

IBPS SO Preliminary Grand Test –ISP-181207

HINTS & SOLUTIONS

ANSWER KEY

1. (1)	26. (4)	51. (3)	76. (3)	101. (3)	126. (2)
2. (3)	27. (1)	52. (1)	77. (4)	102. (4)	127. (1)
3. (5)	28. (5)	53. (5)	78. (4)	103. (2)	128. (3)
4. (1)	29. (1)	54. (3)	79. (4)	104. (5)	129. (5)
5. (5)	30. (3)	55. (3)	80. (3)	105. (2)	130. (3)
6. (3)	31. (4)	56. (4)	81. (1)	106. (4)	131. (5)
7. (5)	32. (4)	57. (1)	82. (2)	107. (2)	132. (3)
8. (4)	33. (1)	58. (4)	83. (4)	108. (3)	133. (1)
9. (1)	34. (5)	59. (5)	84. (1)	109. (4)	134. (4)
10. (2)	35. (1)	60. (5)	85. (3)	110. (1)	135. (1)
11. (4)	36. (2)	61. (5)	86. (2)	111. (1)	136. (1)
12. (4)	37. (5)	62. (4)	87. (1)	112. (1)	137. (2)
13. (5)	38. (4)	63. (2)	88. (4)	113. (5)	138. (3)
14. (4)	39.(1)	64. (4)	89. (1)	114. (3)	139. (4)
15. (4)	40.(1)	65. (4)	90. (4)	115. (5)	140. (2)
16. (3)	41.(3)	66. (4)	91.(2)	116. (3)	141. (4)
17. (4)	42.(1)	67. (3)	92.(3)	117. (5)	142. (1)
18. (1)	43.(4)	68. (3)	93.(4)	118. (5)	143. (5)
19. (1)	44. (3)	69. (1)	94.(1)	119. (4)	144. (1)
20. (3)	45.(2)	70. (4)	95.(2)	120. (4)	145. (3)
21. (3)	46. (4)	71. (3)	96.(2)	121. (2)	146. (3)
22. (2)	47. (2)	72. (2)	97.(5)	122. (5)	147. (1)
23. (4)	48. (3)	73. (5)	98.(1)	123. (4)	148. (4)
24. (3)	49. (1)	74. (3)	99.(2)	124. (4)	149. (3)
25. (1)	50. (2)	75. (2)	100.(4)	125. (5)	150. (5)

HINTS & SOLUTIONS

1. (1) There is a grammatical error in only the third part of the sentence. The verb “**announced**” should be replaced by “**announcing**” to make the sentence grammatically feasible. It can well be guessed from the verb used in the highlighted part of the sentence. Hence the option (a) is the correct choice.
2. (3) There are certain grammatical errors in both the fourth and the fifth parts of the sentence. In the fourth part of the sentence, the preposition “**along**” should be replaced by “**over**” as the correct preposition to replace the word should be “**over**” which means **expressing duration**. Similarly, in the fifth part of the sentence, the preposition “**in**” should be replaced by “**from**” as the correct expression should be “**higher temperatures from increased greenhouse gases in the air**” to make the sentence grammatically correct. Hence the option (c) is the correct choice.
3. (5) The given sentence is grammatically correct and doesn't require any correction. Hence the option (e) is the correct choice.
4. (1) There is a minor mistake in the second part of the sentence. The expression “**a convenient planks**” should be replaced by “**a convenient plank**” as the article “**a**” in the sentence suggests that the noun it refers should be in the singular number to make the sentence grammatically correct. The other parts of the sentence are grammatically correct. Hence option (a) is the correct choice.
5. (5) The given sentence is grammatically correct and doesn't require any correction. Hence the option (e) is the correct choice.
6. (3) Both the first and the second starters can be used to frame meaningful sentences without altering the intended meaning of the two sentences. Hence the option (c) is the correct choice.
(I) Given that the President and his Republican cabal have consistently debunked the inquiry, it is open to question whether the White House will pursue a tougher stance towards Russia.
(II) Seeing that the President and his Republican cabal have consistently debunked the inquiry, it is open to question whether the White House will pursue a tougher stance towards Russia.
7. (5) All the three starters are feasible enough to form meaningful and contextual sentences without altering the intended meaning of the given two sentences. Hence the option (e) is the correct choice.
(I) Although medical science, neuroscience and psychology can reveal the benefits of forgiveness to our mental, physical, emotional and even spiritual wellbeing, they fail to explain the deep connections that we have with one another and our desire to live in peace and harmony in our communities.
(II) While medical science, neuroscience and psychology can reveal the benefits of forgiveness to our mental, physical, emotional and even spiritual wellbeing, they fail to explain the deep connections that we have with one another and our desire to live in peace and harmony in our communities.
(III) Notwithstanding that medical science, neuroscience and psychology can reveal the benefits of forgiveness to our mental, physical, emotional and even spiritual wellbeing, they fail to explain the deep connections that we have with one another and our desire to live in peace and harmony in our communities.
8. (4) Both the starters (I) and (III) can be used to frame meaningful sentences without altering the intended meaning of the given sentences. Hence the option (d) is the correct choice.
(I) While forgiveness is not easy to practice, we cannot forget that it is the only path to a healing and a happy heart.

- (III) Even though forgiveness is not easy to practice, we cannot forget that it is the only path to a healing and a happy heart.
9. (1) Only the first starter can be used to frame the meaningful sentence combining the above two statements. Hence the option (a) is the correct choice.
(I) With the US Senate's confirmation of a 12th circuit court judge earlier this month, Mr. Trump set a record for the most appellate judges confirmed in a president's first year.
10. (2) only the second starter can be used to construct a meaningful sentence connecting the above two statements without altering their intended meaning. Hence the option (b) is the correct choice.
(II) Despite the fact that 'Happiness' has become such a trite word, it still fascinates many of us to figure out what makes us happy.
11. (4) Refer the sixth sentence of the first paragraph "Theoretically, it is possible to reduce poverty as well as expand the domestic market for industry by raising labour productivity in agriculture and spreading its gains among the low-income groups."
12. (4) Refer the following lines of the first paragraph "urban workers would benefit by both increased industrial employment and price deflation."
13. (5) The statement "the labour supply curve turns elastic at the subsistence wage rate" means that at the minimum wage rate people may or may not work, so labour supply gets affected.
14. (4) Refer the fourth sentence of the first paragraph "Low productivity in agriculture has led to the concentration of the poor in this sector."
15. (4) Refer the fifth, sixth and seventh sentences of the second paragraph "The recent estimate of the employment-output elasticity in agriculture is around 0.5, income elasticity of food is in the range of 0.55-0.60 and that for cereals is 0.25-0.30. The other important inter-dependency, which plays a crucial role in inducing indirect employment, is that between food and other sectors through demand linkages. Since food accounts for a major share in the budget of the poor and any reduction in the food price leaves a significant proportion of income for other items, a lower food price stimulates employment in industrial and service sectors."
16. (3) With reference to the passage we can infer that with increase in prices of Industrial products can lead to demand deficiency in India.
17. (4) It is not mentioned in the passage.
18. (1) 'Sheer' means nothing other than; unmitigated (used for emphasis). Hence it has same meaning as 'simple'.
19. (1) Deflation means reduction.
20. (3) Interdependence means the dependence of two or more people or things on each other. Hence it has opposite meaning as 'independence'.
21. (3) Refer the fourth last sentence of the first paragraph "People feel more comfortable with something they can relate to and understand immediately without too much thought".
22. (2) Refer the eighth sentence of the third paragraph "If he had used representational images and colour, much of the emotional content would have been lost and the piece would not have caused the demand for justice that it did."
23. (4) Refer the first few sentences of the second paragraph "People who look down on abstract art have several major arguments to support their beliefs. They feel that artists turn abstract because they are not capable of the technical drafting skills that appear in a Russell: therefore, such artists create an art form that anyone is capable of and that is less time consuming, and then parade it as artistic progress."
24. (3) Refer the last two sentences of the third paragraph "This can be illustrated by Mondrian's Trees series. You can actually see the progression from the early recognizable, though abstracted Trees, to his final solution, the grid system."
25. (1) Refer the fourth paragraph.
26. (4) **Denounce** means publicly declare to be wrong or evil. Hence it has same meaning as **proscribe**.
Splendid means magnificent, very impressive.
Candid means truthful and straightforward, frank.
Sublime means of very great excellence or beauty.
27. (1) **Scrabble** means an act of scratching or scrambling for something. Hence it has same meaning as **rummage**.
Rebuke means express sharp disapproval or criticism of (someone) because of their behaviour or actions.
Ascribe means regard something as being due to (a cause).
Rife means abundant.
Murky means dark and gloomy, especially due to thick mist.
28. (5) **Vividly** means strongly. Hence it has opposite meaning as indeterminate.
Cavil means make petty or unnecessary objections.
Berate means scold or criticize (someone) angrily.
Disparage means regard or represent as being of little worth.
29. (1) Among the given four options, elimination of incorrect sentences can be easily carried out based on their inappropriate grammar usage like in the case of options (b), (c) and (d). Moreover, they have altered the basic and true meaning of the sentence as asked in the question. Thus options (b), (c) and (d) are inept to the required answer. However, sentence (a) depicts the correct grammar usage along with its sentence structure which adds meaning to the sentence so formed after their union. Hence option (a) is the correct sentence regarding both grammar and context.
30. (3) Both the starters (I) and (II) are correct and can be used to frame the logical sentence. The third starter would give a meaningless sentence and thus it is incorrect.
(I) While the final word is yet to be said on the alleged channeling of black money into Jan Dhan accounts, the scheme has indeed led to a transformation.
(II) Although the final word is yet to be said on the alleged channeling of black money into Jan Dhan accounts, the scheme has indeed led to a transformation.
31. (4) Among the given options, sentence (a) is structurally incorrect as it has deviated the actual meaning of the sentence. Sentences (b) and (c) are grammatically and structurally incorrect which can be easily spotted like "have resulted in an exponential growth" which should be "has resulted in an exponential growth" in the case of

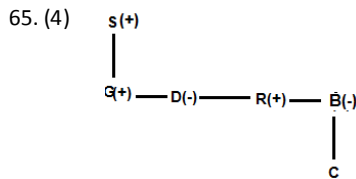
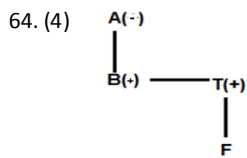
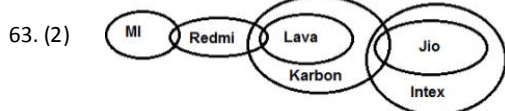
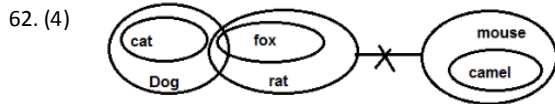
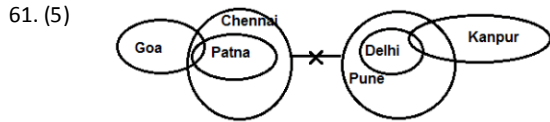
- sentence (b) and the use of incorrect starter “Although” in the case of sentence (c). Moreover, they infer vague and meaningless sentence. However, sentence (d) provides the most logical and contextual meaning of the sentence. Hence (d) is the correct choice.
32. (4) Both the starters (I) and (III) can be used to frame a logical and meaningful sentence for the given set of sentences. However, the second starter is incorrect owing to its irrelevant meaning to the sentence.
(I)Notwithstanding that Amit Shah was summoned back to Delhi for an urgent meeting with the PM and Arun Jaitley, the aborted march is being seen in Kerala as an admission of defeat by the BJP chief.
(III)Although he was summoned back to Delhi for an urgent meeting with the PM and Arun Jaitley, the aborted march is being seen in Kerala as an admission of defeat by the BJP chief.
33. (1) Among the four options, sentences (b), (c) and (d) are grammatically incorrect. In the sentence (b), the correct phrase would be “must await the conclusion” and not “must be awaiting the conclusion” so as to follow the subject-verb agreement. In the sentence (c), the phrase “who should await” is grammatically incorrect as it also doesn’t follow the subject-verb agreement. Similarly, in the case of the sentence (d), the use of connectors “As...but...” makes no real sense to the meaning of the sentence. Thus all these three statements are eliminated owing to their grammatical errors and structures. However, the sentence (a) is both grammatically correct and contextually meaningful. Hence (a) is the correct choice.
34. (5) Repugnance means intense disgust while nausea means a feeling of loathing or disgust, hence they both are **similar** in meaning.
35. (1) Callous means showing or having an insensitive and cruel disregard for others hence solicitous which means characterized by or showing interest or concern is the word which is most **opposite** in meaning.
36. (2) Denounce means publicly declare to be wrong or evil hence castigate which means reprimand (someone) severely is the word which is most **similar** in meaning.
37. (5) Subsidiary means less important than but related or supplementary to something hence trivial of which means little value or importance is the word most **opposite** in meaning.
38. (4) Garrulous means excessively talkative, especially on trivial matters loquacious which means tending to talk a great deal; talkative is the word which is most **similar** in meaning.
- 39.(1) “arriving” should be given a principle verb form in past.
- 40.(1) “listen” should be plural in form as it has come for people.
- 41.(3) Two contradictory statements are to be combined and “even though” does not make any sense here.
- 42.(1) “to do so” is a better expression than “to do that thing”.
- 43.(4) ‘expand’, ‘produce’ and ‘reach’ being main verbs will be in the same form.
44. (3) The phrase given in bold “**it cannot be indoctrinated through symbolic gestures**” implies that patriotism cannot be taught or shown through symbolic deeds. Thus among the three statements, statement (I) and (III) provide the exact and the most suitable meaning of the phrase in the context of its usage in the sentence. Hence

- (c) is the correct option. Statement (II) is incorrect as the word allusive means to contain suggestion rather than explicit mention whereas the whole issue is revolving around the propagandizing of patriotism.
- 45.(2) **Obligation** - an act or course of action to which a person is morally or legally bound. Hence Obligation and agreement are similar in meanings.
46. (4) Perception and Creation are explained in terms of essentiality and non-essentiality in the third and fourth paragraph of the passage.
Hence the answer is Option (d).
47. (2) We can eliminate options C and D as they are contrary to what is stated in the passage. The passage states that all facets of nature, and not artistic creations, are revealed by human consciousness. The passage states that: “The latter seeks essentiality in the creation and obtains it, but then it is the object which becomes the inessential.”
Hence, we can infer option (b).
48. (3) The passage states that “Each of our perceptions is accompanied by the consciousness that human reality is a ‘revealer’, that is, it is through human reality that ‘there is’ being, or, to put it differently, that man is the means by which things are manifested. It is our presence in the world which multiplies relations.”
Hence, option (c) is stated in the paragraph.
The passage states that :
The dialectic is nowhere more apparent than in the art of writing, for the literary object is a peculiar top which exists only in movement. To make it come into view a concrete act called reading is necessary, and it lasts only as long as this act can last.
Hence, option (a) directly follows from the passage
50. (2) The passage states that:
One of the chief motives of artistic creation is certainly the need of feeling that we are essential in relationship to the world.
Hence, an artist makes us feel essential vis-a-vis nature.
- 51-55.**
- | Students | Subject | Std | Age (Years) |
|----------|----------|-----|-------------|
| K | Math | I | 5 |
| Z | Hindi | IV | 8 |
| X | Science | VI | 10 |
| M | English | V | 9 |
| R | History | III | 7 |
| T | Physics | VII | 12 |
| V | Sanskrit | II | 6 |
51. (3)
52. (1)
53. (5)
54. (3)
55. (3)
56. (4) Accident have a direct link to violation of traffic rules and regulations.
57. (1) Judicious and regulated release of water is the proper way out.
2nd does not make sense because absence of rains will also lead to scarcity of ground water.
3rd is ruled out because it is not directly related.
58. (4) Whenever a facility is provided to people, the assumption is that it would lead to better services to them.
59. (5) I is impractical. II is not appropriate. Hence, neither I nor II follows. But III follows because it is the right way of action.

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60. (5) (I) is advisable because it will be helpful in taking measures to make reform in the performance of the team.
 (II) is also advisable because to be perfect must do practice.
 (III) is not advisable since it is matter of World Cup and new comers will take some time to adjust themselves.



66. (4) No, this is not possible according to given DFD. Customer can made payment through credit/debit card or by cash on delivery (cod) option only.
 67. (3) This is not possible according to DFD. Customer has to first register with shopping company then he/she can purchase the product.
 68. (3) Data is insufficient. This is not mention at all in DFD.
 69. (1) We can see the DFD and find that, Customer can select the cash on delivery option when there is not sufficient money in his/her debit card.
 70. (4) Data is insufficient. This is not mention in DFD.

71-75.
LOGIC: according to number of vowel in word.
 1 vowel-#, 2 vowel-@, 3 vowel-\$, 4 vowel-&, 5 vowel-%
NUMBER- Sum of place values (alphabetical values) of 2nd letter and 2nd last letter of the word
 ex- Vowel- O= 15
 second last- E =5
Sum:- 15+5=20
LETTER- last letter of word

71. (3)
 72. (2)
 73. (5)
 74. (3)
 75. (2)

76-80.

AX7	DG25	TK4
HU18		VZ20
SF12	IJ3	BW9

For Step-1: Interchange the alphabets as per the arrows mentioned in the above figure to get step –1.

Step - 1

TK7	IJ25	AX4
VZ18		HU20
BW12	DG3	SF9

For step- 2:

- (i) If the alphabets contain one vowel and one consonant and number with them is less than 5 then replace the number with its square.
 (ii) If the alphabets contain one vowel and one consonant and number with them is greater than 5 then subtract 2 from the given number.
 (iii) If the alphabet contains two consonant then change both the letters with their succeeding letter according to alphabetical order.

Step - 2

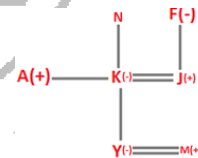
UL7	IJ23	AX16
WA18		HU18
CX12	EH3	TG9

For Step-3: In step 3, the first letter of each element is replaced with its opposite element's first letter and the second letter will remain the same. And after this 3 will be added to each even number and 2 will be subtracted from each odd number.

Step - 3

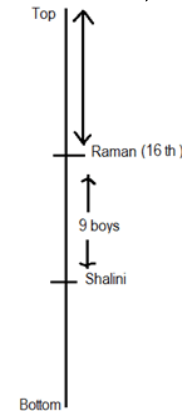
TL5	EJ21	CX19
HA21		WU21
AX15	IH1	UG7

76. (3)
 77. (4)
 78. (4)
 79. (4)
 80. (3)
 81. (1)
 82. (2)



83. (4)

Total no. of student=56
 Boys: Girls=5:3, So Boys=35 and Girls=21
 We don't know the exact number of girls sitting ahead or behind Shalini, so can't be determine.



84. (1)

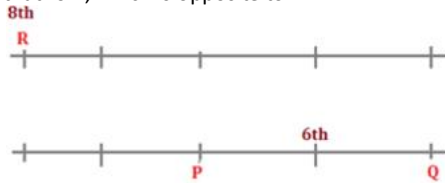
Clearly, suspicion first needs to be confirmed and only when it is confirmed, should an action be taken. So, only course I follows.

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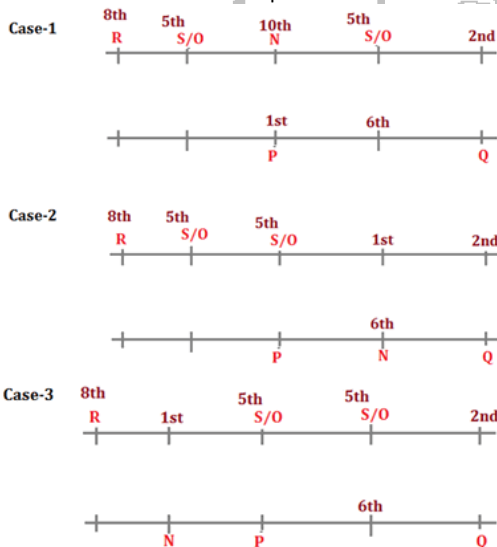


85. (3) Clearly, the contamination of ground water doesn't provide sufficient grounds to shift people to other areas. The problem demands creating awareness among people of the dangers of drinking contaminated water and arranging to provide them safe drinking water. Thus, only course II follows.

86-90. From the given conditions, R is sitting at the right end of the row and facing to south. The person, who lives on 6th floor, is sitting second from the right end of the row. P and Q are adjacent to the person, who lives on 6th floor, but the person P is not sitting at an end. R lives on 8th floor and is not sitting in the same row in which the person, who lives on 4th and 6th floors, is sitting; hence the persons, who lives on 4th and 6th floors, is sitting on that row, which is opposite to R.

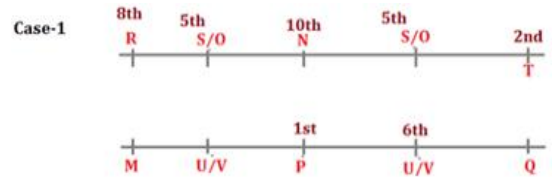


From the other conditions, S lives on 5th floor and is not sitting in the same row in which the person, who lives on 3rd and 6th floors, is sitting; hence S sits on that row in which R sits. O lives in odd number floor, but not on 1st floor and is sitting in the same row with S. Q is sitting opposite to the person, who lives on 2nd floor and lives neither on 3rd floor nor 1st floor. N lives in even number floor and sits opposite to the person, who lives on 1st floor. Hence there are three possible case occur.

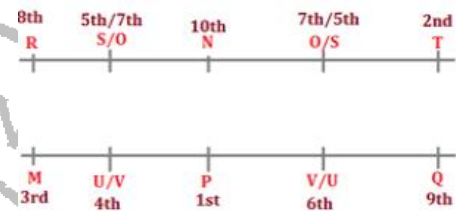


Now from the rest conditions, no two persons who live in even number floor are adjacent to each other; hence the persons, who live in odd number floor also not adjacent to each other. Hence Case-2 and Case-3 will be eliminated, Case-1 is continued.

M is neither adjacent nor opposite to S and O, hence M sits left end of the row and facing north. U and V are sitting in the same row. Rest T sits extreme left end of the row and facing south.



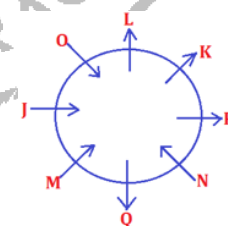
Now from the some other rest conditions, the person, who lives on 6th floor, is not sitting to the left of person who lives on 7th floor, Q does not live on 7th floor. Only two floors are left for Q i.e. 4th and 9th floors. The person who lives in odd number floor is not opposite to another person who lives in odd number floor. So M lives on 3rd floor. No two persons who live in even number floor are adjacent to each other, So Q lives on 9th floor. And O lives on 7th floor. And the person, who lives on 4th floor, sits immediate right of M. The final arrangement are-



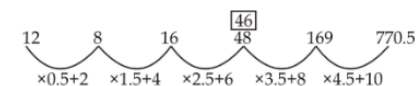
- 86. (2)
- 87. (1)
- 88. (4)
- 89. (1)
- 90. (4)
- 91. (2)
- 92. (3)
- 93. (4)
- 94. (1)
- 95. (2)
- 96-100.

By the help of 2nd statements we can find that 'Le' means 'there'.
From either statements Arjun's rank can be determined.
If the data in both the Statement I and II are not sufficient to answer the question.

From 1st statement we can find that X is youngest.
From 2nd statement we can find that B is second to the left of F.



- 96. (2)
- 97. (5)
- 98. (1)
- 99. (2)
- 100. (4)
- 101. (3)



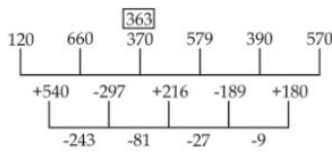
102. (4)



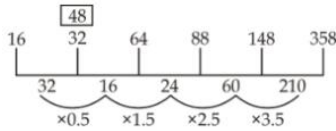
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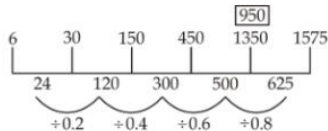
103. (2)



104. (5)



105. (2)



106. (4)

Marker B bought by Satish = $\frac{165}{11} \times 4 = 60$
 Marker B bought by Veer = $\frac{195}{13} \times 5 = 75$
 Amount spend by Satish & Veer on marker B
 = $60 \times 40 + 75 \times 20 = 2400 + 1500 = 3900$
 Marker C bought by Ranjan = $\frac{210}{14} \times 4 = 60$
 Marker C bought by Arun = $\frac{198}{9} \times 5 = 110$
 Amount spend by Ranjan & Arun on Marker C
 = $60 \times 40 + 110 \times 45 = 2400 + 4950 = 7350$
 Required difference = $7350 - 3900$
 = 3450

107. (2)

Amount spend by Veer
 = $\frac{195}{13} \times 4 \times 50 + \frac{195}{13} \times 5 \times 20 + \frac{195}{13} \times 4 \times 30$
 = $15[200 + 100 + 120]$
 = 6300
 Amount spend by Amit = $\frac{175}{5} [2 \times 40 + 2 \times 60 + 70]$
 = $35 [80 + 120 + 70]$
 = 9450
 Required % = $\frac{9450}{6300} \times 100 = 150\%$

108. (3)

Amount spend on maker A by Amit, Ranjan and Arun
 = $\frac{175}{5} \times 2 \times 40 + \frac{210}{14} \times 4 \times 60 + \frac{198}{9} \times 1 \times 35$
 = $2800 + 3600 + 770 = 7170$
 Amount spend on Maker C by Satish, Veer and Amit
 = $\frac{165}{11} \times 4 \times 50 + \frac{195}{13} \times 4 \times 30 + \frac{175}{5} \times 1 \times 70$
 = $3000 + 1800 + 2450 = 7250$
 Required difference = $7250 - 7170 = 80$

109. (4)

Total amount spent by Satish = $\frac{165}{11} [3 \times 30 + 4 \times 40 + 4 \times 50]$
 = $15 [90 + 160 + 200]$
 = 6750
 Total Amount spent by Ranjan = $\frac{210}{14} [4 \times 60 + 6 \times 50 + 4 \times 40]$
 = $15 [240 + 300 + 160]$
 = 10500
 Required ratio = $\frac{6750}{10500} = \frac{9}{14}$

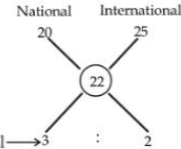
110. (1)

Required value = $\frac{198}{9} [1 \times 35 \times \frac{11}{10} + 3 \times 70 \times \frac{12}{10} + 5 \times 45 \times \frac{13}{10}]$
 = $22 [38.5 + 252 + 292.5]$
 = 12826

111. (1)

Selling price of the combined books = Rs 27.5
 Profit = 25% = $\frac{1 - \text{Profit}}{4 - \text{CP}}$
 Cost price = $\frac{27.5}{5} \times 4 = \text{Rs } 22$
 The SP of national book = Rs 18
 $\therefore \text{CP} = \frac{18}{(100 - 10)} \times 100 = \text{Rs } 20$
 The SP of international book = Rs = 30
 $\therefore \text{CP} = \frac{30}{(100 + 20)} \times 100 = \text{Rs } 25$

Now by allegation method,



Ratio of National & International book
 \therefore Ratio of National : International books = 3 : 2

112. (1)

Let, Renu and Usha can complete the work together in 'x' days
 ATQ,
 $\frac{1}{x + 8} + \frac{1}{x + 4.5} = \frac{1}{x}$
 $\frac{1}{x + 8} - \frac{1}{x} = -\frac{1}{x + 4.5}$
 $\frac{x + 8 - x}{x - x - 8} = -\frac{1}{x + 4.5}$
 $\frac{(x + 8)x}{(x - x - 8)x} = -\frac{1}{x + 4.5}$
 $8(x + 4.5) = (x + 8)x$
 $8x + 36 = x^2 + 8x$
 $\Rightarrow x^2 = 36 \Rightarrow x = \pm 6$
 Renu alone can complete the design in 'x + 4.5' hour i.e., 10.5 hr

113. (5)

Let speed of train = x
 Speed of car = y
 ATQ,
 $\frac{160}{x} + \frac{600}{y} = 8$... (i)
 $\frac{240}{x} + \frac{520}{y} = 8 \frac{1}{5}$ (ii)
 On solving (i) & (ii) we get
 x = 80 km/h
 y = 100 km/h
 Required % = $\frac{100 - 80}{80} \times 100 = 25\%$

114. (3)

Let CP of 10 fruits = Rs 100
 SP of 10 fruits = Rs 115
 Profit percentage in normal case = 15%
 Profit percentage when 20% fruits rotten
 = $\frac{115 \times \frac{110}{100} \times 80 - 100}{100} \times 100$
 = $\frac{101.2 - 100}{100} \times 100 = 1.2\%$
 Change in profit % = 15% - 1.2%
 = 13.8%

115. (5)

Let cost price (CP) of one article = 100x
 ATQ,
 $14 \times \text{SP} = 16 \times \text{CP} + 40\%$ of CP of 16 article [SP \rightarrow Selling price]
 $14 \times \text{SP} = 1600x + \frac{40}{100} \times 1600x$
 $14 \times \text{SP} = 2440x$
 $\text{SP} = 160x$
 $\text{SP} = 96\%$ of MP [MP \rightarrow marked price].
 $\Rightarrow \text{MP} = \frac{160x}{96} \times 100$
 = $\frac{500}{3}x$
 Required percentage
 = $\frac{\frac{500}{3}x - 100x}{100x} \times 100$
 = $\frac{2}{3} \times 100$
 = $66 \frac{2}{3}\%$

116-120.

Total students = 1000
 Let, students appear in exam Z only = a
 Total students appeared in exam Y = 360
 Ratio of number of students appeared in exam X and Y only to students appeared in exam Y and Z only = 2 : 3

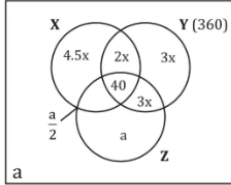
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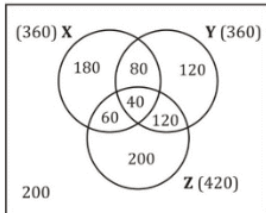
Students appeared in exam X and Z both = $a/2$
 Number of students appeared in all three exams
 $= \frac{4}{100} \times 1000 = 40$

Number of students appeared in Y exam only
 = No. of students appeared in Y and Z only = $3x$
 Number of students appeared in exam X and Y only
 $= \frac{2}{3} \times 3x = 2x$

1000



Now, $2x + 3x + 3x + 40 = 360$
 $\Rightarrow x = 40$
 and, $12.5x + a + \frac{a}{2} + a = 1000$
 $\frac{5a}{2} = 500$
 $\Rightarrow a = 200$
 1000



116. (3) Students appeared in atleast two exams = $80 + 60 + 40 + 120 = 300$
 117. (5) Students appeared in two exams only = $80 + 60 + 120 = 260$
 118. (5) Students appeared in atmost two exams = $180 + 120 + 200 + 60 + 80 + 120 + 200 = 960$
 119. (4) Student not appeared in exam Y = $1000 - 360 = 640$
 120. (4) Students appeared in exam X or in exam Z
 $= 180 + 60 + 40 + 80 + 200 + 120 = 680$

121. (2) Reduction in speed $\propto \sqrt{\text{No. of compartment attached}}$
 Reducton in speed = $K\sqrt{\text{No. of compartment attached}}$
 Where k = proportionality constant
 ATQ
 $42 - 24 = K\sqrt{9}$

$$\frac{18}{3} = K = 6$$

Now,

$$K\sqrt{\text{No. of Compartments}} = 42$$

No. of compartment = $\left(\frac{42}{6}\right)^2 = 49$
 Maximum number of compartments that can be carried by the engine
 $= 49 - 1 = 48$

122. (5) Let SP of One 4 seater rickshaw = $4x$
 Then, SP of one 2 seater rickshaw = $\frac{3}{4} \times 4x = 3x$
 ATQ,
 $8 \times 4x + 22 \times 3x = \frac{7}{5} \times 4725$
 $\Rightarrow 32x + 66x = 6615$
 $98x = 6615$
 $x = 67.5$
 $\Rightarrow 4x = 4 \times 67.5 = \text{Rs } 270$

123. (4) Let, no. of persons initially going for picnic = x
 ATQ,
 $x \times 16.75 + 20 \times 13.25 = (x + 20) \times 15$
 $16.75x + 265 = 15x + 300$
 $1.75x = 35$
 $x = \frac{35}{1.75} = 20$

124. (4) Overall percentage = 78%
 Overall marks = $\frac{78}{100} \times 250 = 195$
 Score of Uday in English & History
 $= \frac{(65+82)}{100} \times 100 = 147$
 Minimum score in Sociology to get 78% overall = $195 - 147 = 48$
 Minimum percentage in Sociology to get 78% overall = $\frac{48}{50} \times 100 = 96\%$

125. (5) Let, population of town = $20x$
 Literate population in locality A = $9x \times \frac{80}{100} = 7.2x$
 Literate population in Locality B = $8x \times \frac{70}{100} = 5.6x$
 Literate population in Locality C = $3x \times \frac{90}{100} = 2.7x$
 Percentage literacy of the town = $\frac{7.2x + 5.6x + 2.7x}{20x} \times 100$
 $= \frac{15.5}{20} \times 100$
 $= 77.5\%$

126. (2)

Earnings		
	Gaurav	Vivek
Salary	62500	75000
Incentive	11250	10000
Expenditure		
	Gaurav	Vivek
Food	7550	8850
Rent	8000	8000
Shopping	22125	22125
Other expenditure	9575	13405
Savings	26500	32620

Difference in savings of Vivek and Gaurav = $32620 - 26500 = \text{Rs. } 6120$

127. (1) Total Earning of Vivek
 $= 75000 + \frac{1}{2}(10000) = 80000$
 Required Percentage = $\frac{8000}{80000} \times 100 = 10\%$
 128. (3) Total earning of Neeraj = $\frac{80}{100} \times (73750 + 85000)$
 $= \text{Rs. } 127000$
 Savings of Neeraj = $32620 - 870 = 31750$
 Required percentage = $\frac{31750}{127000} \times 100 = 25\%$
 129. (5) Required ratio = $\frac{8000}{10000} = 4 : 5$

130. (3) Money spent by Vivek and Gaurav on 'other expenditures' = $9575 + 13405 = \text{Rs. } 22980$

131. (5) Average age of 30 student = $14 \times 12 + 4 = 172$ month
 Total age of 30 students = 172×30
 Age of 5 new students = $165 \times 35 - 172 \times 30 = 615$
 Age of 4 older student = $615 - 119 = 496$ month
 Average age of 4 remaining students
 $= \frac{496}{4} = 124$ month
 $= 10 \text{ year } 4 \text{ month}$

132. (3) The total distance covered
 $= 10\% + 6.66\% + 8.33\% + 16.66\% + 5.833\% + 31.666\% + 2.0833\% = 81.25\%$
 ATQ,
 $\frac{22.5}{18.75} \times 100 \Rightarrow 120 \text{ km length of forest}$

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133. (1) ATQ,
 $X \times \frac{2}{5} + 32 = y \times \frac{3}{4} - 140 = Z \times \frac{3}{4} - 8$
 $= 6K$
 $X = (6K - 32) \times \frac{5}{2} = 15K - 80$
 $Y = (6K + 140) \times \frac{4}{3} = 8K + \frac{560}{3}$
 $Z = (6K + 8) \times \frac{5}{3} = 10K + \frac{40}{3}$
 $\therefore 15K - 80 + 8K + \frac{560}{3} + 10K + \frac{40}{3} = 1000$
 $33K + \frac{360}{3} = 1000$
 $33K = 880$
 $\therefore K = \frac{80}{3}$
 X's share = $15 \times \frac{80}{3} - 80$
 = Rs 320

134. (4) Let speed of D.S. = x
 Speed of U.S. = y
 ATQ,
 $\frac{39}{x} + \frac{25}{y} = 8 \dots (i)$
 $\frac{52}{x} + \frac{30}{y} = 10 \dots (ii)$
 Multiply (i) by 6 and (ii) by 5
 $\frac{234}{x} + \frac{150}{y} = 48 \dots (iii)$
 $\frac{260}{x} + \frac{150}{y} = 50 \dots (iv)$
 On solving (iii) & (iv), we get
 $x = 13$
 Put value of x in (iv), we get
 $y = 5$
 Speed of boat = $\frac{13 + 5}{2}$
 = 9 km/hr
 Speed of stream = $\frac{13 - 5}{2}$
 = 4 km/hr
 Required% = $\frac{9 - 4}{4} \times 100$
 $= \frac{5}{4} \times 100$
 = 125%

135. (1) 1 Rs. → 2 oranges ... (i)
 1 Rs. → 3 oranges ... (ii)
 No. of oranges of both qualities are same hence in (i) multiply by 3 and in (ii) multiply by 2.
 $\Rightarrow 3 \text{ Rs.} \rightarrow 6 \text{ oranges}$
 $2 \text{ Rs.} \rightarrow 6 \text{ oranges}$
 $\Rightarrow 5 \text{ Rs.} \rightarrow 12 \text{ oranges}$
 To gain 20% 'SP' = 120% of CP
 $\Rightarrow \text{Rs. } 6 \text{ Rs.} \rightarrow 12 \text{ oranges}$

136. (1) Sales of Adidas in 2001 = $320 \times \frac{140}{100} = 448$ lakh
 Sale of Nike in 2001 = $798 - 448 = 350$ lakh
 Cost of production of Nike = $350 \times \frac{100}{140} = 250$ lakh

137. (2) Let cost of production of Adidas be 5x lakh
 And cost of production of Nike be 4x lakh
 Then,
 $5x \times \frac{130}{100} + 4x \times \frac{125}{100} = 1150$
 Or, $\frac{1150x}{100} = 1150$
 $\Rightarrow x = 100$
 Req. Difference = $5x - 4x \Rightarrow x = 100$ lakh

138. (3) Required Percentage
 $\frac{1}{2} \times \left(460 \times \frac{145}{100} + 510 \times \frac{130}{100} \right)$
 $= \frac{1}{2} \times \left(440 \times \frac{135}{100} + 470 \times \frac{120}{100} \right) \times 100$
 $\approx 114\%$

139. (4) Sales of Nike in 2005 = $1330 - 510 \times \frac{130}{100}$
 $= 1330 - 663$
 $= 667$ lakh
 Profit % of Nike = $\frac{667 - 580}{580} \times 100 = \frac{87}{580} \times 100$
 $= 15\%$

140. (2) Required Ratio = $\frac{420 \times \frac{120}{100}}{470 \times \frac{120}{100}} = \frac{42}{47}$

141. (4) A → C = B - 2000
 B → A = C + 2C
 $\Rightarrow A = 3C$
 And, A = 2B
 C → B = (100 - 50)% of A
 $\Rightarrow B = 50\%$ of A
 And, B = (100 + 50)% of C
 $\Rightarrow B = 150\%$ of C

Ratio of investments can be obtained from either statement B alone or C alone.
 Hence, the question can be answered by using either statement B alone or C alone.

142. (1) Let the speed of boat in still water and speed of stream be x and y respectively.
 $A \rightarrow \frac{45}{x+y} + \frac{45}{x-y} = 8$
 $B \rightarrow x = 4y$
 $C \rightarrow \frac{60}{x+y} + \frac{60}{x-y} = 10 \frac{2}{3}$

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

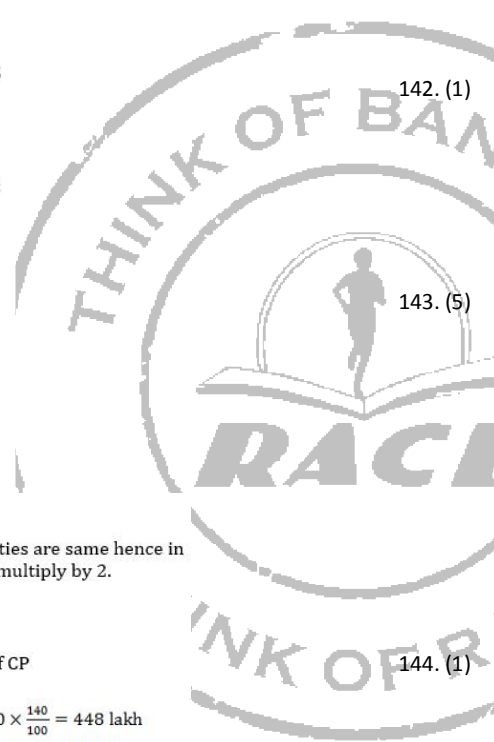
143. (5) A → Let, the length and breadth of cuboid be 6x and 5x cm respectively.
 And, total surface area = 900 cm²
 $\Rightarrow 2(l \times b + b \times h + l \times h) = 900$
 B → Let, the length and height of cuboid be 4y and 5y cm respectively.
 C → Total surface area of a cube = 1350 cm³
 $\Rightarrow 6a^2 = 1350 \text{ cm}^3$
 $\Rightarrow a = 15 \text{ cm} = \text{height of the cuboid}$

Length, breadth and height of the cuboid can be obtained from either A and B together or A and C together.
 Hence, the question can be answered by using either A and B together or A and C together.

144. (1) A → Let the number of green and blue balls in the bag be x and 2x respectively.
 B → Probability of getting a blue ball
 $= \frac{\text{Number of blue balls}}{\text{Total number of balls}} = \frac{4}{9}$
 $\Rightarrow \frac{B}{R+B+G} = \frac{4}{9}$

C → Number of green balls + Number of blue balls = 2 × Number of red balls
 $\Rightarrow G + B = 2R$

From all the statements together,
 Number of red balls = $R = \frac{3}{2}x$
 Hence, all the three statements together are not sufficient to answer the question.



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145. (3) $A \rightarrow 9 \times SP = 9 \times CP + 2 \times CP$
 $\Rightarrow 9SP = 11CP$
 $\Rightarrow CP = \frac{9}{11}$ of SP
 $B \rightarrow SP + 80 = CP + 33\frac{1}{3}\%$ of CP
 $\Rightarrow SP + 80 = \frac{4}{3}$ of CP
 $\Rightarrow CP = \frac{3}{4} \times (SP + 80)$
 $\Rightarrow CP = \frac{3}{4}$ of SP + 60
 $C \rightarrow (100 - 25)\%$ of SP = CP - 60
 $\Rightarrow CP - 60 = \frac{3}{4}$ of SP
 $\Rightarrow CP = \frac{3}{4}$ of SP + 60

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

146. (3) Total Indians in November
 $= \frac{35}{1700} \times \frac{85}{100} \times 18000$
 $= 315$
 Total visitors in November
 $= \frac{4}{3} \times 15000 = 20000$
 \therefore Foreigners visiting in November
 $= 20000 - 315 = 19685$
 \therefore Required difference
 $= 19685 - 315 = 19370$

147. (1) Males visiting who are foreigner in September
 $= \frac{3}{7} \times \frac{23}{100} \times 15400$
 $= 1518$
 Females foreigner in September
 $= \frac{4}{7} \times \frac{23}{100} \times 15400$
 $= 2024$
 \therefore Required percentage = $\frac{1518}{2024} \times 100$
 $= 75\%$

Alternately,

Required ratio = $\frac{3}{4} \times 100 = 75\%$

148. (4) Foreigner who are married
 $= \frac{18}{100} \times 16800 \times \frac{1}{3} = 1008$
 Indians who are married
 $= \frac{82}{100} \times 16800 \times \frac{1}{4} = 3444$
 remaining foreign females visitors
 $= \frac{2016}{4} = 504$
 Remaining Indian females visitors =
 $= \frac{10332}{3} = 3444$
 \therefore Required total females
 $= \frac{1008}{2} + \frac{3444}{2} + 504 + 3444$
 $= 6174$

149. (3) Required ratio
 $= \frac{\frac{3}{5} \times \frac{75}{100} \times 15000}{\frac{1}{6} \times \frac{18}{100} \times 16800}$
 $= \frac{6750}{504} = 375 : 28$

150. (5) Required percentage
 $= \frac{\frac{15}{100} \times 18000}{\frac{75}{100} \times 15000} \times 100$
 $= 24\%$

