

## IIFT-2006 (DI Solutions)

**For questions 80 to 85:**

From Information 7, the occupant of room number 103 owns 12 cars and he donated to 8 institutions. Then from Information 3, occupant of room number 102 must be having 24 cars. From information 6, occupant of room number 104 must be having  $4z$  number of cars and donated to  $y$  number of institutions where  $4z < y$ . From information 9, occupant of room number 105 owns 8 cars and if the businessman from Canada donated to 'x' number of institutions, then the occupant of room number 105 must have donated to  $(x-2)$  number of institutions.

From information 10, residents of Canada, England and Brazil are staying in alternate rooms in that order starting from left. Though room numbers of residents of Canada, England and Brazil can also be 102, 104 and 106 respectively. But from question 80 we can conclude that room numbers are 101, 103, and 105 respectively as room number 106 is not given for Brazilian Businessman.

Although the nationality of the occupant of room number 106 is not known from the information given, it can be found out to be Germany from the options of the 3<sup>rd</sup> question in the set.

We can compile the following table now and answer all questions.

Room No	101	102	103	104	105	106
Nationality	Canada	Uruguay	England	Argentina	Brazil	(Germany)
Number of Cars		24	12	4	8	16
Number of Institutions in which they have donated	x		8	18	x-2	24

- 80.(D) Room No. 105
- 81.(C) 18
- 82.(D) Germany
- 83.(D) Germany
- 84.(B) Uruguay
- 85.(B) 12



For questions 86 to 89:

The following table can be made after observing the rules:

INPUT	lemon	apple	choco	college	girl	dream	room	book	calf	
	1	2	3	4	5	6	7	8	9	
STEP-1	3	1	2	4	5	6	9	8	7	Rule-1
STEP-2	1	2	3	6	5	4	7	8	9	Rule-2
STEP-3	9	1	2	8	3	4	7	5	6	Rule-3
STEP-4	2	9	1	8	3	4	6	7	5	Rule-4
STEP-5	1	9	2	4	3	8	5	7	6	Rule-2
STEP-6	6	1	9	7	2	8	5	3	4	Rule-3
STEP-7	9	1	6	7	2	8	4	3	5	Rule-1
STEP-8	6	1	9	8	2	7	5	3	4	Rule-2
STEP-9	4	6	1	3	9	7	5	2	8	Rule-3
STEP-10	1	4	6	3	9	7	8	5	2	Rule-4
STEP-11	6	4	1	7	9	3	2	5	8	Rule-2
STEP-12	8	6	4	5	1	3	2	9	7	Rule-3
STEP-13	4	6	8	5	1	3	7	9	2	Rule-1
STEP-14	8	6	4	3	1	5	2	9	7	Rule-2
STEP-15	7	8	6	9	4	5	2	1	3	Rule-3

86.(A,B,D) From the table STEP 10 is:

STEP-10	1	4	6	3	9	7	8	5	2
	lemon	college	dream	choco	calf	room	book	girl	apple

So STEP 10 is option (C).  
Hence the right options are A, B and D.

87.(A,C,D) From the table STEP 8 is:

STEP-8	6	1	9	8	2	7	5	3	4
	dream	lemon	calf	book	apple	room	girl	choco	college

So option (B) can be output. Hence the right options are A, C and D.

88.(A,B,C,D) By observing the table, we get none of the arrangement in the options will fall between STEP 11 to 15.

89.(C, D) By check the options. Rule-1 is applied in options (C) and (D).

90. (D) By checking the options.

**Option(A):** If Dilip observed the other three actors helmets colour like 2 silver and 1 copper. Then he could tell his helmet colour i.e. Gold . But he did not give right answer. So option (1) is the correct statement.

**Option (B):** Bimal knows that Chris and Dilip cannot tell their helmets colour. If Bimil observed the helmet colour of Aslam. Then he could tell his helmet colour i.e. Gold. But he did not give the right answer

**Option (C):** Chris knows that Dilip cannot tell his helmet colour. If Chris observed the other two actors helmets colour like one silver and one copper or both silver. Then he can identify his helmet colour i.e. Gold. But he did not give right answer. So it is the right statement.

**Option (D):** None of the statement is wrong. So option D is answer.



91.(A,B,C,D) By checking the options. The following table can be made.

	Option -A	Option -B	Option -C	Option -D
No of Units of Product-1	2	2	2	2
No of Units of Product-2	14	14	10	14
No of Units of Product-3	2	4	8	4
No of Units of Product-4	6	4	4	4
No of Units of Product-5	2	2	2	2
Cost	1960	1980	1960	1980
No of points	26000	26000	26000	26000
No of Panalty points	20000	10000	20000	10000

Hence A, B, C and D are the right options.

For questions 92 to 96:

92.(A,B,D) Statement A: correct

	2001	2002	2003
Wipro	0.1164	0.1189	0.1348
Tata Steel	0.156	0.1489	0.1495

Statement B: correct

	2001	2003
Indo Rama	0.0111	0.0076
Arvind Mills	0.0316	0.0236
Raymond	0.0372	0.0389
Century Enka	0.00744	0.00811
Steel Authority	0.5631	0.584
Tata Steel	0.1717	0.1909
Rashtriya Ispat	0.076	0.0636
Ispat Industries	0.0083	0.0086

Statement C: incorrect

	2001	2002	2003
R & D expenditure of Tata Steel as a percentage of sales	0.117	0.096	0.152
Percentage of R & D expenditure to sales as iron and steel sector as a whole	0.134	0.113	0.105

Statement D: Correct as 5 companies show decline.

	2002	2003
Ranbaxy	0.4646	0.225
Dr.Reddy Lab	0.727	-0.004
Cipla Ltd.	0.3167	0.1206
Glaxosmithkline	0.0472	0.0375
Wipro	0.1115	0.1608
Infosys	0.3698	0.3913
Videocon	0.5332	-0.275
Bharat Electronics	0.1257	0.291

93.(A,C)

**Statement A: Correct**

Sectors	Required Percentage
Textiles	8.31%
Pharmaceuticals	7.77405%
Electronics	7.7704%
Iron and Steel	9.64%

**Statement B:** Incorrect (Ispat Industries will be ranked lowest)

Companies	Required Percentage
Indo Rama	1.4%
Arvind Mills	6.57216%
Raymond Ltd.	16.23188%
Century Enka Ltd.	3.69979%
Ranbaxy	6.0099%
Dr. reddy's	8.03519%
Cipla	4.64081%
GlaxoSmithkline	11.19163%
Wipro	15.85%
Infosys	46.31%
Videocon	1.4714%
Bharat electronics	14.62058%
Steel Authority	18.04016%
Tata Steel	11.58125%
Rashtriya Ispat Nigam	7.83028%
Ispat Industries limited	1.18076%

**Statement C: Correct**

Companies	Required Percentage
Indo Rama	0
Arvind Mills	0
Raymond Ltd.	0
Century Enka Ltd.	0
Ranbaxy	5.54753%
Dr. reddy's	5.95794%
Cipla	3.35%
GlaxoSmithkline	0.33417%
Wipro	0.43017%
Infosys	0.57604%
Videocon	0
Bharat electronics	4.6225%
Steel Authority	0.30077%
Tata Steel	0.09665%
Rashtriya Ispat Nigam	0.0714286%
Ispat Industries limited	0

**Statement D: Incorrect**

It did not make the highest profit as Indo Rama Synthetic Ltd. has made a higher growth than Wipro in the year 2001-2003.

94.(B,C,D)

**Statement A: Correct**

By observation.

Statement B: (Incorrect as the percentage is minimum for Electronics sector)

Sectors	Required Percentage
Textiles	8.31%
Pharmaceuticals	7.77405%
Electronics	7.7704%
Iron and Steel	9.64%

**Statement C: Incorrect.**

It is Incorrect as for no company the required percentage is greater than 20%.

**Statement D: Incorrect**

In the year 2002 the ratio of total profits to total sales is -0.02880 and in the year 2001 the given ratio is -0.0260.

95.(B,C)

**Statement A: Incorrect**

Because in the year 2002-2003 Cipla Ltd. had a 100% decline in the R & D expenditure.

**Statement B: Correct.**

Company	Ratio
Ranbaxy	0.0541
Dr. Reddy's	0.0696
GlaxoSmithKline	0.0033501
Infosys	0.00565
Bharat Electrical	0.04655
Steel Authority of India Limited	0.0028
Tata Steel	0.00124

The ratio was highest for Dr.Reddy's.

**Statement C: Correct**

During the year 2001-2003, in terms of sales growth, the best performer in the pharmaceutical sector was that of Ranbaxy which had a 79.55% growth and no company had a growth rate greater than any company in the Iron and Steel sector.



**Statement D: Incorrect**

Arvind Mills in the year 2001-2002 and Indo Rama Synthetic Ltd in the year 2002-2003 have greater percentage decline than Videocon in any of the given years.

96.(A,B,D)

Statement	2001	2002	2003
A	0.02779	0.01976	0.0196
B	0.156096	0.14891	0.1495
C	0.12160	0.11612	0.1119
D	0.2247	0.0887	0.0869

The values in the statements A, B and D in the given three years when plotted will closely resemble in the figure.

**For questions 97 to 100:**

97.(A,B,C)

**Statement A: Correct**

From graphs we can conclude that the vote share of Democrats and Labour party in 2002 is greater than their combined vote share in 1998.

**Statement B: Correct**

Number of seats lost by Democrats in 2002 elections =  $(33.53 \times 5.01 - 25.48 \times 6.20)$   
=  $168 - 158 = 10$

Number of seats gained by the Republicans in 2002 =  $(7.9 \times 6.2 - 6 \times 5.01) = 49 - 30 = 19$ .

**Statement C: Correct**

By observation.

**Statement D: Incorrect.**

In the year 2002 as well as in the year 1996 70% of Independants and Labour are eligible to form the government as their share in the seats won is greater than 50% in each of the years.

98.(C,D)

**Statement A: Correct**

The percent increase in seats obtained by the Liberals and Labour together in 2002 over the year 1998 is 11.39% and the percent increase in the vote share obtained by these parties during the same period is 1.34%.

**Statement B: Correct**

By observation Labour party showed the greatest percentage increase in the vote share obtained in the year 2000 over the year 1998 across all the parties.

**Statement C: Correct**

Because in 2000 elections three parties namely Independents, Democrats and Liberal faced a decline in the vote share, whereas in 1998 four parties (excluding democrats) faced decline.

**Statement D: Incorrect**

Highest jump in the percentage of seats obtained by any party (Independents in 2000 over the year 1998) =  $(38.72 - 32.98) = 5.74\%$

Highest jump in the percentage of vote share obtained by any party (Democrats in 1998 over the year 1996) =  $(25.69 - 20.29) = 5.4\%$

99.(B,C)

**Statement A: Incorrect**

Vote share of Labour and Liberal party taken together in the year 1996  
=  $28.8 + 1.97 = 30.77$

Vote share of Labour and Liberal party taken together in the year 1998  
=  $25.82 + 1.75 = 27.57$ .

Number of seats won by Labour and Liberal in the year 1996 = 143

Number of seats won by Labour and Liberal in the year 1998 = 158.

Gain is 15 sweets.

**Statement B: Correct**

Democrats, Republicans and 35% of the Independents could have formed the government in two elections 1998 and 2000.

**Statement C: Correct**

By observation we find that no party increased its vote share in every succeeding elections.

**Statement D: Incorrect**

In 1996 vote share of the republicans and Democrats =  $(20.29 + 6.12) = 26.41\%$

In 2000 vote share of the republicans and Democrats =  $(23.75 + 5.4) = 29.15\%$ .

In 1996 percentage of seats of the republicans and Democrats =  $(29.61 + 5.88) = 35.49\%$

In 2000 percentage of seats of the republicans and Democrats =  $(33.53 + 6.00) = 39.53\%$ .

Difference in the vote share = 2.74%

Difference in the percentage of the seats = 4.04%



100.(C)

**Statement A: Correct**

Percentage of the seats obtained by the Democrats and Labour together in 2002 over the year 2000 =  $(26.61 + 25.48) - (33.53 + 20.92) = -2.16\%$ .

Republican and Liberal party gained in the percentage of the seats in the given period and Independent had a marginal loss in the percentage of seats = 0.5%.

**Statement B: Correct**

Vote share of the Liberals and Republicans together in the year 1998 = 6.91%

Vote share of the Liberals and Republicans together in the year 2000 = 6.88%

Number of seats obtained by the Liberals and Republicans together in the year 1998 = 44.

Number of seats obtained by the Liberals and Republicans together in the year 2000 = 34.

**Statement C: Incorrect**

Difference in the number of seats won by Independents in 2000 and 1998 = +6

Difference in the number of seats won by Labour in 2000 and 1998 = -43

Difference in the number of seats won by Republican in 2000 and 1998 = -4

Difference in the number of seats won by Liberals in 2000 and 1998 = -6

Difference in the number of seats won by Democrats in 2000 and 1998 = -21

**Statement D: Correct**

Number of seats won by Labour party in the year 1996 = 132

Number of seats won by Labour party in the year 1998 = 148

Number of seats won by Labour party in the year 2000 = 105

Number of seats won by Labour party in the year 2002 = 165

For questions 101 and 102:

101.(A)

**Statement A: Correct.**

	Gap	Rank
North America	-7.3	6
Latin America	9.9	3
Central and Eastern Europe	11.6	2
Western Europe	-1.4	5
Africa	14.4	1
Asia	2.6	4

Rank of Central and Eastern Europe is second.

**Statement B: Incorrect** (The highest percentage change in exports was highest in the year 2000)

Year	Average Annual Percentage Change
1997	5.03333333
1998	-3.85
1999	4.716
2000	18
2001	-3.61666
2002	3.5666
2003	16.5

**Statement C: Incorrect** (Rank of Asia is third)

	Gap	Rank
North America	0.2	5
Latin America	-1.5	4
Central and Eastern Europe	-5.9	2
Western Europe	2.5	6
Africa	-10.6	1
Asia	-1.7	3

**Statement D: Incorrect** (Lowest during the year in 2001)

Year	Average Annual Percentage Change
1997	6.98333
1998	-0.45
1999	0.51666
2000	13.1
2001	-3.4
2002	-2.9333
2003	16.1833



102.(C,D)

**Statement A: Incorrect**

North American region average annual percentage change in exports is 2.25 is less than the average annual percentage change in exports of Latin America which is 6.3.

**Statement B: Incorrect**

Regions	Average Annual Percentage Change
North America	10.9
Latin America	9.375
Central and Eastern Europe	1.7
Western Europe	3.45
Africa	1
Asia	4.15

Africa region experienced the lowest average annual percentage change in imports as compared to other regions.

**Statement C: Correct**

In the year 1999-2000 Central and Eastern European region experienced a jump of 26.1 which is the highest across all companies in any of the given years.

**Statement D: Correct**

In the year 2000-2001 Asian region suffered the maximum slump which is 30.1 and it is the highest across all companies in any of the given years.

**For questions 103 to 106:**

103.(A,C)

**A. Correct**

Growth rate of female population during 2005-2010  
 $= (3360 - 3189) / 3189 \times 100 = 5.3\%$   
 Growth rate of male population during 2010-2015  
 $= (3559 - 3403) / 3403 \times 100 = 4.5\%$

**B. Incorrect**

Growth rate of population of high income countries during 2005-2010  
 $= 17 / 980 \times 100 = 1.73\%$   
 Growth rate of male population in East Asia and Pacific during 2010-2015  
 $= 36 / 1001 \times 100 = 3.59\%$

**C. Correct**

Growth rate of male population in low income countries during 2005-2010  
 $= (1438 - 1330) / 1330 \times 100 = 8.12\%$

Growth rate of female population in low income countries during 2005-2010  
 $= (1400 - 1294) / 1294 \times 100 = 8.19\%$

**D. Incorrect**

Growth rate of world population during 2005-2010  
 $= (6764 - 6418) / 6418 \times 100 = 5.39\%$   
 Growth rate of world population during 2010-2015  
 $= (7096 - 6764) / 6764 \times 100 = 4.90\%$

104.(A,B,D)

**A. Incorrect**

Share of high income countries in total world population in 2005  
 $= 980 / 6418 \times 100 = 15.26\%$   
 Share of high income countries in total female population in 2005  
 $= 497 / 3189 \times 100 = 15.58\%$

**B. Incorrect**

Share of Europe and central Asia in total male population in 2005  
 $= 229 / 3230 \times 100 = 7.08\%$   
 Share of Europe and central Asia in total male population in 2010  
 $= 229 / 3403 \times 100 = 6.73\%$   
 Share of Europe and central Asia in total male population in 2015  
 $= 230 / 3569 \times 100 = 6.44\%$

**C. Correct**

Share of middle income countries in total female population in 2015  
 $= 1512 / 3528 \times 100 = 42.85\%$   
 Share of low income countries in total world population in 2010  
 $= 2838 / 6764 \times 100 = 41.95\%$

**D. Incorrect**

Share of south Asia in total Female population in 2015  
 $= 821 / 3528 \times 100 = 23.27\%$   
 Share of south Asia in total world population in 2010  
 $= 1581 / 6764 \times 100 = 23.37\%$



105.(A)

**A. Correct**

Share of high income countries in total female population in 2005 =  $497/3189 \times 100 = 15.58\%$   
Share of high income countries in total female population in 2010 =  $505/3360 \times 100 = 15.02\%$   
Share of high income countries in total female population in 2015 =  $511/3528 \times 100 = 14.48\%$

Share of high income countries in total male population in 2005 =  $483/3230 \times 100 = 14.95\%$   
Share of high income countries in total male population in 2010 =  $491/3403 \times 100 = 14.42\%$   
Share of high income countries in total male population in 2015 =  $497/3569 \times 100 = 13.92\%$

**B. Incorrect**

Growth rate of population of high income countries during 2010-2015 =  $(1008 - 997) / 997 \times 100 = 1.10\%$   
Growth rate of world population during 2010-2015 =  $(7096 - 6764) / 6764 \times 100 = 4.90\%$

**C. Incorrect**

Share of South Asia's females in total world population in 2005 =  $715 / 6418 \times 100 = 11.14\%$

Share of South Asia's females in total world population in 2015 =  $821 / 7096 \times 100 = 11.56\%$   
Share of South Asia's females in total female population in 2005 =  $715 / 3189 \times 100 = 22.42\%$   
Share of South Asia's females in total female population in 2015 =  $821 / 3528 \times 100 = 23.27\%$

Growth rate of Share of South Asia's females in total world population during 2005-2015 =  $(11.56 - 11.14) / 11.14 \times 100 = 3.77\%$

Growth rate of Share of South Asia's females in total female population during 2005-2015 =  $(23.27 - 22.42) / 22.42 \times 100 = 3.79\%$

**D. Incorrect**

Growth rate in population of middle income countries during 2010-2015 =  $(3040 - 2928) / 2928 \times 100 = 3.82\%$

Growth rate in population of middle income countries during 2005-2010 =  $(2928 - 2814) / 2814 \times 100 = 4.05\%$

Growth rate in population of high income countries during 2010-2015 =  $(997 - 980) / 980 \times 100 = 1.73\%$

Growth rate in population of high income countries during 2005-2010 =  $(1008 - 997) / 997 \times 100 = 1.10\%$

106.(A,C)

**A. Incorrect**

Share of south Asia in total world population in 2005 =  $1470/6418 \times 100 = 22.90\%$   
Share of south Asia in total world population in 2015 =  $1684/7096 \times 100 = 23.73\%$   
Share of low income countries in total world population in 2005 =  $2624/6418 \times 100 = 40.88\%$   
Share of low income countries in total world population in 2015 =  $3048/7096 \times 100 = 42.95\%$   
 $(23.73 - 22.90) < (42.95 - 40.88)$

**B. Correct**

Share of high income countries in total female population in 2010 =  $505/3360 \times 100 = 15.02\%$   
Share of high income countries in total female population in 2015 =  $511/3528 \times 100 = 14.48\%$   
Share of high income countries in total world population in 2010 =  $997/6764 \times 100 = 14.73\%$   
Share of high income countries in total world population in 2015 =  $1008/7096 \times 100 = 14.20\%$

**C. Incorrect**

Growth rate of female population in East Asia and Pacific region during 2010-2015 =  $(1001 - 963) / 963 \times 100 = 3.94\%$   
Average annual growth rate =  $3.94 / 5 = 0.79\%$   
Growth rate of female population in South Asia region during 2010-2015 =  $(821 - 769) / 769 \times 100 = 6.76\%$   
Average annual Growth rate =  $1.35\%$

**D. Correct**

Growth rate of female population in Europe and Central Asia during 2005-2015 =  $1/248 \times 100 = 0.40\%$   
Growth rate of male population in Europe and Central Asia during 2005-2015 =  $1/229 \times 100 = 0.43\%$

