

Coming Up Next

Date	Time	Session Name
19 November 2012	8:00 PM to 11:00 PM	GK Session-3 for IIFT by Rajat
20 November 2012	8:00 PM to 11:00 PM	IIFT 2009 – 11 Paper Discussion



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Test ID: 7 7 1 6 9 4

MCT-0006/12

Time: 2 Hours

Marks: 100

Please read the following instructions carefully. Do not open the seal until the Invigilator instructs you to open.

Instructions

1. This booklet contains 32 pages including the blank ones. Immediately after opening the booklet, verify that all the pages are printed properly.
2. Write your **Enrollment ID** clearly in the space provided in both the **Question Booklet** and the **Answer Sheet**.
3. Mark your **answers** in the **Answer Sheet** only. The Answer Sheet **alone** will constitute the basis of evaluation.
4. All **rough work** must be done in the **Question Booklet** only.
5. Do not make any stray marks anywhere in the answer sheet.
6. Do not fold or wrinkle the answer sheet.
7. Use only **HB Pencil** to **mark the answers** in the answer sheet.
8. **All Questions have one correct answer. Every answer must be indicated clearly darkening one circle for each answer. If you wish to change an answer, erase completely the already darkened circle, then make a fresh mark. If you darken more than one circle your answer will be treated as wrong, as shown in the example below:**

WRONG METHOD



RIGHT METHOD



9. There is negative marking equivalent to 1/3rd of the mark allotted to the specific question for wrong answer.
10. The candidates are advised to **read all options thoroughly**.
11. No clarification of any sort regarding the question paper is permitted.

ANY CANDIDATE GIVING / SEEKING / RECEIVING ASSISTANCE OR FOUND COPYING WILL BE IMMEDIATELY DISQUALIFIED.

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Time: _____ Date: _____

Best Wishes!

THE ENTIRE QUESTION PAPER IS DIVIDED INTO
THE FOLLOWING SECTIONS

SECTIONS	NO. OF QUESTIONS	MARKS PER QUESTION	TOTAL MARKS
(a)	(b)	(c)	(d) = (b) X (C)
Section – I	21 (Questions 1 – 21)	1.00	21.00
Section – II	21 (Questions 22 – 42)	0.50	10.50
Section – III	15 (Questions 43 – 57)	0.75	11.25
Section – IV	23 (Questions 58 – 80)	0.75	17.25
Section – V	24 (Questions 81 – 104)	1.00	24.00
Section – VI	16 (Questions 105 – 120)	1.00	16.00
Total	120		100.00

SECTION - I

Directions for questions 1 and 2: Answer the questions on the basis of the information given below.

In each of the following letter series, some of the letters are missing, which are given below. Choose the correct alternative.

1. A _ B B _ C C _ A _ _ B _ C C _ A _
A. BBCAABBC B. ABBACCBA C. BCAABBCCA D. None of the above
2. _ Q R _ P P _ R Q _ P Q _ Q _
A. PQQPRP B. PPQQPR C. PQRPPR D. None of the above

Directions for questions 3 and 4: Answer the questions on the basis of the information given below.

In a certain code language, the following lines are written as

'shu mil jan tan' means 'Ron likes having tea',

'mil pan tin gin lan' means 'tea is healthier than coffee',

'zho jan lan pan' means 'she is having coffee',

'mil yan flo zho' means 'she hardly enjoys tea'.

3. What could be the code for 'she hardly likes Ron'?
A. tan zho jan fig B. zho shu yan tan C. mil yan jan zho D. None of the above
4. What could the code 'gin' stand for?
A. healthier B. is C. coffee D. None of the above

Directions for questions 5 and 6: Answer the questions on the basis of the information given below.

In each of the following questions, find the relationship that can be definitely deduced on the basis of the relations given. The symbols used to define the relationship are as follows:

& means 'equal to'

@ means 'greater than or equal to'

% means 'less than'

means 'greater than'

\$ means 'less than or equal to'.

5. If it is given that $N@T$, $T\&P$ and $N\%Z$, then which of the following is definitely true?
A. $N\#P$ B. $P\%Z$ C. $Z@T$ D. None of the above
6. If it is given that $A\#4C$, $B\&2D$ and $3B\$2C$, then which of the following is definitely true?
A. $6B@A$ B. $C\&6D$ C. $12D\%A$ D. None of the above

Directions for questions 7 and 8: Answer the questions on the basis of the information given below.

Six athletes – Andrew, Brian, Jose, Mark, Phil and Sam – are assigned for stay in four rooms numbered 101 to 104 during the Inter Indoor Games Tournament. Two of the rooms are double and the remaining single rooms. Brian is assigned an even numbered room which he shares with the Swimmer. Room number 103 is to be occupied by the Badminton player only. The room numbers of Andrew and Jose, who is neither a Badminton player nor a Squash player, are distinct and their sum is equal to twice the room number of the Hockey player. Phil, who prefers not to share his room, plays either Basketball or Squash. Sam is a national level Table Tennis player.

7. Identify the correct combination of athlete, sport and room number from the following.
- | | |
|-------------------------|----------------------|
| A. Jose, Hockey, 101 | B. Phil, Squash, 104 |
| C. Brian, Swimming, 102 | D. None of the above |
8. Who is the Swimmer?
- | | | | |
|---------|----------|---------|----------------------|
| A. Mark | B. Brian | C. Jose | D. None of the above |
|---------|----------|---------|----------------------|

Directions for questions 9 and 10: Answer the questions on the basis of the information given below.

The seven finalists of 'Variety Dog Pet Show' are made to stand on the podium for their final round. Each participant has a different breed of dog as his/her entrant. The number of participants to the right of Ana is twice of that of Cindy and they are standing next to each other. The owner of the Alsatian is a neighbour of the owner of the Bulldog and Britney, who is standing at one of the extreme ends. Pixy, who owns a Poodle is at the middlemost position. The Labrador and the Alsatian dogs are kept as far as possible and neither of them has the Dalmatian as its neighbour. Ana and Danny are the neighbours of the owner of the German Shephard. Either Mitch owns a Doberman or Laila doesn't own an Alsatian.

9. Who is the owner of the Dalmatian?
- | | | | |
|----------|--------|----------|----------------------|
| A. Danny | B. Ana | C. Cindy | D. None of the above |
|----------|--------|----------|----------------------|
10. If Mitch and Cindy interchange their positions, who is standing second to the left of the owner of the Doberman?
- | | | | |
|-----------|------------|----------|----------------------|
| A. Poodle | B. Bulldog | C. Laila | D. None of the above |
|-----------|------------|----------|----------------------|
11. In a certain code language OASIS is written as 163221324. What will be the code of 'MIRAGE'?
- | | | | |
|----------------|----------------|----------------|----------------------|
| A. 14112151211 | B. 14123151112 | C. 14112115211 | D. None of the above |
|----------------|----------------|----------------|----------------------|
12. If in a certain language, PLANTS is coded as 125137, then what will be the code for VERTEBRATE?
- | | | | |
|---------------|---------------|---------------|----------------------|
| A. 5218925295 | B. 4592525219 | C. 5219252954 | D. None of the above |
|---------------|---------------|---------------|----------------------|

Directions for questions 13 and 14: Answer the questions on the basis of the information given below.

A team of representatives is to be selected from 8 persons – A to H. C and D are always selected together. If H is selected, then A is also selected. Exactly one of G and F has to be selected in the team. A and E cannot be in the same team. B is selected only if D is selected. If A is selected, then C is not selected in the team.

13. If A is one of the members of the team, what is the maximum size of the team?
- | | | | |
|------|------|------|----------------------|
| A. 3 | B. 4 | C. 5 | D. None of the above |
|------|------|------|----------------------|

14. Which of the following sets of representatives cannot be selected together?
A. G, B, C B. H, B, A C. B, C, E D. None of the above

Directions for questions 15 to 17: Answer the questions on the basis of the information given below.

Following are the conditions for selecting Senior Manager in an organization.

The candidate must:

- (I) Be a Mechanical Engineer and have obtained at least 65 percent marks in Engineering.
- (II) Be at least 25 years and not more than 35 years old as on 16.01.2013.
- (III) Have secured at least 50 percent marks in the written examination.
- (IV) Have secured at least 55 percent marks in the selection interview.
- (V) Have post-qualification work experience of at least 4 years in manufacturing sector.

However, if the candidate satisfies all the above mentioned criteria except:

- (a) criteria (I), but has secured at least 65 percent marks in M Tech (Mechanical), the case is to be referred to the DGM.
- (b) criteria (II), but has post-qualification experience of at least five years as Assistant Manager (in infrastructure sector), the case is to be referred to the GM.

Based on the above criteria and information provided on each of the candidate in the questions below, you have to decide which course of action should be taken against each candidate.

Without assuming anything regarding any applicant, the decision should be based on the information provided. All these cases are given to you as on 16.01.2013.

15. Mahendra was born on 15th December 1986. He has secured 65% marks in both written examination and selection interview. He has been working as a Assistant Manager for the last 6 years in an organization after completing his B Tech (Mechanical) with 65% marks.
A. He is not selected B. He is selected
C. His case is referred to DGM D. The data provided is not adequate to take a decision
16. Neeraj was born on 23rd October 1987. He was a brilliant student and completed Bachelor of Technology (Mechanical) with 74% marks. He was keen to work and joined a big manufacturing sector company since the year 2007. He has scored 60 percent marks in the interview and 58 percent marks in the written examination.
A. He is selected B. He is not selected
C. His case is to be referred to DGM C. His case is to be referred to GM
17. Harsh Sahay was born on 19th March 1984. He has secured 61% marks in both selection interview and written examination. He has secured 63% marks in B Tech Mechanical and 67% marks in M Tech (Mechanical). He has been working in a manufacturing company as an Assistant Manager for the past six years after completing his post graduation.
A. He is not selected
B. His case is to be referred to DGM
C. His case is to be referred to GM
D. The data provided is not adequate to take a decision

Directions for questions 18 and 19: Each of the questions below starts with a few statements, followed by four conclusions numbered 1, 2, 3 and 4. You have to consider every given statement as true, even if it does not confirm to the accepted facts. Read the conclusions carefully and then decide which of the conclusion(s) logically follow(s) from the given statements, disregarding commonly known facts.

18. **Statements:**

- a. Some resorts are hotels.
- b. All hotels are motels.
- c. All hotels are expensive

Conclusions:

- 1. Some hotels are not resorts.
 - 2. Some motels are hotels.
 - 3. All motels are expensive
 - 4. Some motels are resorts.
- A. Either 1 or 2 and 3 follow
B. 2 and 4 follow
C. 1, 2 and 3 follow
D. None of the above

19. **Statements:**

- a. All dogs are mammals.
- b. Some mammals are not carnivores.
- c. All dogs are carnivores.

Conclusions:

- 1. Some carnivores are dogs.
 - 2. Only mammals are dogs.
 - 3. All carnivores are dogs.
 - 4. Some carnivores are not mammals.
- A. Only 1 and 4 follow
B. Only 2 and 3 follow
C. Only 1 and 2 follow
D. None of the above

Directions for questions 20 and 21: In each question given below, a statement is followed by three courses of action numbered 1, 2 and 3. You have to assume everything in the statement to be true, and then decide which of the three suggested courses of action logically follow(s).

20. **Statement:** Poor diet, lack of exercise and smoking are the main offenders behind Patna's high number of deaths from heart disease.

Courses of action:

- 1. Government should provide increased grants to health researchers to conduct extensive research towards finding cures for heart ailments.
- 2. Free diet consultation should be given to patients in hospitals.
- 3. More and more awareness campaigns should be devised to educate people on the benefits of nutrition and the dangers of smoking

- A. Only 1 and 2 follow B. Only 3 follows C. Only 1 and 3 follow D. All follow

21. **Statement:** Maruti, the manufacturer of XS4 cars has discovered a probable defect in the hand braking systems of cars manufactured between March and August.

Courses of action:

- 1. Send Recall letters to all the owners of vehicles affected.
- 2. Conduct thorough in-house research into the matter and establish the nature of the problem and degree of its effects.
- 3. Provide free replacement and maintenance services for the cars containing the defective part.

- A. Only 1 and 3 follow B. Only 1 follows C. Only 2 follows D. Only 1 and 2 follow

SECTION - II

22. Which one of the following groups is the permanent member of the United Nations Security Council?
 A. France, China, U.K. and Russia B. France, Germany, U.K. and Russia
 C. Germany, China, U.K. and Japan D. France, China, Russia and Japan

23. Match the following countries with their capitals given below:

Countries	Capitals
a. Armenia	i. Tashkent
b. Kazakhstan	ii. Yerevan
c. Turkmenistan	iii. Astana
d. Uzbekistan	iv. Ashgabat

- A. a-i, b-ii, c-iii, d-iv B. a-i, b-ii, c-iv, d-iii
 C. a-ii, b-iii, c-iv, d-i D. a-ii, b-iii, c-i, d-iv
24. Where was the seventeenth summit of SAARC held in November, 2011?
 A. Male B. Addu City C. Colombo D. Dhaka
25. Correctly match the International Occasions with the dates, when they are celebrated:

Occasions	Dates
a. Wetland Day	i. 30 January
b. World Leprosy Eradication Day	ii. 2 February
c. World Heritage Day	iii. 8 March
d. Women's Day	iv. 10 April

- A. a-i, b-ii, c-iii, d-iv B. a-i, b-ii, c-iv, d-iii
 C. a-ii, b-i, c-iii, d-iv D. a-ii, b-i, c-iv, d-iii
26. Which of the following is not penned by Kalidas?
 A. Meghdootam B. Malavikagnimitram C. Vikramorvashiyam D. Mrichchakatikam
27. Arrange the following hills in right order from north to south:
 A. Maikal, Kaimur, Ajanta, Balaghat B. Kaimur, Maikal, Ajanta, Balaghat
 C. Maikal, Kaimur, Balaghat, Ajanta D. Kaimur, Maikal, Balaghat, Ajanta

28. Match the given personalities with the organizations, he/she currently leads:

Personalities	Organizations
a. World Bank	i. Haruhiko Kuroda
b. Asian Development Bank	ii. Jim Yong Kim
c. World Trade Organization	iii. Pascal Lami
d. International Monetary Fund	iv. Christine Lagarde

- A. a-i, b-ii, c-iii, d-iv B. a-i, b-ii, c-iv, d-iii
 C. a-ii, b-i, c-iii, d-iv D. a-ii, b-i, c-iv, d-iii

29. Which of the following organizations has never got the noble prize for peace?
 A. UNICEF B. International Labour Organization
 C. International Committee of the Red Cross D. UNESCO

30. Match the following revolutions with the sectors in which it is introduced:

Revolutions	Sectors
a. Golden	i. Oil-seeds
b. Yellow	ii. Horticulture
c. Silver	iii. Fishing
d. Blue	iv. Egg

- A. a-i, b-ii, c-iii, d-iv B. a-i, b-ii, c-iv, d-iii
 C. a-ii, b-i, c-iii, d-iv D. a-ii, b-i, c-iv, d-iii

31. The Net National Income (NNI) of a nation is equal to which of the following?
 A. Gross Domestic Product - Indirect Taxes
 B. Net Domestic Product + Direct Taxes
 C. Net National Product - Indirect Taxes
 D. Gross National Product + Direct Taxes

32. Match the given missiles with their features:

Missiles	Features
a. Akash	i. Surface-to-air missile
b. Nag	ii. Anti-tank missile
c. Sagarika	iii. Submarine launched ballistic missile
d. Pradyumna	iv. Anti-ballistic missile

- A. a-i, b-ii, c-iii, d-iv B. a-i, b-ii, c-iv, d-iii
 C. a-ii, b-i, c-iii, d-iv D. a-ii, b-i, c-iv, d-iii

33. In 1954, India's highest civilian award Bharat Ratna was awarded to:
 A. C Rajagopalachari, Jawaharlal Nehru and C V Raman
 B. C Rajagopalachari, S Radhakrishnan and C V Raman
 C. Jawaharlal Nehru, S Radhakrishnan and C V Raman
 D. Bhagwan Das, M Visvesvarayya and Govind Ballabh Pant

34. What was India's official rank in the Global Competitiveness Report 2012-2013 released by the World Economic Forum?
 A. 45 B. 59 C. 61 D. 63

35. In the table below match the sessions of the Indian Science Congress with their correct places and the name of the General President of that session:

Sessions	Places	General presidents
a. 96 th	i. Thiruvananthapuram	1. Geeta Bali
b. 97 th	ii. Shillong	2. K.C. Pandey
c. 98 th	iii. Chennai	3. G. Madhvan Nair
d. 99 th	iv. Bhubaneswar	4. T. Ramasami

A. a-i-1, b-ii-2, c-iii-3, d-iv-4
C. a-i-1, b-ii-2, c-iv-4, d-iii-3

B. a-ii-4, b-i-3, c-iii-2, d-iv-1
D. a-ii-4, b-i-3, c-iv-2, d-iii-1

36. Recently, which of the following young politician has been commissioned as a Lieutenant in the Territorial Army of India?

A. Abhijit Mukherjee B. Rahul Gandhi C. Sachin Pilot D. Vivek Singh

37. Match the following Nobel Prize, 2011, winners with his/her field of contribution:

Winners	Contributions
a. Tomas Transtromer	i. Economics
b. Thomas Sargent	ii. Literature
c. Tawakkul Karman	iii. Chemistry
d. Daniel Schechtman	iv. Peace

A. a-i, b-ii, c-iii, d-iv
C. a-ii, b-i, c-iii, d-iv

B. a-i, b-ii, c-iv, d-iii
D. a-ii, b-i, c-iv, d-iii

38. 16th NAM (Non-Aligned Movement) summit was held at which of the following cities?

A. Rabat B. Colombo C. Tehran D. Damascus

39. In the table given below match the chief guests on the Republic Day of India with the correct years of their visit and the name of the country, which he/she belongs:

Chief guests	Years	Countries
a. Nursultan Nazarbayev	i. 2009	1. Kazakhstan
b. Lee Myung Bak	ii. 2010	2. South Korea
c. Yingluck Shinawatra	iii. 2011	3. Indonesia
d. Susilo Bambang Yudhoyono	iv. 2012	4. Thailand

A. a-i-1, b-ii-2, c-iii-3, d-iv-4
C. a-i-1, b-ii-2, c-iv-4, d-iii-3

B. a-ii-4, b-i-3, c-iii-2, d-iv-1
D. a-ii-4, b-i-3, c-iv-1, d-iii-2

40. According to the 'Child Mortality Estimates Report 2012,' released by United Nations Children's Fund, in which of the following countries 'under-five mortality rates' are the highest in the world?
 A. India B. Bangladesh C. Nigeria D. Afghanistan

41. Match the personalities given below with her nation:

Personalities	Nations
a. Julia Gillard	i. Brazil
b. Angela Merkel	ii. United States
c. Dilma Rousseff	iii. Australia
d. Sarah Palin	iv. Germany

- A. a-i, b-ii, c-iii, d-iv B. a-i, b-ii, c-iv, d-iii
 C. a-iii, b-iv, c-ii, d-i D. a-iii, b-iv, c-i, d-ii

42. Consider the following matches and choose the correct answer from the codes given below:

Nobel Prize Winner (2012)	Field	Contribution
a. Serge Haroche and David J. Wineland	i. Chemistry	1. ground-breaking experimental related with individual quantum systems
b. Robert J. Lefkowitz and Brian K. Kobilka	ii. Physiology and Medicine	2. for studies of G-protein-coupled receptors
c. Sir John B. Gurdon and Shinya Yamanaka	iii. Economics	3. theory of stable allocations and the practice of market design
d. Alvin E. Roth and Lloyd S. Shapley	iv. Physics	4. for the discovery that mature cells can be reprogrammed to become pluripotent

- A. a-i-1, b-ii-4, c-iii-3, d-iii-3 B. a-ii-4, b-i-3, c-iii-2, d-iii-3
 C. a-i-1, b-ii-4, c-iv-2, d-iii-3 D. a-iv-1, b-i-2, c-ii-4, d-iii-3



SECTION - III

Directions for questions 43 to 46: Read the following passage carefully and answer the questions that follow.

In the early 1990s, the U.S. automobile industry was locked into an all-too-familiar mode of destructive competition. End-of-year rebates and dealer discounts were ruining the industry's profitability. As soon as one company used incentives to clear excess inventory at year-end, others had to do the same. Worse still, consumers came to expect the rebates. As a result, they waited for them to be offered before buying a car, forcing manufacturers to offer incentives earlier in the year. Was there a way out? Would someone find an alternative to practices that were hurting all the companies? General Motors may have done just that. In September 1992, General Motors and Household Bank issued a new credit card that allowed cardholders to apply 5% of their charges toward buying or leasing a new GM car, up to \$500 per year, with a maximum of \$3,500. The GM card has been the most successful credit-card launch in history. One month after it was introduced, there were 1.2 million accounts. Two years later, there were 8.7 million accounts—and the program is still growing. Projections suggest that eventually some 30% of GM's nonfleet sales in North America will be to cardholders.

As Hank Weed, managing director of GM's card program, explains, the card helps GM build share through the "conquest" of prospective Ford buyers and others—a traditional win-lose strategy. But the program has engineered another, more subtle change in the game of selling cars. It replaced other incentives that GM had previously offered. The net effect has been to raise the price that a noncardholder—someone who intends to buy a Ford, for example—would have to pay for a GM car. The program thus gives Ford some breathing room to raise its prices. That allows GM, in turn, to raise its prices without losing customers to Ford. The result is a win-win dynamic between GM and Ford.

If the GM card is as good as it sounds, what's stopping other companies from copying it? Not much, it seems. First, Ford introduced its version of the program with Citibank. Then Volkswagen introduced its variation with MBNA Corporation. Doesn't all this imitation put a dent in the GM program? Not necessarily. Imitation is the sincerest form of flattery, but in business it is often thought to be a killer compliment. Textbooks on strategy warn that if others can imitate something you do, you can't make money at it. Some go even further, asserting that business strategy cannot be codified. If it could, it would be imitated and any gains would evaporate.

Yet the proponents of this belief are mistaken in assuming that imitation is always harmful. It's true that once GM's program is widely imitated, the company's ability to lure customers away from other manufacturers will be diminished. But imitation also can help GM. Ford and Volkswagen offset the cost of their credit card rebates by scaling back other incentive programs. The result was an effective price increase for GM customers, the vast majority of whom do not participate in the Ford and Volkswagen credit card programs. This gives GM the option to firm up its demand or raise its prices further. All three car companies now have a more loyal customer base, so there is less incentive to compete on price.

To understand the full impact of the GM card program, you have to use game theory. You can't see all the ramifications of the program without adopting an allocentric perspective. The key is to anticipate how Ford, Volkswagen, and other automakers will respond to GM's initiative.

When you change the game, you want to come out ahead. That's pretty clear. But what about the fact that GM's strategy helped Ford? One common mind-set—seeing business as war—says that others have to lose in order for you to win. There may indeed be times when you want to opt for a win-lose strategy. But not always. The GM example shows that there also are times when you want to create a win-win situation. Although it may sound surprising, sometimes the best way to succeed is to let others, including your competitors, do well.

Looking for win-win strategies has several advantages. First, because the approach is relatively unexplored, there is greater potential for finding new opportunities. Second, because others are not being forced to give up ground, they may offer less resistance to win-win moves, making them easier to implement. Third, because win-win moves don't force other players to retaliate, the new game is more sustainable. And finally, imitation of a win-win move is beneficial, not harmful.

To encourage thinking about both cooperative and competitive ways to change the game, we suggest the term *coopetition*. It means looking for win-win as well as win-lose opportunities. Keeping both possibilities in mind is important because win-lose strategies often backfire. Consider, for example, the common—and dangerous—strategy of lowering prices to gain market share. Although it may provide a temporary benefit, the gains will evaporate if others match the cuts to regain their lost share. The result is simply to reestablish the status quo but at lower prices—a lose-lose scenario that leaves all the players worse off. That was the situation in the automobile industry before GM changed the game.

Did GM intentionally plan to change the game of selling cars in the way we have described it? Or did the company just get lucky with a loyalty marketing program that turned out better than anyone had expected? Looking back, the one thing we can say with certainty is that the stakes in situations like GM's are too high to be left to chance. That's why we have developed a comprehensive map and a method to help managers find strategies for changing the game.

The game of business is all about value: creating it and capturing it. Who are the participants in this enterprise? To describe them, we introduce the Value Net—a schematic map designed to represent all the players in the game and the interdependencies among them. Interactions take place along two dimensions. Along the vertical dimension are the company's customers and suppliers. Resources such as labor and raw materials flow from the suppliers to the company, and products and services flow from the company to its customers. Money flows in the reverse direction, from customers to the company and from the company to its suppliers. Along the horizontal dimension are the players with whom the company interacts but does not transact. They are its substitutors and complementors.

Substitutors are alternative players from whom customers may purchase products or to whom suppliers may sell their resources. Coca-Cola and Pepsico are substitutors with respect to consumers because they sell rival colas. A little less obvious is that Coca-Cola and Tyson Foods are substitutors with respect to suppliers. That is because both companies use carbon dioxide. Tyson uses it for freezing chickens, and Coke uses it for carbonation. (As they say in the cola industry, "No fizziness, no bizziness.")

Complementors are players from whom customers buy complementary products or to whom suppliers sell complementary resources. For example, hardware and software companies are classic complementors. Faster hardware, such as a Pentium chip, increases users' willingness to pay for more powerful software. More powerful software, such as the latest version of Microsoft Office, increases users' willingness to pay for faster hardware. American Airlines and United Air Lines, though substitutors with respect to passengers, are complementors when they decide to update their fleets. That's because Boeing can recoup the

cost of a new plane design only if enough airlines buy it. Since each airline effectively subsidizes the other's purchase of planes, the two are complementors in this instance.

We introduce the terms substitutor and complementor because we find that the traditional business vocabulary inhibits a full understanding of the interdependencies that exist in business. If you call a player a competitor, you tend to focus on competing rather than on finding opportunities for cooperation. Substitutor describes the market relationship without that prejudice. Complementors, often overlooked in traditional strategic analysis, are the natural counterparts of substitutors.

43. Identify the *correct* statement:
- A. The GM card caters to more fleet customers than nonfleet customers.
 - B. The GM card has provided GM with a continuing unique advantage over Ford.
 - C. The GM card has inspired GM's competitors to come up with their own cards.
 - D. The GM card was targeted at both fleet and nonfleet customers.

44. Identify the *false* statement:
- A. The GM card replaced some incentives that GM used to offer before.
 - B. GM has consistently increased product prices since the introduction of the GM card.
 - C. In traditional business parlance, substitutors are called competitors.
 - D. GM's card program has proved beneficial for Ford as well.

45. Match the following set of words:

Set A	Set B
a. Tyson Foods	i. MBNA Corporation
b. United Airlines	ii. Fleets
c. Ford	iii. Carbon dioxide
d. Volkswagen	iv. Citibank

- A. a-ii; b-i; c-iii; d-iv B. a-ii; b-iii; c-iv; d-i C. a-iii; b-ii; c-iv; d-i D. a-iv; b-ii; c-iii; d-i

46. Which of the following *cannot* be inferred from the passage?
- A. the same two companies can be complementors as well as substitutors with respect to the same group of customers.
 - B. game theory does not fully address the interdependencies that exist in business.
 - C. a win-win strategy can be effective for a company because it does not force other players in the market to retaliate.
 - D. All of the above

Directions for questions 47 to 49: Read the following passage carefully and answer the questions that follow.

Leadership brand is a reputation for developing exceptional managers with a distinct set of talents that are uniquely geared to fulfill customers' and investors' expectations. A company with a leadership brand inspires faith that employees and managers will consistently make good on the firm's promises. A Nordstrom customer knows that the retailer's employees and managers will give her white glove service. Parents who take their kids to a Disney theme park assume that ride operators and restaurant personnel will be upbeat, friendly, and gracious. McKinsey clients understand that smart, well-educated consultants will bring the latest management knowledge to bear on their problems. A leadership brand is also embedded in the

organization's culture, through its policies and its requirements for employees. For example, the tagline of Lexus is "the pursuit of perfection." Internally, the Lexus division translates that promise into the expectation that managers will excel at managing quality processes, including lean manufacturing and Six Sigma. In observing 150 successful leader feeder firms of various sizes over the past decade, we have found that most of them have developed a similar outside-in approach, which helps them produce an excellent pipeline of leaders generation after generation. They also tend to enjoy remarkably steady profits year after year, because they have secured the ongoing confidence of external constituents whose expectations are comfortably filled by leaders throughout the organization.

Building a strong leadership brand requires that companies follow five principles. First, they have to do the basics of leadership-like setting strategy and grooming talent-well. Second, they must ensure that managers internalize external constituents' high expectations of the firm. Third, they need to evaluate their leaders according to those external perspectives. Fourth, they must invest in broad-based leadership development that helps managers hone the skills needed to meet customer and investor expectations. And finally, they should track their success at building a leadership brand over the long term. Before considering these principles in more detail, however, let us consider why relatively few companies are able to establish leadership brands in the first place.

In recent years, thousands of companies have spent millions on their own corporate universities; yet most have failed to develop true leadership bench strength. That's because, in too many cases, the approach to leadership training is detached from what the firm stands for in the eyes of customers and investors. Rather, training is the same from company to company, regardless of whether the company is a fast-food chain or an aerospace contractor: A senior executive extols the importance of leadership; outside experts talk about business strategy, elicit 360-degree feedback, or take personality inventories; everyone spends time socializing and playing golf. Leadership practices are piecemeal and are seldom integrated with the firm's brand, let alone with the daily operations of the organization.

At the root of this unfortunate problem is a persistent focus on developing the individual leader. HR and succession-planning teams tend to concentrate on finding and developing the ideal candidate, who they hope will raise corporate fortunes. In our experience, many firms rely on a competency model that identifies a set of generic traits-vision, direction, energy, and so on-and then try to find and build next-generation leaders that fit the model. Consider what happened when we held a workshop for nine companies that were all household names. We asked the representatives from each organization to send us their leadership competency models, which listed the "unique" characteristics that they sought in their leaders ("has a strong vision," "fosters teamwork," "demonstrates emotional intelligence," and the like). We then deleted the names of the corporations from each model. During the workshop, we asked the representatives to pick out their own. Few were able to do so; there was little difference among the models of a telecommunications company, a consumer products company, a financial services company, and an aerospace company. The conclusion was obvious: By focusing on the desirable traits of individual leaders, the firms ended up creating generic models. And vanilla competency models generate vanilla leadership.

Once it selects a candidate, a company will try to train her to be more emotionally and socially adept, to set direction, to build relationships of trust, and so on. Eventually, she may develop a personal reputation that distinguishes her from other executives; she may even become a "celebrity leader" of the kind featured in popular business magazines. With this leader in place, her firm feels that its long-term success is assured. This can be a trap, however, for a powerful and charismatic leader can develop a personal brand that overpowers the organization's own brand. When employees become more dedicated to the individual who is in charge than focused on what customers want, the company can wind up in trouble. Moreover, an

institution that becomes too beholden to an individual leader runs a risk if the leader turns out to be less than perfect. When Sandy Weill, a celebrity leader and a master of acquisitions, left Citigroup after a long string of mergers, the firm continued to struggle with a series of ethical problems; it's been left to his successor, Chuck Prince, to figure out what holds the place together.

Certainly, a strong, energetic, and intelligent leader can help an organization; but given the short tenure of most CEOs and the changing fortunes of the corporation in a dynamic marketplace, we think that too intense a spotlight on the individual leader is both naive and incomplete. Expanding the competency model to include an external focus allows companies to offset that risk, by enabling them to tailor their leadership model to their own requirements.

Long-term success depends on making a critical distinction: A focus on leaders emphasizes the personal qualities of the individual; leadership emphasizes the methods that secure the ongoing good of the firm. We believe that long-term success—the kind that lasts generation after generation—depends on making the critical distinction between leaders and leadership. A focus on leaders emphasizes the personal qualities of the individual; a focus on leadership emphasizes the methods that secure the ongoing good of the firm and, in the process, also builds future leaders.

47. Which of the following statements is *incorrect*?
- A. Strong leadership brands need to focus on the desirable traits of individual leaders in the organization.
 - B. Corporate universities have not always been successful in ensuring quality leadership in organizations.
 - C. Leadership practices in an organization need to be in sync with the firm's brand and practices.
 - D. A firm's leadership competency model should be arrived at after factoring in the firm's promises.
48. Which of the following statements is *correct*?
- A. Setting strategy and grooming individual talent leads to broad-based leadership development in organizations.
 - B. Personality inventories do not contribute to an understanding of leadership in organizations.
 - C. Financial performance should be the primary factor to be taken into account when appraising leadership in an organization.
 - D. Organizational policies and requirements for employees have a role to play in fostering leadership in organizations.
49. Identify the *correct* statement from the following:
- A. Celebrity leaders are highly sought after by firms because of the long term success that follows as a consequence.
 - B. Excessive dependence on a celebrity leader might prove harmful for an organization.
 - C. An organization should create a competency model for its leaders that emphasizes brand building rather than immediate profits.
 - D. An external focus in the leadership competency model of an organization leads to a misplaced exaltation of generic leadership traits.

Directions for questions 50 to 53: Read the following passage carefully and answer the questions that follow.

Executives in large companies often ask themselves, “Why aren’t we better at innovation?” After all, there is no shortage of sound advice on how to improve: Come up with better ideas. Look outside the company for concepts and partners. Establish different funding mechanisms. Protect the new and radically different businesses from the old. Sharpen the execution.

Such strategic counsel, however, is based on the assumption that all organizations face the same obstacles to developing new products, services, or lines of business. In reality, innovation challenges differ from firm to firm, and otherwise commonly followed advice can be wasteful, even harmful, if applied to the wrong situations.

Consider how two different CEOs confronted the innovation challenges facing their companies. When Steve Bennett joined Intuit, the maker of the financial software programs Quicken and QuickBooks, in January 2000, it was a company with lots of ideas—most collected from outside the organization—but little discipline for bringing those ideas to market. “We had a lot of energy focused on learning from customers,” the CEO recalls, “but we were struggling to decide which ideas would have the highest impact.” To fix this, Bennett demanded that clear business objectives be set for ideas in development, and he held people accountable for delivering on them. Intuit is now just as good at executing on ideas as it is at generating them. The company’s revenues and profits are up 47% and 65%, respectively, from three years ago, in part because of this effort.

About the same time that Bennett took the helm at Intuit, A.G. Lafley became CEO of Procter & Gamble, a company that had traditionally been good mainly at developing new products internally and bringing them to market. But a persistent weakness was its insular culture. Lafley wanted the company to become better at cultivating ideas from the outside. After five years of investments, P&G now has a state-of-the-art process for sourcing ideas externally, which includes a global network of resources and online knowledge-exchange sites. This process complements P&G’s core competency in executing on ideas and has helped fuel an increase in sales and profits of 42% and 84%, respectively, over the past five years.

Bennett and Lafley faced different innovation challenges, which required different solutions. Intuit and Procter & Gamble probably would be worse off today had their CEOs simply imported the latest best practices in innovation management. Now consider a computer hardware company we analyzed. Buying into the latest advice about innovation—companies should focus on generating more ideas—managers set up a series of formal brainstorming sessions. Idea generation wasn’t the problem, however. The company had inadequate screening and funding processes: Concepts never flourished, nor did they die. The brainstorming sessions actually aggravated the innovation process—employees were pumping more and more ideas into an already badly broken system.

Even the strongest dose of the best analgesic on the market won’t help mend a broken bone. Likewise, companies can’t just import the latest fads in innovation to cure what’s ailing them. Instead, they need to consider their existing processes for creating innovations, pinpoint their unique challenges, and develop ways to address them. In this article, we offer a comprehensive framework—“the innovation value chain”—for doing just that.

The innovation value chain view presents innovation as a sequential, three-phase process that involves idea generation, idea development, and the diffusion of developed concepts. Across all the phases, managers must perform six critical tasks—internal sourcing, cross-unit sourcing, external sourcing, selection, development, and company-wide spread of the idea. Each is a link in the chain. Along the innovation value chain, there may be one or more activities that a company excels in—the firm’s strongest links. Conversely, there may be one or more activities that a company struggles with—the firm’s weakest links.

Our framework asks executives to take an end-to-end view of their innovation efforts. It discourages managers from reflexively importing innovation practices that may address a part of the chain but not necessarily the one that the company needs to improve most. It centers their attention on the weakest links and prompts executives to be more selective about which practices to apply in their quest for improved innovation performance.

Executives understand that innovation starts with good ideas—but where do these concepts come from? Managers naturally look first inside their own functional groups or business units for creative sparks; they usually find they have a pretty good sense of what’s close at hand. The bigger sparks, they discover, are ignited when fragments of ideas come together—specifically, when individuals across units brainstorm or when companies tap external partners for ideas.

Cross-unit collaboration—combining insights and knowledge from different parts of the same company in order to develop new products and businesses—is not easily achieved. Decentralized organizational structures and geographical dispersion make it hard for people to work across units. Managers at Bertelsmann, the large German global media company, took a staggering three years to catch up with Amazon in launching an online bookstore, in large part because of their company’s decentralized makeup. Bertelsmann’s autonomous publishing houses, book and music clubs, and distribution and multimedia divisions could not and did not collaborate on this new business opportunity.

Generating lots of good ideas is one thing; how you handle (or mishandle) them once you have them is another matter entirely. New concepts won’t prosper without strong screening and funding mechanisms. Instead, they’ll just create bottlenecks and headaches across the organization. In many companies, tight budgets, conventional thinking, and strict funding criteria combine to shut down most novel ideas. Employees quickly get the message, and the flow of ideas dries up. When Stewart Davies became head of R&D at BT in 1999, the UK telecommunications group was in financial trouble. Davies reviewed operations within R&D and recalled being staggered by the inventiveness—and the frustration—of the people he met. There was no shortage of good ideas at the company, he concluded. But inadequate commercial skills and a shortage of seed money for high-risk projects made it difficult for anyone to move forward with ideas for new technologies.

50. Match the following:

Set A	Set B
a. Steve Bennett	i. Procter & Gamble
b. Stewart Davis	ii. Bertelsmann
c. Online knowledge-exchange sites	iii. Telecommunications
d. Online bookstore	iv. Intuit

- A. a-ii; b-iii; c-iv; d-i B. a-iv; b-ii; c-iii; d-i C. a-iv; b-iii; c-i; d-ii D. a-iii; b-iv; c-ii; d-i

51. Which of the following is *not* true about the innovation value chain?
- A. It asks executives to take a holistic view of innovation in his/her organization.
 - B. It identifies certain tasks that managers need to perform to ensure successful innovation in any organization.
 - C. It relies largely on assimilating fragments of ideas from external partners.
 - D. It focuses managerial attention on the activities that a company struggles with.
52. Which of the following is *true* about 'cross-unit' collaboration?
- A. Cross-unit collaboration is an assimilation of innovation ideas both internal and external to the organization.
 - B. In cross-unit collaboration, knowledge-sharing happens between various parts of the same organization.
 - C. Decentralized organization structures facilitate cross-unit collaboration through greater dispersal of innovation ideas.
 - D. All of the above.
53. Identify the *correct* statement:
- A. The innovation value chain aims to incubate all innovative ideas in an organization.
 - B. Stewart Davies understood that the flow of new ideas at BT served no useful purpose and that only commercially viable ideas should be entertained.
 - C. According to the innovation value chain framework, brainstorming sessions do not have a big role to play in innovation management
 - D. Executing on innovative ideas is a core competency for P&G.

Directions for questions 54 to 57: Read the following passage carefully and answer the questions that follow.

Conventional strategic planning is driven by the calendar and tends to focus on issues, such as declining profits or market share. As long as this is the case, the organization will fall into the trap of investigating data related to the issues rather than exploring and testing possible solutions.

A simple way to get strategists to avoid that trap is to require them to define two mutually exclusive options that could resolve the issue in question. Once you have framed the problem as a choice—any choice—your analysis and emotions will focus on what you have to do next, not on describing or analyzing the challenge. The possibilities-based approach therefore begins with the recognition that the organization must make a choice and that the choice has consequences. For the management team, this is the proverbial crossing of the Rubicon—the step that starts the strategy-making process.

In the late 1990s, when Procter & Gamble was contemplating becoming a major player in the global beauty care sector, it had a big issue: It lacked a credible brand in skin care, the largest and most profitable segment of the sector. All it had was Oil of Olay, a small, down-market brand with an aging consumer base. P&G crossed its Rubicon and laid out two possibilities: It could attempt to dramatically transform Oil of Olay into a worthy competitor of brands like L'Oréal, Clarins, and La Prairie, or it could spend billions of dollars to buy a major existing skin care brand. This framing helped managers internalize the magnitude of what was at stake. At that point P&G turned from contemplating an issue to facing a serious choice.

Having recognized that a choice needs to be made, you can now turn to the full range of possibilities you should consider. These might be versions of the options already identified. For example, P&G could try to grow Oil of Olay in its current price tier or take it upmarket, or it could seek to buy the German company that owns Nivea or pry Clinique out of the hands of Estée Lauder. Possibilities might also exist outside the initial options. For instance, P&G could extend its successful cosmetics brand, Cover Girl, into skin care and build a global brand on that platform.

Constructing strategic possibilities, especially ones that are genuinely new, is the ultimate creative act in business. No one in the rest of the beauty industry would have imagined P&G's completely reinventing Olay and boldly going head-to-head against leading prestige brands. To generate such creative options, you need a clear idea of what constitutes a possibility. You also need an imaginative yet grounded team and a robust process for managing debate.

Desired output. A possibility is essentially a happy story that describes how a firm might succeed. Each story lays out where the company plays in its market and how it wins there. It should have internally consistent logic, but it need not be proved at this point. As long as we can imagine that it could be valid, it makes the cut. Characterizing possibilities as stories that do not require proof helps people discuss what might be viable but does not yet exist. It is much easier to tell a story about why a possibility could make sense than to provide data on the odds that it will succeed.

A common temptation is to sketch out possibilities only at the highest level. But a motto ("Go global") or a goal ("Be number one") does not constitute a strategic possibility. We push teams to specify in detail the advantage they aim to achieve or leverage, the scope across which the advantage applies, and the activities throughout the value chain that would deliver the intended advantage across the targeted scope. Otherwise it is impossible to unpack the logic underlying a possibility and to subject the possibility to subsequent tests. In the Cover Girl possibility, the advantage would come from Cover Girl's strong brand and existing consumer base combined with Procter & Gamble's R&D and global go-to-market capabilities. The scope would be limited to the younger demographic at the heart of the current Cover Girl consumer base, and it would need to build internationally from North America, where the brand was strong. The key activities would include leveraging Cover Girl's stable of model and celebrity endorsers.

Managers often ask, "How many possibilities should we generate?" The answer varies according to context. Some industries offer few happy stories—there are simply not a lot of good alternatives. Others, particularly ones in ferment or with numerous customer segments, have many potential directions. We find that most teams consider three to five possibilities in depth. On one aspect of this question we are adamant: The team must produce more than one possibility. Otherwise it never really started the strategy-making process, because it didn't see itself as facing a choice. Analyzing a single possibility is not conducive to producing optimal action—or, in fact, any action at all.

We also insist that the status quo or current trajectory be among the possibilities considered. This forces the team in later stages to specify what must be true for the status quo to be viable, thereby eliminating the common implicit assumption "Worst case, we can just keep doing what we're already doing." The status quo is sometimes a path to decline. By including it among the possibilities, a team makes it subject to investigation and potential doubt.

The team at P&G surfaced five strategic possibilities in addition to the status quo. One was to abandon Oil of Olay and acquire a major global skin care brand. A second was to keep Oil of Olay positioned where it was, as an entry-priced, mass-market brand, and to strengthen its appeal to current older consumers by leveraging R&D capabilities to improve its wrinkle-reduction performance. A third was to take Oil of Olay into the prestige distribution channel—department stores and specialty beauty shops—as an upscale brand. A fourth was to completely reinvent Olay as a prestigelike brand that would appeal more broadly to younger women (age 35 to 50) but be sold in traditional mass channels by retail partners willing to create a “masstige” experience, with a special display section. A fifth was to extend the Cover Girl brand to skin care.

54. Which of the following is *correct* according to the passage?
- A. Strategists should develop strategy alternatives by including the status quo in their calculations without considering it unchanged as one of the alternatives.
 - B. The entire range of possibilities for a strategic plan should be defined at the outset and not deviated from.
 - C. Conventional strategic planning does not always place enough emphasis on exploring and testing possible solutions.
 - D. It is not imperative that the advantage that an organization hopes to achieve is defined at the outset of strategic planning.
55. Which of the following is *incorrect* according to the passage?
- A. Strategists would do well to define two mutually exclusive options at the outset of the strategic planning process.
 - B. Emotions have no part to play in strategic planning where a carefully structured approach is essential.
 - C. Constructing new strategic possibilities can be considered a creative act in business.
 - D. Creative options in strategic planning need to be grounded by a clear understanding of what is possible.
56. Which of the following *correctly* describes a desirable characteristic of strategic planning according to the passage?
- A. A goal statement should be used to ground all strategic possibilities.
 - B. To begin with, possibilities should be sketched out only at the highest level.
 - C. The scope of a strategic plan should not be confused with a motto.
 - D. The logic underlying a strategic possibility needs to be justified by the odds that the story will succeed.
57. Which of the following has *not* been mentioned in the passage while discussing the strategic planning that went behind Oil of Olay?
- A. Keep Oil of Olay as an entry-priced, mass-market brand.
 - B. Leverage R & D capabilities to improve the product.
 - C. Turn Oil of Olay into an upscale brand.
 - D. Introduce new variants to appeal to a larger consumer base.

SECTION - IV

Direction for questions 58 and 59: Identify *antonyms* for the following words.

58. Abrogate
A. Abate B. Ratify C. Indicate D. Impinge
59. Mendacious
A. Duplicitous B. Equivocating C. Perfidious D. Veracious

Directions for question 60 and 61: Select the most appropriate words from the given choices to fill the blanks.

60. This historical fact needs to be _____ today, especially when a constitutional authority like the Election Commissioner, in his _____ attempt to prove that illegal Bangladeshis are behind the violence, claims that this stream of migration into Assam started during the late 1960s and early 1970s.
- A. exfoliated, fallacious B. adducted, facetious
C. reiterated, overzealous D. falcated, adenomatous
61. Regular as clockwork, every four years there are predictable _____ in the media concerning the over-commercialisation of the Olympics. The complaint has always struck me as _____.
- A. commemorations, inappropriate B. prophecies, immoderate
C. lamentations, paradoxical D. calibrations, ludicrous

Direction for questions 62 and 63: For each of the following questions, choose the most appropriate “one word” for the given expressions.

62. Accustom (someone) to something, especially something unpleasant.
A. Bemire B. Delate C. Inure D. Abscise
63. A novel dealing with a person’s formative years or spiritual education.
A. Gothic B. Bildungsroman C. Bibliothecae D. Iambus

Directions for questions 64 and 65: Given below are the first and last parts of a sentence, and the remaining sentence is broken into four parts p, q, r and s. From options A, B, C and D, choose the arrangement of these parts that forms a complete, meaningful sentence.

64. Senior people and administrators _____ pursuit of knowledge and teaching.
- p. The quality of research they have done,
q. The aspirants are assessed on the basis of what they have published,
r. And how passionate they seem about the
s. Who make decisions make sure that
- A. rqp B. qrps C. sqpr D. psrq

71.

Column 1	Column 2
a. Contiguous	i. Disappear
b. Forlorn	ii. Sharing a common border
c. Supine	iii. Pitifully sad and abandoned
d. Opprobrium	iv. Severe criticism
e. Dissipate	v. Lying face upwards

A. a-v, b-ii, c-iv, d-i, e-v
C. a-ii, b-iii, c-v, d-iv, e-i

B. a-iii, b-iv, c-ii, d-i, e-v
D. a-iv, b-ii, c-iii, d-v, e-i

72. Which of the following cannot be termed as 'tautology'?

- A. This is a short summary of the book.
B. It's 3 a.m. in the morning
C. An organization expects joint efforts from its members.
D. The fact needs to be reiterated again.

Directions for questions 73 and 74: Five sentences are given below, labeled A, B, C, D and E. They need to be arranged in a logical order to form a coherent paragraph/passage. From the given options, choose the most appropriate one.

73. I. But although few among the British understood so well the case for a new Community, many were reluctant to be disadvantaged in Continental markets and excluded from the taking of important policy decisions.
II. So after failing to secure a free trade area that would incorporate the EEC as well as other West European countries, successive British governments sought entry into the Community, finally succeeding in 1973.
III. But while the British played a leading part in developing the common market into a more complete single market, they continued to lack the political motives that have driven the founder states, as well as some others, to press towards other forms of deeper integration.
IV. One such exception was Winston Churchill who, less than a year and a half after the end of the war, said in a speech in Zurich: 'We must now build a kind of United States of Europe . . . the first step must be a partnership between France and Germany . . . France and Germany must take the lead together.'
V. With some exceptions, they failed to understand the strength of the case for such reform.

A. V, IV, I, II, III B. I, II, III, V, IV C. II, III, V, IV, I D. II, IV, I, III, V

74. I. The culture of criticism was auctioned off to the lowest bidder to make space for Page 3 journalism some years ago.
II. The Indian criticism scene however, has long been threatening to fade into the sunset.
III. Film scholar and historian Amrit Gangar believes that in the age of PR and hagiography, a hatchet job can be a good intervention.
IV. If 'The Hatchet Job' does not bury the hatchet and remains intrepidly and intelligently critical, then it will be advantageous for our general cerebral health.
V. In any event, the debate around criticism has got itself a new pair of running shoes.

A. I, V, III, II, IV B. I, II, III, IV, V C. III, IV, V, II, I D. V, II, III, IV, I

Direction for questions 75 and 76: Each of the questions presents a sentence, part or all of which is underlined. Beneath the sentence you will find four ways of phrasing the underlined part. Select the answer that produces the most effective sentence; your answer should make the sentence clear, exact, and free of grammatical error.

75. On parallel paths though with different emphasis, different lexicons and overlapping clouds of experts these emergent paradigms have created space for a fresh struggle with the tough questions.
- A. Within parallel paths with different emphasis and lexicons and overlapping clouds of experts these emerging paradigms have created space
 - B. On parallel paths with different emphasis, different lexicons and overlapping clouds of experts these emergent paradigms have created space
 - C. On parallel paths, though with different emphases, different lexicons, and overlapping clouds of experts, these emergent paradigms have created space
 - D. Within parallel paths though, with different emphases, lexicons and overlapping clouds within experts have created space
76. Intense integration of markets, trade, and finance have accompanied the latest tidal wave of globalization, facilitated by seismic policy shifts, akin those associated with the fall of the Soviet Union, the European Union being formed, and the opening of emerging economies.
- A. have accompanied the latest tidal wave of globalization, facilitated by seismic policy shifts, akin those associated with the fall of the Soviet Union, the European Union being formed, and the opening of emerging economies.
 - B. accompanied the latest tidal wave of globalization, which has been facilitated by seismic policy shifts, akin those associated with the fall of the Soviet Union, the European Union being formed, and the opening of emerging economies.
 - C. has accompanied the latest tidal wave of globalization facilitated by seismic policy shifts, akin those associated with the fall of the Soviet Union, the European Union being formed, and the opening of emerging economies.
 - D. has accompanied the latest tidal wave of globalization, facilitated by seismic policy shifts, like those associated with the fall of the Soviet Union, the formation of the European Union, and the opening of emerging economies.

Directions for questions 77 and 78: In each of the following questions a sentence is given in "Direct Speech" "Identify the right alternative A, B, C or D which best expresses this sentence in "Indirect Speech".

77. She said, "I have been working on the implementation of the strategy since the day I joined the organization."
- A. She said she has been working on the implementation of the strategy since the day she had joined the organization.
 - B. She said she had been working on the implementation of the strategy since the day she joined the organization.
 - C. She had said she was working on the implementation of the strategy since the day she had joined the organization.
 - D. She was saying that she has been working on the implementation of the strategy since the day she has joined the organization.

78. The manager said, "I will try to look at the plans tomorrow."
 A. The manager said that he will try to look at the pans tomorrow.
 B. The manager said he would try to look at the plans tomorrow.
 C. The manager said he will be trying to look at the plans today.
 D. The manager said he will try to look at the plans tomorrow.

Directions for questions 79 and 80: Select the right combination of numbers given in A, B, C and D so that letters arranged accordingly form a meaningful word.

79.

G	I	B	A	A	T	R	E	R
1	2	3	4	5	6	7	8	9

- A. 2 9 7 1 6 5 3 4 8 B. 4 3 5 1 8 9 2 7 6 C. 4 7 3 2 6 9 5 1 8 D. 3 9 4 6 1 5 2 8 7

80.

G	B	N	A	L	C	N	I	A
1	2	3	4	5	6	7	8	9

- A. 5 4 3 2 1 6 9 7 8 B. 8 7 1 2 4 3 6 5 9 C. 2 4 5 9 3 6 8 7 1 D. 3 9 5 4 1 8 2 7 6

SECTION - V

81. What is the nature of the roots of the equation $x^2 + (x - a)^2 + (x - b)^2 - (x - c)^2 - (x - d)^2 = 0$, where $a : b : c : d = 2 : 3 : 2 : 3$?
- A. Integer B. Irrational C. Imaginary D. None of the above
82. An automobile company has 12 machines of equal efficiencies in its factory. The annual production cost is ₹36,000 and the establishment cost is ₹12,000. The annual output of the company is ₹72,000. The sum of the annual output, the production cost and the establishment cost is directly proportional to the number of machines. The share holders get 12.5% of the profit, which is directly proportional to the annual output of the company. Had there been 16.67% less number of machines, then by what fraction would the profit of company have been less than the actual profit? (where profit is excess of the annual output (in ₹) over the sum (in ₹) of the production cost and the establishment cost)
- A. $\frac{1}{4}$ B. $\frac{1}{5}$ C. $\frac{1}{6}$ D. $\frac{1}{7}$
83. Six numbers are selected at random from the set $\{2, 3, 2, 4, 5, 2, 6, 5, 7\}$. If P is the product of the six numbers, what is the number of distinct possible values of P?
- A. 20 B. 28 C. 31 D. 42
84. The product of the ages of Aman and Chaman two years ago is 26 more than the product of the present ages of Bimal and Aman. If the ages of Aman, Bimal and Chaman two years ago were three distinct prime numbers, find the sum of the present ages of the youngest and the eldest among three of them.
- A. 20 years B. 24 years C. 34 years D. Cannot be determined
85. The ratio of milk and water in a mixture is 2 : 1. Some quantity of water is added to the mixture to make the ratio of milk and water in the new mixture 1 : 2. The quantity of water added to the original mixture is what percent of the quantity of water in the original mixture?
- A. 150 B. 200 C. 300 D. 100
86. Find the units digit of the product of first 29 odd prime numbers.
- A. 7 B. 3 C. 5 D. None of the above
87. The perimeter of a rectangle is 62 cm. If the length of the diagonal (in cm) is an integer, which of the following can be the area (in cm^2) of the rectangle?
- A. 220 B. 168 C. 150 D. 300
88. If $\log_5 2 + \log_5 (2x + 1) = \log_5 (2x + 3) + 2$, then which of the following is true?
- A. $-\frac{73}{46} < x \leq 0$ B. $-\frac{73}{46} \leq x \leq 1$ C. $1 < x \leq 2$ D. No solution

89. In an experiment, it was found that the rate of evaporation of ethanol in a container upon boiling at a constant temperature $K^{\circ}\text{C}$ is directly proportional to the square root of the area of the open surface of the container. If the container is open from the top face only, then which of the following options represents the containers with decreasing rate of evaporation at the start of the experiment?
- A cube of dimension 5 cm \times 5 cm \times 5 cm.
 - A cylinder of base radius 7 cm and length 10 cm.
 - A hemi-sphere of radius 3.5 cm.
- A. ii, iii, i B. iii, ii, i C. ii, iii, i D. None of the above
90. If the measures (in cm) of the sides of a triangle are distinct integers, which of the following (in cm) cannot be one of the sides of the triangle?
- A. 1 B. 2 C. 3 D. None of the above
91. Kangkana thought of giving a last try to CAT, so she decided to take a mock test at Career Launcher. In Mock-Cat-4, she attempted all the three sections i.e. QA, VA and LR-DI, each of which had the maximum marks 75. It was observed that half of the marks obtained by Kangkana in LR-DI were equal to the one-fourth of the marks obtained by her in VA. If the average marks obtained by her in the three sections were 50 and the LCM of the marks obtained by her in the three sections was 60, what was the sum of the marks obtained by her in QA and VA?
- A. 90 B. 110 C. 120 D. 60
92. A sequence is formed from the set of first 100 natural numbers. If the sequence contains all the numbers of the mentioned set except perfect squares and multiples of 6, find the number of elements in the sequence.
- A. 73 B. 74 C. 75 D. 76
93. The positive real numbers a , b and c are in geometric progression such that $a + b + c = \frac{13}{2}$. If $a \leq b \leq c$, then the maximum possible value of b is
- A. $\frac{13}{6}$ B. $\frac{13}{4}$ C. $\frac{26}{5}$ D. None of the above
94. If the letters from A to Z are assigned values from 50 to 75 respectively, what is the highest prime number which divides the expression $\{(A + M) \times (B - M) \times (C + M) \times \dots \times (Y + M) \times (Z - M)\}$?
- A. 37 B. 61 C. 67 D. 127
95. Find all the possible four digit even natural numbers that can be formed by using the digits 1, 2, 3, 4, 5, 6 and 7.
- A. 343 B. 686 C. 1029 D. 540
96. Which of the following ratios has the highest percentage value?
- A. 25 : 34 B. 14 : 17 C. 28 : 33 D. 63 : 68
97. A man and a woman can construct a wall in 60 days working together. If the efficiency of the man is three-fourth of that of the woman, in how many days can the man complete the work alone?
- A. 105 B. 120 C. 115 D. None of the above

98. Ashutosh was on his way to catch the 'Jay Express' to Agra to attend the marriage of his friend, Ajay. On the way, he got stuck in a traffic jam and as a result, missed his train by a few minutes. In order to make it to the wedding in time, he hired an SUV and drove down Agra covering one-fourth of the distance at a speed 48 km/hr, half of the rest distance at 72 km/hr and the remaining distance at 96 km/hr. Find the average speed (in km/hr) for the journey.
- A. $69\frac{1}{11}$ B. $69\frac{9}{11}$ C. $67\frac{13}{17}$ D. $69\frac{11}{17}$
99. Six delegates, three from India and three from Pakistan, congregated in Geneva to attend a round table conference for peace and mutual cooperation. Among the delegates, three were males and three were females. They were asked to sit on six identical chairs that were equidistant around a circular table. If male and female delegates sat at alternate positions, what is the probability that Mr. Digvijay Sinha from India sat diagonally opposite to Miss Meena Rabbani Khan from Pakistan?
- A. 0.25 B. 0.33 C. 0.5 D. 0.67
100. How many times between 12:00 noon and 1:00 p.m., the second hand and the minute hand coincide with each other in a clock?
- A. 58 B. 59 C. 60 D. 61
101. There are some balls in a bag out of which seven balls are black and three balls are white. The bag contains six plastic balls and seven leather balls. Three of the plastic balls are black in color and two are white in color. One of the leather balls is white in color and two are black in color. There is a green ball, which is of neither leather nor of plastic. What can be the least possible number of balls in the bag?
- A. 17 B. 16 C. 15 D. 14
102. What is the maximum number of cuboids of dimensions 4 cm × 3 cm × 5 cm that can be formed by using 729 cubes each of dimensions 1 cm × 1 cm × 1 cm?
- A. 10 B. 12 C. 11 D. 13
103. Arpit builds an overhead tank in his house, which has three taps namely T_1 , T_2 and T_3 attached to it. T_1 is an inlet tap that can fill the tank in 15 hours; T_2 is also an inlet tap which takes 150% more time than the time taken by T_1 to fill the tank. T_3 is an outlet tap which can empty the tank in 45 hours. One day, in order to fill the tank, Arpit opens T_1 and after two hours, opens T_2 as well. However, at the end of the sixth hour, he realizes that T_3 has been kept open right from the beginning and immediately closes it. Find the approximate time (in hours) in which tank gets full.
- A. 7 B. 8 C. 13 D. 14
104. The metro schedule of TP metro station, which is in Delhi, is designed in such a way that a train departs from the station for 'Blue Line' at an interval of every 10 minutes, for 'Yellow Line' at an interval of every 12 minutes, for 'Red Line' at an interval of every 20 minutes and for 'Orange Line' at an interval of every 25 minutes. If on one morning, a trains for each of the mentioned lines had departed simultaneously from the station at 10 a.m., but due to heavy power failure in Delhi on the same day between 1:00 pm and 3:00 p.m. metro services came to a standstill. Metro services were restored to its usual schedule at 3:00 p.m. again. At what time immediately after the restoration of metro services, would a train have departed for each of the mentioned lines simultaneously from TP station?
- A. 5:00 p.m. B. 4:00 p.m. C. 3:00 p.m. D. Cannot be determined

SECTION - VI

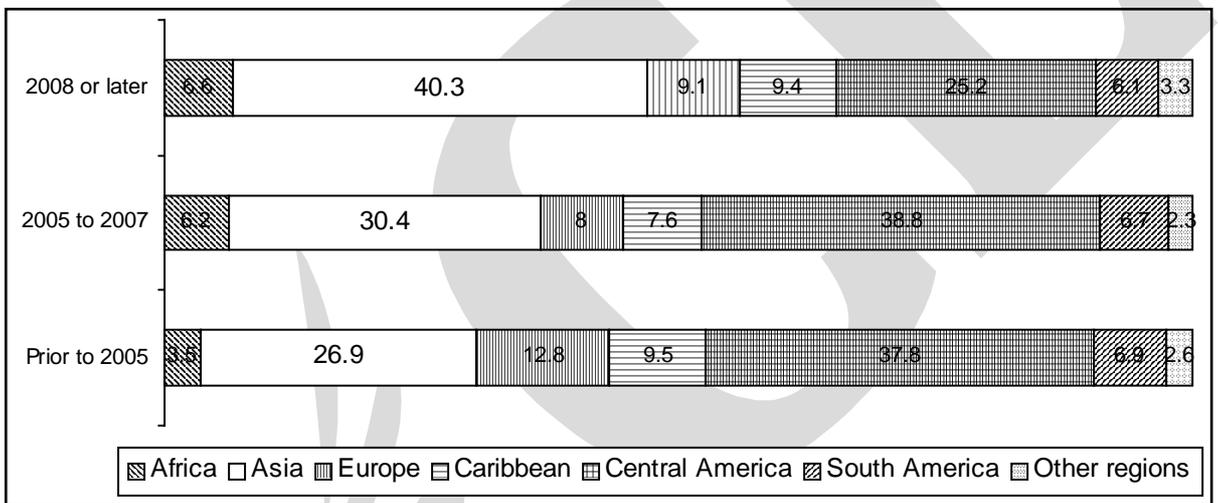
Directions for questions 105 to 109: Answer the questions on the basis of the information given below. The table given below represents the aggregate data (in ₹ million) – Revenue, Liabilities, Production Cost and Profit – for each of the four sectors – Retail, IT, Automobile, Electronics and the individual data of the same for each of the respective companies under that sector.

Organizations	Revenue			Liabilities			Production Cost			Profit		
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011
Retail sector	48500	47675	48215	4202	4299	4278	231	342	445	-3500	-3265	-2645
Shoppers Stop	1800	740	1552	136	46	102	20	45	24	-512	110	135
Prozone Capital	1340	992	1035	160	167	168	80	65	18	450	95	87
Brandhouse	840	892	946	32	34	35	70	45	16	110	82	75
IT sector	22050	26372	30731	1985	2210	2400	495	652	655	2563	2465	8970
Wipro	855	1800	1690	100	160	190	60	120	195	170	512	420
Infosys	1120	1520	1680	120	110	90	65	90	40	215	190	275
HCL Technologies	1260	1240	1320	160	220	205	45	70	25	90	115	210
Automobile sector	36000	38000	51452	2618	2355	3245	35	55	35	-2100	-2900	1000
Renault	8400	7900	11100	900	1120	1180	12	9	14	565	190	950
Mitsubishi	3585	4200	5185	408	508	406	10	14	9	-310	-175	620
Nissan	3217	2812	4658	45	798	55	11	17	8	-360	-350	95
Electronics sector	22000	26000	26540	1700	1690	1850	210	263	219	740	920	-295
LG Electronics Ltd.	4200	3670	4200	450	420	415	12	26	36	840	900	880
Hewlett Packard Ltd.	2210	2780	3700	810	1080	1230	22	22	22	550	750	1100
IBM India Ltd.	3420	5520	3900	119	110	120	45	15	32	180	180	-350

105. Mark the false statement:
- The percentage share of Renault in the total revenue generated by the automobile sector was higher than the percentage share of LG Electronics Ltd. in the total revenue generated by electronics sector during the period 2010 to 2011.
 - The production cost of Renault as a percentage of its revenue in two of the three given years was higher than that of the automobile sector as a whole.
 - IBM India Ltd. experienced an increase in the growth rate of the revenue generated by it in 2011 over the previous year.
 - None of the above
106. Liabilities of IT sector were what percent of its Revenue in the year 2011?
- 5.2%
 - 7.8%
 - 9.9%
 - 12.56%
107. How many companies recorded a growth in Revenue as well as in Profit in each of the years over the previous year during the given period?
- 4
 - 6
 - 5
 - None of the above

108. In which of the following pairs, Production cost of the first company in the pair as a percentage of Liabilities of the second company in the pair during the given period was the highest?
- A. Hewlett Packard Ltd. – Prozone Capital B. Wipro – Renault
 C. Nissan – Shopper Stop D. Infosys – Mitsubishi
109. Identify the highest number:
- A. Increase in the revenue of Brandhouse from 2009 to 2010
 B. Increase in the liabilities of IBM India Ltd. from 2010 to 2011
 C. Increase in the profit of LG Electronics Ltd. from 2009 to 2010
 D. Increase in the production cost of Wipro from 2010 to 2011

Directions for questions 110 to 114: Answer the questions on the basis of the information given below. The bar graph given below shows the percentage distribution of immigrants to USA by their region of birth for the periods of entry.



The bar graph given below shows the statewise percentage distribution of immigrants to USA for the periods of entry.



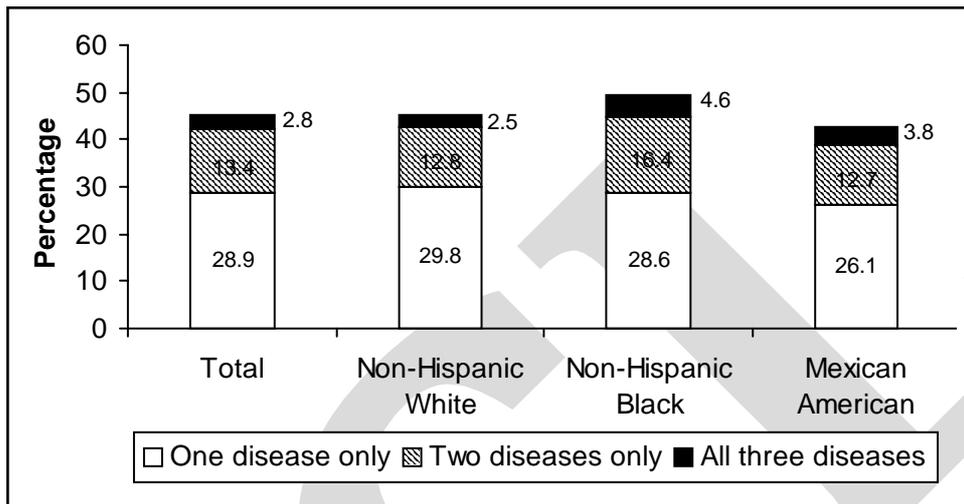
The table given below shows the number of immigrants to USA (in '000) for the periods of entry.

Period of entry	Foreign-born Population (in '000)	Percentage
Prior to 2005	33,004	82.6
2005 to 2007	3,956	9.9
2008 and later	2,997	7.5
Total	39,957	100

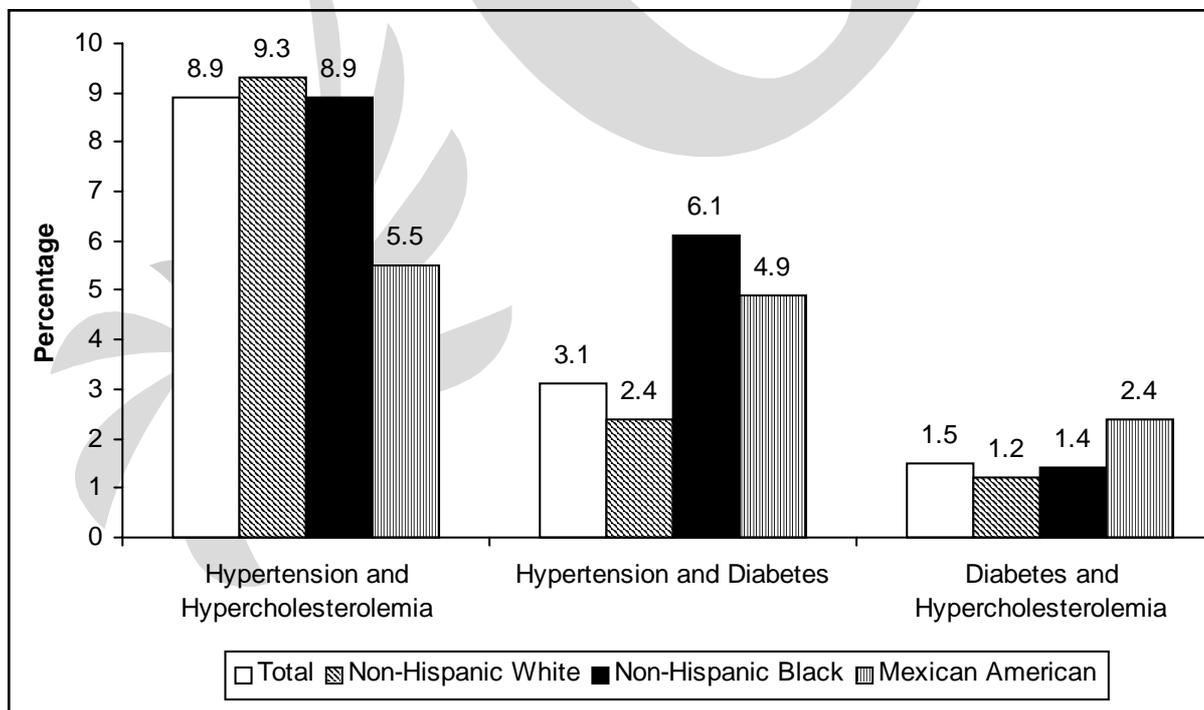
Note: The data was compiled on 31st December, 2011.

110. Mark the correct statement:
- The absolute percentage change in the percentage of immigrants to 'California' in the time period '2005 or later' over the period 'prior to 2005' was 25.59%.
 - In the time period '2005 or later' over the period 'prior to 2005', the absolute percentage change in the percentage of immigrants to 'Florida' was the lowest among all the given states.
 - The absolute percentage change in the percentage of immigrants to 'Texas' in the time period '2005 or later' over the period 'prior to 2005' was more than that to 'Florida' in the same time period.
 - The absolute percentage change in the percentage of immigrants to 'Other state' in the time period '2005 or later' over the period 'prior to 2005' was 20.74%.
111. In the given time period, the second highest percentage decline in the percentage of immigrants to US was from _____ in the time period _____ over the previous time period.
- Europe, 2005-07
 - Caribbean, 2005-07
 - South America, 2008 or later
 - Central America, 2008 or later
112. The absolute difference between the immigrants to US from Central America in the time period prior to 2005 and that from Africa in the time period 2005 to 2007 was approximately
- 12.23 million
 - 10.22 million
 - 14.22 million
 - 16.22 million
113. Mark the correct statement:
- The immigrants to US from Europe in the time period '2005 to 2007' was the lowest among the given regions in any given time periods.
 - The immigrants to Florida in the time period 'prior to 2005' was equal to the combined immigrants to California, New York, Texas and Florida in the time period '2005 or later'.
 - In the time period '2008 or later', number of immigrants to US from Caribbean was same as that of South America and other regions combined together.
 - The immigrants to US from South America in the time period '2005 to 2007' was more than the that from Europe in the time period '2008 or later'.
114. What was the approximate combined immigrants to Florida, Texas and New York in the time period 'prior to 2005'?
- 10 million
 - 10.5 million
 - 11 million
 - None of the above

Directions for questions 115 to 120: Answer the questions on the basis of the information given below. The bar chart given below shows the percentage of adults of different race/ethnicity who were suffering from one or more diseases among – Hypertension, Hypercholesterolemia and Diabetes. Mexican American was also known as Hispanic White in the year 2011.



The bar chart given below shows the percentage of adults of different race/ethnicity who were suffering from exactly two of the three diseases in the year 2011 with $\pm 0.4\%$ error.



The Table given below shows the population of different race/ethnicity in US in the year 2011 with $\pm 0.4\%$ error.

Race / Ethnicity	Number	Percentage of U.S. population
Non Hispanic or Latino	258,267,944	83.60%
Non-Hispanic White	196,817,552	63.70%
Non-Hispanic Black or African American	37,685,848	12.20%
Non-Hispanic American Indian or Alaska Native	2,247,098	0.70%
Non-Hispanic Asian	14,465,124	4.70%
Non-Hispanic Native Hawaiian or other Pacific Islander	481,576	0.20%
Non-Hispanic Some Other Race	604,265	0.20%
Non-Hispanic Two or more races	5,966,481	1.90%
Hispanic or Latino	50,477,594	16.40%
Hispanic White	26,735,713	8.70%
Hispanic Black or African American	1,243,471	0.40%
Hispanic American Indian or Alaska Native	685,150	0.20%
Hispanic Asian	209,128	0.10%
Hispanic Native Hawaiian or other Pacific Islander	58,437	0.00%
Hispanic Some Other Race	18,503,103	6.00%
Hispanic Two or more races	3,042,592	1.00%
Total	308,745,538	100.00%

115. Mark the correct statement:
- The population of Non-Hispanic Asian in US as a percentage of the population of Non-Hispanic Blacks or African Americans in the given period was 36.65%.
 - The absolute difference between the percentage contribution of population in US from White and Non-Hispanic White was 8.7%.
 - The contribution of Black or African Americans in population of US was 9.9 percentage points more than that of Non-Hispanic Asians.
 - None of the above
116. Mark the false statement:
- The number of Non-Hispanic Whites suffering from two diseases was less than the number of people in US suffering from 'Hypertension and Hypercholesterolemia'.
 - The number of Mexican Americans suffering from one disease only was greater than the number of people in US suffering from 'Diabetes and Hypercholesterolemia'.
 - The number of Non-Hispanic Whites suffering from 'Hypertension and Diabetes' was approximately equal to 52,00,000.
 - The population of US suffering from all the three diseases was less than the number of Non-Hispanic Blacks suffering from one disease only.

117. Find the approximate number of Mexican Americans who were suffering from 'Hypertension and Diabetes'.
- A. 1205265 B. 1310050 C. 1399820 D. 1265650
118. Mark the true statement:
- A. The population of US suffering from 'Hypertension and Hypercholesterolemia' as a percentage of the population of US suffering from 'Diabetes and Hypercholesterolemia' was approximately equal to 76.25%.
- B. The population of US suffering from Hypertension and Diabetes as a percentage of the population of US suffering from 'Hypertension and Hypercholesterolemia' was approximately equal to 34.83%.
- C. The population of US suffering from 'Diabetes and Hypercholesterolemia' as a percentage of the population of US suffering from 'Hypertension and Diabetes' was approximately equal to 43.85%.
- D. The population of US suffering from 'Hypertension and Diabetes' as a percentage of the population of US suffering from 'Diabetes and Hypercholesterolemia' was approximately equal to 250%.
119. 'A – B' is defined as the population of type A people in US as a percentage of the population of type B people in US. If the value of 'A – B' is X%, then which among the following pairs in the given order will have the minimum value of X?
- A. Hispanic Asian – Black or African American.
- B. American Indian or Hispanic Alaska Native – Hispanic or Latino.
- C. Asian – Non-Hispanic White.
- D. Some Other Race – Non Hispanic or Latino.
120. Which of the following race/ethnicity bears the least percentage contribution in the population of US?
- A. Hispanic Other Pacific Islander
- B. Hispanic Alaska Native
- C. Hispanic Asian
- D. Non-Hispanic Two or more races

MOCK IIFT ADMISSION TEST

Answers and Explanations

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

MY PERFORMANCE							
		Total Questions	Time Taken (Min)	Total Attempts	Correct Attempts	Incorrect Attempts	Net Score
LR	Section I	21					
GK	Section II	21					
RC	Section III	15					
VA	Section IV	23					
QA	Section V	24					
DI	Section VI	16					
TOTAL		120	100				

MCT-0006/12

1. C The question can be easily solved by using options. Using option (C), we get
 ABBBCCCAAABBBCCCAA
 The sequence is:
 ABB, BCC, CAA, ...
2. A The question can be easily solved by using options. Using option (A), we get
 PQRQPPQRQPPQRQP
 The sequence is:
 PQRQP, PQRQP, ...

For questions 3 and 4:

From statements (i) and (iv), code for 'tea' is 'mil'.
 From statements (i) and (iii), code for 'having' is 'jan'.
 From statements (iii) and (iv), code for 'she' is 'zho'.
 So from statement (iv), the code for 'hardly' can be either 'yan' or 'flo'.
 From statement (i), the code for 'likes Ron' is 'shu tan'.

3. B A possible code for 'she hardly likes Ron' is 'zho shu yan tan'.
4. A From statements (ii) and (iii), code for 'is coffee' is 'pan lan'.
 So from statement (ii), code for 'healthier than' is 'tin gin'. Hence, 'gin' could possibly stand for 'healthier'.
5. B $N@T$ means $N \geq T$... (i)
 $T \& P$ means $T = P$... (ii)
 $N\%Z$ means $N < Z$... (iii)
 From (i), (ii) and (iii), we get
 $P = T \leq N < Z$ which implies $P < Z$, i.e. $P\%Z$.
 Hence, (B) is the correct option.
6. C $A\#4C$ means $A > 4C$... (i)
 $B\&2D$ means $B = 2D$... (ii)
 $3B\$2C$ means $3B \leq 2C$... (iii)
 Multiplying both sides of (iii) by 2, we get
 $6B \leq 4C$... (iv)
 From (i), (ii) and (iv), we get
 $12D = 6B \leq 4C < A$ which implies $12D < A$, i.e. $12D\%A$.
 Hence, (C) is the correct option.

For questions 7 and 8:

It is given that the room numbers of Andrew and Jose are distinct and their sum is equal to twice the room number of the Hockey player. The possible set of room numbers for Andrew and Jose are (101, 103) and (102, 104). The set (102, 104) if possible implies that the Hockey player is in room number 103, which is a contradiction. So room numbers of Andrew and

Jose are 103 and 101 respectively. This implies the Hockey player is in room number 102. So the other single room is 104, which is occupied by Phil. Therefore, Brian plays Hockey and stays in 102.

Further analysis can be tabulated as below.

Room number	101	102	103	104
Occupant (Sport)	Sam (Table tennis)	Brian (Hockey)	Andrew (Badminton)	Phil (Squash)
	Jose (Basketball)	Mark (Swimming)		

7. B

8. A

For questions 9 and 10:

Let us fix the positions from 1 to 7, starting from the left side of the row.

It is given that Pixy is at position 4. Since the number of participants to the right of Ana is twice of that of Cindy, the possible positions are 3 and 5 respectively. This implies that Danny is at position 1. So Britney is at position 7.

Since the owner of the Alsatian is a neighbour of the owner of the Bulldog and Britney, so Cindy owns a Bulldog and the Alsatian is at position 6. This implies Danny is the owner of the Labrador. Therefore, the Dalmatian cannot be standing at positions 2 and 7, i.e. it is at position 3.

Further analysis gives the following table.

Position	1	2	3	4	5	6	7
Owner	Danny	Laila	Ana	Pixy	Cindy	Mitch	Britney
Breed of dog	Labrador	German Shephard	Dalmatian	Poodle	Bulldog	Alsatian	Doberman

9. B

10. D

11. A The pattern followed is as below:

$O(15) + 1 \Rightarrow 16$

$A(1) + 2 \Rightarrow 3$

$S(19) + 3 \Rightarrow 22$

$I(9) + 4 \Rightarrow 13$

$S(19) + 5 \Rightarrow 24$

Hence, the code for 'MIRAGE' is 14112151211.

12. C Firstly the alphabets are arranged in the reverse order and then they are coded according to the digit sum of their alphabetical positions.
The reverse of PLANTS is STNALP. The corresponding code is:

$$S(19) \Rightarrow 1+9 \Rightarrow 1+0 \Rightarrow 1$$

$$T(20) \Rightarrow 2+0 \Rightarrow 2$$

$$N(14) \Rightarrow 1+4 \Rightarrow 5$$

$$A(1) \Rightarrow 1$$

$$L(12) \Rightarrow 1+2 \Rightarrow 3$$

$$P(16) \Rightarrow 1+6 \Rightarrow 7$$

Hence, the code of VERTEBRATE is 5219252954.

13. A One of the members of the team has to be either G or F.

If A is selected, then C is not selected. This implies that B and D are not selected too. Again, E cannot be selected with A.

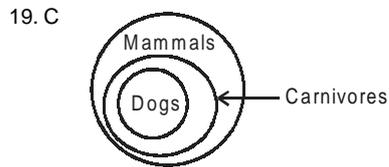
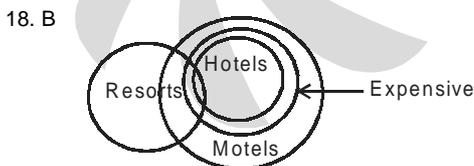
Hence, the maximum size of the team can be 3 wherein A, H and one of G or F is selected.

14. B We approach this question by the given options.
Option (B) is the only incorrect combination. If H is selected, then A is also selected. This implies that C is not selected. Again, we know that C and D are always selected together and B is selected only if D is selected. This concludes that H and B can never be selected together.

15. D The data is inadequate because the sector in which Mahendra has worked for six years is not mentioned.

16. A The candidate satisfies all conditions and should be selected.

17. B The candidate fulfills all criteria except (I). However, he has secured 67% marks in M.Tech (Mechanical). Therefore, his case is to be referred to the DGM.



20. B Option (B) is the correct option as statement 3 aims to educate people about the factors leading to heart diseases and provide measures to prevent the occurrence of the disease. Statement 1 is ruled out as it talks about conducting research towards cure for the disease when we already know the causes for it. On the other hand, statement 2 talks about free dietary consultation to people who are already afflicted.

21. C Option (C) is the correct option as the defect is probable and the company needs to ascertain whether it is potential or not. Statements 1 and 2 are incorrect as the defect is yet to be confirmed; hence repair or replacement of the part is not a suitable action.

22. A 23. C 24. B 25. D 26. D 27. B

28. C 29. D 30. D 31. C 32. A 33. B

34. B 35. B 36. C 37. D 38. C 39. C

40. A 41. D 42. D

43. C Since Ford came up with its own card, it cannot be said that the GM card has a continuing unique advantage over Ford. The statement in option (C) follows from the passage.

44. B It can only be inferred that GM can increase prices now. This does not mean that GM has consistently increased prices since the introduction of its card. So (B) is a false statement. The rest of the statements follow from the passage.

45. C Tyson foods has been mentioned in the context of it using carbon-dioxide. United Airlines has been mentioned in the passage in the context of it updating its fleets. Ford is said to have launched its card with Citibank while Volkswagen launched its card with MBNA Corporation.

46. B While it is mentioned in the passage that “the traditional business vocabulary inhibits a full understanding of the interdependencies that exist in business”, it cannot be inferred that game theory does not fully address the interdependencies that exist in business. In fact the passage states at one point—“ To understand the full impact of the GM card program, you have to use game theory.”
47. A The passage repeatedly talks about the misplaced emphasis laid upon individual leaders in organizations. So the statement in option (A) is incorrect. The rest of the options can be deduced from the passage.
48. D Option (D) follows from— “A leadership brand is also embedded in the organization’s culture, through its policies and its requirements for employees.” The rest of the options are incorrect.
49. B The statement in option (B) follows from—“ When Sandy Weill, a celebrity leader and a master of acquisitions, left Citigroup ... and incomplete.”
50. C According to the passage, Steve Bennett is the CEO of Intuit, Stewart Davis was head of R&D at BT (which deals with telecommunications), P&G has online knowledge-exchange sites, and Bertelsmann launched an online bookstore.
51. C From the passage it can be inferred that the innovation value chain does not concentrate on assimilating ideas from external partners at the expense of not examining ideas generated internally in an organization.
52. B Option (B) follows directly from— “Cross-unit collaboration—combining insights and knowledge from different parts of the same company in order to develop new products and businesses.”
53. D Option (D) follows from— “This process complements P&G’s core competency in executing on ideas ...”
54. C The statement in option (C) follows from— “Conventional strategic planning ... rather than exploring and testing possible solutions.”
55. B From the passage it cannot be concluded that emotions have no part to play in strategic planning—“Once you have framed the problem as a choice—any choice—your analysis and emotions will focus on what you have to do next, not on describing or analyzing the challenge.”
56. C The statement in option (C) follows from— “A common temptation is to sketch out possibilities only at the highest level. But a motto (“Go global”) or a goal (“Be number one”) does not constitute a strategic possibility.”
57. D Only the statement in (D) has not been mentioned while discussing P&G’s strategic planning— “One was to abandon Oil of Olay and acquire a major ... but be sold in traditional mass channels by retail partners willing to create a “masstige” experience ...”
58. B ‘Abrogate’ means to repeal or do away with; ‘ratify’ means making something officially valid by signing or giving a formal consent; ‘abate’ means to become less intense or widespread; ‘indicate’ means to point out or show; ‘impinge’ means to have an effect especially a negative one. ‘Ratify’ is the most opposite of ‘abrogate’. Hence, option (B) is the correct answer.
59. D ‘Mendacious’ means not telling the truth or lying; ‘duplicitous’ means deceitful; ‘equivocating’ means to use ambiguous language so as to conceal the truth; ‘perfidious’ means untrustworthy; ‘veracious’ means speaking or representing the truth. Hence, option (D) is the correct answer.
60. C *Exfoliated* means to shed material in scales or layers; this does not fit the first blank. *Adducted* means to move muscles towards the midline of the body or towards another part, this does not fit in the context of the sentence. *Falcated* means curved like a sickle; hooked. *Reiterated* means to say something again or a number of times, typically for emphasis or clarity. It fits in the first blank appropriately. For the second blank *fallacious*, *facetious* (not showing seriousness or respect) and *adenomatous* (related to a benign tumour formed from glandular structures in epithelial tissue) do not fit because all three render the sentence meaningless, only *overzealous* which means too energetic or enthusiastic in one’s attitude or behaviour fits the blank appropriately. Hence, option (C) is the correct answer.
61. C *Commemorations* means to recall and show respect for (someone or something); it does not fit the context because the sentence talks about over-commercialisation and a complaint. In this context “predictable commemorations” will render the sentence meaningless. *Prophecies* means prediction of future and predictable prediction creates a tautological effect hence this does not fit the first blank. *Calibrations*

- means to measure something precisely and it does not give any meaning to the sentence. Only *lamentations* fits the first blank appropriately. Hence, option (C) is the correct answer.
62. C 'Bemire' means to cover or stain with mud; 'delate' means inform against someone; 'abscise' means the natural detachment of parts of a plant, typically dead leaves and ripe fruit; 'inure' means to accustom (someone) to something, especially something unpleasant. Hence, option (C) is the correct answer.
63. B 'Gothic' means belonging to or redolent of the Dark Ages; portentously gloomy or horrifying; 'bibliothecae' means a library; 'iambus' means a metrical foot consisting of one short (or unstressed) syllable followed by one long (or stressed) syllable; 'bildungsroman' means a novel dealing with a person's formative years or spiritual education. Hence, option (B) is the correct answer.
64. C Statement s and the opening statement form a mandatory pair because 'who' in statement s refers to the 'people and administrators' in the opening statement. Statement s and q form a mandatory pair because what is to be made sure in statement s is the assessment of aspirants in statement q. As this combination of mandatory pairs is present only in option (C), it is the correct answer.
65. D Statement s follows the opening line because 'who' in statement s refers to people mentioned in opening line. Statement s and statement p form a mandatory pair because statement p provides the time reference to the event mentioned in statement s. Statement p and statement r form a mandatory pair because statement iii provides the contrast to statement s. As this combination of mandatory pairs is only present in option (D), it is the correct answer.
66. C 'Burnt to a cinder' means to burn completely; this does not fit as it does not provide the required contrast or any meaning to the sentence. 'Full to the gunwales' means full to the brim, this does not fit as it makes the sentence meaningless. 'Petered out' means dwindle away to nothing, this does not provide the needed contrast to the sentence. 'Nail your colours to the mast' means to defiantly display one's opinions and beliefs, it fits the blank as it provides the contrast as well as the meaning to the sentence. Hence, option (C) is the correct answer.
67. B Option (A) does not fit here because 'who' as a relative pronoun only refers to people whereas 'which' refers to things. Options (C) and (D) are both grammatically incongruous with the tense of the sentence. Hence, option (B) is the correct answer.
68. C 'Ingenuous' means innocent and unsuspecting 'ingenious' means clever, original, and inventive. Both words are correctly used in the sentences in the given context. Hence, option (C) is the correct answer.
69. D 'Loath' means reluctant whereas 'loathe' means to feel intense dislike or disgust for something. Here, both words have been wrongly used in the context given in the sentence. Hence, option (D) is the correct answer.
70. B 'Usurious' means relating to or characterized by extracting high interest rates on money lent; extortionate; 'Anathema' means a curse; 'Cozen' means to trick or deceive; 'Intransigent' means stubbornly adamant; 'Bucolic' means rustic or pastoral. Hence, option (B) is the correct answer
71. C 'Contiguous' means sharing a common border; 'Forlorn' means pitifully sad and abandoned; 'Supine' means lying face upwards; 'Opprobrium' means severe criticism; 'Dissipate' means to disappear. Hence, option (C) is the correct answer.
72. C 'Tautology' means saying the same thing twice over in different words, generally considered to be a fault of style. In option (B), 3 am in itself refers to morning, in option (D) 'reiteration' itself means repetition so, use of the word 'again' is not required. In option (A) 'Summary' means a brief statement or account of the main points of something the use of short before it is redundant. Option (C) has no such repetition.
73. A Statements V and statement IV form a mandatory pair because statement V mentions an "exception" that is further explained in statements IV. Furthermore, I, II, III talk about a contrary approach to the exception. Hence, option (A) is the correct answer.
74. C Statements IV and V form a mandatory pair because V provides substantiation for the claim made in statement IV. Statements III and IV form a mandatory pair because the phrase 'hatchet job' connects these two statements. Statements II and I also form a mandatory pair as 'however' in statement in statement

II indicates a contrast to statement I. This combination of pairs can only be found in option (C). Hence, option (C) is the correct answer.

75. C The plural noun *emphases* should be used instead of *emphasis*. *On parallel paths* is idiomatic. There should be commas to set off the parenthetical phrase *though with different emphases, different lexicons, and overlapping clouds of experts*. Sentence (C) correctly incorporates all these elements in a logical way.

76. D *Intense integration* will require a singular verb—*has*. *akin to* is the correct idiomatic expression. Sentence (D) uses correct parallel structure (*associated with the fall of the Soviet Union, the formation of the European Union, and the opening of emerging economies*) and follows the subject verb agreement rule. Hence option (D) is the correct answer.

77. B Direct speech in the present perfect continuous tense gets converted to indirect speech in the past perfect continuous tense. So, sentence (B) is correct.

78. D *Will* in the direct speech is changed to *would* in indirect speech. Hence, option (D) is the correct answer.

79. C The correct answer is C. The word is "arbitrage."

80. B The correct sequence is given in (B). The word is "balancing."

81. A $x^2 + (x - a)^2 + (x - b)^2 - (x - c)^2 - (x - d)^2 = 0$
 $\Rightarrow x^2 - 2(a + b - c - d)x + a^2 + b^2 - c^2 - d^2 = 0 \dots(i)$
 Also, $a : b : c : d = 2 : 3 : 2 : 3 \dots(ii)$
 From (i) and (ii), we get $x^2 = 0 \Rightarrow x = 0, 0$
 Hence, the roots are integers.

82. C Let p , e and x be the annual production cost, the annual establishment cost and the annual output (in ₹) respectively.

Profit $\propto x$

$$\Rightarrow x - p - c \propto x$$

$$\Rightarrow (x - p - c) = k_1 x \text{ (where } k_1 \text{ is the proportionality constant)}$$

$$\Rightarrow p + c = (1 - k_1)x$$

Also, $x + p + c \propto n$ (where n is the number of machines)

$$\Rightarrow x + p + c = k_2 n \text{ (where } k_2 \text{ is the proportionality constant)}$$

$$\Rightarrow x + (1 - k_1)x = k_2 n$$

$$\Rightarrow x = \left(\frac{k_2}{2 - k_1} \right) n$$

$$\therefore \frac{\text{old profit}}{\text{new profit}} = \frac{12 \left(\frac{k_2}{2 - k_1} \right)}{10 \left(\frac{k_2}{2 - k_1} \right)} = \frac{6}{5}$$

$$\text{Hence, the required fraction} = \frac{6 - 5}{6} = \frac{1}{6}.$$

83. B The number of values of P will be equal to the number of ways of selecting 6 numbers from the set, which is equal to the number of ways of selecting 3 numbers from the set as the number of elements in the set is 9.

Case: (i): All the three numbers are same

The number of values of $P = 1$

Case: (ii): Two of the three numbers are same

The number of values of $P = {}^2C_1 \times {}^5C_1 = 10$

Case: (iii): All the three numbers are distinct

The number of values of $P = {}^6C_3 = 20$

Among all computer values of P , there are three values which are counted twice and these are:

$$24 = 2 \times 3 \times 4 = 2 \times 2 \times 6$$

$$60 = 3 \times 4 \times 5 = 2 \times 5 \times 6$$

$$84 = 3 \times 4 \times 7 = 2 \times 6 \times 7$$

Hence, the number of distinct values of

$$P = (1 + 10 + 20 - 3) = 28.$$

84. D Let the ages of Aman, Bimal and Chaman 2 years ago be A , B and C years respectively.

$$\therefore A \times C = (B + 2)(A + 2) + 26$$

$$\Rightarrow A \times C = BA + 2B + 2A + 4 + 26$$

$$\Rightarrow C = \frac{(30 + 2B)}{A} + (B + 2)$$

Since $\frac{(30 + 2B)}{A}$ is an integer, (A, B, C) can be

$(2, 3, 23)$ or $(11, 7, 13)$ and so-on.

Since there are more than one possible value of the sum. Hence, the question cannot be answered.

85. C Let the quantity of milk and that of water in the original mixture be $2x$ and x respectively, and the quantity of water added be 'a'.

$$\therefore \frac{2x}{x + a} = \frac{1}{2} \Rightarrow a = 3x$$

$$\text{Hence, the percentage} = \frac{3x}{x} \times 100 = 300.$$

86. C 5 is a part of first 29 odd prime numbers.
Hence, the units digit of the product = $5 \times \text{odd digit} = 5$.
87. B Let l and b are the length and breadth of the rectangle respectively.
 $l + b = 31$
- $$\text{Diagonal} = \sqrt{l^2 + b^2} = \sqrt{(l + b)^2 - 2lb}$$
- $$= \sqrt{961 - 2lb} = \text{positive integer}$$
- Only $lb = 168$ satisfies the above condition.
Hence, option (B) is the correct.
- Note:** We do not need to verify $lb = 300$ as $lb \leq 240.25$.
88. D The given equation can be rewritten as,
 $\log_5 2 + \log_5 (2x + 1) = \log_5 (2x + 3) + \log_5 25$
 $\log_5 (4x + 2) = \log_5 (50x + 75)$
 $\Rightarrow 4x + 2 = 50x + 75$
 $\Rightarrow x = -\frac{73}{46}$
- Putting the value of x in $\log_5 (2x + 1)$, we get
 $\log_5 \left(-\frac{50}{23}\right)$, but logarithm is not defined for negative number. Hence, the given equation has no solution.
89. B (i) Area of the open surface = $5 \times 5 = 25 \text{ cm}^2$
(ii) Area of the open surface = $\pi(7)^2 = \frac{22}{7} \times 49$
 $= 154 \text{ cm}^2$
(iii) Area of the open surface = $\pi(3.5)^2$
 $= \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} = 38.5 \text{ cm}^2$
- Hence, option b is the correct answer.
90. A Let the three sides (in cm) with integral measures in ascending order be a , b and c .
 $\therefore a > b - c$ and $b - c \geq 1 \Rightarrow a > 1$
Hence, 1 cm cannot be any of the sides of the triangle.
91. C Let the marks scored by Kangkana in QA, VA, and LR-DI sections be q , v and l respectively.
 $q + v + l = 3 \times 50 = 150 \quad \dots(i)$
- $$\frac{l}{2} = \frac{v}{4} \Rightarrow v = 2l \quad \dots(ii)$$
- $$\text{LCM}(q, v, l) = 60 \quad \dots(iii)$$

Since q , v and l are factors of 60 and $v = 2l$, only possible solution of above equations is $q = 60$, $v = 60$ and $l = 30$.
Hence, the sum = $60 + 60 = 120$.

92. C Number of perfect squares among the first 100 natural numbers = 10
Number of multiples of 6 among the first 100 natural numbers = 16
36 is common in both the sets.
Hence, the number of elements in the sequence = $100 - (10 + 16 - 1) = 75$.
93. A We have, $b = \sqrt{ac}$
- Also, $\frac{a+b+c}{3} \geq \sqrt[3]{abc}$ (AM > GM)
- $$\Rightarrow \frac{a+b+c}{3} \geq b$$
- $$\Rightarrow \frac{13}{3 \times 2} \geq b$$
- Hence, the maximum value of b will be $\frac{13}{6}$.
94. C Value of the given expression = $112 \times (-11) \times 114 \times (-9) \times \dots \times 134 \times 11 \times 136 \times 13$
Since above expression contains six negative term, its value will be positive.
Now, $134 = 2 \times 67$
Hence, the highest prime number is 67.
95. C The required number of four-digit even numbers = $7 \times 7 \times 7 \times 3 = 1029$.
96. D $63 : 68$ has the highest percentage value.
97. D Let the number of days taken by the man to complete the construction of the wall be ' $4x$ '. Therefore, the number of days taken by the woman will be $3x$.
- $$\therefore \frac{1}{3x} + \frac{1}{4x} = \frac{1}{60}$$
- $$\Rightarrow x = 35$$
- Hence, the number of days = $4x = 4 \times 35 = 140$.

98. B Let the distance (in km) be $8x$.

$$\text{The average speed} = \frac{\text{Total distance covered}}{\text{Total time taken}}$$

$$= \frac{8x}{\frac{2x}{48} + \frac{3x}{72} + \frac{3x}{96}} = 69\frac{9}{11} \text{ km/hr.}$$

99. B As male and female delegates sat alternately, each male delegate must have seated diagonally opposite to a female delegate and vice-versa.

Once the position of Mr. Digvijay Sinha had been fixed, any one of the three female delegates could have seated in the seat which was diagonally opposite to him.

$$\text{Hence, the probability} = \frac{1}{3} = 0.33.$$

100. A Between 12: 00 noon and 1: 00 pm, the second hand completes 59 rounds and minute hand completes 1 round.

Hence, the number of times the second hand and the minute hand coincide with each other = $59 - 1 = 58$.

101. B Number of black balls which are of leather = 2
Number of black balls which are of plastic = 3
Number of black balls which are of neither leather nor plastic = 2
Number of white balls which are of leather = 1
Number of white balls which are of plastic = 2
Number of white balls which are of neither leather nor plastic = 0
Number of leather balls which are neither black nor white = 4
Number of plastic balls which are neither black nor white = 1

And, also there is one green ball which is of neither leather nor plastic.

Hence, the minimum number of balls in the bag = $2 + 3 + 2 + 1 + 2 + 4 + 1 + 1 = 16$.

102. B The maximum number of cuboids = $\left[\frac{729}{60} \right] = 12$,

where $[]$ is greatest integer function.

103. C Time taken by the T_2 to fill the tank = $2.5 \times 15 = \frac{75}{2}$ hrs.

Let the required time taken be 't' hours.

$$\therefore \frac{t}{15} + \frac{t-2}{75} - \frac{6}{45} = 1$$

$$\Rightarrow x = 12.71 \approx 13 \text{ hrs.}$$

104. A The time interval after which a train departs for each of the lines simultaneously

$$= \text{LCM}(10, 12, 20, 25) = 300 \text{ minutes} = 5 \text{ hrs.}$$

Had there not been the power failure, a train for each of the lines would have departed simultaneously at 3:00 p.m., but due to power failure this event had taken place at 5:00 p.m. i.e. two hours after the restoration of services.

105. C **Statement A:** The percentage share of Renault

$$= \frac{19000}{89452} \times 100 \approx 21.24$$

The percentage share of LG

$$= \frac{7870}{52540} \times 100 \approx 14.98$$

Hence, the statement is correct.

Statement B: The production cost of Renault as a percentage of its revenue in two of the three given years (i.e., 2009 and 2011) was higher than that of the automobile sector as a whole.

Statement C: This statement is incorrect as revenue of IBM India Ltd. decreased in the year 2011 over the previous year.

Hence, statement C is incorrect.

106. B The percentage = $\frac{2400}{30731} \times 100 \approx 7.80$.

107. D There were two companies which recorded growth in Revenue as well as in Profit in each year over the previous year during the given period and these were Mitsubishi and Hewlett Packed Ltd.

108. D Option A: The percentage

$$= \frac{22 + 22 + 22}{160 + 167 + 168} \times 100 \approx 13.33$$

Option B: The percentage

$$= \frac{60 + 120 + 195}{900 + 1120 + 1180} \times 100 \approx 11.71$$

Option C: The percentage

$$= \frac{11 + 17 + 8}{136 + 46 + 102} \times 100 \approx 12.67$$

Option D: The percentage

$$= \frac{65 + 90 + 40}{408 + 508 + 406} \times 100 \approx 14.75$$

Hence, option D is the correct answer.

109. D **Statement A:** The increase = $892 - 840 = 52$

Statement B: The increase = $120 - 110 = 10$

Statement C: The increase = $900 - 840 = 60$

Statement D: The increase = $195 - 120 = 75$

Hence, option D is correct answer.

110. C **Statement A:** The percentage change

$$= \frac{26.7 - 19.4}{26.7} \times 100 \approx 27.34.$$

Statement B: The lowest percentage change was witnessed by New Jersey and it was equal to

$$\frac{4.6 - 4.5}{4.6} \times 100 \approx 2.17.$$

Statement C: The percentage for:

$$\text{Texas} = \frac{10.8 - 10.3}{10.3} \times 100 \approx 4.85$$

$$\text{Florida} = \frac{9.2 - 8.9}{9.2} \times 100 \approx 3.26.$$

Statement D: The percentage change for

$$\text{'Other states'} = \frac{42.5 - 33.8}{33.8} \times 100 \approx 25.74.$$

Hence, statement C is correct.

111. D The highest percentage decline was for Europe during the period 2005-07 and it was equal to

$$\frac{12.8 - 8}{12.8} \times 100 = 37.5.$$

The second highest percentage decline was for Central America for the period '2008 or later' and it was equal to

$$\frac{38.8 - 25.2}{38.8} \times 100 \approx 35.05.$$

112. A The immigrants to US from Central America in the time period 'prior to 2005'

$$= 37.8\% \text{ of } 33004000 \approx 12.48 \text{ million.}$$

The immigrants to US from Africa in the time period '2005 to 2007'

$$= 6.2\% \text{ of } 3956000 \approx 0.25 \text{ million.}$$

Hence, the difference = $12.48 - 0.25 \approx 12.23$ million.

113. C **Statement A:** This statement is not correct.

Statement B: The immigrants (in '000) to Florida in the period 'prior to 2005' = $9.2\% \text{ of } 33004 = 3036$.

The combined immigrants (in '000) to California, New York, Texas and Florida in the time period '2005 or later' = $49.1\% \text{ of } 6953 = 3414$. Therefore, this statement is also not correct.

Statement C: The immigrants (in '000) to US from Caribbean in the time period '2008 or later' = $9.4\% \text{ of } 2997$

The immigrants (in '000) to US from South America and other regions together

$$= (6.1 + 3.3)\% \text{ of } 2997 = 9.4\% \text{ of } 2997$$

Hence, this statement is correct.

Statement D: The immigrants (in '000) to US from South America in the time period '2005 to 2007' = $6.7\% \text{ of } 3956 = 265$.

The immigrants (in '000) to US from Europe in the time period '2008 or later' = $9.1\% \text{ of } 2997 = 273$.

Hence, statement C is correct.

114. A The population (in million)

$$= (9.2 + 10.9 + 10.3) \times \frac{33.004}{100} \approx 10.$$

115. B **Statement A:** The percentage = $\frac{4.7}{12.2} \times 100 = 38.52$

Hence, the statement is not correct.

Statement B: The difference = $72.4\% - 63.7\% = 8.7\%$ Hence, the statement is correct.

Statement C: The value = $12.6\% - 4.7\% = 7.9\%$.

Hence, the statement is not correct.

116. C **Statement A:** The number of Non-Hispanic Whites suffering from two diseases = $12.8\% \text{ of } 63.7\% \text{ of total US population} = 8.1536\% \text{ of total US population}$. Number of people in US suffering from Hypertension and Hypercholesterolemia = $8.9\% \text{ of total US population}$.

Hence, the statement is correct.

Statement B: The number of Mexican Americans suffering from one disease = 26.1 % of 8.7% of total US population $\approx 2.27\%$ of total US population.

The number of people in US suffering from Diabetes and Hypercholesterolemia = 1.5% of of total US population.

Hence, the statement is correct.

Statement C: The number of Non-Hispanic Whites suffering from Hypertension and Diabetes = 2.4% of 196817552 ≈ 4723621 .

Hence, the statement is false.

Statement D: Population of US suffering from all the three diseases = 2.8% of total US population

The number of Non-Hispanic Blacks suffering from one disease only = 28.6% of 12.2% of total US population $\approx 3.49\%$ of total US population

Hence, the statement is correct.

117. B The number = 4.9% of 26735713 ≈ 1310050 .

118. B **Statement A:**

The percentage = $\frac{8.9}{1.5} \times 100 \approx 593.33\%$

Statement B:

The percentage = $\frac{3.1}{8.9} \times 100 \approx 34.83\%$

Statement C:

The percentage = $\frac{1.5}{3.1} \times 100 \approx 48.39\%$

Statement D:

The percentage = $\frac{3.1}{1.5} \times 100 \approx 206.67\%$

Hence, statement B is correct.

119. A **Statement A:**

The percentage = $\frac{0.1}{12.6} \times 100 \approx 0.79$.

Statement B:

The percentage = $\frac{0.2}{16.4} \times 100 \approx 1.22$.

Statement C:

The percentage = $\frac{(4.7 + 0.1)}{63.7} \times 100 \approx 7.54$.

Statement D:

The percentage = $\frac{(0.2 + 6)}{83.6} \times 100 = 7.42$.

Hence, the value of X is lowest for option A.

120. A The percentage contribution of:

A $\approx 0\%$

B $\approx 0.2\%$

C $\approx 0.1\%$

D $\approx 1.9\%$

Hence, option A is the answer.