

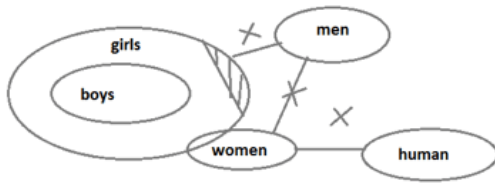




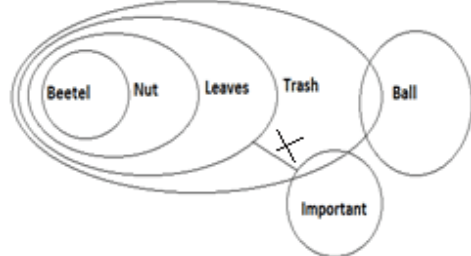
**Grand Test – ICM 181203**



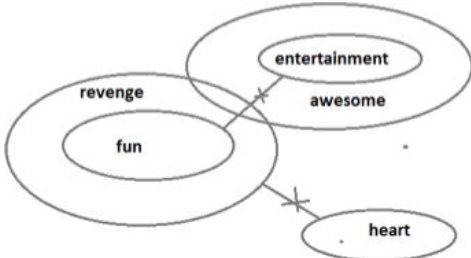
93.(2)



94.(1)



95.(5)



96-100.

| Floor Number | Rooms  |       |         |       |
|--------------|--------|-------|---------|-------|
|              | Case i |       | Case ii |       |
| 6            | C1     | F1    | F1      | C1    |
| 5            | H1/E1  | H1/E1 | H1/E1   | H1/E1 |
| 4            | B1/K1  | B1/K1 | B1/K1   | B1/K1 |
| 3            | I1     | A1    | A1      | I1    |
| 2            | L1     | J1    | J1      | L1    |
| 1            | D1     | G1    | G1      | D1    |

96.(3)

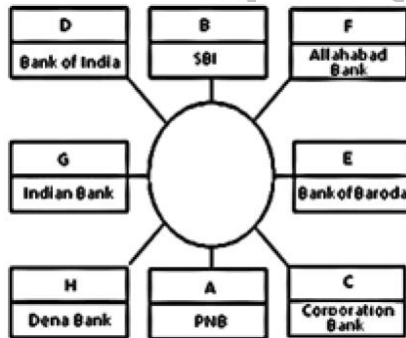
97.(2)

98.(4)

99.(1)

100.(2)

101-105.



101.(3)

102.(1)

103.(2)

104.(3)

105.(4)

106.(3)

107.(3)

108.(2)

109-113.

| Days      | Cricketer | Runs |
|-----------|-----------|------|
| Monday    | Paul      | 60   |
| Tuesday   | Ricky     | 40   |
| Wednesday | Ajay      | 120  |
| Thursday  | Grant     | 180  |
| Friday    | Moin      | 270  |
| Saturday  | Andy      | 150  |
| Sunday    | Pollock   | 90   |

109.(5)

110.(3)

111.(1)

112.(4)

113.(3)

114.(5)

115.(3)

116.(5)

The ? should be replaced by >.

117.(2)

D ≥ B is true in (2) and (3) and among them C > F is true for (2).

118.(3)

- I. S > A > P (True)
- II. S > A > P > T (True)
- III. N ≥ A > P > T (True)
- IV. S > A ≤ N (False)

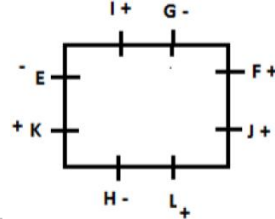
119.(1)

- I. E < M ≤ S (True)
- II. B ≤ E < M ≤ S (False)
- III. M > S (False)
- IV. R < S ≥ M (False)

120.(3)

- I. G ≥ M > P < R (False)
- II. Q ≤ R > P < M (False)
- III. P < M ≤ G (True)
- IV. M > P < R (False)

121-125.



121.(5)

122.(1)

123.(4)

124.(3)

126.(2)

127.(4)

125.(2)

128-132.

- We → Ka
- Provide → hu
- Study → Ja
- Material → lu
- Score → la
- Maximum → fa
- Selection → ju
- The → fu
- Of → na

128.(2)

129.(1)

130.(2)

131.(1)

132.(2)

133.(4)

From both statements, Gender of R is not known.

134.(5)

School will open on 15th june.

135.(4)

Code of "call" may be 1 or 3.

136.(3)

From either statement we can find that code for "adam" is ka

137.(2)

From 2nd statement it is clear that J is youngest.

138.(4)

139.(3)

140.(3)

141. (2)

S. I after 20 years =  $\frac{2000 \times 20 \times 10}{100} = 4000$   
 ∴ New principle =  $2000 + 4000 = 6000$   
 Now, Let after 't' years the interest become  $14000 - 6000 = 8000$   
 $8000 = \frac{6000 \times t \times 10}{100}$

142. (1)

∴ Time  $t = \frac{8000 \times 100}{6000 \times 10} = \frac{40}{3}$  years.  
 ∴ Total time =  $20 + \frac{40}{3} = \frac{100}{3} = 33\frac{1}{3}$  years  
 Total distance =  $128 + 122 = 250$  meter  
 And Resultant Velocity =  $48 + 42 = 90$  km  
 $= 90 \times \frac{5}{18} = 25$  m/s.

143. (2)

∴ Time to cross each other =  $\frac{250}{25} = 10$  Second  
 Let speed of boat be 'v' and, of stream be 'x'  
 For downstream,  $V + U = \frac{28}{7} = 4$  km/hr — (I)  
 & for ups stream,  $V - U = \frac{28}{14} = 2$  km/hr — (II)  
 From (I) & (II),  
 $V = 3$  km/hr.

144. (3)

Let daily wage was 'x' Rs.  
 ∴  $150\% \text{ of } x = 30$   
 $\therefore x = \frac{30 \times 100}{150} = 20$  Rs.

145. (3)

Let cost price be 'x' Rs.  
 ∴ S.P =  $X \times \frac{116}{100} \times \frac{125}{100} = \frac{29x}{20}$   
 $\therefore \text{Profit } \% = \frac{\frac{29x}{20} - x}{x} \times 100$   
 $= \frac{9x}{20 \times x} \times 100 = 45\%$

# Grand Test – ICM 181203



146. (2) Pattern is  $T_{n+1} = T_n \times 3$   
 $\therefore 15 \times 3 = 45$  Not 30
147. (2) Pattern of series is –  
 $36 \times 1.5 = 54$   
 $54 \div 3 = 18$   
 $18 \times 1.5 = 27$   
 $27 \div 3 = 9$   
 $9 \times 1.5 = 13.5 \neq 18.5$   
 $13.5 \div 3 = 4.5$
148. (1) Pattern of series is –  
 $582 + 23 = 605$   
 $605 - 17 = 588$   
 $588 + 23 = 611$   
 $611 - 17 = 594 \neq 634$   
 $594 + 23 = 617$   
 $617 - 17 = 600$
149. (3) Pattern of series is –  
 $46080 \div 12 = 3840$   
 $3840 \div 10 = 384$   
 $384 \div 8 = 48$   
 $48 \div 6 = 8 \neq 24$   
 $8 \div 4 = 2$   
 $2 \div 2 = 1$
150. (4) Pattern of series is  
 $1^3, 2^3, 3^3, 4^3, [5^3 = 125 \neq 124], 216, 343$
151. (3) Academic books published by publisher M  
 $= 28200 \times \frac{7}{10} = 19740$   
 Academic books published by publisher P  
 $= 31200 \times \frac{8}{13} = 19200$   
 Required difference =  $19740 - 19200 = 540$
152. (2) Books distributed by publisher Q  
 $= \frac{33800 \times 79}{100} = 26702$   
 $\therefore$  Required no. of books =  $\frac{26702}{25} \approx 1068$
153. (3) Published Non-Academic books  
 Publisher R  $\rightarrow 35700 \times \frac{6}{17} = 12600$   
 Publisher S  $\rightarrow 37800 \times \frac{13}{18} = 27300$   
 $\therefore$  Required average =  $\frac{12600 + 27300}{2} = 19950$
154. (2) Total books published by publisher P, Q and R  
 $= 31200 + 33800 + 35700$   
 $= 100700$   
 Total Books published by publisher M, N, O and S  
 $= 28200 + 32200 + 29700 + 37800$   
 $= 127900$   
 now, no. of books published by all there the publisher  
 $= \frac{100700 \times 130}{100} + \frac{127900 \times 80}{100} = 233230$   
 average =  $\frac{233230}{7} = 33318$
155. (4) Books distributed  
 Publisher O  $\Rightarrow 29700 \times \frac{92}{100} = 27324$   
 Publisher Q  $\Rightarrow 33800 \times \frac{79}{100} = 26702$   
 Required sum =  $27324 + 26702 = 54026$
156. (4) From I  $\rightarrow 4\% \rightarrow 20$   
 $100\% \rightarrow 500$   
 Minimum passing marks =  $\frac{38}{100} \times 500 + 8 = 198$   
 From II,  
 $5\% \rightarrow 25$   
 $100\% \rightarrow 500$
- Minimum passing marks =  $\frac{35}{100} \times 500 + 23 = 198$   
 From III,  
 We can't determine the minimum passing marks from it.  
 $\therefore$  with the help of statement I or II we can get the required value.
157. (2) From I, Total profit = 54000  
 Time = 1 year  
 From II, we will get the ratio of their investment = 3 : 4 : 2  
 From III, profit of V = profit of A + 4000  
 $4x = 2x + 4000$   
 $2x = 4000$   
 $x = 2000$   
 From II and either I or III, we can get the share of R.  
 Let distance = d  
 Speed in still water = x  
 Speed of current = y  
 $\therefore \frac{d}{x} = 2$   
 From A, d given  
 $B, \frac{d}{x+y} = \text{given}$   
 C, y = given, so upstream speed can be calculated by using any 2 of the 3 statements.  
 From I,  $\ell : b = 3 : 2$   
 From II, length = 48 m  
 Cost of flooring = 850 per sq m  
 $\therefore \ell = 48$  m  
 $b = 32$  m  
 Area =  $48 \times 32$   
 Required price =  $48 \times 32 \times 850$  Rs.  
 From III, perimeter = 160  
 Length =  $3 \times 16 = 48$  m  
 Breadth =  $16 \times 2 = 32$  m  
 $\therefore$  Required cost =  $48 \times 32 \times 850$  Rs.  
 $\therefore$  We can get the cost of flooring a rectangular hall from any of the two statements.
159. (4) From I,  $\ell : b = 3 : 2$   
 From II, length = 48 m  
 Cost of flooring = 850 per sq m  
 $\therefore \ell = 48$  m  
 $b = 32$  m  
 Area =  $48 \times 32$   
 Required price =  $48 \times 32 \times 850$  Rs.  
 From III, perimeter = 160  
 Length =  $3 \times 16 = 48$  m  
 Breadth =  $16 \times 2 = 32$  m  
 $\therefore$  Required cost =  $48 \times 32 \times 850$  Rs.  
 $\therefore$  We can get the cost of flooring a rectangular hall from any of the two statements.
160. (3) Let the required number =  $10x + y$   
 From I =  $x^2 + y^2 = 26$   
 From II,  $(10x + y) : (x + y) = 5 : 2$   
 From III,  $x = y - 4$   
 $y - x = 4$   
 We can get the value of x and y with the help of any of the two statements.
161. (5) Expenditure of the company =  $120 - 70 = 50$  cr.  
 $\therefore$  % profit =  $\frac{70}{50} \times 100 = 140\%$
162. (1) Required ratio =  $(85 + 30) : 85 = 115 : 85 = 23 : 17$
163. (3) Required average  
 $= \frac{40+55+50+70+30+75}{6} = \frac{320}{6} = 53\text{cr}$
164. (2) Req. exp =  $95 \text{ cr} - 40 \text{ cr} = 55 \text{ cr}$   
 $= 55 \times 10^7$
165. (4) Req. % =  $\frac{70 - 50}{50} \times 100 = 40\%$
166. (4) Let initial expenditures an rice, fish and oil be Rs. 12x, Rs. 17x and 3x respectively.  
 Total expenditure =  $12x + 17x + 3x = \text{Rs. } 32x$   
 After increase  
 Expenditure an rice =  $\frac{120}{100} \times 12x = \text{Rs. } 14.4x$   
 Expenditure an fish =  $\frac{130}{100} \times 17x = \text{Rs. } 22.1x$   
 Expenditure an oil =  $\frac{150}{100} \times 3x = 4.5x$   
 Total expenditure =  $14.4x + 22.1x + 4.5x$   
 $= 41x$   
 Increase =  $9x$   
 Percentage Increase =  $\frac{9x}{32x} \times 100 = 28\frac{1}{8}\%$
167. (2) Req. Probability =  $\frac{2c_1 + 1c_1}{12c_1} = \frac{3}{12} = \frac{1}{4}$

# Grand Test – ICM 181203



168. (4) Let A's capital =  $3x$   
 B's capital =  $5x$   
 Ratio of their profit =  $(4 \times 3x) : (T \times 5x)$   
 $\therefore \frac{12x}{5Tx} = \frac{4}{5}$   
 $3 = T$   
 $\therefore$  Required time = 3 months

169. (4) Let no. of students in class A, B and C be  $x, y$  and  $z$   
 $A = 83x$   
 $B = 76y$   
 $C = 85z$   
 Now,  $A + B = 79x + 79y$   
 $B + C = 81(y + z) = 81y + 81z$   
 $\therefore 83x + 76y = 79x + 79y$   
 $4x = 3y$   
 $\frac{x}{y} = \frac{3}{4}$   
 And,  $76y + 85z = 81y + 81z$   
 $5y = 4z$   
 $\frac{y}{z} = \frac{4}{5}$   
 $\therefore x : y : z = 3 : 4 : 5$   
 $\therefore$  Required average =  $\frac{83 \times 3 + 76 \times 4 + 85 \times 5}{12}$   
 $= \frac{249 + 304 + 425}{12}$   
 $= \frac{978}{12}$   
 $= 81.5$

170. (1) Let Required money =  $x$   
 $\therefore \frac{x \times 8 \times 4}{100} + \frac{x \times 6 \times 10}{100} + \frac{x \times 5 \times 12}{100} = 12160$   
 $\frac{x}{100} (32 + 60 + 60) = 12160$   
 $x = \frac{12160 \times 100}{152} = 8000$  Rs.

171. (3) Required average  
 $= \frac{40 \times 4200 + 35 \times 4000}{75}$   
 $= \frac{168000 + 140000}{75}$   
 $= \frac{308000}{75}$   
 $= 4106 \frac{2}{3}$  Rs.

172. (4) Let length of first train =  $2\ell$   
 $\therefore$  length of second train =  $\ell$   
 $\therefore \frac{(48+42)5}{18} = \frac{3\ell}{12}$   
 $25 = \frac{3\ell}{12}$   
 $\ell = 100$  m  
 Let length of platform =  $x$   
 $\therefore \frac{48 \times 5}{18} = \frac{(200+x)}{45}$   
 $600 = 200 + x$   
 $x = 400$  m

173. (2) Let speed of train =  $S$  km/hr  
 $(S - 6) \times \frac{5}{18} = \frac{75}{15} \times 2$   
 $S - 6 = 36$   
 $S = 42$  km/hr  
 Let speed of the second person =  $x$  km/hr  
 $\therefore (42 - x) \frac{5}{18} = \frac{75}{27} \times 4$   
 $42 - x = 40$   
 $x = 2$  km/hr

174. (5)  $2\pi r^2 = 616$   
 $r^2 = \frac{616}{2} \times \frac{7}{22}$   
 $r^2 = 98$

$\therefore$  Volume =  $\frac{2}{3} \pi r^3$   
 $= \frac{2}{3} \times \frac{22}{7} \times 98 \times 7 \sqrt{2}$   
 $= 2032.69$  cm<sup>3</sup>

175. (1) Let length of the wire =  $h$   
 Radius =  $\frac{40}{2} = 20$  mm  
 $= 2$  cm  
 Volume of the wire =  $\pi r^2 h = 4\pi h$   
 and, volume of sphere =  $\frac{4}{3} \pi (9)^3$   
 $4\pi h = \frac{4}{3} \pi \times 9 \times 9 \times 9$   
 $h = 243$  m

176. (2)  $? = 622.793$

177. (1)  $? = (43)^{37-41+6}$   
 $= (43)^2 = 1849$

178. (4)  $? = (53.7+43.6) (53.7-43.6)$   
 $= 97.3 \times 10.1$   
 $= 982.73$

179. (3)  $? = \frac{4004}{52 \times 7} = 11$

180. (2)  $? = \frac{76 \times 112}{100} - \frac{42 \times 116}{100}$   
 $= \frac{3640}{100} = 36.40$

181. (1) I.  $(x + 10)(x - 3) = 0$   
 $x = -10, 3$

II.  $y = \frac{10}{3}$   
 Hence,  $x < y$

182. (2) I.  $(3x - 7)(x - 3) = 0$   
 $x = \frac{7}{3}, 3$

II.  $(6y + 7)(y + 3) = 0$   
 $\therefore y = -3, -\frac{7}{6}$

Hence,  $x > y$

183. (2) I.  $x^3 = \frac{128}{2}$   
 $\therefore x = 4$

II.  $\frac{1}{y^2} = \frac{1}{8}$   
 $\therefore y = \pm 2\sqrt{2}$

Hence,  $x > y$

184. (4) I.  $(5x - 12)(x - 3) = 0$   
 $x = \frac{12}{5}, 3$

II.  $(5y - 6)(5y - 12) = 0$   
 $y = \frac{6}{5}, \frac{12}{5}$

Hence,  $x \geq y$

185. (5) I.  $(x + 6)(x + 3) = 0$   
 $x = -6, -3$

II.  $(y + 3)(y - 6) = 0$   
 $y = 6, -3$

Hence,  $x \leq y$

186. (4)  $P + \frac{P \times 6 \times T}{100} = P + \frac{P \times 4 \times (T+2)}{100}$   
 $6T = 4T + 8, T = 4$  years  
 $P + \frac{P \times 6 \times 4}{100} = 18600, P = \text{Rs } 15000$

Total sum 30000 Rs

187. (5) Let the distance each way be  $x$  km

Then,

$\frac{x}{40} - \frac{x}{45} = 1$

or,  $5x = 1800$

or,  $x = 360$  km

188. (2) Let the 3<sup>rd</sup> pipe can empty full tank in  $x$  hours

$\frac{1}{2} + \frac{1}{3} - \frac{1}{x} = \frac{7}{12}, x = 4$  hours

189. (1) Distance covered by Sam in 30 sec = diagonal = 50 m  
 distance covered by Shyam in 40 sec = sum of 2 sides = 70 m  
 $x + y = 70, x^2 + y^2 = 2500$ , solving the eq<sup>n</sup>,  $xy = 1200$  m<sup>2</sup>

190. (3) Required no. of ways =  $\frac{6!}{2!} \times \frac{5!}{2!} = 21600$

