

ANSWER KEY - IIFT 2015-17

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

SOLUTION IIFT - 2015-17

1. B Option A: Refer to the following lines from the fifth paragraph, "... Wigan did not dramatically outperform their wage bill...From 2006 to 2011, they finished eighteenth, fifteenth, fifteenth, sixteenth and sixteenth in the salary league ...". So, accordingly, in terms of salary payments of the staff, Wigan ranked sixteenth and not fifteenth in the year 2009-10, rendering option A incorrect.
Option B: Refer to the following line from the seventh paragraph, "With the wage bills four, two and one and a half times Wigan's £ 40 million, Manchester United, Aston Villa and Fulham faced odds of demotion of 0, 31 and 69 per cent, respectively." From this we can infer option B.
Option C: The second paragraph of the passage states that according to Simon Kuper and the economist Stefan Szymanski it "might not be the case that the team with the highest wage bill finishes top each and every season, but over the long term, the correlation is uncanny". Since the results in the long term are uncanny, we cannot infer option C.
Option D: The passage uses the performance chalkboards published by The Guardian in conjunction with Opta Sports and not ESPN sports. This renders option D incorrect.
2. C According to the following statement from the penultimate paragraph, "when Larcada calculated the average distances from which Premier league clubs attempted shots that season, Wigan were the overall league leaders. Their average shooting distance was some twenty-six yards...their goals came from a longer distance from any of their peers – an average of 18.5 yards..." This makes option C correct.
3. D As per the passage, Hugo Rodallega is a player of the Wigan Athletic, Ramzi Ben Said is a student at Cornell University, Roberto Martinez is the manager of Wigan Athletic and Albert Larcada is an analyst at ESPN. Hence, option D is correct.
4. C The author in the last paragraph describes the characteristics of the unique game played by Wigan Athletic - highly accurate long range shots, recovering to their defensive shape easily and reliance on counter attack instead of attacking. This he touts is the Guerilla football style, rendering option C correct. Options A and B are factually incorrect.
5. A Option A is incorrect. The sixth paragraph of the passage gives the data of the club finances collected by Deloitte in the last "twenty years" and not "the last decade alone".
Option B can be inferred from the following statement of the fourth paragraph, "It's the same when we look at television and commercial earnings: in 2010-11, they earned £ 50.5 million ... but half what the average Premier League team took."
Option C can be inferred from the following lines of the fourth paragraph, "Part of the reason Wigan managed to survive so long in the rarefied air of the Premier League is Dave Whelan, the local magnate who owns the club. Wigan's average attendance was just 17000 – they rarely sold out their home ground, the DW stadium, its initials a (self-awarded) tribute to the club's benefactor..."
Option D: The fourth-last paragraph while comparing the scores of Wigan Athletic (made by free kicks) with that scored by the other teams of the Premier League in the year 2010-11, states that Wigan "scored as many goals on the break as the average side, and they scored almost four times as many goals from free kicks". From this, we can infer option D.
6. C Option C is incorrect because the following line from the fourth paragraph states that the Judge's command of "Hindi and Urdu was tenuous (weak)". Hence, option C is the answer. All other statements are correct.
7. B The third last paragraph of the passage states that one thing that always happened on the Judge's return from the countryside was that "he returned with – *Nothing!*". This renders option B as the answer. All other options are factually incorrect.
8. A Refer to the following line from the third paragraph, "Farms were growing less than ten mounds an acre of rice and wheat, and at two rupees a mound, every single man in the village sometimes was in debt to the bania. This makes option A as the correct answer. All other options are factually incorrect.
9. A All the words 'brood', 'flock' and 'flight' are collective nouns that describe a group of birds. Only lariat, which means 'like a rope', is the odd word and also the correct option.
10. D Option A: The author in the third paragraph states that in 1948, after Garibaldi arrived in Italy, "Charles Albert had pardoned Garibaldi, but to outward appearances he was still very wary of the general". This reference renders option A incorrect.
Option B is incorrect because the penultimate paragraph states that Garibaldi's wife died after they were attacked by the "Austrian flotilla" and not "Spanish flotilla".
Option C can be eliminated because the passage makes no reference to the defeat of the republican army. Also, Rome at one point was attacked by 60,000 foreign soldiers and not 80,000.
Option D: From the third-last and the fourth-last paragraphs, we can infer option D, which makes it the answer.
11. C Option A: This option is factually incorrect. According to the fifth paragraph, King of Naples, Ferdinand II was dubbed 'King Bomba' after bombing "Messina" and not "Milan".
Option B: The seventh paragraph of the passage states that Garibaldi defended "Janiculum Hill, which was crucial to the defense of Rome", but does not state that Garibaldi positioned his army near that Hill to protect it. It is possible that he stationed the army very far off from the hill on the enemy's route towards the Hill. Additionally, it cannot be inferred that he was protecting Rome from the attack of Austrian troops. So, this option cannot be inferred.
Option C: The last paragraph states that Garibaldi, after the various wars he fought, came back to Nice to 'reunite' with his family. So, this option appears to be the best of all the other options and hence is the answer.
Option D: Mazzini was a leader of the republicans.
12. A According to the passage Charles Albert is the King of Piedmont, Ferdinand II is the King of Naples, Louis Philippe was the King of France and Grand Duke belongs to Tuscany. This makes option A correct.
13. B The second-last and the third-last paragraphs state that after they failed to reach Venice, "Garibaldi had no time to lose; he and his faithful companion Leggero escaped across the Po towards Ravenna." Therefore, the correct answer is option B.

14. A Option A is incorrect because it is stated in the end of the fifth paragraph that the Pope had taken refuge with King Bomba and not the King of Piedmont. Therefore, option A is the answer.
Option B can be inferred from the third paragraph of the passage.
Option C: Refer to the ninth paragraph of the passage, "Garibaldi wanted to carry the fight down into the Kingdom of Naples, but Mazzini, who by now was effectively in charge of Rome, ordered him back to the capital..." From this, we can infer option C.
Option D: The fifth paragraph states that that "Rome declared itself a republic". After that, "Prince Louis Napoleon of France dispatched an army of 7000 men under General Charles Oudinot to the port of Civitavecchia to seize the city." From this, we can infer option D.
15. A Option A: Refer to the following line from the third paragraph, "However, in the first quarter last year, banks had healthier loan growth on a sequential basis than this year." Therefore, option A is correct and also the answer.
Option B: Refer to the following line from the eighth paragraph, "Lower the credit rating of the company, riskier the loan is perceived to be." According to this, the risk level of loans is inversely proportional to the credit ratings of a company. So, option B is incorrect.
Option C: This is factually incorrect. The third paragraph states that "Bank of Baroda and Punjab National Bank shrank their loan book by 1.97% and 0.66% respectively in the first quarter on a sequential basis."
Option D: The passage makes no reference to it, rendering this option incorrect.
16. C Option A: Refer to the following line from the third paragraph, "However, in the first quarter last year, banks had healthier loan growth on a sequential basis than this year." From this, we can infer option A.
Option B can be inferred from the following line in the ninth paragraph, "As per the norms (Basel III norms), a bank's total capital adequacy ratio should be 12% at any time..."
Option C: The last line of the fifth paragraph states that SBI did not get many fresh proposals that year. So, it is the correct answer.
Option D can be inferred from the sixth paragraph which states that "part of the credit contraction is due to the economic slowdown".
17. D The passage states that Banks are now looking for safe bets by preferring highly rated customers to lower rated companies. This ensures that the risk taken by the bank is low ("Lower the credit rating of the company, riskier the loan is perceived to be."). Also, it decreases profitability or the difference between yields on advances and cost of deposits narrows ("...the difference between yields on advances and cost of deposits, a key gauge of profitability, fell...as the bank focused on lending to highly rated customers."). Moreover, capital adequacy increases which can then be easily met by the banks ("If loans have been given to lower rated companies, risk weight goes up and capital adequacy falls.") This renders option D as the correct answer.
18. C III and II form a mandatory pair because III discusses Milner's investment of \$10 billion in Facebook and II states that this amount, i.e. \$10 billion, is less than what Microsoft and Li Ka-shing accepted in the past. I and IV form a mandatory pair because I states the probability of Financial markets becoming hollow and IV states that despite the doubts (discussed in I), Milner not only spent on buying a stock from Facebook but will also spend more on buying stocks from elsewhere. Since III introduces the idea of Milner having invested in Facebook and its reference is being made in IV, III and II will precede I and IV. Hence, the correct sequence is III, II, I, and IV and option C the answer.
19. D IV and II form a mandatory pair because the 'him' in II refers to Schubert in IV. II should be followed by I because I, which describes a world devoid of sound or light, follows from II that discusses the process of creation of this world. III should follow I because III discusses the only impressions on sense created after I mentions that the impressions of light and sight do not exist in this world. Hence, the correct answer is option D.
20. A The correct spelling is option A, decrepit.
21. B The correct spellings are – receive, deceive, perceive and believe. Hence, option B is correct.
22. C Solicitude, which means care or concern for someone or something, is logically correct in the given sentence, rendering option C correct. Solicitude and chivalry are incorrect spellings of the words solicitude and chivalry. Chivalry, which means gallantry or courtliness, does not make sense in this context.
23. A To prevaricate means to speak or act in an evasive/ambiguous/confusing way to mislead the listener. The sentence given here is an example of a doctor talking in an elusive or confusing manner to evade the patient's question of how much time she would live. This renders option A correct. Insinuation refers to an unpleasant hint or suggestion of something bad; preambulation is the wrong spelling of the word perambulation, which means to walk or travel through or round a place; abrogation means abolition or revocation.
24. D The verb 'hope' should be followed by preposition 'to' and not 'for'. This eliminates options A and B. Option C is unnecessarily wordy and therefore option D is the answer.
25. A Option C can be ruled out because the sentence is not comparing Saundarya's Skin nourishing cream with their face Wash and Anti-ageing cream but the sales of the three products. Options B and D can be eliminated because 'anti-ageing cream' should be preceded by the pronoun 'their'. Since option A compares the sales of the three creams and also uses the correct pronoun, it is the correct answer.
26. C The relationship between the capitalized pair is – the second word is the characteristic feature of the first word. When a person mumbles, his speech is indistinct. Similarly, when someone scribbles, his writing is illegible. Therefore, option C is the answer. Swagger (arrogant and self important gait) is not timid. Exacerbate (worsen) and cure are antonyms. Drizzle and downpour are synonyms.
27. B Ruffle (upset or disturbed) and Equanimity (calmness; levelheadedness) are antonyms. Similarly, disturb and balance are also antonyms. Hence, option B is the answer. Bewilderment and confusion are synonyms. Interest and astound (shock or surprise) are not antonyms. Flounce (an exaggerated action intended to express annoyance or impatience) and turmoil (disorder or tumult) are not antonyms either.
28. D The complete sentence should be – 'Having started with just 5.8 million in seed financing, you squandered more than half of your capital in less time than it takes to soft-boil an egg.' This makes option D correct.

29. D The complete sentence should be – ‘You could behave badly, say you were sorry, you could get extra fun and be reinstated in the same position as the one who had done nothing, who now had both to suffer the crime and the difficulty of forgiving.’. This makes option D correct.
30. B Option A: Here the verb ‘are’ should be replaced by ‘were’ as the sentence is in simple past tense. The correct sentence is – “I forgot that they were coming today”.
Option B: This sentence is grammatically correct. It means that “I used to meet her more frequently (in the past) than I meet you (in the present)”.
Option C: This sentence has a parallelism error. It uses an adjective (challenging) and a noun (an inspiration) to refer to the same subject (This course). The correct sentence should either be “This course is challenging and inspiring” or “This course is a challenge and an inspiration.”
Option D: The word confident is followed by the preposition ‘about/of’ and not ‘to’. So, the correct statement should be – “She is confident of/about speaking in English within six months.”
31. C Option A: Since the action of fleeing has already happened, ‘flee’ should be replaced by ‘have fled’. The correct sentence should therefore be – “The convict escaped from prison and is believed to have fled the country.”
Option B: This sentence has an error of parallelism. The correct sentence should either be “Did he travel by taxi, train or plane?” or “Did he travel by taxi, by train or by plane?”
Option C: This sentence is grammatically correct. It means that to imagine becoming successful is the same as becoming successful.
Option D: This sentence also has parallelism error. The correct sentence should be – “I would do anything for my friend but not for my neighbor.”
32. A All three words, ‘expatriate’, ‘exile’ and ‘banish’ are synonyms. Therefore, expiate, which means to do something in a way to show that you are sorry about doing something bad, is the odd word out, rendering option A correct.
33. B Brevity, succinctness and conciseness are all synonyms. So, circumlocution, which means the use of many words to say something that could be said more clearly and directly by using fewer words, is the odd option and hence the correct answer is option B.
34. B The phrase ‘The bigger they come, the harder they fall’ means the more powerful and successful people are, the more they suffer when they experience defeat and disaster. Hence, option B is correct.
35. D The phrase ‘To frighten the life out of someone’ means to make someone feel very frightened. Hence, option D is the answer.
36. B A few words that can be formed are – latte, late, tale, teal, tele, elate, yale. Therefore, option B is correct.
37. C The words that can be formed are – heath, heathen, neat, heat, hate, then, than, eaten, etc. Hence, option C is the answer.
38. B Sarangsh Malhotra in the year 2014 will be more than 31 years old if his 25th birthday was in the year 2008. According to the enlisted conditions, the candidate must be between 25-30 years of age, which this candidate does not fulfill. Therefore, he will not be selected. This renders option B as the answer.
39. B Nalin Saxena fulfills conditions I, II and III but is not able to fulfil one more condition to be an eligible candidate for the post. Also, his experience cannot be considered valid as per the condition as he does not work in a daily newspaper (according to condition number IV) but in a weekly magazine. So, he will be rejected. Hence, option B is the answer
40. C Geetika Arora fulfills mandatory condition I and with it conditions III and V. She does not fulfill condition II but instead secures 80% above marks during her Post Graduation degree in Journalism. This fulfills the flexible condition (b). So, as per the condition, Geetika will be referred to the chairman of Tomorrow Digest. Hence, option C is the answer.
41. A Manjeet Tyagi fulfills conditions I, II and III. Since Manjeet completed his PG in July 2010, he left Data Analytics firm by January 2011 and then joined Financial Standard. We will have to assume that he joined Financial Standard immediately after he left Data Analytics and also that he worked in the newspaper till August 2014. It is so because otherwise it is not possible to determine his selection or rejection in this case and ‘cannot be determined’ is not an option in this question. Accordingly, this fulfills condition IV also. So, we can say that Manjeet will be selected, rendering option A correct.
42. D The alphabetic position of the first letter of each term, starting from the second term, of the of the sequence is two more than that of the previous term. The second letter in all the terms is the same i.e. P. The third letters follow the same pattern as that of the first letters. The last letter remains the same in all the terms i.e. S. So the answer is KPLS.

For question 43 to 46: The given information can be tabulated as follows:

Name	Activity	Hostel	Discipline	City
Ravi	Mess	Satpura	Computer Science	Jodhpur
Sanjay	Sports	Aravalli	Mech. Engineering	Nagpur
Hardeep	Cultural	Aravalli	Metallurgy	Patna
Abhishek	Student Body	Vindhya	Civil Engineering	Kochi
Hemant	Placement	Vindhya	Chemical Engineering	Allahabad

43. B From the above table, the student belonging to Chemical Engineering branch stays in Vindhya Hostel, whereas Cultural activity student stays in Aravalli Hostel. So statement I is incorrect. Also the student in charge of placement activity is studying chemical Engineering. So, second statement is also incorrect. Also, the student who belongs to Nagpur is student in charge of sports activity and Ravi belongs to Jodhpur. Hence, option B is the correct answer.
44. C From the above table, it is clear that the student from Patna studies metallurgy.
45. D The student from Allahabad is studying in Chemical Engineering.
46. C The general secretary of the student body belongs to Kochi.

For questions 47 to 49: The given information is tabulated below:

	W1	W2	W3	W4	W5
Mon	9:30 AM to 2:30 AM	12:30 PM to 2:30 PM	3:30 PM to 5:30 PM	8:00 AM to 10:00 AM	2:00 PM to 4:00 PM
Tues	8:00 AM to 11:30 AM	11:30 AM to 3:00 PM	3:30 PM to 5:30 PM
Wed	9:30 AM to 2:30 PM	8:30 AM to 11:30 AM	10:00 AM to 12:30 PM	3:30 PM to 5:30 PM	8:00 AM to 10:00 AM
Thur	8:00 AM to 11:30 PM	8:30 AM to 11:30 AM	3:30 PM to 5:30 PM	12:30 PM to 3:00 PM	10:30 AM to 12:30 PM
Fri	3:00 PM to 5:00 PM	8:00 AM to 10:00 AM	10:00 AM to 12:00 PM	12:30 PM to 3:00 PM	3:30 PM to 5:30 PM
Sat	...	12:30 PM to 2:30 PM	10:00 AM to 12:30 PM	8:00 AM to 10:00 AM	...

47. B The maximum is on Wednesday.
48. D Only on Saturday not more that one window is open simultaneously at any given time.
49. A All windows are closed for one hour between 2:30 PM to 3:30 PM only on Wednesday.
50. C From the given information, the order in which they deliver the speeches is Mr. D'souza , Mr. Arora, Mr.Puri, Mr. Kaare, Mr. Sethi, Mr. Tondon, Mr. Bisht , Mr. Reddy. So, Mr. puri delivered his address before Mr. Reddy
51. D From the given information, the order in which they delivered the speeches is Mr. D'souza , Mr.Arora, Mr. Bisht , Mr. Reddy. Since Mr. Reddy is managing director of spearhead unlimited and there are two MD's who will speak after Mr. Reddy, we cannot definitely say who will be the last CEO to speak between Mr. Sethi and Mr. puri.
52. D Assumption I is invalid because the statement suggests that realizing a 7 per cent GDP growth rate in India is very much feasible. Assumption II is valid because according to the statement, increase in GDP will happen if the capital formation increases. Assumption III is invalid because the statement does not state that the GDP growth of a country is the sole indicator of a country's economic development. Since, only assumption II is valid, option D is the answer.
53. A The statement discusses that the plant installed by the city has decided to provide mineral water bottles to its citizens at US \$ 0.5 cheaper than that provided by local private players. Assumption I is invalid because it is possible that the citizens only trust the brand of local private players and therefore, prefer mineral water bottles sold by them. Assumption II is invalid because it is possible that the city plant earns profit despite selling the bottles at a cheaper price. There is no reason why people will stop using normal tap water. It is possible that citizens don't use only mineral water for all purposes, rendering assumption III also invalid. Hence, the answer to this question is option A.

For questions 54 and 55: There is no as such logic followed in this arrangement, instead it is a random arrangement and we can just compare as shown below:

Input	STEP 1	STEP 2	STEP 3	STEP 4
Be	the	You	You	see
the	Be	Be	See	You
change	You	The	The	This
you	Change	Change	This	The
wish	To	To	To	World
to	Wish	World	World	To
see	In	In	In	Be
in	See	See	Be	In
this	World	Wish	Wish	Change
world	This	This	Change	wish

54. C Given input: ' Don't cry because it's over smile since it's actually happened'.
And we are asked to find step 4 of this input, now instead of solving we can simply compare that first word of step 4 is the 7th word of input and the last word is 5th word of the input. Based upon this, we can judge that first word is 'since' and the last word will be 'over'. So option 1st and 4th options are eliminated Now the second word of step 4 is the 4th word of input. Therefore, word of step 4 should be 'it' and from here we can conclude that (C) is the correct choice.
55. A We are given the 4th step as 'dog sea school star ice moon flower home rock ball' and we are asked to find the input of this. Now, instead of solving, we can simply compare that first word of step 4 is 7th word of input and the the last word is 5th word of the input. Based upon this we can judge that the 7th word of input should be dog. Only option A has 7th word as dog and hence is the required input. Further to ensure the last word should be ice and is also true for option A.
56. A
-
- As per the Venn diagram, option A is the correct answer.
57. A
-
- As per the Venn diagram, option A is the correct answer.
58. A Time taken in each of the given options case is shown below:

Places	Distance (in km)	Mode of Transportation	Speed	Time
Mumbai – Kanyakumari	950	Bus	40	950/40 = 23.75 hrs
Bhubaneswar – Chennai	950	Ship	30	950/30 = 730 hrs
Chennai – Kochi	901	Ship	30	901/30 = 30.03 hrs
Mumbai – Chennai	1000	Ship	30	1000/30 = 33.33 hrs

59. B Costs of each route given in the options is as follows:
 Mumbai – Bhubaneswar (Bus) and Bhubaneswar – Kochi (Airplane)
 Total fare = $701 \times 2 + 798 \times 5 = 1402 + 3990 = 5392$
 Mumbai – Chennai (Ship) and Chennai – Kochi (ship)
 Total fare = $1000 \times 1.5 + 901 \times 1.5 = 1500 + 1351.5 = 2851.5$
 Mumbai – Kanyakumari (Bus) and Kanyakumari – Kochi (Train)
 Total = $950 \times 2 + 1100 \times 2.5 = 1900 + 2750 = 4650$
 Mumbai - Vizag (Airplane) and Vizag – Kochi (Airplane)
 Total fare = $500 \times 5 + 600 \times 5 = 5500$

60. A The cost will be minimum through the given route.

Chennai $\xrightarrow{\text{Ship}}$ Bhubaneswar $\xrightarrow{\text{Train}}$

Kanyakumari $\xrightarrow{\text{Ship}}$ Vizag $\xrightarrow{\text{Train}}$ Chennai

Hence, the required cost (in Rs.)
 = $(950 + 250) \times 1.5 + (700 + 300) \times 2.5 = 4300$.

61. C Time to reach each of the cities is shown below.

Bhubaneswar – Chennai (by Ship)
 = $950 / 30 = 31.67$ hrs
 Bhubaneswar – Kanyakumari (by Train)
 = $700 / 25 = 28$ hrs
 Bhubaneswar – Mumbai (by Bus)
 = $701 / 40 = 17.525$ hrs
 Bhubaneswar – Vizag (by Train)
 = $1002/25 = 40.08$ hrs

62. B The costs for each of the given route is shown below.
 Kochi – Vizag = $600 \times 5 = \text{Rs. } 3000$.
 Kochi – Chennai – Vizag = $901 \times 1.5 + 300 \times 2.5 = \text{Rs. } 2051$.
 Kochi – Kanyakumari – Vizag = $1100 \times 2.5 + 250 \times 1.5 = \text{Rs. } 3125$.
 Kochi – Mumbai – Vizag = $300 \times 2.5 + 500 \times 5 = \text{Rs. } 3250$.

63. B Total number of mergers for the entire period = 1499
 Total number of mergers and acquisitions = 5646
 Thus, number of acquisitions = $5646 - 1499 = 4147$
 Percentage of mergers to acquisitions = $(1499/4147) \times 100 = 36.15\%$.

64. D The following table can be formed from the given information:

Sectors	Total 'Mergers & Acquisitions'	Total 'Acquisitions'	Percentage of 'mergers' to 'mergers & acquisitions'
Food & Beverage	465	97	>20%
Textile	371	77	>20%
Chemicals	584	116	<20%
Drugs & Pharma	350	74	>20%
Cement	48	6	<20%
IT & Telecom	643	96	<20%
Diversified	52	2	<20%
Financial Services	1041	452	>20%
Others Services	1709	512	>20%
Miscellaneous Manufacturing	192	34	<20%
Non Metallic Mineral Products	191	33	<20%

From the above table, it can be seen the required number is 5.

65. D It can be observed that 5 sectors namely (1) Food & Beverage, (2) IT & Telecom, (3) Diversified, (4) Financial Services and (5) Other Services have more ($> \frac{1}{2}$) merger activity in the first 3 years as compared to the last 3 years.

66. D Turbulence = Sum of differences (in absolute terms) in number of mergers & acquisitions on a year-on-year basis. Going by the answer

Sectors	Financial Services	IT & Telecom	Food & Beverage	Other Services
2001-02	$103 - 91 = 12$	$134 - 19 = 115$	$96 - 17 = 79$	$207 - 90 = 117$
2002-03	$107 - 94 = 13$	$95 - 19 = 76$	$54 - 23 = 31$	$188 - 92 = 96$
2003-04	$87 - 73 = 14$	$71 - 13 = 58$	$67 - 10 = 57$	$182 - 105 = 77$
2004-05	$75 - 41 = 34$	$64 - 16 = 48$	$55 - 19 = 36$	$200 - 81 = 119$
2005-06	$118 - 75 = 43$	$92 - 17 = 75$	$43 - 20 = 23$	$210 - 61 = 149$
2006-07	$126 - 51 = 75$	$91 - 12 = 79$	$53 - 8 = 45$	$210 - 83 = 127$
Total	191	451	271	685

It can be observed from the above table that 'Other Services' is the most turbulent for the given period.

67. C The following table gives the number of acquisitions for all the sectors over the given period:

Sectors	2002-03	2003-04	2004-05	2005-06	2006-07
Food & Beverage	54	67	55	43	53
Textile	52	51	53	56	32
Chemicals	83	100	76	55	47
Drugs & Pharma	43	30	40	45	60
Cement	5	7	19	0	0
IT & Telecom	95	71	64	92	91
Diversified	8	12	4	7	5
Financial Services	94	73	75	118	126
Others Services	188	182	200	210	210
Miscellaneous Manufacturing	23	31	31	24	21
Non Metallic Mineral Products	19	26	22	39	23
Higher number of acquisitions	-	6	5	7	3

As we can see from the above table, maximum 7 sectors in the year 2005-06 had higher number of acquisitions compared to the previous year

68. C In 2009, the consumption of:
 Coal = 540 MTOE, Crude Oil = 290 MTOE,
 Natural Gas = 80 MTOE
 Nuclear energy = 20 MTOE
 Hydro electricity = 50 MTOE
 Others = 20 MTOE
 Total consumption in 2010 of:
 Coal = $540 \times 1.15 = 621$ MTOE
 Crude Oil = $290 \times 1.1 = 319$ MTOE
 Natural gas = $80 \times 1.05 = 84$ MTOE
 Hydro Electricity = $50 \times 1.1 = 55$ MTOE
 Others = $20 \times 1.5 = 30$ MTOE
 Import in Coal = 25% of 621 = 155.25 MTOE
 Import in Crude = 50% of 319 = 159.5 MTOE
 Import in Natural Gas = 50% of 84 = 42 MTOE
 Import in Hydro Electricity = 5% of 55 = 2.75 MTOE
 Total Import = $155.25 + 159.5 + 42 + 2.75 = 359.5$ MTOE

69. B In 2010, the import of natural gas was 42 MTOE.
Consumption of natural gas in 2012
= $84 \times 1.1 \times 1.05 = 97$ MTOE
The import of natural gas in 2012
= 30% of 97 = 29.1 MTOE
So, there was a decrease of 13 MTOE.

70. B Consumption of Crude Oil in 2011
= $290 \times 1.1 \times 1.1 = 351$ MTOE
The import of Crude oil in 2011 is 45%. So, the production will be 55% of 351 = 193 MTOE.

71. D

Year	Crude Oil	Natural gas	Coal	Nuclear energy	Hydro electricity	Other
2009	290	80	540	20	50	20
2010	319	84	621	24	55	23
2011	350.9	92.4	683.1	27.6	57.75	26.45
2012	403.53	97	785.5	30.36	63.52	29.1

As it can be observed from the above table that the total domestic consumption of energy
= $403.53 + 97 + 785.5 + 30.36 + 63.52 + 29.1 = 1409$
Thus, proportion of coal in 2012
= $(785.5/1409) \times 100 = 56\%$.

72. B The following table gives consumption of nuclear and hydro electricity from 2009 to 2011:

Year	Nuclear energy	Hydro-electricity
2009	20	50
2010	24	55
2011	27.6	57.75

Thus, domestic production of nuclear energy in 2011 = $27.6 \times 1 = 27.6$ MTOE
Domestic production of hydro-electricity in 2011
= $57.75 \times 0.95 = 54.9$ MTOE
Thus, approximate sum of nuclear energy and hydro-electricity (domestic production) in 2011
= $27.6 + 54.9 = 82.5$ MTOE.

73. A Radius of P1 = r

$$\text{Side of Q1} = \sqrt{2}r$$

$$\text{Radius of P2} = \frac{r}{\sqrt{2}}$$

$$\text{Side of Q2} = r$$

$$S1 = Q1 - P2 = (\sqrt{2}r)^2 - \frac{r^2}{2} = \frac{1}{2}r^2 \quad 4 -$$

$$S2 = Q2 - P3 = \frac{1}{4}r^2 \quad 4 -$$

$$S3 = \frac{1}{8}r^2 \quad 4 -$$

Required ratio

$$\frac{\frac{1}{2}r^2 \quad 4 -}{2r^2} = \frac{\frac{1}{4}r^2 \quad 4 -}{4r^2} = \frac{\frac{1}{8}r^2 \quad 4 -}{8r^2} \dots \left(\frac{4 -}{2} \right).$$

74. B Let the number of students in the class be 'N' and the number of chocolate was to be given to the student who got twice as many chocolates as he was entitled to be 'X'.
According to the question,
 $(1 + 2 + 3 + \dots + N) + X = 1200$
As we know that 'N' and 'X' are integers, we can find the required quantity with the help of options. The option that gives an integer value of X, will be the correct answer. Going by the options, we get N = 48 and X = 24.

75. D Distance covered

$$= 210 \left(1 - \frac{1}{\sqrt{3}} \right) = 210 \left(\frac{\sqrt{3} - 1}{\sqrt{3}} \right) = 70(3 - \sqrt{3}) \approx 89 \text{ m}$$

$$\text{Speed} = 3\text{km/hr} = 3000 \text{ meter/hr} = 50 \text{ meters/min}$$

$$\text{The required time} = \frac{89}{50} \approx 2 \text{ min.}$$

76. B Alloy X contains:

$$\text{Zn} = 16 \text{ grams}$$

$$\text{Cu} = 24 \text{ grams}$$

$$\text{Alloy Y 60 contains:}$$

$$\text{Zn} = 70/3 \text{ gram}$$

$$\text{Cu} = 110/3 \text{ gram}$$

$$\text{Alloy Z contains:}$$

$$\text{Zn} = 16 + \frac{70}{3} = \frac{118}{3} \text{ gram}$$

$$\text{Cu} = 24 + \frac{110}{3} = \frac{182}{3} \text{ gram}$$

$$\text{Hence, the required ratio} = 59 : 91.$$

77. A Side of hexagon = 2a.

$$X = 6 \times \frac{\sqrt{3}}{4} \times (2a)^2 - \frac{\sqrt{3}}{4} \times a^2 \Rightarrow a^2 = \frac{4X}{23\sqrt{3}}$$

$$\text{Radius of the circle} = 2a$$

$$\text{The area of the circle} = \pi(2a)^2 = 4\pi a^2 = \frac{16\pi}{23\sqrt{3}} X.$$

78. D Ten years ago, let the age of Ravindra be 5x years and the age of Rekha be 4x years.

At present:

$$\text{The age of Ravindra} = (5x + 10) \text{ years}$$

$$\text{The age of Rekha} = (4x + 10) \text{ years}$$

$$\therefore (5x + 10) = \frac{7}{6}(4x + 10) \Rightarrow x = 5$$

The the present age of each child belonging to triplets, that of to twins and that of the sixth child be A, B and C respectively. Present age of parents and six children

$$= (25 + 10) + (20 + 10) + 3A + 2B + C$$

$$= 35 + 30 + 9A' + 6B' + C'$$

In order to maximise the total age of family, the value of A, B and C have to be 9, 6, 3 years respectively.

$$\text{Total age} = 35 + 30 + 9 \times 3 + 6 \times 2 + 3 \times 1$$

$$= 65 + 27 + 12 + 3 = 107 \text{ years.}$$

79. D The two students can be selected in two ways: girl from section A and boy from Section B; boy from section A and girls from Section B.

$$\text{The required probability} = \frac{1}{4} \times \frac{5}{9} + \frac{3}{4} \times \frac{4}{9} = \frac{17}{36}.$$

80. D By using the concept of replacement continuously, the required quantity of milk comes out to be

$$40 \left(1 - \frac{10}{40} \right)^5 = \frac{405}{128} \text{ litres.}$$

81. C By the time the crew came to know about the hole, the boat has travelled 27 km (at the rate of 18 km/hr as the current of water is 2km/hr). Now the boat has to travel 73 km towards Vivekanand rock and then 100 km back to KanyaKumari in $4\frac{1}{2}$ hours.
Let the speeds (in km/hr) of boat towards Vivekanand rock and that of towards kanyakumari be x and y respectively.

$$\frac{73}{x-2} + \frac{100}{y+2} = 4\frac{1}{2}$$

Among the given options, option C satisfies the above equation.

82. D On the basis of the given terms in the sequence, it does not seem possible to find the next term of the sequence. One more thing that needs to be noted is the answer has to be a rational number, but none of options except A is a rational number, which cannot be the answer as the approximate value of the expression is 0.85.
Out of the given options, the value of option D is approximately 0.85.

$$\begin{aligned} 83. D \quad & \log_7 \log_7 \left(\sqrt{7} \sqrt{7} \sqrt{7} \right) \\ &= \log_7 \log_7 \left(7^{\frac{1}{2} + \frac{1}{2} + \frac{1}{2}} \right) \\ &= \log_7 7 - \log_7 8 = 1 - 3\log_7 2 \end{aligned}$$

$$84. C \quad \text{The required width} = 5 + \sqrt{13^2 - 8^2} = 15.2.$$

85. A* The Required Number = The total number of 8-digit number – Number of 8-digit number with no digits repeated
 $= 10^8 - 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 = 981885600.$

86. D Let the number of analyst covering all the three locations be x.
 $\therefore 42 = 22 + 28 + 24 - (6 + x) - (8 + x) - (4 + x) + x$
 $\Rightarrow x = 7$
Hence, the no. employees covering New York alone
 $= 28 - (6 + 8 + 7) = 7.$

87. C The investment will become double in $72/6 = 12$ years. As the return compounds annually, the amount will get doubled in every 12 years. Therefore, in 48 years, it will become 16 times i.e. 16×3000000 i.e. 48000000.

88. C Volume of the cylinder = $\pi \times 6^2 \times 24 = 864\pi$
Diameter of the Base = 12
Side of the rectangular solid = $6\sqrt{2}$
Volume of rectangular solid = $(6\sqrt{2})^2 \times 20 = 1440.$
Required amount of water
 $= 864\pi - 1440 = 288(3\pi - 5).$

89. A From the information given in the question, it can be noted that nth of the sequence is the sum of the first n terms.

$$T_n = \frac{n(n+1)}{2}$$

$$S_n = \sum T_n = \frac{1}{2} \sum N^2 + \frac{1}{2} \sum N$$

$$= \frac{n(n+1)(2n+1)}{12} + \frac{n(n+1)}{4}$$

Putting $n = 20$, we get

$$S_n = 1540$$

An MBA student is twice as efficient as an Engineering student.

$$\text{Hence, the required number of days} = \frac{1540}{2 \times 11} = 70.$$

90. C Cost price of 6000 strips = Rs. 8,00,000
Free Medicine = 600 strips
Remaining medicine = 5400 strips
Revenue generated by selling 5400 strips
 $= \frac{4}{5} \times 5400 \times 250 \times 0.75 + \frac{1}{5} \times 5400 \times 250 = 10,80,000$
Revenue after discount given to vendor
 $= 1080000 \times 0.7 = 756000$
The required percentage loss
 $= \frac{800000 - 756000}{800000} \times 100 = 5.5.$

91. B The required distance = $32 + 2(16 + 8 + 4 + 2 + \dots + 10 \text{ terms})$
 $= 32 + 2 \times \frac{16 \left(1 - \frac{1}{2^{10}} \right)}{1 - \frac{1}{2}} \approx 96.$

92. C Required no. of ways = The number of committees that has Rani but not Raj + The number of committees that has Raj but not Rani + The number of committees that has neither Raj nor Rani
 $= {}^6C_3 \times {}^7C_3 + {}^6C_4 \times {}^7C_2 + {}^6C_2 \times {}^7C_4$
 $= 20 \times 35 + 15 \times 21 + 15 \times 35$
 $= 700 + 315 + 525 = 1540.$