

# Puzzle test for SBI PO Mains, IBPS PO Mains and RBI Grade B Exams. PT Set No 163

# Directions: Study the following information carefully and answer the questions given beside.

Eight boxes Red, Black, Orange, Yellow, White, Blue, Green and Purple are placed in a row. Each box contains different amounts which are multiple of 7. The amounts are in different denominations such as Rs.2000 and Rs.500. The amount ranges from Rs. 5000 to 75000. No two boxes have same number of denominations in either Rs.2000 or Rs.500. No two boxes have same amount. All the above information is not necessarily in the same order. Consider all boxes are placed towards north direction.

Some of the additional information given below:

The amount in the box which is adjacent to Purple colored box does not exceed Rs.50000. Rs.21000 is neither in Red or Black colored box and number of notes in denominations of Rs.2000 and Rs.500 is in the ratio of 3:2 respectively. Difference between number of Rs.2000 denominations notes in Black and Red colored box is 5. The maximum amount is in Yellow colored box and it is divisible by 9. There are three boxes between the box which has Rs.17000 in Rs.500 denominations and Orange colored box, which has Rs.28000. Number of Rs.500 notes in Blue colored box, is 2 more than Red colored box. There are three boxes between Black colored box and Green colored box, which has Rs.35000 with 13 notes in Rs.2000 denominations. Orange colored box is exactly between Yellow and Black colored box and also Yellow colored box, is not adjacent to Red colored box. The Red colored box is either fourth or fifth from the extreme end. The purple colored box contains half of the amount of Orange colored box with 8 notes in Rs.500 denominations. The box which contains Rs.42000 is not adjacent to Rs.21000. Total number of Rs.500 denominations notes in Orange and the box at the extreme right end is 38. The white colored box is on the immediate left of Red colored box and the total numbers of notes are 15. The amount in any of the box is divided by 10, if it is perfect a square then it is in the Blue colored box which is second to the left of Red colored box. Maximum numbers of notes are in Red colored box and Rs.16000 is in Rs.500 denominations. The sum of number of notes in Rs.2000 denominations of both purple and Red colored box is equal to that of yellow colored box.



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1	What is the	e total number of n	otes in Black and (	)range colored ho	x?					
A. 69		B. 64	C. 62	D. 67	F. Can't be determined					
0	<b>F (</b> 1)									
2.	the following does not belong to the group?									
A. Gre	een-13	B. White - 6	C. Yellow - 26	D. Orange - 12	E. Purple - 7					
3.	How many denominat	y boxes are there ions and Rs.30000	e between the b in 2000 notes deno	ox which has Rs ominations?	.9000 in 500 notes					
A. No	ne	B. One	C. Two	D. Three	E. Can't be determined					
4.	Which amo	ong the following b	oxes has Rs.7000 i	n total?						
A. Pui	rple	B. White	C. Black D. Eit	her Black or Purple	E. None of the above					
5.	Which amonumber of	ong the following notes is definitely	combinations repr true?	esenting Box colo	r-Total amount-total					
A. Wh D. Yel	nite-Rs.21000,1 Iow-Rs.63000,	6 B. Gre 52 E. Nor	een-Rs.35000, 29 ne is true	C. Black-Rs.4	12000, 39					
			The Que	estion Ba	nk					
Corre	ct Answers:									
		<b>1</b> C	2 3 4 E D E	5 C						
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# **Common explanation :**

#### **References**

- 1. The Red colored box is either fourth or fifth from the extreme end.
- The white colored box is on the immediate left of Red colored box and the total numbers of notes are 15.
- 3. Maximum numbers of notes are in Red colored box and Rs.16000 is in Rs.500 denominations.
- 4. The amount in any of the box is divided by 10, if it is perfect a square then it is in the Blue colored box which is second to the left of Red colored box.
- 5. Number of Rs.500 notes in Blue colored box is 2 more than Red colored box.

## **Inferences**

From above information, the possible amounts in the boxes are given below

- <u>Note: Amounts in the boxes are Rs.7000, Rs.14000, Rs.21000, Rs.28000, Rs.35000, Rs.42000,</u> <u>Rs.49000, Rs.56000, Rs.63000 and Rs.70000 [All amounts which is multiple of 7]</u>
- Let us take the box as numbered from 1 to 8 from the extreme left end as shown in table.
- With reference to point-1, we get two possible cases as follows
- White colored box is either Box number 3 or 4 (Refer point 2) & it has 15 notes in total.
- Red colored box has 32 Rs.500 Notes [16000/500 = 32, refer point 3) and it has maximum notes in total.
- Out of the given amounts, only <u>49000/10 = 4900 = 70<sup>2</sup> is the perfect square</u> & it is in Blue colored box, which is 2<sup>nd</sup> to the left of Red colored box (Refer point 4)
- Blue colored box has 34 Rs.500 Notes (2 more than Red box). Then, Blue box has Rs.17000 (34 × 500) in Rs.500 denominations and Rs. 32000 (16 × 2000) in Rs.2000 denominations. Total Rupees in Blue colored box is Rs.17000 + Rs.32000 = Rs.49000 and Total Notes are 34 + 16 = 50.

From above information, we get the initial table as follows,

Case:1										
Color		Blue	White	Red						
Amount		49000								
No's: 2000		16								
No's : 500		34		32						
Total no of Notes		50	15	Maximum						
		16 × 2000 =								
Colculation		32000		32 × 500 =						
Calculation		34 × 500 =		16000						
		17000								
Box	1	2	3	4	5	6	7	8		

	Case:2										
Color			Blue	White	Red						
Amount			49000								
No's: 2000			16								
No's : 500			34		32						
Total no of Notes			50	15	Maximum						
			16 × 2000 =								
Calculation			32000		32 × 500 =						
Calculation			34 × 500 =		16000						
			17000								
Вох	1	2	3	4	5	6	7	8			

#### **References**

- 1. No two boxes have same number of denominations in either Rs.2000 or Rs.500. No two boxes have same amount.
- 2. There are three boxes between the box which has Rs.17000 in Rs.500 denominations and Orange colored box, which has Rs.28000.
- 3. The maximum amount is in Yellow colored box and it is divisible by 9.
- 4. Orange colored box is exactly in between Yellow and Black colored box and also Yellow colored box, is not adjacent to Red colored box.

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#### Inferences

From above information

- Blue colored box has Rs.17000 (in Rs.500 denominations, refer point 1 & 2) and Orange colored box is 6 and 7 in case 1 & case 2 respectively. Orange colored box has Rs.28000 [Refer point 2]
- Yellow colored box is not adjacent to Red colored box [Refer point 4]
- In case 1, Yellow colored box is 7 & Black colored box is 5 [Refer point 4]
- In case 2, Yellow colored box is 8 & Black colored box is 6 [Refer point 4]
- Out of given amounts the only amount Rs.63000 (63000/9 = 7000) is divisible by 9 and it is in Yellow colored box [Refer point 3]. From this statement, it is clearly known that, in any the 8 boxes there are no 70000 Rupees. Yellow colored box has Maximum Rs.63000.

From above information, we get the table as follows,

	Case:1											
Color		Blue	Whit	te	Red	Black	Orange	Yellow				
Amount		49000					28000	63000				
No's: 2000		16										
No's : 500		34			32							
Total no of Notes		50	15		Maximum							
		16 × 2000 =										
Colculation		32000			32 × 500 =							
Calculation		34 × 500 =			16000							
		17000										
Box	1	2	3		4	5	6	7	8			

	Case:2											
Color			Blue	White	Red	Black	Orange	Yellow				
Amount			49000				28000	63000				
No's: 2000			16									
No's : 500			34		32							
Total no of Notes			50	15	Maximum							
			16 × 2000 =									
Calculation			32000		32 × 500 =							
Calculation			34 × 500 =		16000							
			17000									
Box	1	2	3	4	5	6	7	8				

#### **References**

- 1. There are three boxes between Black colored box and Green colored box, which has Rs.35000 with 13 notes in Rs.2000 denominations.
- 2. The purple box contains half of the amount of Orange colored box with 8 notes in Rs.500 denominations.
- 3. The amount in the box which is adjacent to Purple colored box is not exceeds Rs.50000.

## **Inferences**

From above information,

- In case 1, Green colored box is 1 & case 2, Green colored box is 2 [Refer point, 1]
- Green colored box has Rs.35000 [13 notes, Rs.2000 Denominations i.e. 13 × 2000 = Rs 26000 & then, 18 notes must be in Rs.500 denominations i.e. 18 × 500 = Rs.9000. Total = Rs.26000 + Rs.9000 = Rs.35000 & Total notes 13 + 18 = 31].
- $_{\odot}$   $\,$  Purple box is 8 in case 1 & Purple box is 1 in Case 2 ( Last box)  $\,$
- With reference to point 2, Orange colored box = Rs.28000 and its half is Rs.14000 (Rs.28000/2 = Rs.14000) and Purple colored box has Rs.14000 [8 notes, Rs.500 denominations i.e. 8 × 500 = Rs.4000 & then, 5 notes must be in Rs.2000 denominations i.e. 5 × 2000 = Rs.10000. Total = Rs.4000 + Rs.10000 = Rs.14000 & Total notes 8 + 5 = 13].
- With reference to point 3, Case : 1 gets eliminated as shown in Table

Case:1 [Eliminated]											
The amount in the bo	he amount in the box which is adjacent to Purple colored box is not exceeds Rs.50000. Here it is Rs.63000										
Color	Green	Blue	White	Red	Black	Orange	Yellow	Purple			
Amount	35000	49000				28000	63000	14000			
No's: 2000	13	16						5			
No's : 500	18	34		32				8			
Total no of Notes	31	50	15	Maximum				13			
	13 × 2000 =	16 × 2000 =						5 × 2000 =			
Calculation	26000	32000		32 × 500 =				10000			
Calculation	18 × 500 =	34 × 500 =		16000				8 × 500 =			
	9000	17000						4000			
Box	1	2	3	4	5	6	7	8			

	Case:2											
Color	Purple	Green	Blue	White	Red	Black	Orange	Yellow				
Amount	14000	35000	49000				28000	63000				
No's: 2000	5	13	16									
No's : 500	8	18	34		32							
Total no of Notes	13	31	50	15	Maximum							
	5 × 2000 =	13 × 2000 =	16 × 2000 =									
Calculation	10000	26000	32000		32 × 500 =							
Calculation	8 × 500 =	18 × 500 =	34 × 500 =		16000							
	4000	9000	17000									
Box	1	2	3	4	5	6	7	8				

#### **References**

- 1. Rs.21000 is neither in Red or Black colored box and number of notes in denominations of Rs.2000 and Rs.500 is in the ratio of 3:2 respectively.
- 2. The box which contains Rs.42000 is not adjacent to Rs.21000.
- 3. The sum of number of notes in Rs.2000 denominations of both purple and Red colored box is equal to yellow colored box.

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#### **Inferences**

From above information,

White colored box has Rs.21000 (only possibility, refer point 1) and White box has 15 notes in total & given, number of notes in denominations of Rs.2000 and Rs.500 is in the ratio of 3:2 respectively. [Ratio Calculation],

Rs.2000 ×15 (notes)  $\times \frac{3}{5}$  = Rs.2000 × 3 × 3 = Rs.18000

Rs.500 × 15 (notes)  $\times \frac{2}{5}$  = Rs.500 × 3 × 2 = Rs.3000

Total, White Box = Rs.18000 + Rs.3000 = Rs.21000

- Remaining amounts left are Rs.7000, Rs.42000 & Rs.56000 (two boxes left). Given, Rs.42000 box is not adjacent to white box, Refer point 2. So Rs.42000 may be in Black box or not in any of the boxes. Red box must have Rs.56000, because already it has Rs.16000 in Rs.500 denominations. So Rs.7000 is not possible in Red colored box. So finally Rs.7000 or Rs.42000 is in Black box.
- Red colored box has Rs.56000 [Given, 32 notes, Rs.500 denominations i.e. 32 × 500 = Rs.16000 & then, 20 notes must be in Rs.2000 denominations i.e. 20 × 2000 = Rs.40000. Total = Rs.16000 + Rs.40000 = Rs.56000 & Total notes 32 + 20 = 52, maximum among 8 boxes].

- With reference to point 3, Purple box has 5 notes (Rs.2000 denominations) & Red colored box has 20 notes (Rs.2000 denominations). Sum = 5 + 20 = 25. Then Yellow colored box has 25 notes in Rs.2000 denominations.
- Yellow colored box has Rs.63000 [25 notes, Rs.2000 Denominations i.e. 25 × 2000 = Rs 50000 & then, 26 notes must be in Rs.500 denominations i.e. 26 × 500 = Rs.13000. Total = Rs.50000 + Rs.13000 = Rs.63000 & Total notes 25 + 26 = 51].

	Case:2											
Color	Purple	Green	Blue	White	Red	Black	Orange	Yellow				
Amount	14000	35000	49000	21000	56000	7000/42000	28000	63000				
No's: 2000	5	13	16	9	20			25				
No's : 500	8	18	34	6	32			26				
Total no of Notes	13	31	50	15	52			51				
	5 × 2000 =	13 × 2000 =	16 × 2000 =	9 × 2000 =	20 × 2000 =			25 × 2000 =				
Calculation	10000	26000	32000	18000	40000			50000				
Calculation	8 × 500 =	18 × 500 =	34 × 500 =	6 × 500 =	32 × 500 =			26 × 500 =				
	4000	9000	17000	3000	16000			13000				
Вох	1	2	3	4	5	6	7	8				

From above information, we get the table as follows,

#### **References**

# 1. Total number of Rs.500 denominations notes in Orange and extreme right end box is 38.

2. Difference between number of Rs.2000 denominations notes in Black and Red colored box is 5.

#### **Inferences**

From above information,

- Yellow box-extreme right end box and it has 26 notes in Rs.500 denominations.
- Then, Orange colored box has 12 notes in Rs.500 denominations [Total = 38, Then 38-26 = 12, as per the reference point-1]

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• Orange colored box has Rs.28000 [Given, 12 notes, Rs.500 denominations i.e. 12 × 500 = Rs.6000 & then, 11 notes must be in Rs.2000 denominations i.e. 11 × 2000 = Rs.22000.

## Total = Rs.6000 + Rs.22000 = Rs.28000 & Total notes 12 + 11 = 23].

- Red colored box has 20 notes in Rs.2000 denominations. Given, Difference between Red & Black box is
  5. Then Black box should have either 15 notes or 25 notes in Rs.2000 denominations.
- If Black box has 25 notes in Rs.2000 denominations, it amounts 25 × 2000 = Rs.50000 which is not possible as it has either Rs.7000/Rs.42000.
- $\circ$  If Black has 15 notes in Rs.2000 denominations, it amounts  $15 \times 2000 = \text{Rs.30000}$  which is possible. Then clearly indicates that, any of the boxes doesn't have Rs.7000.

Finally, Black colored box has Rs.42000 [15 notes, Rs.2000 Denominations i.e. 15 × 2000 = Rs 30000 & then, 24 notes must be in Rs.500 denominations i.e. 24 × 500 = Rs.12000. Total = Rs.30000 + Rs.12000 = Rs.42000 & Total notes 15 + 24 = 39].

Thus we get the final table as shown below,

	Case:2											
Color	Purple	Green	Blue	White	Red	Black	Orange	Yellow				
Amount	14000	35000	49000	21000	56000	42000	28000	63000				
No's: 2000	5	13	16	9	20	15	11	25				
No's : 500	8	18	34	6	32	24	12	26				
Total no of Notes	13	31	50	15	52	39	23	51				
	5 × 2000 =	13 × 2000 =	16 × 2000 =	9 × 2000 =	20 × 2000 =	15 × 2000 =	11 × 2000 =	25 × 2000 =				
Colculation	10000	26000	32000	18000	40000	30000	22000	50000				
Calculation	8 × 500 =	18 × 500 =	34 × 500 =	6 × 500 =	32 × 500 =	24 × 500 =	12 × 500 =	26 × 500 =				
	4000	9000	17000	3000	16000	12000	6000	13000				
Box	1	2	3	4	5	6	7	8				





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## **Explanations:**

**1.** The following common explanation, we get "62".

Black box = 39 & Orange Box = 23 Then Sum = 39 + 23 = 62

Hence, option C is correct.

2. The following common explanation, we get "Purple-7, 7 does not belong to any of the denominations".

Remaining 4 options are paired with, either number of Rs.500 notes or number of Rs.2000 notes.

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Hence, option E is correct.

**3.** The following common explanation, we get "**Three Boxes**".

Green Box has Rs.9000 (500 denominations) & Black box has Rs.3000 (2000 denominations).

In betwe<mark>en, 3 boxes a</mark>re there.

Hence, option D is correct.

**4.** The following common explanation, we get **"None of the above"**.

No box contains Rs.7000.

Hence, option E is correct.

**5.** The following common explanation, we get "Black-Rs.42000 & Total notes 39".

Hence, option C is correct.

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