ANSWER KEY - IIFT 2008-10

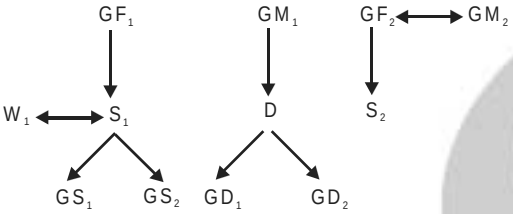
1	C	**2**	B	**3**	C	**4**	A	**5**	B	**6**	C	**7**	B	**8**	B	**9**	A	**10**	C
11	A	**12**	D	**13**	C	**14**	D	**15**	C	**16**	C	**17**	B	**18**	D	**19**	B	**20**	D
21	C	**22**	D	**23**	C	**24**	B	**25**	A	**26**	A	**27**	B	**28**	C	**29**	D	**30**	C
31	D	**32**	B	**33**	B	**34**	D	**35**	A	**36**	D	**37**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

SOLUTION IIFT - 2008-10

1. C	2. B	3. C	4. A	5. B
6. C	7. B	8. B	9. A	10. C
11. A	12. D	13. C	14. D	15. C
16. C	17. B	18. D	19. B	20. D
21. C	22. D	23. C	24. B	25. A
26. A	27. B	28. C	29. D	

30. C There are 4 fathers out of which 2 are grandfathers. Also, there are 4 mothers out of which 2 are grandmothers. So in all 8 persons are there. Now, there are also 2 grandsons and 2 grand-daughters present in the picnic. So, in all there is a minimum of 12 persons present at the picnic.

One of the possible family tree is as follows:



Here, GF_1, GF_2, S_1 and S_2 are fathers, where S_2's children are not present in the picnic. GM_1, GM_2, W_1 and D are the mothers present in the picnic.

Hence, the correct option is (C).

For questions 31 to 33: Following table can be prepared according to the statements mentioned in the question:

	Movie	Theatre
Veena	Hero	Satyam
Seema	Salaam Namaste	PVR Saket
Mona	Iqbal	Chanakya
Neeta	Khiladi	M2K
Reema	Gangster	Priya

31. D 32. B 33. B

34. D Daljeet is brother of Chiranjeet & Chiranjeet is wife of Baljeet. Therefore, Daljeet must be brother in-law of Baljeet. Hence, (D) is the correct option.

35. A Manjeet is daughter of Chiranjeet & Chiranjeet is father of Daljeet. Therefore, Manjeet and Daljeet are siblings. Hence, Manjeet can't be Baljeet's mother.

36. D Abhijeet is brother of Chiranjeet & Chiranjeet is daughter of Baljeet. Therefore, Baljeet can't be mother- in-law of Chiranjeet.

For questions 37 to 40: From the given statement,

37. C "acb" is the only order of sentences which gives a valid argument.

38. D "bac" is the only order of sentences which gives a valid argument.

39. A "bae" is the only order of sentences which gives a valid argument.

40. D "acb" is the only order of sentences which gives a valid argument.

41. A Only (A) can be concluded with certainty.

42. D Only (D) can be concluded with certainty.

For questions 43 to 46:

Let us consider the rounds in a reverse order, beginning with the last one wherein each person had Rs.32,000 in the end. We can draw the following table.

(The figures are in Rs.'000)

	Mohit	Manohar	Prasant	Dinesh
Initially	66	34	18	10
Round – 1	4	68	36	20
Round – 2	8	8	72	40
Round – 3	16	16	16	80
Round – 4	32	32	32	32

43. C 44. A 45. A 46. B

47. B Option (B) is the correct choice.

For questions 48 to 51: Please make the following correction in this problem set. In exception b, replace "*at (ii)*" by "*at (iii)*"

48. B Amar satisfies the conditions in (i) and (iv). He does not meet the condition in (iii) but as he is willing to pay an amount of Rs.1 lakh, if required to leave the software firm, his case could have been referred to the "President" of the firm. We are given that in 2003, he had started working for an engineering firm but we have no information about the duration of his employment in that firm, hence, we cannot conclude that he satisfies the condition of having at least one year's experience which is required as per condition (ii). Due to lack of this information, he should not be selected. Hence, (B) is the correct answer.

49.* Rajkishore satisfies the conditions in (i), (iii) and (iv). He does not satisfy the condition in (ii) but as he is a computer engineer, his case may be referred to DGM. As none of the answer options mention this, none of them is correct.
***Correct answer is not available.**

50. B Madhuri satisfies the conditions in (i), (ii) and (iv). However, there is no information on either her acceptance or her non-acceptance of the condition of bond in (iii). Thus, due to lack of information, she should not be selected. Hence, (B) is the correct answer.

51. A Kamla satisfies the conditions in (i),(ii), (iii) and (iv). Hence, (A) is the correct option.

For questions 52 to 54:

52. A Bihar has a level of dissimilarity of 2 with Orissa. Others have a level of dissimilarity higher than 2.

53. B Rajasthan has a level of dissimilarity of 4 with Orissa and it is the highest.

54. C In all the options except option (C), the level of dissimilarity is 4. However, in option (C), Rajasthan and Kerala have a level of dissimilarity of 3.

55. B It can be inferred directly from the given lines (Agriculture....income)The line after that mentions 'empowering agri-product producers.'

56. A Nothing in the passage has been mentioned which talks about getting a competitive advantage from knowing the customers better. Hence, option A is the correct answer.

57. A It has been mentioned in the passage that TCL relies on its 'CRDP' model which is not an external agency.

58. C Sentence 25 mentions that TCL felt that it was being viewed as purely product centric. So, positioning itself as a commodity retailing center may not be good for its long term sustainability.

59. C Sentences 35-40 mention that the requirements of farmers were multi-layered and TCL had to reinvent itself to meet those requirements.

60. A The entire passage talks about Hertz and its present and possible operations. Hence, option A is the correct answer.

61. D As mentioned in line 28-29 the Indian population with high disposable income is looking to enjoy all new things in life. Hence, option D is the correct answer.

62. C Sentences 32-33 mention international travellers' disposition to drive alone. It is not mentioned that they know Indian roads or the chauffeurs are unprofessional. Option D is not the reason for self-drive. It is just a related sentence.

63. D The underlined sentence 47-48 mentions the importance of service assurance as an important element for institutional consumers.

64. B It is mentioned in line 69 of the passage that there is a huge scope in this segement for future growth.

65. C Option A is not mentioned in the passage. Option C would be a wrong practice because paragraph 1 mentions that the organized sector is viewed as being a superior service provider than the unorganized sector. So, matching the price with them will not be the right move as the consumer will expect better quality for that price which he will find in the organized sector.

66. B $\sum_{r=1}^{n}\frac{{}^{n}P_r}{r!}=\sum_{r=1}^{n}\frac{\frac{n!}{(n-r)!}}{r!}=\sum_{r=1}^{n}{}^{n}C_r=\left(\sum_{r=0}^{n}{}^{n}C_r\right)-{}^{n}C_0=2^n-1.$

Hence, (B) is the correct answer.

67. A Let the amount given to younger son be Rs. x and the amount given to older son be Rs.(18750 – x). The younger son turns 30, after 20 years and the older turns 30 after 17 years. As each of them will receive the same amount, we must have:

$$x\left(1+\frac{3}{100}\right)^{20}=(18750-x)\left(1+\frac{3}{100}\right)^{17}$$

$\Rightarrow x(1.03)^3 = (18750 - x)$

$\Rightarrow 1.092727x = 18750 - x$

$\Rightarrow 2.092727\ x = 18750$

$\Rightarrow$ x = Rs. 8959.60 is the share of the younger son.

Hence, (A) is the correct option.

68. B The complex number $\omega = -\frac{1}{2}+\frac{\sqrt{3}}{2}i$ is a cube root of 1 i.e. $\omega^3=1$. Using this, we can expand and then simplify the determinant as following:

$$\begin{vmatrix}1 & 1 & 1\\ 1 & -1-\omega^2 & \omega^2\\ 1 & \omega^2 & \omega^4\end{vmatrix}$$

$$=1\times\left[\omega^4\left(-1-\omega^2\right)-\omega^2\times\omega^2\right]-$$
$$1\times\left[\omega^4-\omega^2\right]+1\times\left[\omega^2+1+\omega^2\right]$$

$$=-\omega^4-\omega^6-\omega^4-\omega^4+\omega^2+\omega^2+1+\omega^2$$

$$=1+3\omega^2-3\omega^4-1$$

$$=3\omega^2-3\omega \qquad (\because \omega^3=1)$$

$$=3\omega(\omega-1)$$

69. A The recommended calorie requirement for men, women and children are 2400, 1900 and 1800 respectively and the recommended protein requirement for men, women and children are 55 gm, 45 gm and 33 gm respectively.

For Pradeep's family:
Calorie requirement = 2 × 2400 + 3 × 1900 + 1 × 1800 = 12300
Protein requirement = 2 × 55 + 3 × 45 + 1 × 33 = 278 gm

For Prabhat's family:
Calorie requirement = 1 × 2400 + 1 × 1900 + 2 × 1800 = 7900

Protein requirement = 1 × 55 + 1 × 45 + 2 × 33 = 166 gm

Hence, (A) is the correct option.

70. B **There is a typographical error in the problem statement. Please read $x_r < x_{r=1}$ as $x_r < x_{r+1}$.**

This means, $x_1 < x_2 < x_3 ... < x_{50}$. Hence, each of the 19 numbers $x_1, x_2, x_3 ..., x_{19}$ is less than the number x_{20} and each of the 30 numbers $x_{21}, x_{22}, x_{23} ..., x_{50}$ is greater than x_{20}. Out of the five numbers that are randomly picked, when two numbers are picked from the set $\{x_1, x_2, x_3 ..., x_{19}\}$ and two others are picked from the set $\{x_{21}, x_{22}, x_{23} ..., x_{50}\}$, the number x_{20} will always be in the middle, when the five numbers are arranged in an order. Total number of ways of selecting such five numbers is ${}^{30}C_2 \times {}^{19}C_2$. As the total number of ways of selecting a set of any five numbers out of given 50 is ${}^{50}C_5$, therefore, the required probability is $\frac{{}^{30}C_2 \times {}^{19}C_2}{{}^{50}C_5}$.

71. D The average cost of production c is a function of a single variable q, the number of workers employed. Hence, the total cost of production is given by $c \times q$ = T, say:

$$T = c \times q = \frac{1}{3}q^3 + \frac{5}{2}q^2 - 150q + 75$$

When the cost of production is minimum, $\frac{d}{dq}(T) = 0$.

$$\Rightarrow \frac{d}{dq}(T) = q^2 + 5q - 150 = 0$$

$\Rightarrow$ (q + 15) (q – 10) = 0

$\Rightarrow$ q = 10.

$\therefore$ 10 workers should be employed.

Hence, (D) is the correct option.

72. D Given, $u_1 = \sqrt{3} = 3^{\frac{1}{2}}$.

$u_2 = \sqrt{3\sqrt{3}} = 3^{\frac{3}{4}} = 3^{\frac{2^2-1}{2^2}}$

$u_3 = \sqrt{3\sqrt{3\sqrt{3}}} = 3^{\frac{7}{8}} = 3^{\frac{2^3-1}{2^3}}$

… … …

$\Rightarrow \frac{u_{10}}{u_9} = \frac{3^{\frac{2^{10}-1}{2^{10}}}}{3^{\frac{2^9-1}{2^9}}} = 3^{\frac{1}{2^{10}}}$

Hence, (D) is the correct option.

73. D The present value of the pension is the principal amount of money which after interests for different time intervals, will sum up to make 20 installments of Rs.1800 each, which is Pawan's pension. So the present value of pension is equal to

$$\frac{1800}{1.03} + \frac{1800}{(1.03)^2} + \ldots + \frac{1800}{(1.03)^{20}}$$

$$= 1800 \times \frac{1}{1.03} \frac{\left[1 - \frac{1}{(1.03)^{20}}\right]}{1 - \frac{1}{1.03}}$$

$$= \frac{1800}{0.03}[1 - 0.55362] = 26782.80$$

Hence, (D) is the correct option.

74. D $7777 + 7777 \times 7777 \times (5 \div 77) \times (11 \div 35)$

$= 7777 + 7777 \times 7777 \times \frac{5}{77} \times \frac{11}{35} = 1242098.$

Hence, (D) is the correct option.

75. B The rise in food prices is double that of fuel prices and the rise in miscellaneous groups prices is double that of rent. Only option (B) satisfies the above criteria, Hence, it is correct.

76. A IBM – Daksh will get calls from all the places simultaneously after an interval of time given by the LCM of 10, 12, 20 and 25 which is 300. So the next simultaneous calls will be received after 300 minutes or after 5 hours i.e., at 10:00 a.m. Hence, (A) is the correct option.

77. C Cost of production of x televisions $= \left[120x + \frac{x^2}{2}\right]$

Revenue by selling x televisions

$= x \times 2\left[100 - \frac{x}{4}\right] = \left[200x - \frac{x^2}{2}\right]$

Net Profit $= \left[200x - \frac{x^2}{2}\right] - \left[120x + \frac{x^2}{2}\right]$

$= (80x - x^2) = 1600 - (x - 40)^2$

For maximum profit, x = 40 and the corresponding profit = Rs.1600. Hence, (C) is the correct option.

For questions 78 and 79: The average age of the different groups is in the range of 43 - 55. So whenever

(1) A 25 year old joins the group, the average age of the group dips by around 5 to 6 years.

(2) A 60 years old is retired, the average age of the group dips lesser than that in statement (1) above.

Logical Reasoning	Total Age
2004	49.33 × 3 = 148
2005	44 × 4 = 176, (Here, one faculty member joined whose age is 25 years)
2006	45 × 4 = 180
2007	46 × 4 = 184

Data Interpretation	Total Age
2004	50.5 × 4 = 202
2005	51.5 × 4 = 206
2006	52.5 × 4 = 210
2007	47.8 × 5 = 239 (One faculty member joined aged 25.)

English	Total Age
2004	50.2 × 5 = 251
2005	49 × 4 = 196 year (One faculty member retired aged 60.)
2006	45 × 5 = 225 (One faculty member joined aged 25.)
2007	46 × 5 = 230

Quant	Total Age
2004	45 × 6 = 270
2005	43 × 7 = 301 (One faculty member joined aged 25.)
2006	44 × 7 = 308
2007	45 × 7 = 315

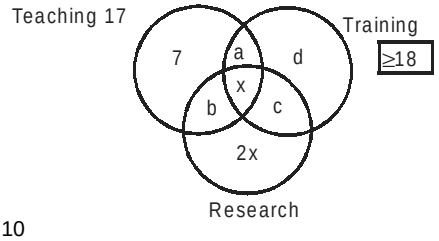
78. C Read the notes in the beginning of the solution. The average age dips twice first from 2004 to 2005 and then from 2005 to 2006.The dip is more when a 25 years old joins & lesser when somebody retires.

79. D Let the person be X. From the data for 2004, as on April 1, 2004:
(Age of Sharma) + (Age of Verma) + (Age of X)
= 49.33 × 3 = 148 years.
Now the sum of ages of Sharma and Verma, as on 1 April 2004 is:

$$\begin{array}{r} 52y + 4m + 10d \\ +49y + 4m + 10d \\ \hline (101y + 8m + 20d) \end{array}$$

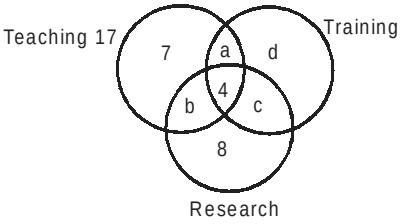
$\Rightarrow$ the age of X on 1 April 2004 is 47y + 3m + 10d
$\Rightarrow$ X's age on 1 April 2009 is $\equiv$ 52y + 3m + 10d
Hence, (D) is the correct option.

For questions 80 and 81:



a+ b + x = 10
x > 3.5
a+ b + c + d + 3x = 30
$\Rightarrow$ c + d + 2x = 20

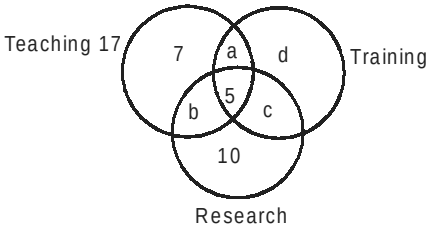
Case I: When x = 4



a + b = 6
c + d = 12
a + c + d + 4 ≥ 18 $\Rightarrow$ a ≥ 2

a	b	c	d
2	4	1	11
3	3	1	11
3	3	2	10
3	3	3	9
4	2	1	11
4	2	2	10
4	2	3	9
4	2	4	8
4	2	5	7
5	1	1	11
5	1	2	10
5	1	3	9
5	1	4	8
5	1	5	7
5	1	6	6
5	1	7	5
6	0	1	11
6	0	2	10
6	0	3	9
6	0	4	8
6	0	5	7
6	0	6	6
6	0	7	5
6	0	8	4
6	0	9	3

Case II: When x = 5



a + b = 5
c + d = 10
a + c + d + 5 ≥ 18 $\Rightarrow$ a ≥ 3

a	b	c	d
3	2	0	10
4	1	0	10
4	1	1	9
4	1	2	8
5	0	0	10
5	0	1	9
5	0	2	8
5	0	3	7
5	0	4	6

For any value of $x \geq 6$, training will not have maximum number of faculty members.

Following the table for variables a, b, c and d we can answer the two questions.

80. D

81.* The minimum number of faculty members involved in both training and teaching, but not in research will be the minimum value of a, i.e., 2.
***None of the options match the correct answer**

82. A Let 'x' be the number of kg of P1 variety and 'y' be the number of kg of P2 variety.
Thus, $4x + 6y \leq 700$ and $6x + 10y \leq 1250$. Among the four given options, (C) and (D) do not satisfy the second inequality.
The profit margin is P = 20x + 30y.
Profit margin for option (A) = Rs.3900
Profit margin for (B) = Rs.3800.
Hence, option (A) is the correct choice.

83. B $|z_1| = 12$ ...(i)

$|z_2 - (3+4i)| = 5$ ...(ii)

Using Triangular Inequality in (ii) we get.

$|z_2 - (3+4i)| \geq ||z_2| - (3+4i)|$

$\Rightarrow 5 \geq ||z_2| - |3+4i||$

$\Rightarrow 5 \geq |z_2| - |3+4i| \geq -5$

$\Rightarrow 10 \geq |z_2| \geq 0$

Now, $|z_1 - z_2| \geq ||z_1| - |z_2||$

$= |12 - 10| = 2$

84. B Let (α,β) and (γ,δ) be the two pairs of opposite angles in the cyclic quadrilateral. Then, we have $(\alpha + \beta) = 180°$ and $(\gamma + \delta) = 180°$. Now,
$\cos\alpha + \cos\beta + \cos\gamma + \cos\delta = \cos\alpha + \cos(180° - \alpha) + \cos\gamma + \cos(180° - \gamma)$
$= \cos\alpha - \cos\alpha + \cos\gamma - \cos\gamma = 0$
Hence, (B) is the correct option.

85. D Looking at the data, we can easily observe that if the wife's age is 23 years, then the age of the husband is likely to be in the range of 22 - 30 years. This doesn't satisfy options (A), (B) and (C).

86. C In any given year, the number of programmes conducted remain the same. The number of programmes added at the beginning of every year must be equal to the number of programmes that are discarded at the end of every year. We must have:

$$108\times\left(\frac{p}{100}\right)=108\times\left(1+\frac{p}{100}\right)\times\left(\frac{q}{100}\right).$$

After simplifying, we get the relation $p = q + \frac{pq}{100}$. Clearly, $p > q$. Hence, (C) is the correct option.

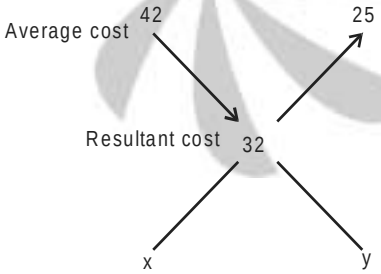
87. B From the given data, we can write that the total work is equivalent to (24 × 16) Man-Days which in turn is equivalent to (32 × 24) Woman-Days.
Hence, 1 Man-Day is equivalent to 2 Woman-Days.
Let x be the number of additional men required for the last two days' work.
Total work ≡ 24 × 16
≡ (16 Men + 16 Women) ×12-Days + (16 Men + 16 Women) × 2-Days

$\equiv (16\text{ Men} + \frac{16}{2}\text{ Men}) \times 12\text{-Days} + \{(16 + x)\text{ Men} + \frac{16}{2}\text{ Men})\} \times$ 2-Days

Therefore, 24 × 16 = 24 × 12 + (24 + x) × 2
⇒ x = 24.
Hence, (B) is the correct option.

88. D The problem statement misses the word "*per*".
The last sentence should have had *"....mixture at Rs. 40 per kg ..."*

Cost price of the mixture $= \frac{40}{1.25} = \text{Rs.}32/\text{kg}$
Let the required ratio be x : y.

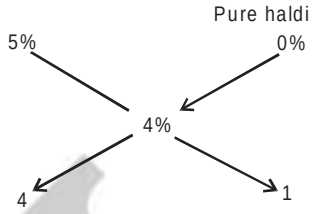


Now applying alligation, we have

$$\frac{42-32}{32-25}=\frac{y}{x}\Rightarrow\frac{x}{y}=\frac{7}{10}=\frac{x}{25}\Rightarrow x=\frac{35}{2}$$

89. B The two trains start simultaneously. Let they meet after time 't'.
The train that has covered 60 km more must be the faster of the two. Hence,
60 = (21 – 16) × t
⇒ t = 12 hours.
Since they are traveling towards each other, total distance is the sum of the distances travelled by the two trains individually.
Total distance = 16 × 12 + 21 × 12 = 444 km
Hence, (B) is the correct option.

90. C Pure haldi has 0% saw dust and the adulterated sample has 5% saw dust in it. By adding appropriate amount of pure haldi, the concentration of saw dust, in the 5% sample, can be reduced to 4%. Applying allegation, we have



$$\Rightarrow\frac{4}{1}=\frac{2\text{ kg (of 5\% sample)}}{\text{Pure Haldi}}$$

⇒ Pure haldi = 0.5 kg
Hence, (C) is the correct option.

For questions 91 to 95:
Calculating the growth rates (in %) of the countries:

Country	2000	2001	2002	2003	2004	2005	Rate per year
Cambodia	23.03	7.99	28.2	10.14	32.1	10.79	18.71
China	27.84	6.78	22.36	34.59	35.39	28.37	25.89
India	18.82	2.32	13.58	15.91	32.37	25.85	18.14
Japan	14.76	-15.81	3.27	13.22	19.89	5.17	6.75
South Korea	19.89	-12.67	7.99	19.29	30.97	12.04	12.4
Myanmar	44.89	44.65	27.93	-18.48	-4.15	22.9	19.62
Singapore	20.16	-11.65	2.81	27.74	24.22	15.61	13.15
Thailand	18.17	-5.92	4.83	17.94	19.82	14.4	11.54
Vietnam	25.21	4.01	9.99	22.06	27.01	23.41	18.62

91. A From the table given above, it is clear that Cambodia experienced the third highest average annual export growth rate over the period 1999 – 2005.

92. C Option A: During 1999-2000, Myanmar registered the highest annual export growth rate, i.e., 44.89%. Hence, (A) is true.
Option B: During 2003-2004, India registered the second highest annual export growth rate, i.e., 32.37% after China. Hence, (B) is true.
Option C: During 2001-2002, Cambodia registered the highest annual export growth rate, i.e., 28.2%. Hence, (C) is not true.
Option D: The change in Thailand's export growth rate from 2000-2001 to 2001-2002 is 4.83 – (– 5.92) = 10.75%. Hence, (D) is true.

93. D Option A: During 2000 – 2001, South Korea registered the second lowest export growth rate just above Japan. Hence, (A) is false.
Option B: Sum of export growth rates of India and Vietnam during 2001 – 2002 = 13.58 + 9.99 = 23.57, which is not lower than the growth rate of China (i.e. 22.36%) in that particular period. Hence, (B) is false.
Option C: Cambodia, China, India and Vietnam witnessed maximum number of years of positive export growth rate during the entire period. Hence, (C) is false.
Option D: During 2004 – 2005, difference between the growth rates of China and Japan = 28.37 – 5.17 = 23.2%, which is lower than the export growth rate of Vietnam (23.41%) in the same period. Hence, (D) is not false.

94.*C ***The language is slightly ambiguous. A likely solution is given below:**
Difference between the highest and the lowest average annual export growth rates by the countries for the periods 1999-00 and 2004 – 05:
Cambodia 10.79 – 23.03 = –12.24%
China: 0.53%; India: 7.03%; Japan: –9.59%; South Korea: –7.85%; Myanmar: –21.99%; Singapore: –4.55%; Thailand: –3.77%; Vietnam: –1.8%
Clearly, China has the second highest difference.

95.*C ***The language is slightly ambiguous. A likely solution is as below:**
Difference between the highest and the lowest average annual export growth rates by the countries yearwise for the period:
1999 – 00: 44.89 – 14.76 = 30.13%
2001 – 02: 28.2 – 2.81 = 25.39%
2004 – 05: 28.37 – 5.17 = 23.2%
2003 – 04: 35.39 – (- 4.15) = 39.54%
Hence, minimum is in the period 2004 – 05, i.e. option (C) is the correct answer.

96. D The average annual level of SO_2 emission for Yamuna Nagar during 1997 – 2003 is 23.94 and not 23.74 μ^g/m^3. Hence, option (D) is false.

97. A The highest average annual level of SO_2 emission on different years is as follows
1997 → 112.3
1998 → 114.9
1999 → 93.3
2000 → 64.6
2001 → 46.5
2002 → 40.9
2003 → 39.3
So the different is maximum for the years 1998 & 2003.

98. C In Faridabad, the emission level of SO_2 in the years 2001, 2002 and 2003 is less than in any years from 1997-2000. So definitely, the average level of SO_2 emission during 1997-2000 for Faridabad is higher than the average annual level for the city for the period from 1997-2003.

99. A By options:

(A) Cochin & Pondichery during 1999 – 2000
Cochin → + 31.1
Pondichery → – 55.7

(B) Calcutta & Nagda during 1998 – 1999
Calcutta → + 26.7
Nagda → – 28.3

(C) Madras & Anpara during 2001 – 2002
Madras → + 14.8
Anpara → – 22.9

(D) Nagda & Pondichery during 1997 – 1998
Nagda → – 26.6
Pondichery → + 2.6

The difference is maximum in option A (Both cases when absolute difference is required or not) i.e. 86.8.

100. B The annual emissile level decline for different years are as follows

1997 – 1998	8
1998 – 1999	4
1999 – 2000	5
2000 – 2001	7
2001 – 2002	6
2002 – 2003	10

It is maximum during 2002 – 2003.
Hence, the correct option is (B).

101.*D The average number of workers per factory for factory C decreased between 2003-04 by 7 so automatically by 6. All other statements are completely false.
***Note: The statement (D) must have been the average number of workers per factory for factory C decreased between 2003-2004 and 2004-2005 by 7.**

102. B

	2003-04					2004-05				
	A	B	C	D	E	A	B	C	D	E
Invested Capital per worker	10.56	6.21	17.35	11.72	7.48	13.31	13.5	10.6	33.3	42.4

Hence, D is ranked second both between 2003-04 and 2004-05.

103. A

	2004-05				
	A	B	C	D	E
Working Capital / Invested Capital	0.21	0.18	0.15	0.1916	0.1972

Hence, E has the second highest ratio.

104. C Increase in gross fixed capital formation between 2003–04 and 2004–05 for D = 1010963 – 12369 = 9,98,594.
Corresponding increase for C and E = 739375 – 27821 = 7,11,554.

105.A

	2003-04					2004-05				
	A	B	C	D	E	A	B	C	D	E
Average Profit per factory	121	61	–64	147	29	27	118	44	778	534

Hence, A has the second highest and the lowest average profit per factory for 2003-04 and 2004-05 respectively.

For questions 106 to 109:

106. A Rank 1 → Europe to North America Iron and Steel export [81 – (– 9) = 90]
Rank 2 → Intra-North America Iron and Steel export [41 – 4 = 37]

107. B Rank 1 → Europe to North America Iron and Steel export (81 – 21 = 60)
Rank 2 → Intra-Europe Iron and Steel export (45 –10 = 35)

108. A The difference between the highest and the lowest average export growth rate during 2005 among all three industries and regions is-
39 {Europe to Asia Iron and Steel export} – (–1){Europe to Asia automotive parts export} = 40.

109.* Option (B) should have been for the year 2003-05 to make all four statements consistent. **Still the answer is not available in any of the four options,** which is actually Europe to North America Iron and Steel export = $\frac{81+21-9}{3}=31$.

110. C The highest growth rate in FDI outflow projects was registered by Japan $\left(\frac{1025-878}{878}\times 100=16.74\%\right)$ amongst the developed nations and by Singapore $\left(\frac{103-90}{90}\times 100=14.44\%\right)$ amongst the developing nations.

111. C China registered a decline of 22.68% which was the second highest decline after Japan 23.8% in 2004-05. Hence (C) is the correct option.

112. A The highest growth rate in number of FDI projects inflow for Singapore was 42.59%

$\left(\frac{174-154}{154}\times 100=42.59\%\right)$

The highest growth rate in number of FDI projects outflow for UK was 61.87%

$\left(\frac{709-438}{438}\times 100=61.87\%\right)$

The difference is 19.28%.
Hence, (A) is the correct option.

113. B Average of FDI projects inflow growth rate in Germany = 46

$\left(=\frac{107.6-15.53}{2}\right)$

And average of FDI project out flow growth rate in Germany

= 41.3 $\left(=\frac{76.10+6.61}{2}\right)$

Hence, (B) is the correct option.

114. C The average growth rate figures for the inflow and the outflow are 39.2 % and 49.8% respectively. Hence option (C) is false.

115. A FDI project outflow growth rate from India in 2002-03

$=\frac{179-117}{117}\times 100=96.63\%$

FDI project outflow growth rate from India in 2004-05

$=\frac{182-199}{199}\times 100=-8.54\%$

∴ Average growth rate of FDI outflow

$=\frac{96.63-8.54}{2}=44.04\%$

Similarly, the average growth rate for FDI inflow in the same period for India = 31.75%.
Hence, statement in (A) is true.

116. D FDI outflow from India as a percentage of total FDI outflow from the developed countries in 2004

$=\frac{199}{1294}\times 100=15.378\%$

FDI inflow from US as a percentage of total FDI inflow from the developed countries in 2003

$=\frac{589}{3867}\times 100=15.231\%$

Hence, statement in (D) is false.

117. D Refer to the line "But there was a dark ... the company stated." All other options are false.

118. D Geico is a 'giant automobile insurer' as mentioned in the second sentence of the passage. It is not an automobile giant.

119. C 'Altavista' is not mentioned in the passage. Hence, option C is the correct answer.

120. C Refer to the line "We are, and may be .... outlining potential risks." Hence, option C is the correct answer.

121. D In sentence A the catch is that the unit of measurement mentioned in the passage is square feet. In the option it is square meter. B is not mentioned in the passage. In C the error is 'market analysis' the 5th para mentions that there was a growing confidence within the company. D is mentioned in para 2.

122. B The details mentioned are about the mall in Bangalore. Hence, option B is the correct answer.

123. D The passage does not mention anything about the term 'Super- speciality stores'

124. B The monetary agreement given in A is wrong. In C 'about 200 brands' is incorrect. D is not given in the passage. Hence, option B is the correct answer.

125. D The passage states that 'experience' (not market analysis) tells the company that a buyer visits around 4 or 5 stores (not at the most 4 or 5 stores) and that they go to a large store and a few smaller brand showrooms (not necessarily selected at random). Hence, option D is the correct answer.

126. B The passage mentions that 1952 saw 59,000 new cases (the most ever) This is considered the peak. In 1955 a vaccine was discovered. 'A' wrongly mentions that traditional biologists were interested in cure and prevention whereas paragraph 8 mentions cure rather than prevention. 'C' wrongly mentions Theodore Roosevelt instead of Franklin Roosevelt. 'D' wrongly mentions multiple stenosis instead of sclerosis. Hence, option B is the correct answer.

127. B In paragraph 9 it is mentioned that after a decade of his discovery Salk started talking about his colleagues' resentment. The option says 'almost 30 years later'. 'B' is implied in the last sentence of paragraph 8. Hence, option B is the correct answer.

128. C Salk was vilified by the scientists, field tests resulted in breakthrough and polio is referred to as dragon in the passage. Hence, option C is the correct answer.

129. B The two words – 'childish' and 'childlike' are synonyms but 'childish' also implies being puerile/petty/mentally & physically weak. 'childlike' has a more positive connotation as it implies being artless/innocent/pure/naïve etc. Since sentence B implies that Amol trusted easily, the correct word should be 'childlike'.

130. D Option A should read "Remember, when we tried to sort out the differen**ces….**he spoke to you and **me** as if we were babies." Option B should read "Was it **they**….?" Option C should read "….doesn't look a little like me."

131. C 'Virulence' (meaning maligning / bitter) is a negative word, so the word 'impudent' (meaning disrespectful) best fits with it. Also, the word 'difficult' in this option makes sense as the sentence talks about the difficulty in circumventing (avoiding).

132. B Since we are looking for a type of question that would make someone stutter to the point of suffocation, we need a negative word here. The only negative word available is 'Brusque' (meaning curt / gruff). Also, horribly goes well with the sentence.

133. C The sentence goes on to explain how vanity and pride are not the same. Thus, different and dissimilar will be considered. The second part of the first sentence begins with 'though'. 'Synonymously' brings out the needed contrast. Hence, option C is the correct answer.

134. A We need an adjective to describe how the leader could refute his opponents' claims. 'Ingeniously' (meaning cleverly / resourcefully) would fit in well. 'Ingenuously' means frankly/ naively. The second sentence implies that it was amazing/ astonishing how he managed to survive. The word incredible should be used here (difficult to believe) instead of incredulous (one who is disbelieving)

135. B A message has to be communicated to be passed on and, similarly, words have to be expressed.

136. A Activate and detonate are synonymous. So are deaden and defuse.

137. C Plentitude and Abundance are synonyms. Indurate means to harden (not the same as consolidate) An Augury is an omen/ sign. So is divination. Mulct means 'to punish a person by fine / penalty or 'to deprive of something/cheat'. Muzzle is a snout of an animal (also means to 'gag'.). Perspicacity means insightful, which has no relationship to transparency. Therefore it is the right answer.

138. A Repudiate means to reject/deny. It is the opposite of sanction.

139. D Grandiloquent (meaning pompous/ pretentious) is the opposite of simple.

140. D Veneration means worship. Burlesque is a caricature/ parody.

141. B Perspicacious means sagacious. Obtuse means dull-witted.

142. D Recalcitrant

143. C Vicissitude

144. C Flatulent

145. * The given question is incorrect as none of the options contain the correct answer.
Option (A) should read "Pele,…consider as…" Option (B) should read "… whom the company would…" Option (C) should read "…talk to whomever was willing to…" Option (D) should read "…supposed to meet Mr. Brown, the well known author from the news bureau…"

146. C Option A should read "…… the porch light was broken again." Option B should read "…… that isn't going to get you anywhere". Option (D) should read "…… we had hardly initiated ……" Option (C) has no error.

147. C The sentence should read "…… people cannot always talk about tulips." Because a verb is required instead of gerund.

148. B The sentence should be "I might as well say this now, that the end of the job was better than the beginning."

149. A Statement IV and III form a mandatory pair because 'and' in statement III connects statement IV by explaining how close the creatures got to her and opened their eyes and mouths so wide. Statement II and statement I form a mandatory pair because statement I provides the contrast to statement II.

150. A Statement II and III form a mandatory pairs as what is said in the statement III is referred to in statement II. Statement I and IV form a mandatory pair because the idea referred to in statement IV is the one mentioned in statement I.