IBPS CLERK MAINS GRAND TEST – ICM180108

ANSWER KEY

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

HINTS & SOLUTIONS

51. (3) 'adopted, needs, dependent' is the correct set of words to be replaced.
Alienated means make (someone) feel isolated or estranged.

52. (2) 'announced, pick, segments' is the correct set of words.

53. (3) 'validation, recognition, ease' is the correct set of words making the sentence meaningful.
Exoneration means the action of officially absolving someone from blame; vindication.
Concialiation means the action of stopping someone being angry; placation.

54. (4) ' struck, great, passed' is the correct set of words to be replaced.
Afflicted means cause pain or trouble to; affect adversely.
Laudable means deserving praise and commendation.

55. (5) No improvement is required here.

56. (2) Refer 1st paragraph 4th sentence "the increase ..... but ourselves"

57. (4) In the 4th sentence of 2nd paragraph it is mentioned that UN environment report is likely to find a place in the US arsenal so as to point an accusing finger towards countries like India and China.

58. (5) Allergic means caused by or relating to an allergy (a strong dislike).

59. (3) Refer the 2nd last sentence of the 2nd paragraph "we release.....global concern"

60. (3) Refer the 2nd sentence of the 1st paragraph, "according to.....enveloped this region"

61. (3) Refer 3rd last sentence of the passage "From opening .....American interests"

62. (2) The 2nd sentence of the 2nd paragraph Illustrates that the Johannesburg meet is set for the usual battle between the developing World and the west.

63. (2) "Morbidity" means the condition of being diseased hence healthiness is the word most opposite in meaning.

64. (3) 'mandate, necessary, unchanged' is the correct set of words making the sentence meaningful.

65. (2) 'proffered, implemented, result' is the correct set of words making the sentence meaningful.
Proffered means hold out or put forward (something) to someone for acceptance.
Inflicted means cause (something unpleasant or painful) to be suffered by someone or something.

66. (4) 'spirits, determination, deployed' is the correct use.

67. (1) "nevertheless" means "however" connects statement A and statement B in the most appropriate manner.
Ankara continues to defiantly say it doesn't need EU money or membership; nevertheless, it is trying to develop ties with individual EU members, which seems to represent a search for another kind of relationship with Europe.

68. (2) "Whereas" is used while taking a fact into consideration.
BJP has been routed in these elections having managed to win mere 18.7% of all seats whereas the opposition, especially independent candidates, have walked away with flying colours.

69. (1) The paragraph is about the programme "Housing For All by 2022" launched by government along with Pradhan Mantri Awas Yojana (Pmay), generating direct and indirect employment as indicated by the National Council of Applied Economic Research. Hence the blank must be filled by the sentence that tells more about the scheme as mentioned in the above sentence of the blank. After reading all the sentences, we can conclude that sentence (a) talking about the Pmay scheme that envisions building 20 million urban units by 2022, is making the paragraph more complete and meaningful than other sentences. Hence option (a) is the best choice.

70. (5) In this paragraph, future economic growth has been discussed, that depends on the young generation. The sentences before the blank talks about the wide gap between productive labour force and the employment and entrepreneurial opportunities available. The success of the fourth Industrial Revolution has also been discussed. Hence the blank must be filled the sentence related to the economic condition. Going through all the sentences, we can infer that sentence (e) goes correctly with the paragraph that talks about the large-scale disruption causing economic turmoil. Hence sentence (e) is the correct choice.

71. (2) Here the theme of the paragraph revolves around the global economy depending upon the investment, trade and industrial production. The sentences before the blank is about the statistics of GDP growth in 2017 from 2016 whereas the sentences after the blank talks about the expected growth of export from previous year. Hence the blank must be filled by the sentence related to this economic growth. After reading all the sentences, we find that sentence (b) goes in agreement with the passage talking about the pick up of GDP, as discussed in its above sentence, which is expected to be broad based across both advanced and emerging market. Hence option (b) is the correct choice.

72. (2) The paragraph talks about the unavailability of land to the Kyrgystan's citizens that is supposed to provide free to every citizen under Kyrgyz law. Hence the blank must be filled by the sentence related to this theme. Going through all the sentences, we can conclude that sentence (b) goes in harmony with the paragraph talking about the attractive and expensive land because of plot scarcity in Bishkek. Hence option (b) is the correct choice.

73. (2) The paragraph is about the earthquake occurred on October 8, 2005 that has affected Kashmir and its aftershocks been felt from across the region from Central Asia to China. The sentence before the blank talks about volatility created in Kashmir hence the blank must be filled by the sentence related to these arguments. Sentence (b) that talks about the reason behind the volatility in Kashmir is going appropriately with the paragraph. Hence option (b) is the correct choice.

74. (3) Sentences bdae form a coherent paragraph talking about the analysis of report by World economic forum in which India lags behind many neighbouring countries like China and Bangladesh in poor wages and participation of women in economy. Sentence (c) that talks about work opportunities for women and therefore fails to connect with the other sentences. Hence option (c) is the right choice.

75. (3) Sentences deab discuss about the need of reforms, that are previously advised by economists, to strengthen the role of markets in China and to solve the China's debt problem. Sentence (c) discusses about China's financial sector which is influenced or controlled by speculative investing and capital flight making it unrelated to other sentences. Hence sentence (c) is the correct choice.

76. (2) Here the discussion is on the surveys of World Bank and Moody's Investors Service on 'Doing Business' in which one showed the improvement of India and the other upgraded the credit rating of India, making sentences eacd interconnected while sentence (b) talks about making business conditions easier in India which fails to connect with other sentences. Hence option (b) is the correct choice.

77. (5) Sentences dacb form a coherent paragraph as it revolves around the theme of the need of affordable drugs while sentence (e) gives statistics of the allotment of India's GDP to its health sector and hence is not related to the other sentences. Hence option (e) is the correct choice.

78. (1) Sentences edcb focus on the need to improve the air quality in the urban states besides the need to attract investment for creating quality jobs whereas sentence (a) talks about the corrective action, which fails to connect with the other sentences. Hence option (a) is the correct choice.

79. (4) 'produces, launch, succeeding' is the correct set of words making the sentence meaningful.
Embark means begin (a course of action).

80. (5) 'maximize, compatible, providing' is the correct set of words making the sentence meaningful.
Antagonistic means showing or feeling active opposition or hostility towards someone or something.
Congruous means in agreement or harmony.
Egress means the action of going out of or leaving a place.

81. (1) ' relinquished, provider, introducing' is the correct set of words.
Relinquished means voluntarily cease to keep or claim; give up.
Desolated means make (someone) feel utterly wretched and unhappy.

82. (3) 'launch, accelerate, role' is the correct set of words making the sentence meaningful.

83. (2) 'pertaining, conclusion, behind' is the correct set of words making the sentence meaningful.
Admissible means acceptable or valid, especially as evidence in a court of law.

84. (4) Refer 2nd line of 1st paragraph, "This means..... the state"

85. (2) Accord means to go well together. "Withdraw" is the word most opposite to "accord".

86. (3) Refer 4th paragraph 1st sentence "In order to……distinct cultural identities."

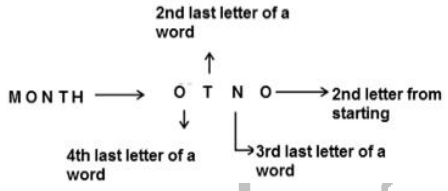
87. (4) Statement (1) is correct because according to the 1st line of the passage the working group on minorities held their session at Geneva in May 2002.
Statement 3 is correct. Refer 1st line of the paragraph, "Integrating diversity……human rights law".

88. (2) Refer 4th paragraph point (b) stating "allowing minorities ……decision making process"

89. (1) According to the passage Minorities have been subjected to social discrimination as it suggests that the state should protect the rights of all within their jurisdiction without the distinction of any kind.

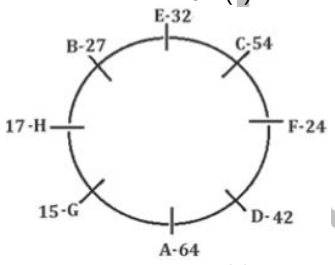
90. (1) Refer 2nd paragraph 2nd line, " This required ……any kind"

91-95. This coding decoding question is based on the new pattern. In this question, the words are coded as per following rules:
(i)1st code is 4th last letter of that word from the right end
(ii) 2nd code is 2nd last letter of word from the right end
(iii)3rd code is 3rd last letter of word from the right end
(iv)4th code is 2nd letter of word from the left end



91. (4) 92. (1)
93. (3) 94. (4) 95. (3)

96-100.



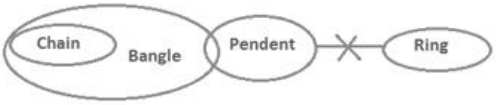
96. (1) 97. (4)
98. (3) 99. (3) 100. (4)

101-105.

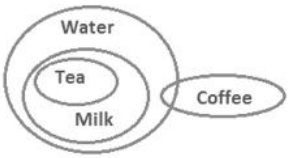
Floor	Players	Earnings	Boxer
18	T(+)	three millions	A
10	S(+/-)	ten millions	B
9	R(+)	one million	C / V
8	Q(-)	three millions	U
6	P(+)	one million	V / C
3	O(+)	one million	B
2	N(+/-)	ten millions	A
1	M(+)	ten millions	U

101. (4) 102. (4)
103. (4) 104. (4) 105. (5)
106. (5)

107.(1)

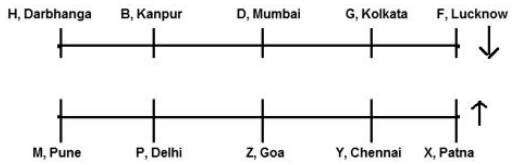


108. (1)



109. (2) Key is the constraint which specifies uniqueness.

110-115.



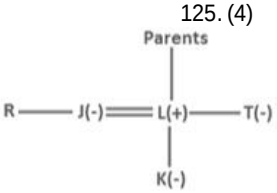
110. (2) 111. (3) 112. (1)
113. (5) 114. (1) 115. (1)

116-120. The machine rearranges two numbers and two words in each step. The words and numbers are arranged alternatively in each step from both right end and left end. The numbers are arranged as smallest even number from left to right and greatest odd number from right to left after that consonants are arranged in increasing alphabetical order from left to right and vowels are arranged decreasing alphabetical order from right to left.
Input: call 40 37 ice land 50 25 under ape same 33 18 38 mango 21 open.
Step I: 18 call 40 ice land 50 25 under ape same 33 38 mango 21 open 37.
Step II: call 18 40 ice land 50 25 ape same 33 38 mango 21 open 37 under.
Step III: 38 call 18 40 ice land 50 25 ape same mango 21 open 37 under 33.
Step IV: land 38 call 18 40 ice50 25 ape same mango 21 37 under 33 open.
Step V: 40 land 38 call 18 ice 50 ape same mango 21 37 under 33 open 25.
Step VI: mango 40 land 38 call 18 50 ape same 21 37 under 33 open 25 ice.
Step VII: 50 mango 40 land 38 call 18 ape same 37 under 33 open 25 ice 21.
Step VIII: same 50 mango 40 land 38 call 18 37 under 33 open 25 ice 21 ape.

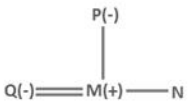
116. (1) 117. (4)
118. (5) 119. (4) 120. (5)

121. (2) I is not advisable because it is unconstitutional. II is desirable because it will control the situation.

122. (2) 123. (2)
124. (3) 125. (4)
126. (5)



127. (1)



128. (4)
129. (1) 34+20-1=53
130. (4)

131-135.

Person	Date	City
A	7th	Laxmi Nagar
B	9th	Laxmi Nagar
C	9th	Munirka
D	7th	Rajender Nagar
E	9th	Munirka
F	7th	Sector-18
G	4th	Munirka
H	7th	Munirka
I	4th	Sector-18
J	2nd	Laxmi Nagar

131. (4) 132. (3)
133. (2) 134. (4) 135. (1)

136-140.

Day	Singer	Country
Monday	R	B
Tuesday	S	C
Wednesday	T	D
Thursday	V	A
Friday	U	E
Saturday	P	F
Sunday	Q	G

136. (3) 137. (1)
138. (4) 139. (5) 140. (2)

141. (2) **I.** $2x^2 - 25x + 72 = 0$
$2x^2 - 16x - 9x + 72 = 0$
$2x(x - 8) - 9(x - 8) = 0$
$x = 8, \frac{9}{2}$
II. $4y^2 - 12y - 27 = 0$
$4y^2 + 6y - 18y - 27 = 0$
$2y(2y + 3) - 9(2y + 3) = 0$
$y = \frac{-3}{2}, \frac{9}{2}$
$x \geq y$

142. (5) **I.** $8x^2 - 26x + 21 = 0$
$8x^2 - 14x - 12x + 21 = 0$
$2x(4x - 7) - 3(4x - 7) = 0$
$x = \frac{7}{4}, \frac{3}{2}$
II. $10y^2 - 43y + 28 = 0$
$10y^2 - 35y - 8y + 28 = 0$
$5y(2y - 7) - 4(2y - 7) = 0$
$y = \frac{7}{2}, \frac{4}{5}$
No relation

143. (2) **I.** $x^2 - 18x + 65 = 0$
$x^2 - 13x - 5x + 65 = 0$
$x = 13, 5$

II. $2y^2 - 17y + 35 = 0$
$2y^2 - 10y - 7y + 35 = 0$
$y = 5, \frac{7}{2}$
$x \geq y$

144. (3) I. $14x^2 + 21x - 10x - 15 = 0$
$7x(2x + 3) - 5(2x + 3) = 0$
$x = \frac{-3}{2}, \frac{5}{7}$
II. $20y^2 - 15y - 16y + 12 = 0$
$5y(4y - 3) - 4(4y - 3) = 0$
$y = \frac{4}{5}, \frac{3}{4}$
$y > x$

145. (3) (i) $3x + 7y = 18$
(ii) $9x - 2y = 8$
Solving (i) and (ii)
$x = 4/3, y = 2$
$y > x$

146. (2) For Arunoday:
In 2012 :
Annual income = Rs. 650 thousands
$\text{Annual expenditure} = 400 \times \frac{3}{2}$
$= \text{Rs. } 600 \text{ thousands}$
$\therefore$ saving (annual) = 50 thousand
Similarly, annual saving in 2016
$= 800 - \left(200 \times \frac{3}{2}\right)$
$= 500$ thousand
For Veer,
Annual saving in 2012
$= \left(650 \times \frac{4}{5}\right) - 400$
= 120 thousands
Annual saving in 2016
$= \left(800 \times \frac{3}{8}\right) - 200$
= 100 thousands
$\therefore$ Required difference of average
$= \frac{1}{2}[(500 + 50) - (120 + 100)]$
= 165 thousands

147. (4) Asked income of Veer
$= 700 \times \frac{4}{7} + 700 + \frac{2}{7}$
$= \text{Rs. } 600 \text{ thousand}$
Asked expenditure of Arunoday
$= 300 \times \frac{4}{3} + 200 \times \frac{3}{2}$
$= \text{Rs. } 700 \text{ thousand}$
$\therefore$ Required ratio $= \frac{600}{700} = 6 : 7$

148. (3) Saving of Veer
$(700 \times \frac{2}{7} - 150) + (800 \times \frac{3}{8} - 200)$
= Rs. 150 thousands
Saving of Arunoday
$= 700 - \frac{2}{3} \times 300 + 800 - 200 \times \frac{3}{2}$
= 1000 thousand.
$\therefore$ Required percentage $= \frac{850}{1000} \times 100$
$= 85\%$

149. (1) Annual saving of Arunoday in 2017
$= \frac{88}{100} \times 500 = 440$ thousand
Annual saving of Veer in 2017
$= \frac{115}{100} \times 100 = 115$ *thousand*
$\therefore$ Their total expenditure
$= (650 - 440) + (650 \times \frac{3}{5} - 115)$
$= 210 + 275$
= 485 thousands

150. (5) Required average
$= \frac{1}{3}\left[\frac{5}{3} \times 150 + \left(800 \times \frac{3}{8} - 200\right) + 700 \times \frac{4}{7}\right]$
$= \frac{1}{3}(250 + 100 + 400)$
$= \text{Rs. } 250 \text{ thousand}$

151. (4) Average expenditure on fuel and transport
$= \frac{98 + 112 + 101 + 133 + 142}{5} = 117.2$
Average expenditure on taxes
$= \frac{83 + 108 + 74 + 88 + 98}{5} = 90.2$
Required % $= \left(\frac{117.2 - 90.2}{90.2}\right) \times 100 \approx 30\%$

152. (5) Expenditure of company in 2011
= 336 + 133 + 36 + 88 = 593
Expenditure of company in 2012
= 420 + 142 + 49 + 98 = 709
Required Ratio $= \frac{593}{709}$
= 593 : 709

153. (3) Expenditure of company in 2010 = 540 lakh
Income of company in 2010
$= \frac{540\times25}{100} + 540 = 675$ lakh
Expenditure of company in 2009 = 594 lakhs
Required % $= \frac{576}{675}\times100 \approx 85\%$

154. (4) Required difference
= Expenditure in 2008 + Expenditure in 2009
– Expenditure in 2012
= 492 + 594 – 709 = 377 lakh

155. (1) All employee received equal amount of salary
Salary get by males in 2008
$= \frac{288\times2}{3} = 192$ lakhs
$2009 = \frac{342\times2}{3} = 228$ lakh
$2010 = \frac{324}{3}\times2 = 216$ lakh
$2011 = \frac{336}{3}\times2 = 224$ lakh
$2012 = \frac{420}{3}\times2 = 280$ lakh
Total salary get by males =
192 + 228 + 216 + 224 + 280 = 1140 lakh

156. (1) Let quantity of vessels A, B and C is 25x, 20x and 18x respectively
Now in vessel A → Milk : Water
2 : 3
10x milk and 15x water
In vessel B → Milk : Water
3 : 2
12x milk and 8x water
In vessel C → Milk : Water
4 : 5
8x milk and 10x water
ATQ→
33x– 30x = 6
3x = 6
x = 2
Quantity in A, B and C
50 liter, 40 liter and 36 liter

157. (5) Let M and W is the one day efficiency of men and women.
If 60 man complete $\left(16\frac{2}{3}\% = \frac{1}{6}\right)$ of work in 20 days
And 60 man complete work in (20 × 6) days = 120 days.
Mans required to complete 5/6 of work in 20 days = 60 × 5 = 300 man
Extra man = 300 – 60 = 240 man
Now efficiency of 1 man equal to efficiency of 2 women.
Women required = (240 × 2)women = 480 women

158. (1) SI (At 14%) CI (@ 20%)
For two years = 28% for two years equivalent rate = 44%
Difference ⇒ CI – SI
44% of (3500 + P) – 28% of (3500) = 1000
16% of 3500 + 44% of P = 1000
44% of P = 440
P = Rs 1000

159. (3) Let amount invested by A, B and C are 2x, 5x and 8x respectively.
⇒ At the end of 4th month A's investment 2x + 6x = 8x = c's initial invested
⇒ C's investment = 8x – 3x = 5x = B's initial investment
Ratio of investment = A : B : C
$(2x\times4 + 8x\times8)$: $(5x\times12)$: $(8x\times4 + 5x\times8)$
6 : 5 : 6
Let B's profit = 5y
Now ATQ
$= \frac{5y\times10}{100} = 2550$
y = 5100
share of A and B = 5y + 6y = 11y = 11 × 5100 = 56100

160. (1) Let cost price of X and Y is A and B respectively
Now Ratio of selling price
$= \frac{125A}{130B} = \frac{175}{234}$
$\frac{A}{B} = \frac{7}{9}$
Cost price of X and Y A = 7y and B = 9y respectively.
Profit on A if it sells on B's cost price
$\frac{9y-7y}{7y}\times100 = 28\frac{4}{7}\%$

161. (1) Let population of city A and city F are
17x, 13x respectively.
Now population city F in 2002
$= 13x\times\frac{150}{100}\times\frac{170}{100}$
Population of city A in 2002
$= 17x\times\frac{115}{100}\times\frac{130}{100}$
Required ratio
$= \frac{13x\times150\times170}{17x\times115\times130} = 30:23$

162. (2) Population of city D in 2002 = 54400
Population of city D in 2001
$= 54400\times\frac{100}{160} = 34000$
So, population of city C in 2000 = 34,000
Population of city C in 2001
$= \frac{34000\times140}{100} = 47{,}600$

163. (4) Let population of city E in 2000 = 100x
So population of city E in 2002
$= 100x\times\frac{120}{100}\times\frac{125}{100} = 150x$
Difference = 150x – 100x = 7000
So population of E in 2000 = 14,000
Population of city B in 2000
$= \frac{14{,}000}{7}\times5 = 10{,}000$
$Required\ difference$
$= 10{,}000\times\frac{135}{100}\times\frac{155}{100} - 10{,}000$
=10925

164. (1) Let population of city F in 2000 = 100x
Then population ion 2001 = 170x
Population in 2002 = 255x
$\text{Average} = \frac{100x + 170x + 255x}{3} = 17500$
x = 100
Population in 2002 = 25,500

165. (5) Let population of city C in 2000 and population of city F in 2001 is 25x and 34x respectively.

Now,

Population of city C in 2001

$= 25x \times \frac{140}{100} = 35x$

Population of city F in 2000

$= 34x \times \frac{100}{170} = 20x$

Required % $= \frac{(35x - 20x)}{20x} \times 100 = 75\%$

166. (5) Let Speed of stream = x km/h

Now→ in upstream boat travel at speed

= 1 km in 15 minutes

= 4 km/hr

1 km/hr is the speed of stream

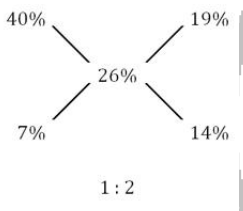
Now in downstream

Distance cover

$= 6 \times \frac{7}{4} = 10.5$ km

167. (3) His profit% $= \frac{119 \times 100}{85} - 100 = \frac{3400}{85} = 40\%$

168. (2)



1 : 2

Part of whisky replaced is $\frac{2}{3}$

169. (2) Let original expense be Rs. $14x$, $17x$ & $5x$ respectively.

Total = $36x$

New expense on medicine = $\frac{5}{4} \times 14x = 17.5x$

New expense on fruit = $\frac{13}{10} \times 17x = 22.1x$

New expense on milk = $\frac{16}{10} \times 5x = 8x$

Total new expense = $47.6x$

Increase % = $\frac{47.6x - 36x}{36x} \times 100$

$= \frac{11.6x}{36x} \times 100$

$= 32\frac{2}{9}\%$

170. (4) Ratio of milk & water in D after 16 l. milk is taken out from A = 16 : 44 = 4 : 11

Now, quantity of milk poured back, into A

$= \frac{4}{15} \times 10$

$= \frac{8}{3}\ ltr.$

Quantity of water poured out from D

$= \frac{11}{15} \times 10$

$= \frac{22}{3}\ ltr.$

Hence, quantity of milk in A = $(80 - 16) + \frac{8}{3} = 64 + \frac{8}{3}$

$= \frac{192 + 8}{3}$

$= \frac{200}{3}\ ltr.$

Quantity of water in B = $44 - \frac{22}{3} = \frac{132 - 22}{3}$

$= \frac{110}{3}\ ltr.$

Required ratio = $\frac{200}{3} : \frac{110}{3} = 20 : 11$

171. (2) Let the total investment of B = 100
Investment of A = 100×125/100
Ratio of 60% profit = 125×12 : 100×9+50×3= 10:7
Let the total profit = 170
Profit for A for only 60 % of profit = 170×0.6×(10/17)=60
Profit of B for only 60 % of profit = 102-60=42
Total profit of A = 60+ 68×7/17= 88
Total Profit of B = 42+68×10/17 = 82
Required ratio = 88:82 = 44:41

172. (2) Let CP of table = x
CP of chair = y
$0.1x = 0.125y, x = \frac{5}{4}y$

$\frac{5}{4}y \times 0.125 - 0.1y = 9, y = 160, x = 200$

173. (2) Let the number of water taps is n
Part of tank filled by water tap in one hour = $\frac{n}{6}$
Part of tank emptied by outlet tap in one hour = $\frac{16-n}{18}$
Resultant $= \frac{n}{6} - \frac{16-n}{18}$

$= \frac{3n - 16 + n}{18} = \frac{4n - 16}{18}$

$= \frac{2n - 8}{9}$

tank is filled in $1\frac{1}{2}$ hour, so,

$\frac{2n - 8}{9} \times \frac{3}{2} = 1$

$2n - 8 = 6$

$2n = 14$

$n = 7$

number of empty taps= $16 - n = 9$

174. (2)

Time taken by trains to meet each other is t.

$73 \times t = 47 \times t + 13$

$26t = 13$

$t = 0.5$ hour

Distance between Allahabad and Kanpur= $(73 + 47) \times 0.5$

$= 120 \times 0.5$

$= 60$ km

175. (5) Volume of earth removed $= 10\times4.5\times3$
$= 135m^3$
Remaining area $= [20\times9 - 10\times4.5] = 180 - 45 = 135$
Let, rise in height be h m
Therefore,
$h\times135 = 135$
$h = 1m$

176. (5) St. A:– A : B = 1.5
St. B:– C = $\frac{1}{2}(A+B)$
St. C:– A = $340 + B$
So using any 2 of the 3 statements we can determine the share of B.

177. (4) Let there are x no. of columns
St. I – $0.625x \times x = 40,\ x^2 = 64$
$x = 8$, no. of rows = 5

student in each column = 5
St. II – $\frac{5}{8}x \times x = 40, x^2 = 64, x = 8$
no. of rows = 5
St. III– R < C
So either A or B is sufficient to answer the following questions

178. (2) Let distance = d
Speed in still water = x
Speed of current = y
$\therefore \frac{d}{x} = 2$
From A, d given
B, $\frac{d}{x+y}$ = given
C, given, soupstream speed can be calculated by using any 2 of the 3 statements

179. (4) A: 3T = 7C
B: T – C = 900
C: $T = C + C \times \frac{400}{3\times100} = \frac{7C}{3}$

180. (5) Let the no. of red balls be x.
So A → x+2 = no. of yellow balls.
B → x+2+G=3x or G = 2x–2
So C → $\frac{x}{2x-2} = \frac{3}{4}$ or x = 3
So, required probability = $\frac{{}^3C_1\times{}^5C_1\times{}^4C_1}{{}^{12}C_3} = \frac{3}{11}$

181. (2) The pattern is:
461 + 13 = 474
474 - 9 = 465
465 + 13 = 478
478 - 9 = 469
469 + 13 = 482

182. (3) Pattern is $+9\times1, -9\times2, +9\times3, -9\times4, +9\times5$

183. (5) $\div2+2, \div3+3, \div4+4, \div5+5$

184. (3) 620 632 608 644 596 **656**
(+12, −24, +36, −48, +60)

185. (5) 120 320 **820** 2070 5195 13007.5
(×2.5+20 each step)

186. (3) Total → 1 Engine, 4 AC coach and 2 General Coaches out of 2 Engine 6 AC coach and 9 General Coaches
Total No of ways = ${}^2C_1 \times {}^6C_4 \times {}^9C_2 = 1080$

187. (1) Let total no. of Blue balls = x
Red balls = 2x
Green balls = 24
Now Red balls = $\frac{2x}{x+2x+24}\times100 = \frac{600}{17}$
$= \frac{2x}{3x+24} = \frac{6}{17}$
x = 9
Number of red balls; 2x = 18
Number of blue balls; x = 9
Box 1 → Total balls → 2 blue + 4 Red + 3 Green
Box 2 → Total balls → 4 blue + 8 Red + 6 Green
Box 3 → Total balls → 3 blue + 6 Red + 15 Green
Required Probability = $\frac{1}{3}\left(\frac{3}{9}+\frac{6}{18}+\frac{15}{24}\right) = \frac{31}{72}$

188. (1) Let length of train and platform be 'L and 'P' respectively
1st train cross the pole = 24 s
2nd train (20% faster than first train) Cross the pole
$= \frac{24}{6}\times5 = 20$ s (same length)
Time taken to cross platform = 30 s
ATQ,
$\frac{L+P}{30} = \frac{L}{20}$
$2P = L$
$\frac{L}{P} = \frac{2}{1}$

189. (1) Let 100x number of employee eligible to cast vote.
10% absent ---
Remaining = 100x – 10x = 90x
10% of Remaining is not valid = 90x – 9x = 81x
Winner got 1 vote extra.
Winner Looser
41x 40x
X = 1
Only possible case
Total employees → 100 × 1 + 2 = 102
2 → Candidates participated in election

190. (4) Sum of age of couple at the Since of marriage = 52
After 4 years = 16 × 4 = 64
Age of 2 children = 64 – 52 – (4 + 4) = 4
As they are not twins but we also don't know the correct age of any one of the two so ages of the children cannot be determined.