1}{3}\%$

160.(4) Cost incurred in manufacturing = 109000 × 50 = Rs. 54,50,000

S.P of 90% products = $\frac{90}{100} \times 109000 \times 80 =$ Rs. 78,48,000

\therefore Required profit % = $\frac{23,98,000}{54,50,000} \times 100 = 44\%$

161.(1) If the statement I alone is sufficient to answer the question, but the statement II alone is not sufficient.

From I,

$\frac{3}{5} * x = x - 90$

or, $\frac{2x}{5} = 90$

Hence, Number, x = 5*45 = 225

162.(5) We cannot get the answer from the statement I and II together, but need even more data.

163.(3) From I and II together, salary of A = 5 × 65780 - (88545 + 59020) = 328900 - 147565 = Rs.181335.

164.(4) From I, S.P. of 1 watch = 15675 and C.P. of 1 watch × $\frac{4}{5} =$ Rs. 12540

\therefore Profit = 15675 - 12540 = Rs. 3135

Hence, only statement I alone is sufficient.

From II - we can also get the profit value from this statement.

165.(3)

From I and II,
 Salary of R = 45980 × 5 - (90670 + 76540)
 $= 229900 - 167210 =$ Rs. 62690

166.(4) The only values that fit situation are C 25%, B 30%, and A 45%. These are the percentage of votes polled. (Note: these value can be got either through trial and error or through solving C + C + 5 + 1.5 (C+5) = 100%
 Then, 20% is 18000 (the difference between A & C).
 Hence, 90000 people must have voted.
 So number of voter on voting list = 1,00,000

167.(3)

Let total monthly income be 'x' Rs.

$\therefore x * \frac{80}{100} * \frac{85}{100} * \frac{70}{100} = 9520$

Total monthly income = 20,000 Rs

- 168.(3) Since, $A + B + C = 3 \times 84 = 252$
 $A + B + C + D = 4 \times 80 = 320$
 \therefore Weight of E = weight of D + 3
 $= (320 - 252) + 3 = 71$ kg.
 Since, $B + C + D + E = 4 \times 78 = 312$
 $\therefore 320 - A + 71 = 312$
 \therefore Weight of A = $391 - 312 = 79$ kg
- 169.(3) Age of captain = $11 \times 30 - (5 \times 27 + 5 \times 29) = 50$ years.
- 170.(3) by Allegation concept,

90	94	97
3	94	4

 \therefore Quantity of first solution in mixture = $\frac{3}{7} \times 21 = 9$ litre
- 171.(2) Let speed of trains are x km/hr And y km/hr
 $\therefore x + y = \frac{132}{6} = 22$ (i)
 $x - y = -7$ (ii)
 From (i) and (ii) -
 $x = 7.5 \frac{km}{hr}, y = 14.5 \frac{km}{hr}$
- 172.(2) Since, 2×2 men of first group = 1×4 men of second group
 \therefore Efficiency of both group are in ratio = $1 : 1$
 Since,
 $M_1 \times D_1 \times T_1 \times E_1 \times W_2 = M_2 \times D_2 \times T_2 \times E_2 \times W_1$
 $30 \times 10 \times 4 \times 1 \times 2 = 45 \times D_2 \times 8 \times 1 \times 1$
 \therefore No. of day's $D_2 = 6 \frac{2}{3}$ days
- 173.(3) $996 - x = x - 894$
 $2x = 1890$
 $x = 945$ Rs.
- 174.(4) Let Nishi's age = $6x$
 Vinee's age = $5x$
 $\frac{6x+9}{5x+9} = \frac{9}{8}$
 $48x + 72 = 45x + 81$
 $3x = 9$
 $x = 3$
 \therefore Required difference = 3 yr.
- 175.(5) $30240 = \frac{84000 \times r \times 3}{100}$
 $r = 12\%$
 At SI, equated rate = 36%
 At CI, equated rate = 40.4928%
 $\therefore 4.4928\%$ of $84000 = 3773.95$
 \therefore Required amount = $30240 + 3773.95 = 34013.95$
- 176.(5) I. $x^2 + x - 20 = 0$
 $(x + 5)(x - 4) = 0$
 $x = 4, -5$
 II. $y^2 - y - 30 = 0$
 $(y - 6)(y + 5) = 0$
 $y = -5, +6$
 no relation
- 177.(2) I. $225x^2 - 4 = 0$
 $x = \pm \frac{2}{15}$
 II. $\sqrt{225y + 2} = 0$
 $y = \frac{-2}{15}$
 $\therefore x \geq y$
- 178.(5) I. $\frac{4}{\sqrt{x}} + \frac{7}{\sqrt{x}} = \sqrt{x}$
 $11 = x$
 II. $y^2 - \frac{(11)^{\frac{5}{2}}}{\sqrt{y}} = 0$
 $y^{\frac{5}{2}} = (11)^{\frac{5}{2}}$
 $y = 11$
 $\therefore x = y$
- 179.(4) I. $x^2 - 365 = 364$
 $x^2 = 729$
 $x = \pm 27$
 II. $y - \sqrt{324} = \sqrt{81}$
 $y = 9 + 18 = 27$
 $\therefore x \leq y$
- 180.(3) I. $3x^2 + 8x + 4 = 0$
 $(3x + 2)(x + 2) = 0$
 $x = \frac{-2}{3}, -2$
 II. $4y^2 - 19y + 12 = 0$
 $(4y - 3)(y - 4) = 0$
 $y = \frac{3}{4}, 4$
 $\therefore x < y$
- 181.(4) Average Budget of B during
 $2008-12 = \frac{795}{5} = 159$
 Average budget of A during
 $2008-12 = \frac{777}{5} = 155.4$
 Required % = $\frac{159}{155.4} \times 100 = 102\%$
- 182.(2) Budget allocated for boys in 2012
 $= 35\%$ of 182
 $= 63.70$ crore
 Budget left = $182 - 63.7 = 118.3$ crore
 Now in 2013, 35% more was increased
 Then, budget for boys in 2013
 $= 135\%$ of 63.7
 $= 85.9\%$
 $\approx 86\%$
 Then budget in 2013
 $= 86 + 118.3 = 204.30$ crore
 Required % = $\frac{204.3 - 182}{182} \times 100$
 $= 12.25\%$
- 183.(2) Budget allocated for girls in 2011
 from state A = $\frac{3}{4} \times 205$
 $= 153.75$ crore
 Amount spent on higher education
 $= \frac{21}{41} \times 153.75$
 $= 78.75$ crore
- 184.(1) Average budget of C from 2009 to 2012
 $= \frac{771}{4} = 192.75$ crore
 Now budget in 2013 = 113% of 192.75
 $= 217.8075$ crore
 Decrease in budget = $220 - 217.8075$
 $= 2.1925$ crore
- 185.(2) Share allocated from budget
 $= 23\%$ of 135
 $= 31.05$ crore
 Shares of NGOs = $67.3 - 31.05$
 $= 36.25$ crore
 Now, let the share of NGOs in
 previous year be x
 $\therefore 110\%$ of $x = 36.25$
 $x = 32.9$ crore
 ≈ 33 crore
- 186.(3) $(2)^{7.2 + 4.8 - 4} = (2)^?$
 $? = 8$
- 187.(2) $187 - 18 = 169$.
- 188.(1) $28 \times 11.25 = 315$
- 189.(2) $? = 64896 / (312 \times 26) ? = 8$.
- 190.(3) $14 \times 2 \times 8 \times 5 = 1120$