

## SECTION – 1 (Part 1)

Number of questions: 19

**DIRECTIONS for questions 1 to 5:** Given below are the shares of sectoral FDI inflow to India in different years (figures in percentage). Answer the questions on the basis of the following data.

Sector	2007	2008	2009	2010	2011	2012
Services Sector	18.2	24.3	20.8	16.8	14.9	20.8
Construction Development	7.6	8.1	12.2	11.7	5.9	10.5
Telecommunications	5.5	8.3	9.4	7.2	6.6	0.4
Drugs and Pharmaceuticals	1.4	0.8	0.7	1.0	9.1	2.7
Computer Software and Hardware	12.8	5.6	2.5	4.7	2.0	2.8
Chemicals (other than Fertilizers)	1.3	1.9	1.7	2.1	16.6	1.5
Automobile Industry	1.9	3.4	5.1	5.9	2.5	4.9
Power	1.3	3.9	5.8	5.1	4.9	3.2
Metallurgical Industries	2.5	4.5	1.8	4.9	4.7	6.9
Hotel and Tourism	1.3	1.6	2.2	2.4	2.6	14.9

- Among the four sectors mentioned below, the increase in share of FDI inflows between the terminal years 2007 and 2012 has been HIGHEST for
  - Services Sector
  - Construction Development
  - Automobile Industry
  - Power
- Over 2007 to 2012, the simple average share of FDI inflows has been SECOND LOWEST for
  - Chemicals (other than Fertilizers)
  - Automobile Industry
  - Metallurgical Industries
  - Hotel and Tourism
- Identify the FALSE Statement from the following sentences
  - During 2009 to 2012 the percentage share of FDI inflow in power sector has witnessed a continuous decline.
  - During 2007 to 2009 the percentage share of FDI inflow in drugs and Pharmaceuticals sector has witnessed a continuous decline.
  - During 2009 to 2011 the percentage share of FDI inflow in Hotel and Tourism sector has witnessed a continuous increase.
  - During 2007 to 2010 the percentage share of FDI inflow in Chemicals (other than Fertilizers) sector has witnessed a continuous increase.
- Identify the TRUE alternative from the given options based on the following statements
  - In 2011, the construction development sector was ranked fifth in terms of percentage share of FDI inflow in the country
  - In 2009, the Computer Software and Hardware sector was ranked sixth in terms of percentage share of FDI inflow in the country
  - In 2012, the drugs and Pharmaceuticals sector was ranked fourth lowest from the bottom in terms of percentage share of FDI inflow in the country
  - Statement ii only
  - Both statements i and ii
  - Statement iii only
  - All three statements

5. Mark the HIGHEST figure among the following options

1. Increase in FDI inflow percentage share for Telecommunications sector between 2007 and 2008
2. Increase in FDI inflow percentage share for Computer Software and Hardware sector between 2009 and 2010
3. Increase in FDI inflow percentage share for Automobile sector between 2011 and 2012
4. Increase in FDI inflow percentage share for Power sector between 2007 and 2008

**DIRECTIONS for questions 6 to 10:** Given below are the shares of India's export basket to different regions (figures in percentage). Answer the questions on the basis of the following data.

Region	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
EU Countries	22.55	22.74	21.85	22.53	21.21	21.17	21.32	20.16	18.33	17.17
West Africa	2.02	1.99	1.98	1.80	1.93	2.13	1.84	1.76	1.71	2.12
East Africa	1.20	1.35	1.37	1.39	2.33	2.58	2.40	1.97	2.13	2.17
North Africa	1.28	1.21	1.62	1.55	1.47	1.63	1.84	1.75	1.59	1.54
North America	22.49	19.61	17.96	18.25	16.23	13.85	12.57	11.89	10.98	12.48
Latin America	2.06	1.40	2.15	2.47	2.95	3.11	2.96	3.13	3.72	4.00
ASEAN	8.76	9.12	10.09	10.10	9.98	10.02	10.29	10.16	10.21	12.00
West Asia Gulf Cooperation Council (GCC)	9.32	11.07	11.75	11.42	12.96	13.35	17.21	17.06	16.90	14.85
West Asia (Other than GCC)	3.68	3.68	3.67	3.26	3.81	3.66	3.32	3.22	3.09	3.12
North East Asia	14.92	14.70	15.83	15.74	15.33	16.23	13.80	16.12	14.83	14.86
South Asia	5.28	6.73	5.51	5.38	5.12	5.90	4.62	4.69	4.64	4.37

6. Among the four options mentioned below, export share of India witnessed HIGHEST year-to-year decline in absolute terms in which of the region-period combinations?

1. In ASEAN region from 2005-06 to 2006-07
2. In South Asian region from 2004-05 to 2005-06
3. In West Asia (GCC) region from 2008-09 to 2009-10
4. In North African region from 2009-10 to 2010-11

7. Among the four options mentioned below for which region have the export shares declined maximum number of times in a year-on-year basis?

1. South Asia
2. North Africa
3. North America
4. West Africa

8. Between 2009-10 and 2010-11, the annual growth rate in India's (percentage) export share has been LOWEST for

1. North Africa
2. North East Asia
3. North America
4. EU Countries

9. Mark the HIGHEST figure from the following options

1. India's simple average export share to North Africa during 2008-09 and 2009-10
2. India's simple average export share to East Africa during 2004-05 and 2007-08
3. India's simple average export share to Latin America during 2002-03 and 2004-05
4. India's simple average export share to West Africa during 2007-08 and 2010-11

**10.** Identify the FALSE statement

1. In 2011 -12, South Asia was ranked sixth in India's export basket
2. The export share of North Africa in India's export basket has been the lowest for maximum number of years
3. In 2004-05, Latin America was ranked fourth from the bottom in India's export basket
4. Between 2002-03 and 2003-04, the annual growth rate in India's (percentage) export share has been highest for West Asia (GCC) market.

**DIRECTIONS for questions 11 to 15:** Given below are the detailed characteristics of select Indian industries. Answer the questions on the basis of the following data.

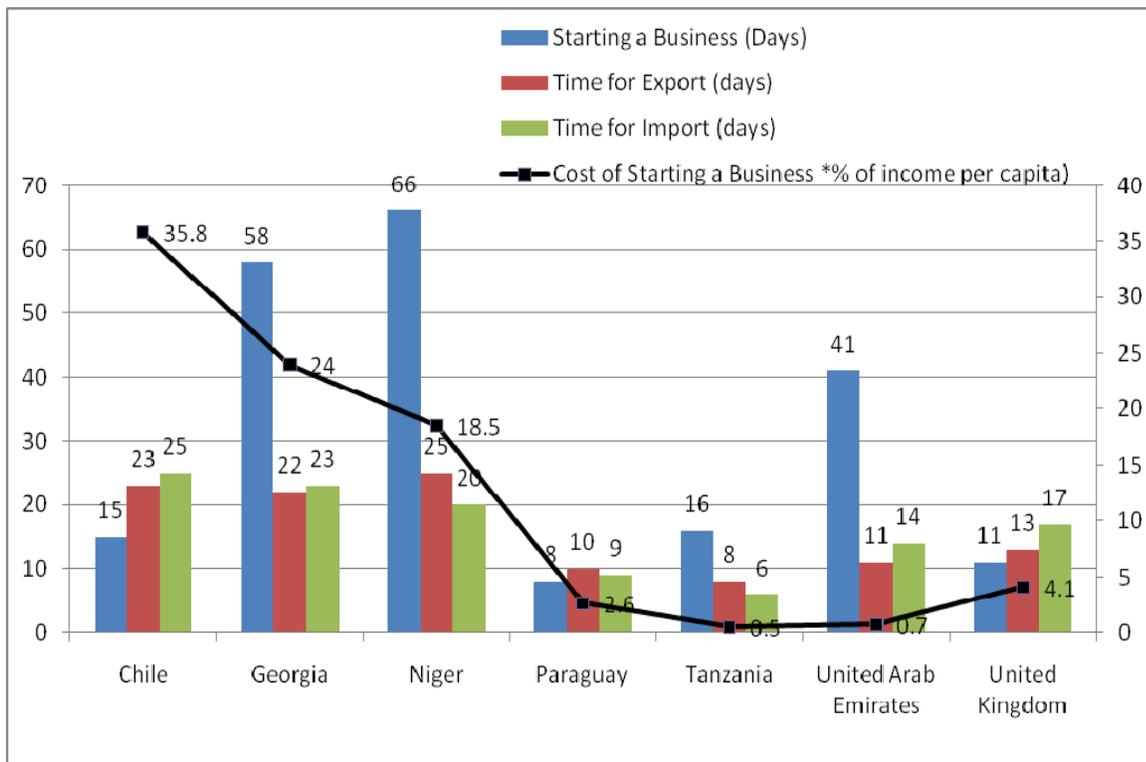
	Industry 1	Industry 2	Industry 3	Industry 4	Industry 5	Industry 6	Industry 7
<b>Number of Factories</b>	65	110	32	30	78	39	300
<b>Number of Workers</b>	9066	877	5656	1099	7508	3333	15670
<b>Total Number of Persons Engaged</b>	9466	1255	6830	1330	9088	4271	19159
<b>Wage to Workers (Rs. Lakh)</b>	1875	420	3706	596	5800	3117	6966
<b>Total Emoluments (Rs. Lakh)</b>	2059	747	6479	1024	9284	6084	15053
<b>Fuels Consumed (Rs.Lakh)</b>	88	762	10817	1384	14790	6461	32178
<b>Materials Consumed (Rs. Lakh)</b>	2519	4135	57275	34027	327400	123275	106233
<b>Total Inputs (Rs. Lakh)</b>	3256	5990	80238	41037	371605	138780	171246
<b>Depreciation (Rs.Lakh)</b>	41	149	6667	1044	25674	3515	11246
<b>Net Value Added (Rs. Lakh)</b>	3178	2284	23640	5831	71739	42434	72290
<b>Profits (Rs. Lakh)</b>	816	913	9356	3990	34943	31219	45392

- 11.** If total managerial wage bill is defined as the difference between total emoluments and total wage to workers, and total managerial staff is defined as the difference between total persons engaged and total number of workers, then average managerial wage would be HIGHEST for:
1. Industry 5
  2. Industry 6
  3. Industry 3
  4. Industry 7
- 12.** Profit expressed as a ratio of net value added is HIGHEST for
1. Industry 6
  2. Industry 7
  3. Industry 4
  4. Industry 5
- 13.** If gross value added is defined as the sum of net value added and depreciation, then the difference in gross value added per worker is maximum between which of the following pairs?
1. Industry 6 and Industry 3
  2. Industry 7 and Industry 1
  3. Industry 5 and Industry 2
  4. Industry 6 and Industry 4

14. Expense on Fuel consumption as a percentage of input cost has been HIGHEST for
1. Industry 3
  2. Industry 7
  3. Industry 2
  4. Industry 6
15. Identify the TRUE statement
1. Number of workers per factory is third highest for Industry 6
  2. Expense on Materials consumption expressed as a percentage of input cost is second highest for Industry 4
  3. Profit earned expressed as a percentage of emolument is second highest for Industry 7
  4. Emoluments expressed as a percentage of net value added is lowest for Industry 5

**DIRECTIONS for questions 16 to 19:** Given below is information relating to cost of starting a business and number of days required for specific business activities in select countries. Answer the questions on the basis of the data in the following figure.

The data labels for the bars are placed above them, while the same for the line graph are placed in boxes. Legend for the bars is given in the order of left bar to right bar.



16. If countries were ranked according to the number of days required to start a business, (with the country requiring least number of days being rank highest), which of the top three countries would have the least cost to per capita income ratio?
1. Chile
  2. Tanzania
  3. Paraguay
  4. None of the above
17. Ratio of number of days required for export to import is the least for which country?
1. UK
  2. UAE
  3. Chile
  4. Georgia

**18.** Identify the TRUE Statement

1. In Tanzania, the number of days required for exporting is lower than the number of days required for importing.
2. The sum of number of days required for exporting and the number of days required for importing is the third lowest for UK.
3. In Paraguay, the number of days required for starting a business is higher than the number of days required for importing.
4. In Georgia, the number of days required for exporting is lower than the number of days required for importing,

**19.** Identify the FALSE Statement

1. The number of days required for starting a business in Chile is lower than the corresponding figure in Tanzania.
2. The number of days required for starting a business in UK is equal to the number of days required for exporting in UAE.
3. The number of days required for importing in Georgia is higher than the number of days required for exporting in Niger.
4. The cost of starting a business as percentage of per capita income in Tanzania is lower than the corresponding figure in UAE.



**DIRECTIONS for questions 26 to 27:**

LETTER	E	R	C	F	L	N	H	K	P	T	A	S	G
CODE	%	3	2	5	@	7	#	6	1	8	4	%	9

- If the first letter is a vowel and the last letter is a consonant, both are to be coded as ©
- If the first letter is a consonant and the last letter is a vowel, both are to be coded as 0
- If the first letter as well as the last letter are vowels, both are to be coded as the code of the last letter.

**26. NFRSCA**

- 753%20
- 053%24
- 0232%0
- 053%20

**27. ARFTHE**

- %358#%
- 4358#%
- 4358#4
- %385#%

**28. Read the following information to answer the question that follows.**

- P-Q means Q is father of P
- P\*Q means Q is brother of P
- P-5-Q means Q is wife of P
- P+Q means Q is sister of P

Which of the following means M is the grandfather of T?

- T-OL+N\*M
- T-R-Z+L\*M
- T-Z\*L+P-M
- None of these

**29. There are five houses P, Q, R, S and T. P is right of Q and T is left of R and right of P. Q is right of S. Which house is in the middle?**

- P
- Q
- T
- R

**30. Find the statement which is necessarily true according to the given information:**

The Asatra Vriksh is an evergreen tree that grows in the Nilgiris. The Asatra Vriksh has a fleshy, poisonous fruit. Recently, Purol, a substance found in the bark of the Asatra Vriksh, was discovered to be a promising new antidepressant drug.

- Purol is poisonous when taken by healthy people.
- Purol has cured people from various diseases.
- People should not eat the fruit of the Asatra Vriksh.
- No treatment for depression was known till Purol was discovered.

**31. Given below are some words from an artificial language.**

- agnoscrenia* means poisonous spider
- delanocrenia* means poisonous snake
- agnosdeery* means brown spider

Which of the following is most likely to mean "black widow spider"?

- aeeryclostangus
- agnosvitribulunin
- agnosdelano
- Trymuttiangus

32. A research study recorded that the number of unemployed educated youth was equal to the number of unemployed uneducated youth. It was Concluded by the researchers that being educated does not enhance the probability of being employed. Which of the following information would be required to validate the above conclusion?
1. The number of unemployed educated and uneducated people in other age groups
  2. The number of organisations employing youth
  3. The percentage of unemployment in educated youth versus percentage of unemployment in uneducated youth.
  4. The percentage increase in number of educated youth versus last year

**DIRECTIONS for questions 33 to 35:** Study the information below and answer the questions based on it:

- i. There are 5 persons in a group - P, Q, R, S and T.
- ii. In this group, there is one badminton player, one chess player and one tennis player.
- iii. P and S are unmarried ladies who do not play any games,
- iv. No lady is either a chess player or a badminton player,
- v. There is one married couple in this group of which T is the husband,
- vi. Q is the brother of R and is neither a chess player nor a tennis player.

33. Which of the following groups has only ladies?
1. PQR
  2. QRS
  3. RST
  4. None of the above
34. Who is the tennis player?
1. Q
  2. R
  3. S
  4. T
35. Who is the wife of T?
1. P
  2. S
  3. Q
  4. R
36. The time in a clock is 20 minutes past 2. Find the angle between the hands of the clock.
1. 45 degrees
  2. 50 degrees
  3. 60 degrees
  4. 120 degrees

**DIRECTIONS for questions 37 to 39:** Select the correct option to fill in the blank space/s

37. c\_bba\_\_cab\_ac\_ab\_ac
1. b,c,b,a,c
  2. c,a,b,c,b
  3. a,c,c,b,c
  4. a,c,b,c,b
38.  $B_2CD$ , \_\_\_\_\_,  $BCD_4$ , \_\_\_\_\_,  $BC_6D$
1.  $BC_3D$ ;  $B_5CD$
  2.  $BC_2D$ ;  $BC_3D$
  3.  $BC_3D$ ;  $B_3CD$
  4.  $BC_3D$ ;  $BC_5D$
39. P3,M8, \_\_\_\_\_, G24,D35
1. K15
  2. J13
  3. 113
  4. J15

## SECTION – 2

**Number of questions: 28**

40. In Column 1 are the names of some great Indians, whose birthdays are celebrated as special days, which are given in Column 2. Match the birthday with the day of celebration

Column 1: Birthday of	Column 2: Celebrated in India as
i. Swami Vivekananda	a. Harmony Day
ii. M. Visvesvaraya	b. Doctors Day
iii. Rajiv Gandhi	c. National Youth Day
iv. B.C. Roy	d. Engineers Day

1. i-a; ii-b; iii-c; iv-d    2. i-c; ii-b; iii-d; iv-a    3. i-c; ii-d; iii-a; iv-b    4. i-d; ii-c; iii-b; iv-a

41. Which of the following fictional characters was created by Agatha Christie?

1. Hercule Poirot    2. Father Brown    3. Perry Mason    4. Sherlock Holmes

42. Under an agreement with which of the following countries did Subhas Chandra Bose organise the Indian soldiers into Azad Hind Fauj?

1. Germany    2. Japan    3. Italy    4. Russia

43. Bashar al-Assad is/was a leader of which of the following countries?

1. Oman    2. Jordan    3. Tunisia    4. Syria

44. From the year 2014 onwards, the London Interbank Offered Rate (LIBOR) will be administered by

1. NYSE Euronext    2. Thomson Reuters  
3. British Bankers' Association    4. UK's Financial Services Authority

45. Which of the following countries is not a member of SAARC?

1. Nepal    2. Myanmar    3. Pakistan    4. Afghanistan

46. Given in Column 1 are some Latin phrases commonly used in English. Their meanings are given in Column 2. Match the phrase in Column 1 with its correct meaning in Column 2:

Column 1	Column 2
i. Caveat Emptor	a. That is to say
ii. Quid Pro Quo	b. In the same place
iii. Videlicet	c. Let the buyer beware
iv. Ibidem	d. One thing for another

1. i-c; ii-d; iii-a; iv-b    2. i-b; ii-a; iii-c; iv-d    3. i-d; ii-c; iii-b; iv-a    4. i-a; ii-b; iii-d; iv-c

47. What is the name of the novel that was published in April 2013 and authored under the pseudonym Robert Galbraith?

1. Ghana Must Go    2. Savage Continent  
3. The Cuckoo's Calling    4. Who says Elephants Can't Dance?

48. Which of the following persons purchased the Washington Post in 2013?
1. Warren Buffet
  2. Jeff Bezos
  3. Carlos Slim
  4. Steven Spielberg
49. For which franchise did Parupalli Kashyap play in IBL 2013?
1. Pune Pistons
  2. Banga Beats
  3. Mumbai Masters
  4. Hyderabad Hotshots
50. Who amongst the following is not associated with Egypt?
1. Mohammed al-Magariaf
  2. Adly Mansour
  3. Mohammed Morsi
  4. Hosni Mubarak
51. Which of the following is Narayan Murthy not associated with?
1. Padma Vibhushan
  2. Patni Computers
  3. Unique Identification Authority of India
  4. Both A and C
52. Pick the odd one out.
1. Ban Ki- Moon
  2. Boutrops Boutros- Ghali
  3. Pascal Lamy
  4. Kofi Annan
53. Pick the odd one out
1. Abhinav Bindra
  2. Sushil Kumar
  3. Gagan Narang
  4. Vijay Kumar
54. Dr. Raghuram Rajan has not served in which of the following positions
1. Governor, RBI
  2. Economic Counsellor, IMF
  3. Chief Economist, World Bank
  4. Chief Economic Advisor, GOI
55. In the Tapi gas pipeline, the word "Tapi" refers to which of the following?
1. Turkey, Afghanistan, Pakistan, India
  2. Tajikistan, Azerbaijan, Pakistan, Iran
  3. Tajikistan, Afghanistan, Pakistan, Iran
  4. Turkmenistan, Afghanistan, Pakistan, India
56. Mt. Everest is the highest mountain summit of the world. Rank the following summits in descending order of their heights?
- i. Makalu;
  - ii. Kanchenjunga;
  - iii. Godwin Austen;
  - iv. Lhotse
1. iv-i-iii-ii
  2. ii-iii-i-iv
  3. iii-ii-iv-i
  4. i-iv-ii-iii
57. Which religion was propounded by Mughal Emperor Akbar in 1582 A.D., with the intention of merging the best elements of different religions?
1. Akbarnama
  2. Ain-i-Akbari
  3. Zij-illkhani
  4. Din-e-Ilahi

58. Match the names in column 1 with their organization in column 2:

Column 1	Column 2
i. Christine Lagarde	a. UNFCCC
ii. Roberto Azevedo	b. IMF
iii. Christiana Figueres	c. World Bank
iv. Jim Yong Kim	d. WTO

1. i-b; ii-a; iii-c; iv-d    2. i-b; ii-d; iii-a; iv-c    3. i-b; ii-a; iii-d; iv-c    4. i-a; ii-c; iii-b; iv-d

59. If India exports more than it imports, which of the following is likely to happen?

1. INR is likely to appreciate against other currencies
2. The supply of INR is likely to exceed the demand in the foreign exchange market, ceteris paribus.
3. INR would be under pressure to depreciate against other currencies.
4. Both B and C are correct

60. Which country has the longest coastline?

1. USA
2. Australia
3. India
4. Canada

61. Match the Countries with Trade Agreements / Regional Blocs:

Country	Trade Agreements / Regional Blocs
i. Brazil	a. ASEAN
ii. Indonesia	b. APTA
iii. Bangladesh	c. MERCOSUR
iv. Mexico	d. NAFTA

1. i-b; ii-c; iii-a; iv-d    2. i-b; ii-a; iii-c; iv-d    3. i-c; ii-b; iii-a; iv-d    4. i-c; ii-a; iii-b; iv-d

62. The nomenclature of which of the following schemes is incorrect?

1. Rajiv Gram Samridhi Yojana
2. Jawahar Rozgar Yojana
3. Rajiv Awas Yojana
4. Pradhan Mantri Gram Sadak Yojana

63. Arrange the following Indian port cities beginning from East to West,

- i. Jamnagar
  - ii. Kochi
  - iii. Chennai
  - iv. Visakhapatnam
1. i-ii-iii-iv    2. iv-iii-ii-i    3. ii-iv-i-iii    4. iii-i-iv-ii

64. Which of the following cities is at the junction of the highways known as North-South and East-West Corridors?

1. Delhi
2. Nagpur
3. Jhansi
4. Hyderabad

65. According to the "Doing Business Report (2013)" of the World Bank, which BRIC nation holds the best ranking?

1. Russian Federation
2. Brazil
3. India
4. China

- 66.** Which is the most abundant element in the universe?
1. Hydrogen
  2. Helium
  3. Oxygen
  4. Carbon
- 67.** Which countries are separated by the McMahon line?
1. India and Pakistan
  2. India and Bangladesh
  3. China and India
  4. China and Tibet

## SECTION – 3 (Part 1)

Number of questions: 20

**DIRECTIONS for questions 68 to 69:** Match the word in column 1 with its meaning in column 2.

68.

Column 1	Column 2
i. Anthromorphous	a. Moving upwards
ii. Anachronistic	b. A collection of extracts from the writings of various authors
iii. Anthology	c. Having or resembling human form
iv. Ascension	d. Occurring in the wrong time period

1. i-b; ii-a; iii-d; iv-c    2. i-c; ii-b; iii-d; iv-a    3. i-c; ii-d; iii-b; iv-a    4. i-b; ii-c; iii-a; iv-d

69.

Column 1	Column 2
i. Cacology	a. Study of human character
ii. Ethology	b. Study of snow and ice
iii. Misology	c. Poor diction or poor choice of words
iv. Cryology	d. Hatred of reasoning

1. i-d; ii-c; iii-a; iv-b    2. i-c; ii-a; iii-d; iv-b    3. i-a; ii-b; iii-c; iv-d    4. None of the above

**DIRECTIONS for questions 70 to 71:** For each of the questions given below, select the word that fits well in all the four given sentences.

70. i) The Bill \_\_\_\_\_ reduction in electoral expenses.  
 (ii) The plan \_\_\_\_\_ ten percent growth in production  
 (iii) The budget \_\_\_\_\_ a two-fold increase in this year's turnover.  
 (iv) The company \_\_\_\_\_ a good production year due to better harvest.

1. seeks                      2. envisages                      3. hopes                      4. demands

71. (i) We \_\_\_\_\_ the room with an electric heater.  
 (ii) His mother \_\_\_\_\_ lunch for all his friends.  
 (iii) The will \_\_\_\_\_ that each child will receive half of the money.  
 (iv) He \_\_\_\_\_ for his family by working overtime.

1. prepared                      2. Equipped                      3. arranged                      4. Provided

**DIRECTIONS for questions 72 to 73:** Arrange the given sentences in the most logical sequence.

72. (i) She was so innovative that she had begun to include the songs composed by Rabindranath Tagore in her repertoire even before the word "Rabindra Sangeet" was coined,  
 (ii) Gauhar knew she could gain the goodwill of the Bengali babus by singing as many Bengali songs as she could in her soirees.  
 (iii) Instead, she rendered them in her own style, giving them a classical twist, (iv) Gauhar was not afraid to defy the norms and in fact she seldom used the tunes that Tagore had set his songs to.

1. i, ii, iii, iv                      2. ii, iv, iii, i                      3. ii, i, iv, iii                      4. iv, ii, i, iii

73. (i) At dusk, I allowed Adele to put away books and work, and to run downstairs,  
 (ii) Twilight and snowflakes together thickened the air and hid the very shrubs in the lawn.  
 (iii) The afternoon was wild and snowy and we passed it in the schoolroom, (iv) Left alone, I walked to the window but nothing was to be seen there.

1. i, ii, iii, iv                      2. iii, i, iv, ii                      3. i, iii, iv, ii                      4. iv, iii, ii, i

**DIRECTIONS for questions 74 to 75:** Select a word to replace the blank spaces.

74. Alleviate: Aggravate :: Elastic : \_\_\_\_\_

1. Rigid                      2. Flexible                      3. Malleable                      4. Strong

75. Benevolent: Kind :: Unclear: \_\_\_\_\_

1. Bright                      2. Thick                      3. Luminous                      4. Muddy

**DIRECTIONS for questions 76 to 79:** Select one word/phrase which is closest in meaning to the given phrase.

76. Person who knows or can speak many languages

1. Polyglot                      2. Potable                      3. Plebiscite                      4. Paramour

77. Deserving blame for an offence or crime

1. Hedonist                      2. Culpable                      3. Misanthrope                      4. Regicide

78. To have a jaundiced eye

1. to be prejudiced                      2. to have an ailing eye  
 3. to have ill-feeling for someone                      4. none of the above

79. To lose one's bearings

1. to become tired                      2. to give up  
 3. to become mentally unstable                      4. to be uncertain of one's position

80. Which of the following statements is grammatically incorrect?

1. Will you pay by cash or by demand draft?  
 2. Do you remember that Mr. Mehta made delicious kebabs and that he often held barbeque parties?  
 3. There are, without a doubt, many good dishes to try here.  
 4. The class teacher told Mrs. Kapoor that neither Priya nor Shikha are good dancers.

81. Which of the following statements is grammatically correct?

1. Each of the girls living in the orphanage had been ill-treated by her family before they were abandoned.  
 2. Each of the girls living in the -orphanage were ill-treated by their family before they were abandoned.  
 3. Each of the girls living in the orphanage had been ill-treated by her family before she was abandoned.  
 4. Each of the girls living in the orphanage was ill treated by her family before she had been abandoned.

**82.** As busy as a bee is an example of:

1. an oxymoron      2. a metaphor      3. an adage      4. a simile

**DIRECTIONS for questions 83 to 84:** Select the option with the incorrect spelling.

**83.** 1. Accidentally      2. Asseverate      3. Assassination      4. Ammelioration

**84.** 1. Gazzette      2. Lustre      3. Sergeant      4. Bucolic

**DIRECTIONS for questions 85 to 86:** Select the most appropriate antonym for the given word.

**85.** Apocryphal

1. authentic      2. audacious      3. blasphemous      4. none of these

**86.** Capricious

1. crafty      2. obvious      3. erratic      4. consistent

**87.** Select the option which best changes the given sentence from active to passive voice:

The invigilator was reading out the instructions.

1. The instructions were read by the invigilator.  
2. The instructions were being read out by the invigilator.  
3. The instructions had been read out by the invigilator.  
4. The instructions had been read by the invigilator.

**SECTION – 3 (Part 2)****Number of questions: 16**

**DIRECTIONS for questions 88 to 103:** Read the following passages carefully and answer the questions at the end of each passage.

**Passage 1**

Much remained a mystery about Bernie Madoff's crime, even after he pleaded guilty in March 2009. But one thing, it seemed, that everybody knew was true was this: his wife and sons were guilty too. From the first weeks after his arrest, unidentified "former prosecutors" and "criminal lawyers who have followed the case" and "legal sources" were repeatedly quoted in various media outlets asserting that Ruth, Mark, and Andrew Madoff were under investigation and would soon be indicted. Glossy magazine articles would speculate carefully; garish Internet blogs would accuse recklessly; television commentators would wink and nod knowingly. All that fierce, smug certainty about their guilt—unsupported by any cited facts—effectively drove Madoff's immediate family into exile.

In an era of hypermedia, with mobile phone paparazzi and self-defined Internet commentators constantly on the alert for ways to attract attention, it is worth noting that these attacks on the Madoff family were a sharp departure from the typical public reaction to cases of white-collar crime, going back more than a century. Of course, such criminals—confidence men, embezzlers, crooked politicians, fraudsters of all kinds—were attacked savagely by the press and the public when their crimes came to light. But their wives and children were almost never included in those attacks; rather they were almost always ignored or, at the very least, quickly left alone. There were a few exceptions where criminal charges were actually filed against a close relative, who was then pulled to the whipping post of public attention. In general, however, even the wives and children of executed murderers were left to rebuild their lives in relative obscurity, unless they sought the spotlight themselves.

The treatment over the years of organized-crime defendants is instructive. Despite widespread fascination with the murderous escapades of so-called "Mafia dons" and crime-family "capos", it was extremely rare for any attention to fall on the elderly Mrs. Mafia Don or the capos' children—even though a realist might have wondered how much they knew about why their husband or father had asked all his closest buddies to wear guns and sleep on mattresses in the garage. On rare occasions, a mobster's relatives actively courted publicity. But those who didn't were routinely ignored by the media and certainly were never publicly and repeatedly accused of complicity in their husbands' or fathers' crimes.

Yet the public outcry against Ruth Madoff and her sons began almost from the instant of Madoff's arrest and did not cease. By the time he pleaded guilty, it was deafening.

From the beginning, however, there were facts in the Madoff case that just didn't seem to be consistent with the family's guilt. First, there was the fact that none of them fled the country. Perhaps Bernie Madoff, seventy years old at the time of his confession, felt too old and tired to leave as a wealthy fugitive; and perhaps Ruth, even if she were guilty and faced arrest and a lifelong imprisonment, would not leave without him. But his two sons, if they were guilty, had the opportunity, the means, and the motive to flee. The end was clearly in sight weeks in advance, there was still a princely sum in the bank, and they and their families were relatively young and portable. Surely, Madoff, before turning himself in, would have handed his sons the keys to the company jet and enough cash to let them live comfortably beyond the reach of the law for the rest of their lives. After all, if they were his accomplices, their only other option would have been to stay and go to prison. And yet Madoff did not flee— and neither did his wife or sons.

Then, there was his confession. Some hostile theorists immediately argued that Madoff and his guilty sons staged his confession so they could turn him in and thereby deflect suspicion from themselves. But this would have been a worthless gesture unless they all could have been absolutely sure that no incriminating

evidence would surface later and none of their other low-level accomplices would finger the sons in a bid for leniency-assumptions that were not remotely realistic if the sons were actually guilty. Moreover, if Madoff truly believed anyone could be insulated from suspicion simply by turning himself in, wouldn't he have arranged for that to be Ruth?

Logic aside, assumptions about the family's guilt began to run up against the fact that, as the Madoff investigation progressed, the predicted arrests of his wife and sons simply did not happen.

- 88.** According to the author, why did the wife and sons of Madoff not flee the country?
1. Because Bernie Madoff had already pleaded guilty
  2. Because they did not have the opportunity and means to flee
  3. Because they had deflected suspicion from themselves by turning Bernie Madoff in
  4. None of the above
- 89.** How did the family of Bernie Madoff react to media frenzy declaring them guilty?
1. They launched counter publicity to prove they were not guilty
  2. They sued the media for defamation
  3. They stayed away from public eye
  4. They approached the media to confess their crime
- 90.** What is the point the author has highlighted in the given passage?
1. That the Madoff crime came to light because of the dynamism of hypermedia
  2. That the treatment over the years of organized-crime defendants has changed
  3. That media tends to run parallel trials to the court
  4. That families of criminals must also be indicted
- 91.** Which of the following sentences is incorrect?
1. It was the facts about the Madoff case that indicated that his family was guilty
  2. Madoff had been arrested following his confession
  3. Media has always shown extensive interest in the exploits of mafia dons and other criminals
  4. Madoff had committed a white-collar crime

## Passage 2

Many years ago, one mustard dominated the supermarket shelves: French's. It came in a plastic bottle. People used it on hot dogs and bologna. It was yellow mustard, made from ground white mustard seed with turmeric and vinegar, which gave it a mild, slightly metallic taste. If you looked hard in the grocery store, you might find something in the speciality-foods section called Grey Poupon, which was Dijon mustard, made from the more pungent brown mustard seed. In the early seventies, Grey Poupon was no more than a hundred-thousand-dollar-a-year business. Few people knew what it was or how it tasted, or had any particular desire for an alternative to French's or the runner-up, Gulden's. Then one day, the Heublein Company, which owned Grey Poupon, discovered something remarkable: if you gave people a mustard taste test, a significant number had only to try Grey Poupon once to switch from yellow mustard. In the food world that almost never happens; even among the most successful food brands, only about one in a hundred has that kind of conversion rate. Grey Poupon was magic.

So Heublein put Grey Poupon in a bigger glass jar, with an enamelled label and enough of a whiff of Frenchness to make it seem as if it were still being made in Europe (it was made in Hartford, Connecticut, from Canadian mustard seed and white wine). The company ran tasteful print ads in upscale food magazines. They put the mustard in little foil packets and distributed them with airplane meals - which was a brand-new

idea at the time. Then they hired the Manhattan ad agency Lowe Marschalk to do something, on a modest budget, for television. The agency came back with an idea: A Rolls-Royce is driving down a country road. There's a man in the backseat in a suit with a plate of beef on a silver tray. He nods to the chauffeur, who opens the glove compartment. Then comes what is known in the business world as the *reveal*. The chauffeur hands back a jar of Grey Poupon. Another Rolls Royce pulls up alongside. A man leans his hand out of the window. "Pardon me. Would you have any Grey Poupon?"

In the cities where the ads ran, sales of Grey Poupon leaped 40 to 50 percent, and whenever Heublein bought airtime in new cities sales jumped 40 to 50 percent again. Grocery stores put Grey Poupon next to French's and Gulden's. By the end of the 1980's Grey Poupon was the most powerful brand in mustard. "The tagline in the commercial was that this was one of life's finer pleasures." Larry Elegant, who wrote the original Grey Poupon spot, says, "and that, along with the Rolls Royce, seemed to impart to people's minds that this was something truly different and superior."

The rise of Grey Poupon proved that the American supermarket shopper was willing to pay more - in this case \$3.99 instead of \$1.49 for eight ounces - as long as what they were buying carried with it an air of sophistication and complex aromatics. Its success showed, furthermore, that the boundaries of taste and custom were not fixed: that just because mustard had always been yellow didn't mean that customers would use only yellow mustard. It is because of Grey Poupon that the standard American supermarket today has an entire mustard section. And it is because of Grey Poupon that a man named Jim Wigon decided, four years ago, to enter the ketchup business. Isn't the ketchup business today exactly where mustard was thirty years ago? There is Heinz and, far behind, Hunt's and Del Monte and a handful of private label brands. Jim Wagon wanted to create the Grey Poupon of ketchup.

Wigon is from Boston. He runs his ketchup business-under the brand World's Best Ketchup-out of the catering business of his partner, Nich Schiarizzi, in Norwood, Massachusetts. He starts with red peppers, Spanish onions, garlic, and a high-end tomato paste. Basil is chopped by hand, because the buffalo chopper bruises the leaves. He uses maple syrup, not corn syrup, which gives him a quarter of the sugar of Heinz. He pours his ketchup into a clear ten-ounce jar, and sells it for three times the price of Heinz, and for the past few years he has crisscrossed the country, peddling World's Best in six flavours- regular, sweet, dill, garlic, caramelized onion, and basil - to speciality grocery stores and supermarkets. If you were in Zabar's on Manhattan's Upper West Side a few months ago, you would have seen him at the front of the store, in the spot between the sushi and the gefilte fish. In front of him, on a small table, was a silver tureen filled with miniature chicken and beef meatballs, a box of toothpicks, and a dozen or so open jars of his ketchup. "Try my ketchup!" Wigon said, over and over, to anyone who passed. "If you don't try it, you're doomed to eat Heinz the rest of your life."

In the same aisle at Zabar's that day two other demonstrations were going on, so that people were starting at one end with free chicken sausage, sampling a slice of prosciutto, and then pausing at the World's Best stand before heading for the cash register. They would look down at the array of open jars, and Wigon would impale a meatball on a toothpick, dip it in one of his ketchups, and hand it to them with a flourish. The ratio of tomato solids to liquid in World's Best is much higher than in Heinz, and the maple syrup gives it an unmistakable sweet kick. Invariably, people would close their eyes, just for a moment, and do a subtle double take. Some of them would look slightly perplexed and walk away, and others would nod and pick up a jar. "You know why you like it so much?" he would say, in his broad Boston accent, to the customers who seemed most impressed. "Because you have been eating bad ketchup all your life!" Jim Wigon had a simple vision: build a better ketchup - the way Grey Poupon built a better mustard - and the world will beat a path to your door.

**92.** Why has the author termed Grey Poupon as "magic"?

1. It had a different taste and was seen as belonging to specialty-foods division
2. It was made from Dijon mustard
3. It commanded a conversion rate uncommon in the food world
4. It came in a bigger glass jar than French's

93. How many years did it take for Grey Poupon to grow from a hundred-thousand dollar a year brand to the most powerful brand in mustard?
1. Less than 5 years    2. About 5-10 years    3. About 15-20 years    4. More than 25 years
94. What kind of audience was Grey Poupon reaching out to through its ads?
1. Frequent Flyers    2. Those who did not like the taste of French's  
3. Buyers of large quantities of mustard    4. Rich and sophisticated customers
95. Which of the following statements is correct?
1. World's Best Ketchup was cheaper than Heinz  
2. Wigon claimed that people will be doomed if they tried Heinz Ketchup  
3. World's Best Ketchup was thicker than Heinz  
4. People who were perplexed with the taste tended to pick up the jar of World's Best Ketchup

### Passage 3

To equate 'capitalism' with 'greed' is a mistake. We tend to confuse self-interest in the marketplace with selfishness or greed. At the heart of capitalism is the idea of exchange between ordinary, self-interested human beings, who seek to advance their interests peacefully in the marketplace. Adam Smith called this 'rational self-interest'. It is the same motive that gets one to jump out of bed in the morning or makes one carry an umbrella if it rains—nothing selfish about that. To be human is to be self-interested, and this is what exchange in the market place entails.

Greed or selfishness, on the other hand, is an excess of self interest and often transgresses on the rights of others. It is present in all of us, but we find it easier to see it in others and difficult to see it in ourselves. Greed can motivate theft, entail himsa—hurting another whose opposite, ahimsa, is a virtue that Mahatma Gandhi extolled. But the other side of greed is ambition, a positive thing, and when rightly directed, is life-affirming. Herein lies the conundrum of human existence: that the same inner forces that result in a vice can just as easily become virtues that can motivate the well-being of our species.

Those who believe that capitalism has been forced on us by the imperial West are also wrong. Friedrich Hayek, the Noble laureate, called the market a spontaneous order—it is natural for human beings to exchange goods and services, and this is how every society evolved money, laws, conventions and morals to guide behaviour in the marketplace. These are natural products of human endeavour. Competing and cooperating in the marketplace existed in India before the West was imperial or modern.

Whether we like it or not, India is headed in the direction of some sort of democratic capitalism. After two decades of reforms, hardly anyone in India wants state ownership of production, where the absence of competition corrodes the character even more, as we know too well from the dark days of the 'license raj'. Our animus against capitalism has diminished after communism's fall as people increasingly believe that markets do deliver greater prosperity, but most think that capitalism is not a moral system. They continue to believe that morality must depend on religion.

Although the market is neither moral nor immoral, human self-interest usually brings about good behaviour in the marketplace. A seller who does not treat his customers with fairness and civility will lose market share. A company that markets defective products will lose customers. A firm that does not promote the most deserving employees will lose talent to its competitors. A buyer who does not respect the market price will not survive. Lying and cheating will ruin a firm's image, making it untouchable to creditors and suppliers. Hence, free markets offer powerful incentives for ethical conduct, but they must be backed by state institutions that enforce contracts and punish criminal behaviour. If the market has an inbuilt morality, why are there so many crooks in the marketplace? The answer is that there are crooked people in every society, and this is why we

need effective regulators, policemen and judges. We should design our institutions to catch crooks and not harass innocent people as we do so often.

The other cause of our grief is to mistake being 'pro-market' with being 'pro-business'. To be 'pro-market' is to believe in competitive markets which help to keep prices low and gradually raise the quality of products. Competition also means that some businesses will die because they are poorly managed and cannot compete. Kingfisher Airlines and Air India should be allowed to die and not be bailed out by the government. Thus, being pro-market leads to 'rules-based capitalism'; 'pro-business' often leads to 'crony capitalism'. Not to have explained this difference has been the great mistake of our reformers and this has led to the false impression that the reforms only make the rich richer. Crony capitalism exists in India today because of the lack of reforms in sectors such as mining and real estate. To get rid of crony capitalism we need more rather than less reform.

The doom-mongers, who claim that we are now resigned to live in an age of decaying moral standards, are also wrong. Yes, the new Indian middle class is permissive and indulges enthusiastically in harmless pleasures. Yes, it is materialistic, consumerist and capitalistic. But these impulses are not to be mistaken for greed. Only when one's pleasure hurts another does it become a matter of the law (and then, of course, it must be punished. The shared imagination of the new India with its harmless pleasure and victimless vice should not be condemned. Think of ours as a society in transition. Mass wealth is profoundly disturbing but once there is enough, India might again return to its old character of renunciation.

Instead of religious rules, young Indians are motivated by duties to fellow human beings rather than to gods. Those who accuse them of shallow materialism ignore the injustices that prevailed when religion held a monopoly on morality. They overlook real ethical progress with regard to sexual and caste equality that our secular society has begun to deliver. So, the next time Kejriwal makes an expose and the TV screams 'greed', do not fall into the trap of believing capitalist culture is morally sick or that we should return to a moral order rooted in socialism or religion.

- 96.** Which of the following statement correctly reflects the views of the author?
1. Greed entails both himsa and ahimsa
  2. Self interest does not necessarily lead to selfish behavior
  3. Being pro market lead to the rich becoming richer
  4. Both B and D
- 97.** Which of the following options most closely explains what the author wants to say, in the sentence beginning with: "Herein lies the conundrum of human existence:..."
1. The enigma of human existence is that vices and virtues can result from the same inner forces.
  2. The bane of human existence is that vices and virtues can result from the same inner forces.
  3. The boon of human existence is that the same inner forces can lead to vices and virtues.
  4. The solution for human existence is that the same inner forces can lead to vices and virtues.
- 98.** As wealth spreads in society, what is likely to happen according to the author?
1. India will have to resign itself to decaying moral standards
  2. India may once again embrace renunciation
  3. The moral order in India will become deeply rooted in religion
  4. None of the above

99. Which of the following statements does not reflect the views given in this passage?
1. Indian society is undergoing a change and the middle class is emerging
  2. Crony capitalism exists in India today because of the governments' pro- market policies.
  3. The Indian youth is motivated/ driven by moral duties rather than religious diktats.
  4. Free markets need the oversight of state institutions for defeating crooks and criminals

## Passage 4

Brazil is a top exporter of every commodity that has seen dizzying price surges -iron ore, soybeans, sugar - producing a golden age for economic growth. Foreign money-flows into Brazilian stocks and bonds climbed heavenward, up more than tenfold, from \$5 billion a year in early 2007 to more than \$50 billion in the twelve months through March 2011.

The flood of foreign money buying up Brazilian assets has made the currency one of the most expensive in the world, and Brazil one of the most costly, overhyped economies. Almost every major emerging-market currency has strengthened against the dollar over the last decade, but the Brazilian *Real* is on a path alone, way above the pack, having doubled in value against the dollar.

Economists have all kinds of fancy ways to measure the real value of a currency, but when a country is pricing itself this far out of the competition, you can feel it on the ground. In early 2011 the major Rio paper, *O Globo*, ran a story on prices showing that croissants are more expensive than they are in Paris, haircuts cost more than they do in London, bike rentals are more expensive than in Amsterdam, and movie tickets sell for higher prices than in Madrid. A rule of the road: if the local prices in an emerging market country feel expensive even to a visitor from a rich nation, that country is probably not a breakout nation.

There is no better example of how absurd it is to lump all the big emerging markets together than the frequent pairing of Brazil and China. Those who make this comparison are referring only to the fact that they are the biggest players in their home regions, not to the way the economies actually run. Brazil is the world's leading exporter of many raw materials, and China is the leading importer; that makes them major trade partners - China surpassed the United States as Brazil's leading trade partner in 2009 -but it also makes them opposites in almost every important economic respect: Brazil is the *un-China*, with interest rates that are too high, and a currency that is too expensive. It spends too little on roads and too much on welfare, and as a result has a very un-Chiria-like growth record.

It may not be entirely fair to compare economic growth in Brazil with that of its Asian counterparts, because Brazil has a per capita income of \$12,000, more than two times China's and nearly ten times India's. But even taking into account the fact that it is harder for rich nations to grow quickly, Brazil's growth has been disappointing. Since the early 1980s the Brazilian growth rate has oscillated around an average of 2.5 percent, spiking only in concert with increased prices for Brazil's key commodity exports.

While China has been criticized for pursuing "growth at any cost," Brazil has sought to secure "stability at any cost." Brazil's caution stems from its history of financial crises, in which overspending produced debt, humiliating defaults, and embarrassing devaluations, culminating in a disaster that is still recent enough to be fresh in every Brazilian adult's memory: the hyperinflation that started in the early 1980s and peaked in 1994, at the vertiginous annual rate of 2,100 percent.

Wages were pegged to inflation but were increased at varying intervals in different industries, so workers never really knew whether they were making good money or not. As soon as they were paid, they literally ran to the store with cash to buy food, and they could afford little else, causing non-essential industries to start to die. Hyperinflation finally came under control in 1995, but it left a problem of regular inflation behind. Brazil has battled inflation ever since by maintaining one of the highest interest rates in the emerging world. Those high rates have attracted a surge of foreign money, which is partly why the Brazilian *Real* is so expensive relative to comparable currencies.

There is a growing recognition that China faces serious "imbalances" that could derail its long economic boom. Obsessed until recently with high growth, China has been pushing too hard to keep its currency too cheap (to help its export industries compete), encouraging excessively high savings and keeping interest rates rock bottom to fund heavy spending on roads and ports. China is only now beginning to consider a shift in spending priorities to create social programs that protect its people from the vicissitudes of old age and unemployment.

Brazil's economy is just as badly out of balance, though in opposite ways. While China has introduced reforms relentlessly for three decades, opening itself up to the world even at the risk of domestic instability, Brazil has pushed reforms only in the most dire circumstances, for example, privatizing state companies when the government budget is near collapse. Fearful of foreign shocks, Brazil is still one of the most closed economies in the emerging world -total imports and exports account for only 15 percent of GDP - despite its status as the world's leading exporter of sugar, orange juice, coffee, poultry, and beef.

To pay for its big government, Brazil has jacked up taxes and now has a tax burden that equals 38 percent of GDP, the highest in the emerging world, and very similar to the tax burden in developed European welfare states, such as Norway and France. This heavy load of personal and corporate tax on a relatively poor country means that businesses don't have the money to invest in new technology or training, which in turn means that industry is not getting more efficient. Between 1980 and 2008 Brazil's productivity grew at an annual rate of about 0.2 percent, compared to 4 percent in China. Over the same period, productivity grew in India at close to 3 percent and in South Korea and Thailand at close to 2 percent.

**100.** According to the passage, the major concern facing the Brazil economy is:

1. Despite being a major exporter of several key primary commodities, the openness of the economy has not improved.
2. High tax incidence on the household and company incomes, which restricts the ability of the firms to facilitate innovation and skill formation.
3. Insufficient spending of budgetary resources on infrastructure augmentation, which hurts economic interests.
4. All of the above

**101.** Brazil's quest for stability in its economy has originated from:

1. The bitter experience of financial crisis and hyperinflation in the nineties
2. The need to maintain steady supply of commodity exports from its economy
3. The urge to enhance economic growth further
4. All of the above

**102.** Identify the false statement:

1. The Brazilian government in the past has shown lesser inclination towards quick implementation of reform measures.
2. The inflow of foreign currency in Brazil has increased by around US \$ 45 Billion over the four-year period starting from 2007.
3. The annual productivity growth rate in China during 1980-2008 is found to be 20 times higher than the corresponding figure experienced by Brazil.
4. The current inflation management practice of Brazil has provided its economy a significant edge vis-a-vis other countries.

**103.** According to the passage, Brazil does not seem to be an exporter of which commodity combination?

1. Poultry and beef
2. Iron ore and soybeans
3. Croissants and bikes
4. Sugar, orange juice and coffee

## SECTION – 4

**Number of questions: 25**

- 104.** Suppose there are 4 bags. Bag 1 contains 1 black and  $a^2 - 6a + 9$  red balls, bag 2 contains 3 black and  $a^2 - 6a + 7$  red balls, bag 3 contains 5 black and  $a^2 - 6a + 5$  red balls and bag 4 contains 7 black and  $a^2 - 6a + 3$  red balls. A ball is drawn at random from a randomly chosen bag. The maximum value of probability that the selected ball is black, is
1.  $16/a^2 - 6a + 10$       2.  $20/a^2 - 6a + 10$       3.  $1/16$       4. None of the above
- 105.** If the product of the integers a, b, c and d is 3094 and if  $1 < a < b < c < d$ , what is the product of b and c?
1. 26      2. 91      3. 133      4. 221
- 106.** Mrs. Sonia buys Rs. 249.00 worth of candies for the children of a school. For each girl she gets a strawberry flavoured candy priced at Rs. 3.30 per candy; each boy receives a chocolate flavoured candy priced at Rs.2.90 per candy. How many candies of each type did she buy?
1. 21,57      2. 57,21      3. 37,51      4. 27,51
- 107.** There is a triangular building (ABC) located in the heart of Jaipur, the Pink City. The length of the one wall in east (BC) direction is 397 feet. If the length of south wall (AB) is perfect cube, the length of southwest wall (AC) is a power of three, and the length of wall in southwest (AC) is thrice the length of side AB, determine the perimeter of this triangular building.
1. 3209 feet      2. 3213 feet      3. 3773 feet      4. 3313 feet
- 108.** Out of 8 consonants and 5 vowels, how many words can be made, each containing 4 consonants and 3 vowels?
1. 700      2. 504000      3. 3528000      4. 7056000
- 109.** If  $x^2 + 3x - 10$  is a factor of  $3x^4 + 2x^3 - ax^2 + bx - a + b - 4$ , then the closest approximate values of a and b are
1. 25,43      2. 52,43      3. 52,67      4. None of the above
- 110.** If the product of n positive integers is  $n^n$ , then their sum is
1. a negative integer      2. equal to n      3. equal to  $n + \frac{1}{n}$       4. never less than  $n^2$
- 111.** A tennis ball is initially dropped from a height of 180 m. After striking the ground, it rebounds  $(3/5)^{\text{th}}$  of the height from which it has fallen. The total distance that the ball travels before it comes to rest is
1. 540 m      2. 600 m      3. 720 m      4. 900 m
- 112.** In a sports meet for senior citizens organized by the Rotary Club in Kolkata, 9 married couples participated in Table Tennis mixed double event. The number of ways in which the mixed double team can be made, so that no husband and wife play in the same set, is
1. 1512      2. 1240      3. 960      4. 640

- 113.** Two trains P and Q are scheduled to reach New Delhi railway station at 10.00 AM. The probability that train P and train Q will be late is  $\frac{7}{9}$  and  $\frac{11}{27}$  respectively. The probability that train Q will be late, given that train P is late, is  $\frac{8}{9}$ . Then the probability that neither train will be late on a particular day is
1.  $\frac{40}{81}$                       2.  $\frac{41}{81}$                       3.  $\frac{77}{81}$                       4.  $\frac{77}{243}$
- 114.** A survey was conducted to test relative aptitudes in quantitative and logical reasoning of MBA applicants. It is perceived (prior to the survey) that 80 percent of MBA applicants are extremely good in logical reasoning, while only 20 percent are extremely good in quantitative aptitude. Further, it is believed that those with strong quantitative knowledge are also sound in data interpretation, with conditional probability as high as 0.87. However, some MBA applicants who are extremely good in logical reasoning can be also good in data interpretation, with conditional probability 0.15. An applicant surveyed is found to be strong in data interpretation. The probability that the applicant is also strong in quantitative aptitude is
1. 0.4                      2. 0.6                      3. 0.8                      4. 0.9
- 115.** Your friend's cap is in the shape of a right circular cone of base radius 14 cm and height 26.5 cm. The approximate area of the sheet required to make 7 such caps is
1. 6750 sq cm              2. 7280 sq cm              3. 8860 sq cm              4. 9240 sq cm
- 116.** In an engineering college there is a rectangular garden of dimensions 34 m by 21m. Two mutually perpendicular walking corridors of 4 m width have been made in the central part and flowers have been grown in the rest of the garden. The area under the flowers is
1. 320 sq m              2. 400 sq m              3. 510 sq m              4. 630 sq m
- 117.** If decreasing 70 by X percent yields the same result as increasing 60 by X percent, then X percent of 50 is
1. 3.84    2. 4.82  
3. 7.10    4. The data is insufficient to answer the question
- 118.** A rod is cut into 3 equal parts. The resulting portions are then cut into 12, 18 and 32 equal parts, respectively. If each of the resulting portions have integer length, the minimum length of the rod is
1. 6912 units              2. 864 units              3. 288 units              4. 240 units
- 119.** If  $\log_{10}x - \log_{10} \sqrt[3]{x} = 6 \log_x 10$ , then the value of x is
1. 10                      2. 30                      3. 100                      4. 1000
- 120.** A mother along with her two sons is entrusted with the task of cooking Biryani for a family get-together. It takes 30 minutes for all three of them cooking together to complete 50 percent of the task. The cooking can also be completed if the two sons start cooking together and the elder son leaves after 1 hour and the younger son cooks for further 3 hours. If the mother needs 1 hour less than the elder son to complete the cooking, how much cooking does the mother complete in an hour?
1. 33.33%                      2. 50%                      3. 66.67%                      4. None of these

- 121.** It was a rainy morning in Delhi when Rohit drove his mother to a dentist in his Maruti Alto. They started at 8.30 AM from home and Rohit maintained the speed of the vehicle at 30 Km/hr. However, while returning from the doctor's chamber, rain intensified and the vehicle could not move due to severe water logging. With no other alternative, Rohit kept the vehicle outside the doctor's chamber and returned home along with his mother in a rickshaw at a speed of 12 Km/hr. They reached home at 1.30 PM. If they stayed at the doctor's chamber for the dental check-up for 48 minutes, the distance of the doctor's chamber from Rohit's house is
1. 15 Km                      2. 30 Km                      3. 36 Km                      4. 45 Km
- 122.** Two alloys of aluminium have different percentages of aluminium in them. The first one weighs 8 kg and the second one weighs 16 kg. One piece each of equal weight was cut off from both the alloys and first piece was alloyed with the second alloy and the second piece alloyed with the first one. As a result, the percentage of aluminium became the same in the resulting two new alloys. What was the weight of each cut-off piece?
1. 3.33 kg                      2. 4.67 kg                      3. 5.33 kg                      4. None of the above
- 123.** Three years ago, your close friend had won a lottery of Rs. 1 crore. He purchased a flat for Rs. 40 lakhs, a car for Rs. 20 lakhs and shares worth Rs. 10 lakhs. He put the remaining money in a bank deposit that pays compound interest @ 12 percent per annum. If today, he sells off the flat, the car and the shares at certain percentage of their original value and withdraws his entire money from the bank, the total gain in his assets is 5%. The closest approximate percentage of the original value at which he sold off the three items is
1. 60 percent                      2. 75 percent                      3. 90 percent                      4. 105 percent
- 124.** If  $\log_{13} \log_{21} \{\sqrt{x+21} + \sqrt{x}\} = 0$ , then the value of x is
1. 21                      2. 13                      3. 81                      4. None of the above
- 125.** If x is real, the smallest value of the expression  $3x^2 - 4x + 7$  is:
1. 2/3                      2. 3/4                      3. 7/9                      4. None of the above
- 126.** The average of 7 consecutive numbers is P. If the next three numbers are also added, the average shall
1. remain unchanged      2. increase by 1                      3. increase by 1.5                      4. increase by 2
- 127.** The duration of the journey from your home to the College in the local train varies directly as the distance and inversely as the velocity. The velocity varies directly as the square root of the diesel used per km., and inversely as the number of carriages in the train. If, in a journey of 70 km. in 45 minutes with 15 carriages, 10 litres of diesel is required, then the diesel that will be consumed in a journey of 50 km. in half an hour with 18 carriages is
1. 2.9 litres                      2. 11.8 litres                      3. 15.7 litres                      4. None of the above
- 128.** Capacity of tap Y is 60% more than that of X. If both the taps are opened simultaneously, they take 40 hours to fill the tank. The time taken by Y alone to fill the tank is
1. 60 hours                      2. 65 hours                      3. 70 hours                      4. 75 hours

## IIFT Paper-2013

### ANSWER KEY

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

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## IIFT Paper-2013

### EXPLANATIONS

1.	<p>Going according to the options                  A) Services Sector = 20.8 – 18.2 = 2.6                  B) Construction = 10.5 – 7.6 = 2.9                  C) Automobile = 4.9 – 1.9 = 3                  D) Power = 3.2 – 1.3 = 1.9                  Thus, the Highest increase in FDI share is for Automobile Industry.</p>
2.	<p>The Simple average share of FDI in flows can be calculated as = <math>\frac{\text{Sum of values for all years}}{6}</math> But since, we need to calculate the lowest value, so calculating only the sum of values will be sufficient. By totaling, it can be checked that the lowest value is for Drugs &amp; Pharmaceuticals, while the second lowest is for Automobile Industry.</p>
3.	By visual inspection, it can be verified that only option (D) is FALSE.
4.	By doing ranking for the given options, it can be visually checked that (i) & (ii) are true while (iii) is false. Thus, correct answer is (B).
5.	<p>A) Telecommunications sector (2007 &amp; 2008) = 8.3 – 5.5 = 2.8                  B) Computer Software &amp; Hardware (2009 &amp; 2010) = 4.7 – 2.5 = 2.2                  C) Automobile Sector (2011 &amp; 2012) = 4.9 – 2.5 = 2.4                  D) Power Sector (2007 &amp; 2008) = 3.9 – 1.3 = 2.6                  Thus, the highest figure for increase in FDI inflow share is for Telecommunication Sector.</p>
6.	<p>Decline in absolute terms:                  ASEAN region =   10.10 – 9.98   = 0.12                  South Asian region =   5.51 – 5.38   = 0.13                  West Asia (GCC) =   17.21 – 17.06   = 0.15                  North African region =   1.59 – 1.75   = 0.16                  Thus, the highest year-to-year decline in absolute terms is for North African region for the given period.</p>
7.	It can be visually checked that there are 6, 6, 7 and 6 declines respectively for the given options. Thus, maximum no. of times, the export shares declined for North America.
8.	<p>Growth rate for North Africa = <math>\frac{1.59 - 1.75}{1.75} \times 100 = -9.14\%</math>                  Growth rate for North East Asia = <math>\frac{14.83 - 16.12}{16.12} \times 100 = -8.0\%</math>                  Growth rate for North America = <math>\frac{10.98 - 11.89}{11.89} \times 100 = -7.65\%</math>                  Growth rate for EU Countries = <math>\frac{18.33 - 20.16}{20.16} \times 100 = -9.08\%</math>                  Thus, the lowest growth rate is for North Africa.</p>
9.	<p>Average export share for North Africa = <math>\frac{1.84 + 1.75}{2} = 1.79</math>                  Average export share for East Africa =</p>

	<p><math>\frac{1.37 + 2.58}{2} = 1.97</math>                  Average export share for Latin Africa = <math>\frac{2.06 + 2.15}{2} = 2.10</math>                  Average export share for West Africa = <math>\frac{2.13 + 1.71}{2} = 1.92</math>                  So, the highest figure for average export share is for Latin America.</p>
10.	Visually, it can be checked that options A, B, C are true while D is false. Thus, the correct answer is option D.
11.	<p>Average Managerial Wage = <math>\frac{\text{Total emoluments} - \text{Total wage to workers}}{\text{Total persons engaged} - \text{Total number of workers}}</math>                  Industry 5 = <math>\frac{9284 - 5800}{9088 - 7508} = 2.205</math>                  Industry 6 = <math>\frac{6084 - 3117}{4271 - 3333} = 3.163</math>                  Industry 3 = <math>\frac{6479 - 3706}{6830 - 5656} = 2.362</math>                  Industry 7 = <math>\frac{15053 - 6966}{19159 - 15670} = 2.318</math>                  Thus, the highest average managerial wage is for industry 6.</p>
12.	<p>Industry 6 = <math>\frac{\text{Profit}}{\text{Net Value added}} = \frac{31219}{42434} = 0.73</math>                  Industry 7 = <math>\frac{45392}{72290} = 0.63</math>                  Industry 4 = <math>\frac{3990}{5831} = 0.68</math>                  Industry 5 = <math>\frac{34943}{71739} = 0.49</math>                  Thus, the highest ratio is for Industry 6.</p>
13.	<p>ATQ, Gross Value added = Net value added + Depreciation                  A) Industry 6 and 3 = <math>\frac{42434 + 3515}{3333} - \frac{23640 + 6667}{5656} = 13.79 - 5.36 = 8.43</math>                  B) Industry 7 and 1 = <math>\frac{72290 + 11246}{15670} - \frac{3178 + 41}{9066} = 5.33 - 0.35 = 4.98</math>                  C) Industry 5 and 2 = <math>\frac{71739 + 25674}{7508} - \frac{2284 + 149}{877} = 12.97 - 2.77 = 10.2</math>                  D) Industry 6 and 4 = <math>\frac{42434 + 3515}{3333} - \frac{5831 + 1044}{1099} = 13.79 - 6.25 = 7.54</math>                  Thus, the maximum difference in gross value added per worker is for industry 5 and industry 2.</p>
14.	<p>Required Percentage = <math>\frac{\text{Expense on Fuel Consumption}}{\text{Input Cost}} \times 100</math>                  Industry 3 = <math>\frac{10817}{80283} \times 100 = 13.5\%</math></p>

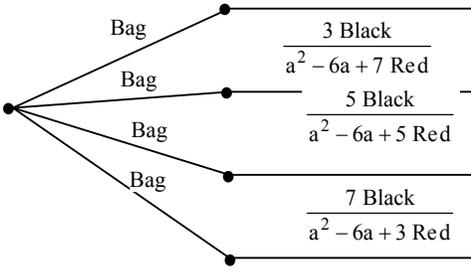


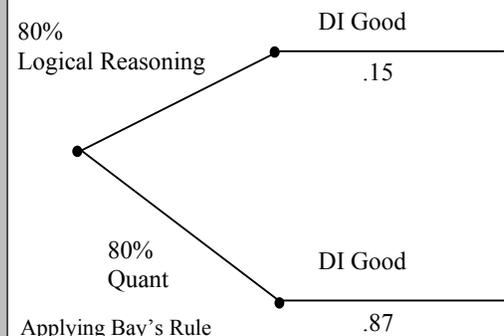
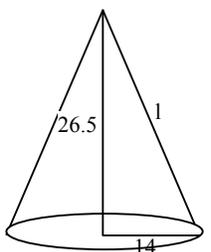
	If $P - Q \rightarrow Q$ is the Father of P. All other option defined the one generation Relation i.e. Sister, Wife, Brother None of the option have two symbols (-) Hence answer is option D.																																				
29.	By Question S Q P T R Hence the House in the middle is P. i.e. option A.																																				
30.	As stated in the passage 'Asatra Vriksh has a fleshy and Poisonous Fruit, hence people should not eat the fruit of the Asatra Vriksh i.e. option C.																																				
31.	Comparing the first two sentence given, the code for 'poisonous' (the only common word) happens to be 'crenia' (the only common code). For the remaining words from these two sentences the code can be found. For the word 'spider' the code will become 'agnos' and for the word 'snake' the code will become 'delano'. On the same logic from the third sentence the code for the word 'brown' can be found as 'deery'. Now for answering the question the code for "black widow spider" the code known is only for the word 'spider'. So the answer must have the code 'agnos' in it. Now out of second and third options it cannot be third, as that contains the code 'delano', which is the code for the word 'snake'. Hence the answer has to be option 2 <sup>nd</sup> .																																				
32.	The given argument is flawed because of the 'percentage fallacy', according to which, merely equating the numbers, one cannot judge the efficiency/inefficiency of the conclusion drawn. So here also the number of youth in both the areas is given and it is not given 'out of how many or total number of 'youth in the respective areas. Therefore unless we are given percentage of both the areas studied. We cannot comment upon the usefulness of the 'getting education'.																																				
33-35.	P&S are unmarried ladies T is the husband that means (he is Male) Q is the brother of R. Hence Q is male and R is the wife of T. <div style="text-align: center;"> <table border="0"> <tr> <td></td> <td>Q</td> <td>R</td> <td>T</td> </tr> <tr> <td>Hence</td> <td>+</td> <td>+</td> <td>+</td> </tr> <tr> <td>    P-S</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    └───┘</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Unmarried</td> <td></td> <td></td> <td>Chess</td> </tr> <tr> <td>...</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>↑</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Badminton</td> <td>Tennis</td> <td></td> </tr> <tr> <td></td> <td>...</td> <td>...</td> <td></td> </tr> </table> </div>		Q	R	T	Hence	+	+	+	P-S				└───┘				Unmarried			Chess	...					↑				Badminton	Tennis			...	...	
	Q	R	T																																		
Hence	+	+	+																																		
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	↑																																				
	Badminton	Tennis																																			
	...	...																																			
33.	By above. The ladies in the group – PSR – Hence D is correct.																																				
34.	Tennis Player – R – Married lady. Hence correct answer is option B.																																				
35.	Wife of T – R. Hence correct answer is option D.																																				
36.	Angle between clock is $50^\circ$ . Hence answer B.																																				
37.	Substituting options :- 4th c a b b a c c a b b a c c a b b a c is the repetitive pattern of <u>c a b b a c</u>																																				
38.	$B_2 C D$ , _____ $BC D_4$ _____ $BC_6 D$ As we can see the Number in the next is increasing and changing the position alphabetically. $B_2 C D$ , $BC_3 D$ , $BCD_4$ $B_5 CD$ , $BC_6 D$ Hence Answer is option 1																																				
39.	P3, M8, _____ G24, D35 we can see that Number are increasing = <u>3</u> <u>8</u> _____ <u>24</u> <u>35</u>																																				

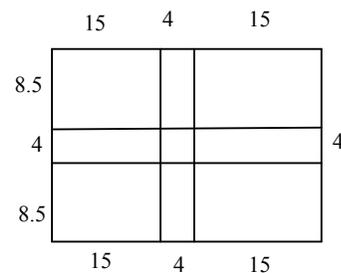
	The space should contain <u>15</u> as difference is increasing $8-3 = 5$ $15-8 = 7$ $24-15 = 9$ $35-24 = 11$ Similarly Position of M and P has the difference 3 Hence J 15 i.e. option is the correct answer
68.	Anthromorphous means To resemble human form (c) Anchronistic comes from an- chron , where chron means time , Therefore it will mean occurring in wrong time (d) Anthology; logy means study and antho means collection of extracts from the writings of various authors (b) Ascension means moving upwards (a)
69.	Caco is root which indicated words/sounds therefore option (d) Ethology is study of human behavior, therefore option (a) Miso indicates hatred therefore option (d) Cryo means icy cold therefore option (b)
70.	The word 'envisages means ''To contemplate; visualize, imagine, conceive, envision''. In all the sentences future is being talked about so option B fits the best in all the sentences
71.	The word 'provide' has following meanings: to make available; furnish: to supply or equip: to afford or yield. to arrange for or stipulate beforehand, as by a provisi onto prepare or procure beforehand. To make arrangements for supplying means of support to the family/anybody Therefore option D can fill all the blanks
72.	Statement (ii) is a general statement introducing the topic "singing Bengali songs". Moreover it uses proper name. Then Statement (i) is extension as it mentioned the kind of songs she sings. (iii) and (iv) are mandatory pair in which usage of "instead" tells (iii) will follow(iv)
73.	The code here is "the sequence of day & activities. Statement (iii) is a general statement which tells about an "afternoon" and it mentions "we in a room" Then statement (i) will come as it talks about dusk and "Adele runs away". Logically (iv) will follow as "after adele runs away....left alone" And then the day progress and "twilight" is mentioned.
74.	Alleviate means "to reduce" whereas aggravate means "to enhance" These are opposites and hence opposite of elastic is rigid
75.	Benevolent means" well meaning and kindly" thus it is same meaning as kind. Therefore the same meaning of unclear will be "muddy"
76.	A person who knows or can speak many languages is polyglot. Plebiscite is "the direct vote of all the members of an electorate on an important public question" Paramour means "a lover, esp. the illicit partner of a married person"
77.	Culpable is one who "deserves blame/guilty". Hedonist is "a pleasure-seeker". Misanthrope is "one who hates mankind" Regicide is "to kill a king"
78.	To have a jaundiced eye means to "to be prejudiced/biased"
79.	One's bearing is one's position; Hence to lose one's bearings is to be uncertain of one's position.
80.	As per the nearest subject rule, if two different subjects are joined with the conjunctions 'neither-nor', then the form of the verb depends on the second/

	nearest subject. Here the second subject is 'shikha', which is singular, therefore singular helping verb 'is' in place of plural helping verb 'are'.
81.	A is incorrect because of 'they' in the second half. We will use 'she' with each as each of is treated to be singular. B is incorrect because of 'their' and 'they' in second half as the reason given above (each of is treated as singular) D is incorrect because abandoning is a one time process and ill treatment can be continuous. we can only use 'had been' with a continuous process. Therefore only C is correct
82.	As busy as a bee is a simile because it is a comparison. bee is very hard working and that implies comparison.
83.	Amelioration is spelled with only one 'm' Others are correct
84.	Gazette has only one 't'
85.	Apocryphal means fictitious Authentic means real Audacious means adventurous Blasphemous means speaking ill against a religion Therefore the correct antonym is authentic which is opposite of fiction
86.	Capricious means fickle minded Crafty means smart or calculative Erratic means abnormal Consistent means dependable So the answer is consistent which means constant
87.	It is a past continuous tense and while converting it into passive. That is why the one with 'were being' is correct. C and D are incorrect as there is no need of 'had been' B is incorrect as it has 'were' which is incorrect as we need continuous passive.
88.	The family had every means to flee the country, so option B is rejected. Option c is rejected as it was the assumption made by some hostile theorist. Option A is rejected as it has nothing to do his family staying or leaving the country.
89.	No mention of option A, in the passage, so rejected. Option b is out of scope, therefore rejected. They did not approach the media to confess their crime, so option D is also rejected. They even didn't the media, so option B is also rejected.
90.	As per the passage. "madoff's case was sharp departure from the reality as his family was also criticized for their involvement in crime. In fourth Para, also the author says that 'the treatment, over the years of organized -crime defendants, is instructive .... , Even though the court did not find anything against the madoff's family, yet the media right from the start pointed fingers at Madoff's family.
91.	The lines "from the beginning, however, there were facts in the Madoff's case that just didn't seem to be consistent with the family's guilt. So it is clear that media tends to run parallel trial court.
92.	From the last lines of the 1 <sup>st</sup> paragraph it is clear that 'Grey Poupon was magic' because it could make several people switch over to using its product, which was almost impossible to achieve.
93.	7 <sup>th</sup> line of the 1 <sup>st</sup> paragraph talks about the period of early 1970s when Grey Poupon was not popular. Then 4 <sup>th</sup> line of the 3 <sup>rd</sup> paragraph states that by end of 1980s it became a successful brand. So this span roughly comes out to be of 15- 20 years.

94.	There are a lot of hints in the paragraph that the ads focused on upscale customers. For instance 4th line 2nd paragraph states " the company ran tasteful print ads in upscale food magazines".
95.	The line of the last paragraphs clearly justifies the answer. "The ratio of tomato solids to liquid in world's ....."
96.	For A refer to last few lines of first passage and also Adam smith calls it rational self interest.to be human is self interested , self interest is like carrying umbrella when it rains.these lines support the idea in B For B Refer to passage 2 line 4 , it clearly written that "greed entails ahimsa whose opposite is ahimsa" ..not greed entails both A & C are out of context.
97.	Refer to 3rd last line of second paragraph "here lies the conundrum" which means the mystery or enigma That is why A is correct.
98.	Refer to last two lines of second last paragraph "Mass wealth....." It is clearly given that mass wealth is distributing but once there is enough , India might return to old character of renunciation.
99.	Last 3 lines of the 6 <sup>th</sup> paragraph states that "crony Capitalism exists in India today because of the lack of reforms in sectors such as mining and real estate. To get rid of ....." Thus option 2 is incorrect because it states the opposite.
100.	Option A is a major concern as it is mentioned in paragraph 9 "Brazil's economy is badly out of balance.....brazil is closed economy....total imports & exports account for only 15% of GDP. Option B is also a concern as mentioned in paragraph 10 "jacked up taxes.....businesses do not have money to invest in new technology" Option C is mentioned in para 4 "it spends too little on road"
101.	It is the only reason directly mentioned in paragraph 6 " Brazil has sought security at any cost.....the hyperinflation ...." Rest of the options are mentioned but are not the direct reason for need for stability.
102.	Option B is right as mentioned in paragraph 1 "Foreign money inflow.....climbed heavenward.....from \$5 billion in 2007 to more than \$50 billion ...in march 2011" Hence \$45 billion in 4 years. Option C is right as mentioned in 10 <sup>th</sup> para "Between 1980 and 2008 Brazil's productivity grew at an annual rate of 0.2 % compared to 4 % of china" it Makes it 20 times. Option D is right as mentioned in 7 para "Brazil has battled inflation by maintaining one of the highest interest rates"
103.	All the products mentioned Except Croissants and bikes are explicitly mentioned as exports in the passage. While talking of Croissants and bikes in Para 3, author tells only about the fact that these are highly priced items as compared to their foreign counterparts.

<b>104.</b>	<div style="text-align: center;"> <math display="block">\frac{1 \text{ Black}}{a^2 - 6a + 9 \text{ Red}}</math>  </div> <p>Required Probability</p> $= \frac{1}{4} \times \frac{1}{a^2 - 6a + 9 + 1} + \frac{1}{4} \times \frac{3}{a^2 - 6a + 7 + 3}$ $+ \frac{1}{4} \times \frac{5}{a^2 - 6a + 5 + 5} + \frac{1}{4} \times \frac{7}{a^2 - 6a + 3 + 7}$ $= \frac{1}{4} \left[ \frac{1+3+5+7}{a^2 - 6a + 10} \right] = \frac{4}{a^2 - 6a + 10}$
<b>105.</b>	<p>If the product of bc is 91 then we have <math>bc = 7 \times 13</math>. Also in this case <math>ad = 34</math> so that <math>a \times d = 2 \times 17</math>. <math>\therefore</math> the order of a, b, c and d is 2, 7, 13, 17.</p>
<b>106.</b>	<p>As no definite number is being given, the question is to be answered by taking each of the options one by one. Taking the first option, the total expenditure happens to be <math>21 * 3.30 + 57 * 2.90 = 234.6</math>. Trying the second option the expenditure happens to be <math>57 * 3.30 + 21 * 2.90 = 249</math>. Hence second option is the answer.</p>
<b>107.</b>	<p>Answer should be Data inconsistent as sum of two sides of triangle should be greater than third side and none of the options satisfies this criteria.</p>
<b>108.</b>	<p>Total number of words that can be made = <math>{}^8C_4 \times {}^8C_3 \times 7! = 70 \times 10 \times 5040 = 3528000</math></p>
<b>109.</b>	<p><math>\frac{x^2 + 3x - 10}{}</math> is factor of <math>3x^4 + 2x^3 - ax^2 + bx - a + b</math></p> <p><math>-4 = 0</math> Find the value of a &amp; b</p> $x^2 3x - 10 = 0 = x^2 + 5x - 2x - 10 = 0$ $x(x+5) - 2(x+5) = 0$ $(x-2)(x+5) = 0$ <p><math>x = 2, -5</math> Substituting: <math>x = 2</math> in</p> $3x^4 + 2x^3 - ax^2 + bx - a + b - 4 = 0$ $3(2)^4 + 2(2)^3 - a(2)^2 - a(2)^2 + b(2) - a + b - 4 = 0$ $48 + 16 - 4a + 2b - a + b = 4$ $-5a + 3b = -60$ <p>Substituting: <math>x = -5</math></p> $3(-5)^4 + 2(-5)^3 - a(-5)^2 + b(-5)^2 - a + b - 4 = 0$ $1875 - 250 - 25a - 5b - a + b - 4 = 0$ $-26a - 4b = -1621 \quad (2)$ $-5a + 3b = -60 \quad (1)$ <p>Solving equation 1 and 2 <math>A = 52, b = 67</math> Hence answer is option 3.</p>
<b>110.</b>	<p>Let the nos are 1, 3, 9 so that their product is 27 i.e. <math>3^3</math>. Now sum of 1, 3, 9 is 13 which more than <math>3^2</math> let us</p>

<b>111.</b>	<p>take another example of nos. 1, 2, 8, 16 so that their product is <math>4^4 = 256</math> and sum is <math>1 + 2 + 8 + 16 = 27</math> which is more than <math>4^2 = 16</math>.</p> <p>Total distance travelled = <math>180 + \frac{3}{5} \times 180 + \frac{3}{5} \times 180</math></p> $+ \frac{3}{5} \times \frac{3}{5} \times 180 + \frac{3}{5} \times \frac{3}{5} \times 180$ $= 180 + 2 \left[ \frac{\frac{3}{5} \times 180}{1 - \frac{3}{5}} \right], = 180 + 2 \left[ \frac{108}{\frac{2}{5}} \right]$ $= 180 + 2 \times 108 \times \frac{5}{2}, = 180 + 540, = 720 \text{ m}$ <p>(As after 1st term each term will be repeated)</p>
<b>112.</b>	<p>Total number of ways = <math>{}^9C_2 \times {}^7C_2 \times 2 = 1512</math></p>
<b>113.</b>	<p>Prob (P late) = <math>\frac{7}{9} \Rightarrow</math> Prob (Q late) = <math>\frac{11}{27}</math></p> <p>Prob (Q late given plate) = <math>\frac{8}{9}</math></p> $\Rightarrow \text{Prob (P} \cap \text{Q) both P \& Q late) = } \frac{7}{9} \times \frac{8}{9} = \frac{56}{81}$ <p>Prob (either P or Q or both late)</p> $= \frac{7}{9} + \frac{11}{27} - \frac{56}{81} = \frac{63 + 33 - 56}{81} = \frac{40}{81}, \text{ Prob (Neither is late) = } 1 - \frac{40}{81} = \frac{41}{81}$
<b>114.</b>	<div style="text-align: center;">  </div> <p>Applying Bay's Rule</p> <p>Prob(Applicant is strong in Quant Aptitude given that applicant is strong in DI) = <math>\frac{0.2 \times 0.87}{0.8 \times 0.15 + 0.2 \times 0.87}</math></p> $= \frac{0.174}{0.294} \approx 0.6$
<b>115.</b>	$l^2 = \sqrt{26.5^2 + 14^2}$ $l = 29.9$ <p>Total area of sheet = <math>7 \times 5 \pi</math></p> $= 7 \times \frac{22}{7} \times 14 \times 29.9 = 9240$ <div style="text-align: center;">  </div>

116.	<p>Required area  <math>= 4 \times 8.5 \times 15</math>  <math>= 510 \text{ sq.m.}</math></p> 
117.	<p>We have <math>70 - \frac{x}{100} 70 = 60 + \frac{x}{100} \times 60</math>  <math>\Rightarrow \frac{130}{100} x = 10 \Rightarrow x = \frac{100}{13}</math>          Now <math>x\%</math> of 50 = <math>\frac{100}{13} \times \frac{1}{100} \times 50 = \frac{50}{13} = 3.84</math></p>
118.	<p>LCM of 12, 18 and 32 is 288          So each length should be multiple of 288.          So Minimum length of rod is <math>= 3 \times 288 = 864 \text{ cms.}</math></p>
119.	<p><math>\log_{10} x - \log_{10} \sqrt[3]{x} = 6 \log_x 10</math>          Putting <math>x = 1000</math> we get  <math>\log_{10} 1000 - \log_{10} \sqrt[3]{1000} = 6 \log_{1000} 10</math>  <math>3 - 1 = 6 \times \frac{1}{3}; 2 = 2</math>          Hence option D is the answer.</p>
120.	<p>In the first case they finish half the work in 30 min. or they will finish the work in one hour. So they work one hour each in the first case. In the second case, they work the elder for 1 hour and the younger for 4 hours. Equating the two cases implies whatever younger son does in three hours the mother does in one hour. The time taken by younger son is thrice the time taken by the mother. Now if mother takes M hours, younger son will take 3M hour and the elder son will take M+1 hours, as given in the question. Now they are finishing the work in one hour implies the following equation. <math>\frac{1}{M} + \frac{1}{3M} + \frac{1}{M+1} = 1</math>          Solving this equation, we get <math>M = 2</math>. So mother takes 2 hours, elder son takes 3 and younger son takes 6 hours. Thus in one hour mother does 50% of work.</p>
121.	<p>Total travel time = 5 hours – 48 minutes  <math>= 5\text{h} - \frac{4}{5}\text{h} = \frac{21}{5}\text{h}</math>          Average speed of whole journey = <math>\frac{2 \times 30 \times 12}{30 + 12}</math>          Total Distance = <math>\frac{2 \times 30 \times 12}{42} \times \frac{21}{5} = 72 \text{ km}</math>          So, distance on one side = <math>72/6 = 36 \text{ km}</math></p>
122.	<p>Let "x" % of aluminium is there in first alloy. And "y" of aluminium is there in second alloy. And z is the weight of each cut off piece.          As per the Question:-          Percentage of New two alloys are equal after two alloys are mixed. i.e.  <math>\frac{x\% \text{ of } 8 \text{ Kg} - x\% \text{ of } z + y\% \text{ of } z}{8} \times 100</math>  <math>= \frac{y\% \text{ of } 16 + x\% \text{ of } z - y\% \text{ of } z}{16} \times 100</math></p>

	<p><math>\frac{x.8}{100} - \frac{x.z}{100} + \frac{y.z}{100} \times 100</math>  <math>= \frac{8x - xz + yz}{8} \times 100</math>  <math>\frac{y.16}{100} + \frac{x.z}{100} - \frac{y.z}{100} \times 100</math>  <math>= \frac{16y + xz - yz}{16} \times 100</math>          Cancelling 100 both sides  <math>\frac{16x}{100} - \frac{2zx}{100} + \frac{2yz}{100} = \frac{16y}{100} + \frac{xz}{100} - \frac{yz}{100}</math>          Taking <math>\frac{1}{100}</math> common  <math>16x - 2zx + 2yz = 16y + xz - yz</math>  <math>16x - 16y - 3zx + 3yz = 0</math>  <math>16(x-y) - 3z(x-y) = 0, (x-y)(16-3z) = 0</math>          Hence either <math>x-y=0</math> or <math>16-3z=0</math> but <math>x-y \neq 0</math> because they are different as given in the question.          Hence <math>16-3z=0, 3z=16, z=5.33\text{kg}</math></p>
123.	<p>Money spent on flat = 40 lakhs.          Money spent on car = 20 lakh          Money spent on shares = 10 lakh          Total money = 1 crore = 100 lakh          Money deposited in Bank = <math>100 - 40 - 20 - 10 = 100 - 70 = 30</math> lakh          Final amount in Bank after 3 years =  <math>30 \times (1.12)^3 = 42.14</math> lakh          Net worth after 3 years = 105 lakh  <math>\therefore</math> Worth of Flat + Car + Shares after 3 years = <math>105 - 42.14 = 62.85</math>          So closest worth of three items = <math>\frac{62.85}{70} \times 100 = 90\%</math></p>
124.	<p><math>\log_{13} \log_{21} \left\{ \sqrt{x+21} + \sqrt{x} \right\} = 0</math>  <math>\Rightarrow \log_{21} \sqrt{x+21} + \sqrt{x} = 13^0 = 1</math>  <math>\Rightarrow \sqrt{x+21} + \sqrt{x} = 21^1</math>          None of the option satisfies this. Hence option D is the answer.</p>
125.	<p><math>Y = 3x^2 - 4x + 7, \frac{dy}{dx} = 6x - 4, \frac{d^2y}{dx^2} = 6</math>          Hence it's a point of minima          For minimum value  <math>6x - 4 = 0, 6x = 4, x = \frac{4}{6} = \frac{2}{3}</math>          Putting <math>x = \frac{2}{3}</math> in <math>3x^2 - 4x + 7</math>          We get <math>3 \times \frac{(2)^2}{3} - 4 \times \frac{2}{3} + 7 = \frac{17}{3}</math>          Hence D option is the answer.</p>
126.	<p>Average of 7 consecutive numbers will be <math>\frac{7+1}{2} = \frac{8}{2} = 4</math>th number. Average of 10 number will be midpoint of <math>\frac{10}{2}</math> i.e. 5<sup>th</sup> and <math>\frac{10}{2} + 1</math> i.e. 6<sup>th</sup> numbers i.e. So average increases by 1.5.</p>
127.	<p>Given as per Question          Duration <math>\propto \frac{\text{Dis tan ce}}{\text{Velocity}}</math></p>

	<p>Velocity <math>\propto \frac{\text{Dis tan ce}}{\text{Duration}} \text{-----1}</math></p> <p>Also Velocity <math>\propto \frac{\sqrt{\text{Diesel Consumption}}}{\text{Total Dis tan ce Travelled}} \text{-----2}</math></p> <p>Substituting value of velocity—in equation</p> $\frac{\sqrt{\text{Diesel Consumption}}}{\text{Total Dis tan ce Travelled}} \propto \frac{\text{Dis tan ce Travelled}}{\text{Duration}}$ <p>Let k is the factor</p> $\frac{\sqrt{\text{Diesel Consumption}}}{\text{Dis tan ce Travelled}} = k \times \frac{\text{Dis tan ce Travelled}}{\text{Duration}}$ <p><math>\times</math> No. of Carriages</p> $= \frac{\sqrt{\text{Diesel consumption}}}{\text{Dis tan ce travelled}} \times \frac{\text{Duration}}{\text{Dis tan ce travelled} \times \text{No. of car}}$ <p>Using Chain rule “k” constant is “x” litres</p> $\frac{\sqrt{10}}{70} \times \frac{45}{70 \times 15} = \frac{\sqrt{x}}{50} \times \frac{30}{50 \times 18}$ $\frac{\sqrt{10}}{70} \times \frac{45}{70 \times 15} \times \frac{50 \times 18}{30} = \frac{\sqrt{x}}{50}$ $\frac{\sqrt{10}}{70} \times \frac{90}{70} = \frac{\sqrt{x}}{50}$ <p>Squaring both sides</p> $\frac{1}{7} \times \frac{81}{49} \times 50 = x, \quad x=11.8 \text{ lites}$
<b>128.</b>	<p>Let the work done by x is 5 unit/hr and by y = 8 unit/hr. So in one hour they will do 13 unit/hr. Since the work is done in 40 hours.</p> <p>= The total capacity of tank = <math>40 \times 13 = 520</math> litre</p> <p><math>\therefore</math> so Y alone will take <math>520/8 = 65</math> hours.</p>