🔺**RACE**

IBPS CLERK MAINS GRAND TEST – ICM180107

ANSWER KEY

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

HINTS & SOLUTIONS

51. (2) Refer the first sentence of the fourth paragraph "There is now considerable evidence that Type B malnutrition is a major cause of chronic degenerative diseases."

52. (4) Refer the last two sentences of the first paragraph "These have a long latency period before symptoms appear and a diagnosis is made. It follows that the majority of apparently healthy people are pre-ill."

53. (1) Refer the last sentence of the second paragraph "Nutrition is the easiest of these to change, and the most versatile tool for affecting the metabolic changes needed to tilt the balance away from disease."

54. (3) Refer the second last sentence of the passage ". The vast majority of people are consuming suboptimal amounts of most micronutrients, and most of the micronutrients concerned are very safe. "

55. (2) Subtle meaning so delicate or precise as to be difficult to analyse or describe. Hence it has same meaning as tenuous.
Abject means experienced or present to the maximum degree.
Adamant means impervious to pleas, persuasion, requests, reason.

Emulate means strive to equal or match, especially by imitating.

56. (5) Invalidate means make or prove (an argument, statement, or theory) unsound or erroneous. Hence it has same meaning as refute.
Servile means having or showing an excessive willingness to serve or please others.
Equivocal means open to two or more interpretations.
Hapless means unfortunate and deserving pity.
Inane means devoid of intelligence.

57. (2) Inevitable means certain to happen; unavoidable. Hence it has opposite meaning as avertable.
Alacrity means liveliness and eagerness.
Amenable means disposed or willing to comply.
Bereft means sorrowful through loss or deprivation.
Callous means emotionally hardened.

58-62. The correct sequence is AGBCEDFH

58. (5)   59. (2)

60. (1)   61. (1)   62. (3)

63. (5) The paragraph is all about the flood situation in Bihar during the 90 days of monsoon and the names given to different levels of the river water. The blank must be filled

by the sentence related to this situation of Bihar. We can easily point out that sentence (e) is in harmony with the paragraph talking about the water level standing still. All other sentences are irrelevant.

64. (1) The paragraph revolves around the theme of protest against the traffickers who grabbed the public attention. The sentence before the blank discusses about wildlife traffickers grabbing attention while sentence after the blank talks about the punishment assigned to them. Hence the blank must be filled by the sentence talking about the traffickers activities. Sentence (a) talks about the smuggling by trafficker gang and is making the paragraph complete and meaningful.

65. (3) The paragraph is about the boost in the business of whale watching in Oslob. The business of fisherman Marcelo has been described in the paragraph. The sentences above the blank is about the Fisherman that turned to guide has now better living standard. Hence the blank must be filled by the sentence discussing about the Marcelo's improved life conditions. Sentence (c) is going correctly with the paragraph and hence is the right choice.

66. (5) The paragraph is about the old access road that was once a sealed highway and then it was declared a national park and a contiguous forest. The sentences before the blank talks about the decommissioning of the road to wildlife while sentence after the blank talks about passing of the bullet train through the forest. Hence the blank must be filled by the sentence related to these statements. Going through the sentences, we can infer that sentence (e) goes correctly with the paragraph. Other sentences are irrelevant.

67. (4) The paragraph revolves around the theme of Kazakhstan's economic development through oil and gas reserves and through coal. The sentence before the blank talks about the abundant quantities of anthracite and bituminous coal in Kazakhstan which is responsible for country's economic development and hence the blank must be filled by the sentence related to coal promoting the development of Kazakhstan. Sentence (d) talks about the production of electricity by coal supporting the development of the country and making it a correct choice.

68. (2) Sentence (b) is incorrect. 'he can' should be used in place of 'could' as the sentence is in present tense.

69. (3) In sentence (c), the use of preposition 'of' is wrong as it is used before any cause, source or relation not before any object.

70. (4) In sentence (d), 'so high' will be used in place of 'such higher' as 'so+ adjective (positive) + that' is used.
Ex. She is so bold that she can talk to anybody.

71. (1) Sentence (a) is incorrect as the use of 'what' is wrong here. 'that' should be used in place of 'what' as 'that' is used in the form of relative pronoun after 'anything, nothing'.
Ex. I can give you anything that you want.

72. (3) Sentence (c) is Incorrect. 'their' will be used in place of 'his' before 'common friend' as the subject of the sentence is plural.

73. (3) Refer the second last sentence of the first paragraph ". He and Peyton West, a doctoral student who has been working with him in Tanzania, had never seen the Tsavo lions that live some 200 miles east of the Serengeti."

74. (3) The statement "The Tsavo lion is considered to be less evolved than the Serengeti variety." do not contribute to the popular image of Tsavo lions as savage creatures.

75. (3) Tsavo lions are believed to be extremely ferocious. So if they are made close to Pleistocene lions and if option (c) is true, then the fact of their ferocity would be negated.

76. (3) Refer the last part of the third paragraph " The zoologist has been working in Tsavo off and on for four years. "I am so sick of this maneater business. Patterson made a helluva lot of money off that story, but Tsavo's lions are no more likely to turn man-eater than lions from elsewhere."

77. (2) Intriguing means arousing one's curiosity or interest; fascinating. Hence it has same meaning as enthralling.
Circumvent means surround so as to force to give up.
Cogent means powerfully persuasive. Debacle means a sudden and violent collapse. Denigrate means charge falsely or with malicious intent.

78. (2) Savagery means the quality of being fierce or cruel. Hence it has same meaning as viciousness. Cognizant means having or showing knowledge or understanding or realization.
Concomitant means following or accompanying as a consequence.
Disparate means fundamentally different or distinct in quality or kind.
Duress means compulsory force or threat.

79. (4) Ferocity means savagely fierce, cruel, or violent. Hence it has opposite meaning as tame.
Covet means wish, long, or crave for.
Ebullient means joyously unrestrained.
Elicit means call forth, as an emotion, feeling, or response.
Enervate means weaken mentally or morally.

80. (1) Primitive means relating to, denoting, or preserving the character of an early stage in the evolutionary or historical development of something. Hence it has opposite meaning as neoteric.
Evince means give expression to.
Exigent means demanding immediate attention.
Onerous means not easily borne; wearing.
Paucity means an insufficient quantity or number.

81. (5) The theme of the sentences revolves around the amendments in Indian Constitution, which is the longest constitution in the world and indicated here as a living document. Going with this theme, we can conclude that sentences cbda form a coherent paragraph. Sentence (e) that talks about making 26 November as National Repeal Law Day, is not going correctly with the theme.
Hence sentence (e) is the right choice.

82. (3) Sentences bead forms a coherent paragraph talking about the introduction of generic medicines, that are more affordable than the branded medicine whereas sentence (c) talks about the health care cost making it unrelated to the other sentences. Hence sentence (c) is the correct choice.

83. (4) As we go through the sentences, we can infer that sentences eabc form a coherent paragraph talking about the things to be taken into concern while taking bold economic and social reforms but sentence (d) is about what leaders and policy makers must do, which fails to connect with other sentences.

84. (4) Going through the sentences, we can infer that the sentences ceab form a coherent paragraph that discusses about the efforts to urbanize the cities that can make India

more competitive. Sentence (d) is about structural traits of city competitiveness making it unrelated to the other sentences. Hence sentence (d) is the correct choice.

85. (3) Sentences dabe form a coherent paragraph talking about appointment of a committee for overhauling the Indian tax and its use while sentence (c) talks about the problems with existing direct law making it different from the other sentences. Hence sentence (c) is the correct choice.

86. (3) Belittle and Magnify are opposite in meaning.
Belittle means to dismiss (someone or something) as unimportant.
Magnify means make (something) appear larger than it is, especially with a lens or microscope.

87. (5) Premeditation and Impromptu are opposite in meaning.
Impromptu means done without being planned or rehearsed.
Premeditation means to think out or plan (an action, especially a crime) beforehand.

88. (3) Genial means friendly and cheerful. Peevish means to having or showing an irritable disposition. Hence both are opposite in meaning.

89. (4) Forbid and permit are opposite in meaning.
Forbid means to refuse to allow (something).
Permit means to officially allow (someone) to do something.

90. (1) Handy and redundant are opposite in meaning.
Handy means convenient to handle or use; useful.
Redundant means not or no longer needed or useful; superfluous.

91. (2)

92. (4)

93. (4)

94. (4)

95. (2)

96-100.
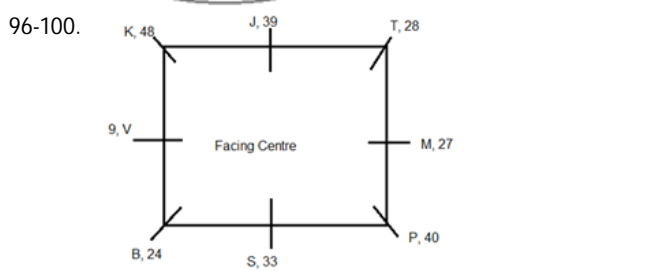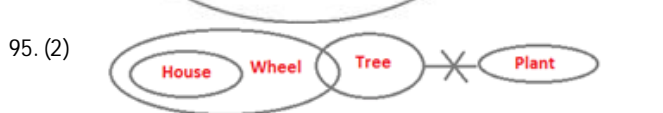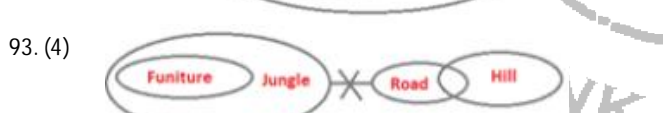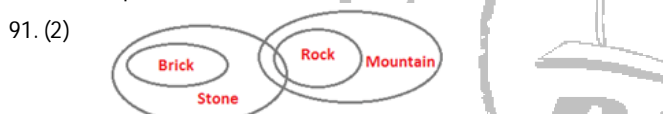
96. (5)   97. (2)
98. (3)   99. (3)   100. (5)

101-105.

Persons	Coffee brands	Country	Types of Muffin
T	Starbucks	London	Corn muffin
U	Maxwell	Paris	Chocolate muffin
V	Nescafe	New York	Blueberry muffin
W	Mount Hagen	France	Honey Bran raisin
X	Folgers	Australia	Fruit muffin
Y	Jacobs Kronug	Singapore	Coffee cake muffin
Z	Caribou	Italy	Strawberry muffin

101. (5)   102. (4)
103. (2)   104. (3)   105. (5)

106. (2) For accountability of plethora of bodies, an umbrella committee should be appointed with powers to regulate action of these bodies. Hence, only action II is the right course of action.

107. (1) Action I will help government to curb the mafia. Action II is not feasible. Hence, only action I is the right course of action.

108. (3)   109. (1)   110. (1)

111-115. Students let us understand the Logic behind this Question and lets understand how to solve it. As a first step lets first understand the logic behind the Output. If you will see the final output you will observe the following:
(i) There are six numbers and six words in the input. The three numbers are arranged in the beginning and the remaining three numbers are arranged in the last.
(ii) The First three numbers are arranged in ascending order from left to right with last three numbers are arranged in descending order from right to left.
(iii) After that the six words are arranged in alphabetical order in the middle.
Now lets take the arrangement given in the Question
Input: 66 health soft 11 beer 83 ice 49 African 77 cute 33
Step I: 11 66 health soft beer ice 49 African 77 cute 33 83
Step II: 11 33 66 health soft beer ice 49 African cute 77 83
Step III: 11 33 49 health soft beer ice African cute 66 77 83
Step IV: 11 33 49 African health soft beer ice cute 66 77 83
Step V: 11 33 49 African beer health soft ice cute 66 77 83
Step VI: 11 33 49 African beer cute health soft ice 66 77 83
Step VII: 11 33 49 African beer cute health ice soft 66 77 83
'Step VII' is the final step of this input.

111. (4) Seven steps are needed to complete the arrangement.

112. (3) It is 'step V'.

113. (4) 'Step I' is the '11 66 health soft beer ice 49 African 77 cute 33 83'

114. (2) '11 33 49 African beer cute health ice soft 66 77 83' is the final arrangement.

115. (1) In step IV '11 33 49 African health soft beer ice cute 66 77 83'
7th position from the right is the 'soft'

116. (1) Clearly, mechanization would speed up the work and increase the production. So, argument I is strong enough. Argument II is vague because mechanization will only eliminate wasteful employment, not create unemployment.

117. (1) Learning martial arts is necessary for girls for self-defence. So, argument I is strong argument. However, argument II is vague since a training in these arts has nothing to do with their feminine grace

118. (4)   119. (4)   120. (1)

121-125.

Floors	Persons	Fruits
9	B	Pomegranate
8	A	Orange
7	F	Papaya
6	H	Grapes
5	G	Mango
4	D	Banana
3	J	Muskmelon
2	E	Cherry
1	C	Watermelon

121. (3)   122. (4)
123. (2)   124. (4)   125. (1)

126. (3) Here if II does not work I will give Indian agriculture a protection to compete with the international companies.

127. (4) Both I and II are not valid courses of action because they won't benefit the team or our objectives.

128. (4) Swati's rank from the top = 40-12+1= 29th
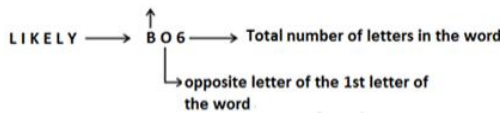So, Monika's rank from the top=25th
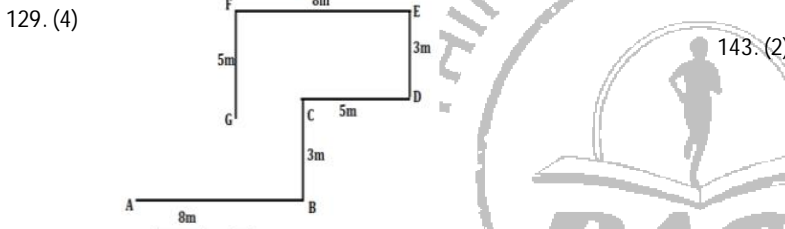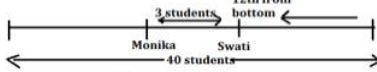
129. (4)

$AG = \sqrt{25+1} = \sqrt{26}$ m

130. (2)
131-135.

131. (3)   132. (4)
133. (4)   134. (4)   135. (5)

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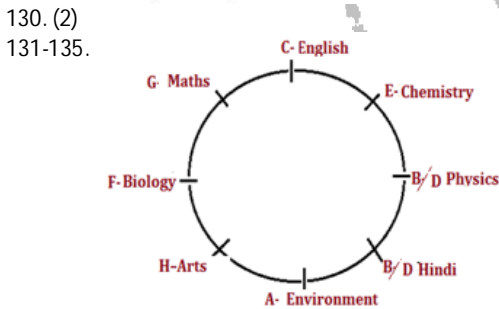
136. (2)   137. (4)
138. (3)   139. (1)   140. (4)

141. (4) Let level of water will be increased by h.

$\pi \times (15)^2 \times h = \frac{4}{3}\pi(10)^3$

$\Rightarrow h = \frac{4}{3} \times \frac{10 \times 10 \times 10}{15 \times 15}$

$= 5\frac{25}{27}$ cm

142. (2) Let R_1 and R_2 is the inner and outer radius of the metallic pipe.

Height = 14 cm.

Difference b/w C.S.A of Inner and outer side of cylinder

$= 2\pi R_2 h - 2\pi R_1 h$

$= 2\pi \times 14(R_2 - R_1) = 44$

$R_2 - R_1 = \frac{1}{2}$ cm _____(1)

Volume of pipe $= 99 \, cm^3 = \pi R_2^2 h - \pi R_1^2 h$

$R_2^2 - R_1^2 = \frac{9}{4}$

$(R_2 - R_1)(R_2 + R_1) = \frac{9}{4}$

$(R_2 + R_1)\frac{1}{2} = \frac{9}{4}$

$R_2 + R_1 = \frac{9}{2}$ _____(2)

Solving (1) & (2)

$R_1 = 2$ cm

$R_2 = 2.5$ cm

143. (2) Let cost price of each article = 100 x

Profit on 1st Article = 15x

Total profit $= (100x + 100x) \times \frac{30}{100} = 60x$

Profit on 2nd Article $= 100x \times \frac{15}{100} + 1500$

$= 15x + 1500$

Now

15x + 15x + 1500 = 60x

30x = 1500

x = 50

Cost price of Article = 5000

144. (2) Let cost price of each candle = 100

Then cost price of each bulb = 200

Let 'x' is percentage of loss and profit

Now,

Profit on selling 10 candles $= 10 \times (\frac{100 \times x}{100}) = 10x$

Profit on selling 10 candles is equal to selling price of 3 bulbs

$\Rightarrow$ selling price of each bulb $= \frac{10x}{3}$

Now loss on selling 10 bulbs

$10 \times (\frac{200 \times x}{100}) = 20x$

Loss equal to the selling price of 4 candles

Selling price of each candle = 5x

Required Ratio $= \frac{5x \times 3}{10x} = 3:2$

145. (4) Let intial quantity taken = x

$$24 = 54 \left\{1 - \frac{x}{54}\right\}^2$$

$$\frac{4}{9} = \left\{1 - \frac{x}{54}\right\}^2$$

x = 18

146. (2) Simple interest on sum after 4 years = 300

Simple Interest for 1 year = 75

Simple Interest for 10 year = 75 × 10 = 750

147. (3) Let A can print 'x' pages in a day

Let B can print 'y' more pages then A

B can print 'x+y' pages

C can print 'x+2y' pages

Now, A's 4 hour prints equal to the

C's 1 hour print.

$$\frac{x}{8} \times 4 = \frac{x + 2y}{8}$$

3x = 2y

$$y = \frac{3}{2}x$$

C's print in one hour = $\frac{900}{20} \times \frac{4x \times 2}{15x \times 8} = \frac{24}{8}$

= 3 pages

148. (4) Inlet pipe can fill the tank = 4 hours

Outlet pipe can empty the tank = 30 hours

Ratio of efficing

Inlet → + 15 ⎤
           ⎦ Per hour work
Outlet → – 2

To prevent overflow we required

7 more outlet pipes

So outlet efficiency become = – 16 per hour

149. (1) Let digits of two digit number is,

x = Ten's place digit

y = Unit place digit

ATQ ⇒

$$\frac{10x + y - (10y + x)}{5} = x + y$$

9x – 9y = 5x + 5y

$$x = \frac{7}{2}y$$

Now, x can only integer

Which is less then 9

$$x = \frac{7}{2} \times 2 = 7$$

Difference = 7 – 2 = 5

150. (2) Let Income y A, B and C are 7x, 9x and 12x respectively.

Let expensive of A, B and C and 8y, 9y and by respectively.

A's saving = 7x – 8y = $\frac{7x}{4}$

$$y = \frac{21}{32}x$$

B's saving = $9x - \frac{9 \times 21}{32}x = \frac{99}{32}x$

C's saving = $12x - 15 \times \frac{21}{32}x = \frac{69}{32}x$

Ratio of A's, B and C's saving

= 56 : 99 : 69

151. (1) Suppose B takes 'x' days,
Then C will take '3x' days
$$\frac{1}{3x} + \frac{1}{x} = \frac{1}{22.5}$$
Or, x = 30
Now, Let A and B together take '2y' days,
Then A will take '3y' days,
$$\frac{1}{3y} + \frac{1}{30} = \frac{1}{2y}$$
Or, y = 5
Hence, A will take 3y = 3 × 5 = 15 days.
Quantity 1 = 15
Quantity 2 = $\frac{90}{6+1}$ = 90/7

152. (2) Quantity I → $\frac{117 \times 3 + 2}{300} \times 600$
= 706 Rs
Quantity II → $x + \frac{25x}{100} = 1000$
$$x = \frac{100}{125} \times 1000$$
= 800 Rs
∴ Quantity I < Quantity II

153. (1) Since $x > 0$ and $y < 0$,
Quantity 1 will always be positive
And quantity 2 will always be negative
Hence, quantity 1 > quantity 2

154. (2) Quantity 1 : Volume of cube left = $7^3 - \pi \left(\frac{7}{2}\right)^2 \times 7$
$$= 343 - \frac{22}{7} \times \frac{49 \times 7}{4}$$
= 343 – 269.5
= 73.5 cm³
Quantity 2 : Surface area of cube left
$$= 6 \times 7^2 - 2.\pi \left(\frac{7}{2}\right)^2 + 2\pi \left(\frac{7}{2}\right)7$$
= 294 – 77 + 154
= 371 cm²
Quantity 2 > Quantity 1

155. (1) Let, first part beRs. x
Second part beRs. y
Then third part = 1440 – x – y
ATQ,
$$\frac{x \times 2 \times 3}{100} = \frac{y \times 3 \times 4}{100} = \frac{4 \times 5 \times (1440 - x - y)}{100}$$
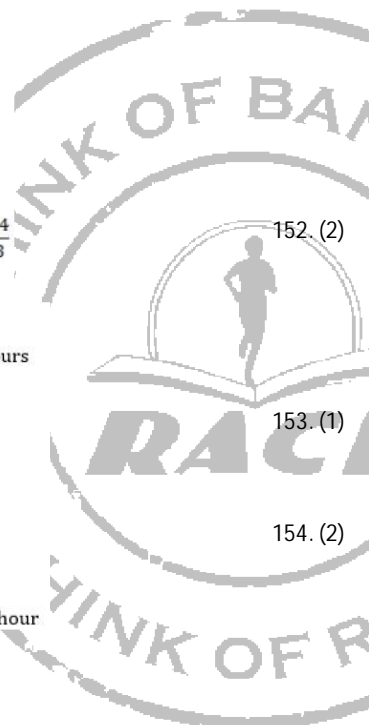Solving, we get
$y = 400$
$x = 800$
1440 – 800 – 400 = 240
Req. Difference = 800 – 240 = 560
Quantity 2 < Quantity 1

156. (2) Number of qualified candidates in

BANK exam in 2002 = $95000 \times \frac{62.5}{100} = 59375$

Failed candidates in SSC exam

in 2001 = $100000 \times \frac{42.5}{100} = 42500$

Required percentage = $\frac{59375 - 42500}{42500} \times 100$

$= \frac{16875}{425} \%$

$= 39.70\%$

157. (3) Qualified candidates of BANK exam in

different year,

In year, 2000 $\Rightarrow 85000 \times \frac{65}{100} = 55250$

2001 $\Rightarrow 90000 \times \frac{60}{100} = 54000$ **decrease**

2002 $\Rightarrow 95000 \times \frac{62.5}{100} = 59375$ **increase**

2003 $\Rightarrow 110000 \times \frac{67.5}{100} = 74250$ **increase**

2004 $\Rightarrow 80000 \times \frac{55}{100} = 44000$ **decrease**

2005 $\Rightarrow 90000 \times \frac{57.5}{100} = 51750$ **increase**

Maximum growth is recorded in 2003

i.e; 74250 - 59375 = 14875

158. (5) Total failed student in 2004

= $80000 \times \frac{45}{100} + 85000 \times \frac{27.5}{100} = 59375$

Qualified students of BANK

exam in 2000 = 55250

Required ratio = 59375 : 55250

= 475 : 442

159. (3) Required average

$= \frac{1}{6} \left[\begin{array}{l} 90000 \times \frac{55}{100} + 100000 \times \frac{57.5}{100} + 105000 \\ \times \frac{60}{100} + 85000 \times \frac{50}{100} + 85000 \times \frac{72.5}{100} + 95000 \times \frac{70}{100} \end{array} \right]$

$= \frac{1}{6}[340625] = 56771$

160. (4) Sum of qualified student in SSC exam

$= 105000 \times \frac{60}{100} + 85000 \times$

$\frac{50}{100} + 85000 \times \frac{72.5}{100} = 167125$

Sum of qualified student in BANK exam

$= 90000 \times \frac{60}{100} + 110000 \times$

$\frac{67.5}{100} + 90000 \times \frac{57.5}{100} = 180000$

Required difference = 180000 – 167125 = 12875

161. (4) Number of Accord cars sold by

dealers D and E together

$= \left(\frac{6}{21} \times \frac{14}{100} + \frac{3}{14} \times \frac{21}{100} \right) \times 12000$

= 480 + 540 = 1020

Number of City cars sold by

dealers B and F together

$= \left(\frac{3}{10} \times \frac{15}{100} + \frac{6}{15} \times \frac{20}{100} \right) \times 12000$

= 540 + 960 = 1500

Required Difference = 1500 - 1020 = 480

162. (2) Number of Accord and Civic cars sold

by dealer A together = $\frac{6}{9}$ of 12% = 8%

Number of Civic and City cars sold by

dealer D together = $\frac{15}{21}$ of 14% = 10%

Required Percentage = $\frac{8}{10} \times 100 = 80\%$

163. (3) Total number of Civic cars sold by

dealers A, B, D and E together

$= \left(\frac{2}{9} \times \frac{12}{100} + \frac{4}{10} \times \frac{15}{100} + \frac{8}{21} \times \frac{14}{100} + \frac{6}{14} \times \frac{21}{100} \right) \times 12000$

= 320 + 720 + 640 + 1080 = 2760

Required Average = $\frac{2760}{4} = 690$

164. (2) Civic and City cars sold together by

dealer B = $\frac{7}{10}$ of 15% = $\frac{21}{2}\%$

Civic and City cars sold together by

dealer E = $\frac{11}{14}$ of 21% = $\frac{33}{2}\%$

Required Ratio = $\frac{21}{2}\% : \frac{33}{2}\% = 7 : 11$

165. (5)

166. (1) Class VII students who failed in atmost 2 subjects

$= \frac{36}{72} \times 28 = 14$

Class VIII students who failed in atmost 2 subjects

$= \frac{72}{72} \times 28 = 28$

∴ Required average $= \frac{1}{2}(14 + 28) = 21$

167. (3) Total failed students in class IX $= \frac{94}{47} \times 100 = 200$

Total failed students in class VIII $= \frac{(94+14)}{72} \times 100 = 150$

∴ Required ratio $= \frac{150}{200} = \frac{3}{4}$

168. (3) Difference in number of students who failed in only 1 subject and those in all 6 subjects = 25 – 18 = 7%

None, difference in number of students of two groups asked in question

= (100 – 18) – (100 – 40)

= 22%

∵ 75% of failed students = 21

∴ 22% of failed students = $\frac{21}{7} \times 22 = 66$

169. (4) Percentage of students who failed in atmost 3 subjects in class

V = 25 + 15 + 22 = 62%

VI = 16 + 25 + 18 = 59%

VII = 100 – 20 – 22 – 16 = 42%

VIII = 100 – 20 – 25 – 15 = 40%

IX = 15 + 22 + 10 = 47%

∴ 2nd minimum students one in class VII.

170. (2) Total failed students in class VIII $= \frac{50}{25} \times 100 = 200$

∴ Number of class V students who failed in atmost 2 subjects

= (100 – 72) × of 200

= 56

So, required number of failed students in class V,

$= \frac{56}{40} \times 100 = 140$

171. (1) Let Son's Age = x
Satish's Age = 4x
After 4 year
4x + 4 = 3(x+4)
4x + 4 = 3x + 12
x = 8
Satish's Age = 8 × 4 = 32
His wife's Age = $\frac{32 \times 7}{8} = 28$
Required Average = $\frac{28+8}{2} = 18$

172. (4) In 30 min the part of the tank will be filled by both tap
= $\frac{30}{36} = \frac{5}{6}$
Required tap = $1 - \frac{5}{6} = \frac{1}{6}$
$\frac{1}{6}$ part of the tank will be filled by tank A in 10 min.
∴ tap A will take 60 min.
∴ tap B will take time to fill the tank
= $\frac{1}{36} - \frac{1}{60}$
= $\frac{1}{90}$
∴ Required time = 90 min.

173. (3) Face card = 12
Joker = 2
Probability = $\frac{14}{54} = \frac{7}{27}$

174. (3) Stop of truck = 6 × 40 = 240 mint or 4 h.
Speed of truck = $\frac{640}{20-4\,h.} = \frac{640}{16} = 40\ km/h$
Speed of car = $\frac{40 \times 120}{100} = 48\ km/h$
Speed of train = $\frac{48 \times 125}{100} = 60\ km/h$
Required time = $\frac{600}{60} = 10\ hours$

175. (4) Let cost price of 1000 gram = 1000 Rs.
He sell 900 grm instead of 1000 gram
Mark up price = $\frac{1000 \times 125}{100} = 1250\ Rs.$
Discount = $\frac{1250 \times 90}{100} = 1125\ Rs.$
Profit = $\frac{1125-900}{900} \times 100 = 25\%$
Percentage of City cars sold by:
Dealer A = $\frac{3}{9}$ of 12% = 4%
Dealer B = $\frac{3}{10}$ of 15% = 4.5%
Dealer C = $\frac{4}{15}$ of 18% = 4.8%
Dealer D = $\frac{7}{21}$ of 14% = 4.67%
Dealer E = $\frac{5}{14}$ of 21% = 7.5%
Dealer F = $\frac{6}{15}$ of 20% = 8%
Hence, dealer A sold the minimum number of City cars.

176. (5) Pattern is,
×0.5 + 1, ×1 + 1, ×1.5 + 1, ×2 + 1, ×2.5 + 1
27 × 2.5 + 1 = 68.5

177. (2) Pattern is,
15　24　49　98　179　300
　9　25　49　81　121
　3^2　5^2　7^2　9^2　11^2

178. (1) Pattern is,
×1 + 1, ×2 + 2, ×3 + 3, ×4 + 4, ×5 + 5

179. (4) Pattern is,
9　11　22　51　107　199
　2　11　29　56　92
　9　18　27　36

180. (2) Pattern is,
67　75　59　91　27　155
　8　−16　32　−64　128

181. (1) Let the C.P. of an item be x and no. of items be A
Total C.P. = Ax
Total S.P. = $1.2x \times \frac{A}{2} + \frac{4}{5} \times \frac{6}{5}x \times \frac{A}{4} + \frac{6}{10} \times \frac{6}{5}x \times x \times \frac{A}{4}$
= $\frac{3Ax}{5} + \frac{6Ax}{25} + \frac{9Ax}{50}$
= $\frac{51Ax}{50}$
= $1.02Ax$
∴ 2% profit

182. (1) Total earning = $4\left(\frac{3}{2} \times 600\right) + 8 \times 600$
= 3600 + 4800
= 8400 Rs.
Total saving = $4 \times \frac{5}{4} \times 400 + 8 \times 400$
= 2000 + 3200
= 5200 Rs.
∴ Total expenditure = 8400 − 5200
= 3200
∴ Required average expenditure = $\frac{3200}{12}$
= 266.66 Rs.

183. (2) Time taken to complete whole work by A = 4 × 10 = 40 days
By B = $\frac{100}{40} \times 15 = 37\frac{1}{2}$ days
By C = 3 × 13 = 39 days
By D = 6 × 7 = 42 days
So B can complete the work in least time

184. (1) Distance covered by 2nd train in 20 minutes = $\frac{20}{60} \times 40 = \frac{40}{3}$ km
Remaining distance = $900 - \frac{40}{3} = \frac{2660}{3}$ km
Time after which they will meet = $\frac{\frac{2660}{3}}{70}$ hours
Distance covered from A in this time = $\frac{2660}{210} \times 30 = 380$ km

185. (2) Value of first land after 2 year = $4000 \times \frac{125}{100} \times \frac{125}{100}$
= 6250
Value of second land after 2 year = $6000 \times \frac{105}{100} \times \frac{105}{100}$
= 6615
Required % = $\left(\frac{6615-6250}{6250}\right) \times 100$
= 5.84%

186. (2) Let the per day efficiency of a man and a woman are 'M' and 'W' respectively.
Total Work = 8 × M × 5 = 40M
A → 2M = 3W ⟹ $\frac{M}{W} = \frac{3}{2}$
5 women can complete the work in
= $\frac{40M}{5W} = \frac{40M}{5 \times \frac{2M}{3}} = 12$ days
B → 6 women can complete the same work in 10 days.
5 women can complete the work in
= $\frac{6 \times 10}{5} = 12$ days
C → 10 men can complete the same work in 4 days.
No relation is given with efficiency of women.
Hence, the question can be answered by using either statement A alone or statement B alone.

187. (1) A → Train A crosses another train B moving in the opposite direction in 15 sec.

∴ Time taken = 15 sec

B → Ratio of the speeds of trains A and B = 3 : 2

∴ Let the speeds of trains A and B be 3x and 2x m/sec respectively.

C → Length of train B is 20% more than that of train A.

∴ Let the lengths of trains A and B be 5y and 6y meters respectively.

From all the three statements,

Relative speed = 3x + 2x = 5x

Sum of lengths of trains = 5y + 6y = 11y

$$\text{Time taken} = \frac{\text{Sum of lengths of trains}}{\text{Relative speed}}$$

$$\Rightarrow 15 = \frac{11y}{5x}$$

Hence, the question cannot be answered even by using all the three statements together.

188. (4) A → Let the length and breadth of the rectangle be 4x and 3x respectively.

B → Sum of the lengths of diagonals of the rectangle = 40 m

Rectangle's diagonals are always equal.

$$d = 20\text{ m} = \sqrt{\text{Length}^2 + \text{Breadth}^2}$$

C → Area of a square = 196 m²

Edge of the square = 14 m

Perimeter of the square = 4 × 14 = 56 m

Perimeter of the rectangle = Perimeter of the square

= 56 m = 2(Length + Breadth)

Hence, the question can be answered by using any two of the three statements together.

189. (2) Let the ten's place and unit's place digits of the number be x and y respectively.

And, the number be 10x + y = z

$$A \rightarrow \frac{10x + y}{x + y} = \frac{3}{1}$$

$$\Rightarrow 2y = 7x$$

B → (10y + x) – (10x + y) = 45

$$\Rightarrow y - x = 5$$

$$C \rightarrow z + z^2 = 28z$$

$$\Rightarrow z = 27$$

Hence, either C alone or A and B together are sufficient to answer the question.

190. (3) A → SP = $112\frac{1}{2}$ % of CP

$$\Rightarrow SP = \frac{9}{8}\text{ of CP}$$

B → 90% of MP = SP

$$\Rightarrow SP = \frac{9}{10}\text{ MP}$$

C → MP = CP + 100

Hence, all the three statements together are sufficient to answer the question.