NMAT by GMAC™ - Practice Sample Questions

Purpose of the NMAT by GMAC™ Practice Sample Questions

NMAT by GMAC™ is a computerized adaptive test (CAT) and is being used for admission into leading Business Schools of South Africa and Philippines for the academic sessions starting 2019. This practice sample questions are intended to help aspiring candidates familiarize with the NMAT by GMAC™ exam structure and help you practice well and achieve your personal best.

Structure & Features

NMAT™ is a computerized adaptive test (CAT) which gives each candidate a personalized test, one question at a time, based on responses to previous questions. Due to the adaptive nature of the exam, candidates will not be able to review or change answers to preceding questions.

It has three sections — Language Skills, Quantitative Skills, and Logical Reasoning. All three sections are individually timed and test takers must answer 108 questions within the total allotted time of 120 minutes. By measuring competency across three different sections, it allows schools to evaluate candidates' strengths as well as development needs.

Sections	Questions	Time	Score Range
Language Skills	36 Questions	28 Minutes	0-120
Quantitative Skills	36 Questions	52 Minutes	0-120
Logical Reasoning	36 Questions	40 Minutes	0-120
Total	108 Questions	120 Minutes	0-360

General Tips for Test Takers.

- ➢ Use estimation to solve quantitative problems quickly.
- ➢ The problems, during this practice sample question and during the actual exam, must be answered **without a calculator.**
- ➢ Consider working the answer options through the problem to see which fits best.
- ➢ Read through all answer choices before selecting your response.
- ➢ Go back and check your work if you are left with additional time

Index

Section I. Quantitative Skills

Question 1

The integers 1, 2 ... 40 are written on the blackboard. The following operation is then repeated 39 times. In each repetition, any two numbers, say *a* and *b*, currently on the blackboard are erased and a new number *a* + *b* - 1 is written. What will be the number left on the board at the end?

- ○ A. 780
- ○ B. 781
- ○ C. 819
- ○ D. 820
- ○ E. 821

Question 2

How many 4-digit numbers of the form AB61 are there that are divisible by 11 (where A and B are distinct digits)?

- ○ A. 3
- ○ B. 4
- ○ C. 7
- ○ D. 13
- ○ E. 14

Question 3

Sumeet spends 10% of his salary on his child's education, 20% of the remainder on rent and 25% of the balance on garments. Finally, he is left with $ 5,400. What is his salary?

○ A. $ 10,000
○ B. $ 11,000
○ C. $ 12,000
○ D. $ 13,000
○ E. $ 14,000

Question 4

A dishonest dealer claims to sell his goods at 20% discount, but uses a weight of 800 grams for weighing 1 kilogram of goods. What is the profit or loss being made by the dealer?

○ A. 40% loss
○ B. 5% loss
○ C. No profit or loss
○ D. 5% profit
○ E. 10% profit

Question 5

Given the quadratic equation $x^2 - (A - 3)x - (A - 7) = 0$, for what value of A is the sum of squares of the roots 0?

○ A. -2
○ B. 3
○ C. 5
○ D. 10
○ E. 13

Question 6

The vice-chancellor of ABC University decided to form a committee to look into the feasibility of introduction of semester systems at the undergraduate level. Five members from the Executive Council and 7 members from the Academic Council were found to be suitable for the job. In how many ways can the vice-chancellor form the committee of 6 members such that at least 4 members of the committee belong to the Academic Council?

- A. 350
- B. 420
- C. 455
- D. 456
- E. 462

Question 7

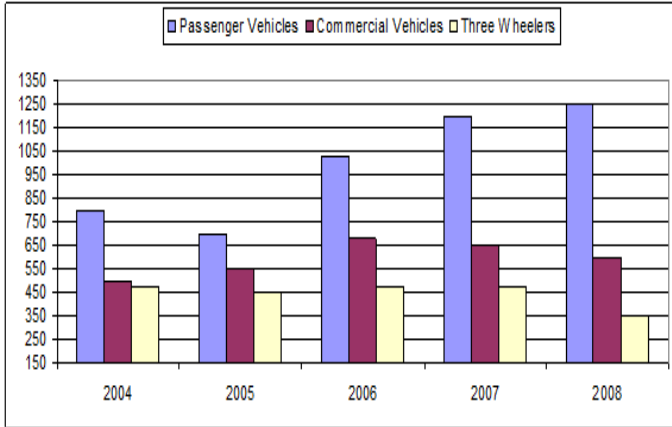**Directions:** Go through the given table and solve the questions based on it.

State	Total Population (in Lakhs)		Male Population (in Lakhs)		Rural Population (%)		Area (In Sq. Km)
	2001	2006	2001	2006	2001	2006	
Uttar Pradesh	1660	1731	875	911	71	70	2,38,576
Madhya Pradesh	603	674	314	360	72	71	3,08,144
Andhra Pradesh	761	823	385	417	69	68	2,75,068
Tamil Nadu	624	697	315	348	70	67	1,30,058
Orissa	368	384	186	195	73	72	1,55,707
Maharsshtra	968	1013	504	527	68	66	3,07,713
West Bengal	802	865	412	446	69	68	88,752

1. What is the percentage increase in the female population in Uttar Pradesh from 2001 to 2006?

   O A. 3.6%

   O B. 4%

   O C. 4.2%

   O D. 4.3%

   O E. 4.5%

2. In which of the following states is the number of males per square metre the least in 2006?

   O A. Uttar Pradesh

   O B. Madhya Pradesh

   O C. Andhra Pradesh

   O D. Tamil Nadu

   O E. Orissa

3. What is the simple annual growth rate (SAGR) of the female population in Uttar Pradesh from 2001 to 2006?

   O A. 0.68%

   O B. 0.74%

   O C. 0.82%

   O D. 0.89%

   O E. 1.11%

4. What is the average percentage of rural population in the given states in the year 2001?

   O A. 68.12%

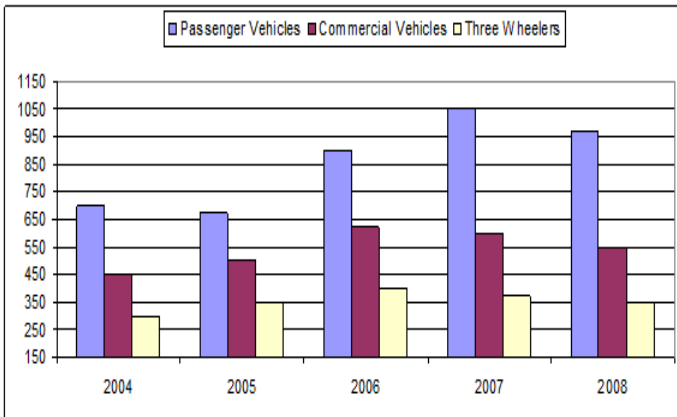   O B. 68.85%

   O C. 69.12%

   O D. 70.28%

   O E. 71.36%

Question 8

Directions: Go through the given graphs and solve the questions based on them.

Automobile Production Trends

Automobile Domestic Sales Trends

1. Which of the following years exhibits the highest percentage decrease over the preceding year in automobile production?

    O A. 2004

    O B. 2005

    O C. 2006

    O D. 2007

    O E. 2008

2. Assuming that whatever was not sold domestically was exported, which year registered max. growth in exports of automobiles?

    O A. 2004

    O B. 2005

    O C. 2006

    O D. 2007

    O E. 2008

3. If the ratio of the domestic sale price of a commercial vehicle, a passenger vehicle, and a three-wheeler is 5 : 3 : 2, then approximately what percent of earnings is contributed by the commercial vehicle segment to the overall earnings from domestic sales during the period 2004–2008?

    O A. 11%

    O B. 27%

    O C. 45%

    O D. 47%

    O E. 52%

4. The ratio between absolute increase in domestic sales over preceding year and absolute increase in production over the preceding year is highest during which year?

    O A. 2004

    O B. 2005

    O C. 2006

    O D. 2007

    O E. 2008

Question 9

Is $x^2 - y^2$ even?

(1) $x + y$ is even.
(2) $x - y$ is odd.

Directions: A question is followed by two statements, numbered (1) and (2). Using the information provided and general knowledge, decide whether the information given is sufficient to solve the problem.

○ A. Statement (1) ALONE is sufficient, but statement (2) ALONE is not sufficient.
○ B. Statement (2) ALONE is sufficient, but statement (1) ALONE is not sufficient.
○ C. BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
○ D. EACH statement ALONE is sufficient.
○ E. Statements (1) and (2) TOGETHER are NOT sufficient.

Section II. Logical Reasoning

Question 1

Automation, however essential it may be to maximise a country's economic production and minimise its costs, should be rejected. The health care industry wants to increase revenues while reducing costs. Hence, it proposes greater automation of health care. This radical automation of health care would cause patients to lose trust in the system as the health care they would receive would lack the personal touch that, according to several studies, patients desire.

Which of the following expresses the main point of the argument?

- ○ A.   Due to economic forces, automation of health care is inevitable.
- ○ B.   Patients desire personalised care.
- ○ C.   Trends in the general economy do not apply to the health care industry.
- ○ D.   The health care industry is becoming too greedy.
- ○ E.   The health care industry should not be heavily automated.

Question 2

Directions: In the question there is a statement followed by two conclusions, numbered I and II. You have to assume everything in the statement to be true, then consider the two conclusions together and decide which of them logically follows from the information given in the statement.

Statements: Government has spoiled many top ranking financial institutions by appointing bureaucrats as directors of these institutions.

Conclusions:
I.   Government should appoint directors of the financial institutions taking into consideration the expertise of the person in the area of finance.
II. The director of the financial institution should have expertise commensurate with the financial work carried out by the institution.

- ○ A.   Only Conclusion I follows.
- ○ B.   Only Conclusion II follows.
- ○ C.   Either Conclusion I or Conclusion II follows.
- ○ D.   Neither Conclusion I nor Conclusion II follows.
- ○ E.   Both Conclusions I and II follow.

Question 3

Directions: Read the passage below. Solve the question based on the information in the passage.

Ajay would do five tasks: A, B, C, D and E, starting at 9:00 a.m. A is the first task and takes 2 hours. B can be done after A is complete and requires 1 hour. Work on C, which would take 1 hour, can start only after A and B are completed. Ajay can do task D along with B and C, and would take 3 hours. Activity E, with duration of 1 hour, can start upon completion of A, B, C and D.

1. What is the earliest time Ajay could complete task C?
   - ○ A. 11:00 a.m.
   - ○ B. 12:00 noon
   - ○ C. 1:00 p.m.
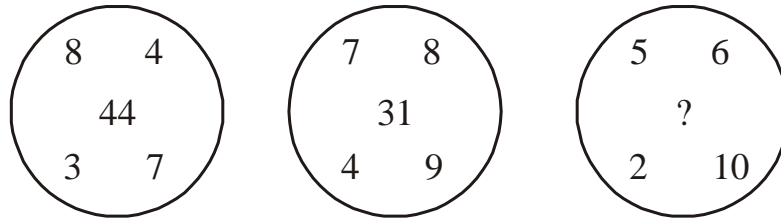   - ○ D. 2:00 p.m.
   - ○ E. 3:00 p.m.

2. If Ajay takes 2 hours for task B and completes other preceding tasks without delay, when can he start task E?
   - ○ A. 12:00 noon
   - ○ B. 1:00 p.m.
   - ○ C. 2:00 p.m.
   - ○ D. 3:00 p.m.
   - ○ E. 4:00 p.m.

3. What is the earliest time Ajay could complete all tasks?
   - ○ A. 12:00 noon
   - ○ B. 1:00 p.m.
   - ○ C. 2:00 p.m.
   - ○ D. 3:00 p.m.
   - ○ E. 4:00 p.m.

4. If Ajay were to start task D after the completion of task C, and take a break for an hour, then when would he complete all tasks?
   - ○ A. 3:00 p.m.
   - ○ B. 4:00 p.m.
   - ○ C. 5:00 p.m.
   - ○ D. 6:00 p.m.
   - ○ E. 7:00 p.m.

Question 4

Which number should replace the question mark?

Circle 1: 8 4 / 44 / 3 7

Circle 2: 7 8 / 31 / 4 9

Circle 3: 5 6 / ? / 2 10

- ○ A. 18
- ○ B. 38
- ○ C. 50
- ○ D. 62
- ○ E. 70

Question 5

Directions: In a marriage party, 278 guests were present. Twenty guests took Pepsi and Dew, 23 guests took Dew and Sprite, 21 guests took Pepsi and Sprite, and 9 guests took all three cold drinks (Pepsi, Sprite and Dew). It is also known that there were equal numbers of bottles of each of the three kinds (Pepsi, Dew and Sprite).

1. How many guests enjoyed Dew or Sprite but not Pepsi?
- ○ A. 167
- ○ B. 176
- ○ C. 199
- ○ D. 143
- ○ E. None

2. How many guests enjoyed Pepsi and Dew but not Sprite?
- ○ A. 189
- ○ B. 271
- ○ C. 24
- ○ D. 39
- ○ E. None

Question 6

Directions: The question presents a situation and asks you to make a judgment regarding that particular circumstance. Answer the question solely on the basis of the information given.

Illegal adulterated and local alcohol that is largely in supply in the city has become a matter of concern for the citizens and administration. A meeting was called up, which involved local people as well, to discuss the situation. The local people claimed that the administration is not doing enough to deal with the situation. You are representing the administration in the meeting. What should be your reaction to these claims?

- ○ A. Tell them that the real problem lies with people of the city who support the business by buying illegal and adulterated alcohol, and not the district administration.
- ○ B. Tell the citizens to refrain from buying local liquor.
- ○ C. Explain that this problem occurs quite frequently and it is the responsibility of individuals in the city only who run such business to stop such activity. It is not the duty of the district administration to handle such situations.
- ○ D. Begin by telling to the group that the district administration needs the cooperation of citizens to find a solution for this problem.
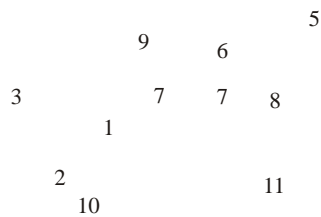- ○ E. Don't say anything; let others speak on the issue.

Question 7

How many pairs of letters are there in the word 'CHILDREN' such that each pair has as many letters between them in the word 'CHILDREN' as they have in the English alphabet series?

- ○ A. 2
- ○ B. 3
- ○ C. 4
- ○ D. 5
- ○ E. None of these

Question 8

Directions: Answer the question based on the following diagram.

```
                              5
                  9      6
        3            7    7    8
             1
           2                11
             10
```

The rectangle represents bachelors.

The square represents Delhi metropolis.
The circle represents English language.
The triangle represents tourists.

Which of the following is **not** true?

- ○ A. Some English speaking bachelors live in Delhi.
- ○ B. Some bachelors do not know the English language but they are in Delhi.
- ○ C. Some English speaking persons are neither tourists nor are they in Delhi.
- ○ D. Some bachelors are tourists who live in Delhi.
- ○ E. None of the above statements is true.

Question 9

Directions: In the question two statements are given which are followed by four conclusions (1), (2), (3) and (4). Choose the conclusions which logically follow from the given statements.

Statements: All pens are instruments. Some green things are instruments.

Conclusions:
(1) All pens are green.
(2) All green things are pens.
(3) Some instruments are green.
(4) All instruments are pens.

- ○ A. Only (4)
- ○ B. Only (3)
- ○ C. Only (2)
- ○ D. Only (1)
- ○ E. Only (1) & (3)

Section III. Language Skills

Question 1

Excess inventory, a massive problem for many businesses, has several causes, some of which are unavoidable. Overstocks may accumulate through production overruns or Certain styles and colors prove unpopular. With some products-computers and software, toys, and books-last year's models are difficult to move even at huge discounts. Occasionally the competition introduces a better product. But in many cases the public's buying tastes simply change, leaving a manufacturer or distributor with thousands (or millions) of items that the fickle public no longer wants.

One common way to dispose of this merchandise is to sell it to a liquidator, who buys as cheaply as possible and then resells the merchandise through catalogs, discount stores, and other outlets. However, liquidators may pay less for the merchandise than it cost to make it. Another way to dispose of excess inventory is to dump it. The corporation takes a straight cost write-off on its taxes and hauls the merchandise to a landfill. Although it is hard to believe, there is a sort of convoluted logic to this approach. It is perfectly legal, requires little time or preparation on the company's part, and solves the problem quickly. The drawback is the remote possibility of getting caught by the news media. Dumping perfectly useful products can turn into a public relations nightmare. Children living in poverty are freezing and XYZ Company has just sent 500 new snowsuits to the local dump. Parents of young children are barely getting by and QRS Company dumps 1,000 cases of disposable diapers because they have slight imperfections.

The managers of these companies are not deliberately wasteful; they are simply unaware of all their alternatives. In 1976 the Internal Revenue Service provided a tangible incentive for businesses to contribute their products to charity. The new tax law allowed corporations to deduct the cost of the product donated plus half the difference between cost and fair market selling price, with the proviso that deductions cannot exceed twice cost. Thus, the federal government sanctions-indeed, encourages-an above-cost federal tax deduction for companies that donate inventory to charity.

1. The passage is primarily concerned with
   A. pointing out a problem
   B. criticizing a particular course of action errors.
   C. discussing possible responses to a problem
   D. analyzing the causes of a repeated occurrence
   E. evaluating two different approaches

2. It can be inferred from the passage that manufacturers would be most likely to avoid using a liquidator to dispose of excess inventory for which of the following reasons?
   A. Using a liquidator has questionable legal status.
   B. Using a liquidator requires costly preparation on the part of the manufacturer.
   C. Having the products appear in discount outlets can damage the manufacturers' public image.
   D. The liquidator often pays less for the inventory than the manufacturer spent to produce it.
   E. The manufacturer is allowed no tax write-off for the loss incurred when excess inventory is sold to a liquidator.

3. The passage provides information that supports which of the following statements?
   A. Excess inventory results most often from insufficient market analysis by the manufacturer.
   B. Products with slight manufacturing defects may contribute to excess inventory.
   C. Few manufacturers have taken advantage of the changes in the federal tax laws.
   D. Manufacturers who dump their excess inventory are often caught and exposed by the news media.
   E. Most products available in discount stores have come from manufacturers' excess inventory stock.

4. Information in the passage suggests that which of the following, if true, would make donating excess inventory to charity less attractive to manufacturers than dumping?
   A. The costs of getting the inventory to the charitable destination are greater than the above-cost tax deduction.
   B. The news media give manufacturers' charitable contributions the same amount of coverage that they give dumping.
   C. No straight-cost tax benefit can be claimed for items that are dumped.
   D. The fair-market value of an item in excess inventory is 1.5 times its cost.
   E. Items end up as excess inventory because of a change in the public's preferences.

Question 2

Directions: Rearrange the jumbled sentences to show the appropriate sequence.

(A)   For example, when the early homo sapiens left their homes in search for food, they would risk death and injury from dangerous animals.

(B)   Throughout human history, the universe has presented an innumerable amount of dangers to explorers.

(C)   Today, many adventure enthusiasts seek to find the thrills and adrenaline rush which their ancestors had experienced in the wild.

(D)   The tradition of humans going out to experience the dangers of unknown nature still exists.

○   A.   ABCD
○   B.   ABDC
○   C.   BADC
○   D.   DABC
○   E.   CBAD

Question 3

Directions: In the given question, the sentence has four underlined words or phrases. Identify the one underlined work or phrase that must be changed in order to make the sentence correct. Mark E for no error.

Though they were written almost a year after they separated, Salim and Javed's stories were published on the same day.

○   A.   Though
○   B.   almost
○   C.   Salim and Javed's
○   D.   were published
○   E.   No error

Question 4

Directions: Choose the set of prepositions whose meaning and sequence best fits the 3 given sentences.

1. After the burglary, the office bought a sophisticated security system as an insurance_____any such losses.
2. She put_____a brave front at the end of the meeting.
3. Sunil decided to avail himself_____the opportunity to go to Australia for training.

(A) on
(B) of
(C) at
(D) against
(E) up
(F) with

- ○ A. ACE
- ○ B. ADB
- ○ C. DAB
- ○ D. DEB
- ○ E. FCD

Question 5

Directions: Choose the word or pair of words that best completes the relationship to the given pair:

allusion : reference ::_____: _____

- ○ A. bombast : broadcast
- ○ B. dearth : affection
- ○ C. opulence : grandiloquence
- ○ D. ostentation : swagger
- ○ E. paucity : scarcity

Section I. Quantitative Skills

Question 1

Given that the integers 1, 2, 3 … 40 are written on the blackboard. Any two numbers, say a and b, are erased and a new number *a + b − 1* is written. This operation is repeated 39 times.

In this manner, the numbers 1, 2, 3 … 40 are added and 1 is subtracted 39 times.

So, number left on the blackboard

$$= 1+2+3 \ldots 40 - (39 \times 1)$$

$$= \frac{40 \times 41}{2} - 39$$

$$= 20 \times 41 - 39$$

$$= 820 - 39 = 781$$

The correct answer is B.

Question 2

Divisibility rule of 11 says that the difference of the alternative sum of the digits should be a multiple of 11.

Therefore, the number AB61 will be a divisible by 11 if (A − B + 6 − 1) is multiple of 11.

That is, A − B + 6 − 1 = 11k

$\Rightarrow$ A − B = 11k − 5

$\Rightarrow$ A − B = −5

Therefore, possible pairs of A and B are (1, 6), (2, 7), (3, 8) and (4, 9).

Hence, 4 such four-digit numbers are possible.

The correct answer is B.

Question 3

Let Sumeet's salary be $ x.

Amount spent on child's education = 10% of $ x = $ 0.1 x

Remaining amount = $ x – $ 0.1 x = $ 0.9x

Amount spent on rent = 20% of $ 0.9x = $ 0.18x

Remaining amount = $ 0.9x – $ 0.18x = $ 0.72x

Amount spent on garments = 25% of $ 0.72x = $ 0.18x

Remaining amount = $ 0.72x – $ 0.18x = $ 0.54x

According to the question,

$ 0.54x = $ 5400

$\Rightarrow$ x = $ 10, 000

Hence, Sumeet's salary = $ 10, 000

The correct answer is A.

Question 4

Suppose the price of 1 kg of a goods be Rs. 100.

So, the price of 800 gm of the goods = Rs. 80

Discount offered on the goods = 20% of Rs. 100 = Rs. 20

So, the selling price of the goods = Rs. 80 per kg

Therefore, the cost price and the selling price of 800 gm of the goods are same.

Hence, there is no profit or loss.

The correct answer is C.

Question 5

$x^2 - (A - 3)x - (A - 7) = 0$

The sum of the roots $(\alpha + \beta)$ and the product of the roots $(\alpha\beta)$ for a quadratic equation, $ax^2 + bx + c = 0$, is given by

$\alpha + \beta = -\dfrac{b}{a} = A - 3$

$\alpha\beta = \dfrac{c}{a} = -(A - 7)$

According to the question,

$\alpha^2 + \beta^2 = 0$

$\Rightarrow \quad (\alpha + \beta)^2 - 2\alpha\beta = 0$

$\Rightarrow \quad (A - 3)^2 + 2(A - 7) = 0$

$\Rightarrow \quad A^2 - 6A + 9 + 2A - 14 = 0$

$\Rightarrow \quad A^2 - 4A - 5 = 0$

$\Rightarrow \quad A^2 - 5A + A - 5 = 0$

$\Rightarrow \quad A(A - 5) + 1(A - 5) = 0$

$\Rightarrow \quad (A - 5)(A + 1) = 0$

$\Rightarrow \quad A = 5$ or -1

The correct answer is C.

Question 6

Number of members from Executive Council = 5
Number of members from Academic Council = 7
A committee of 6 members is to be formed such that at least 4 members of the committee should belong to the Academic Council.
So, required number of ways

$= {^7C_4} \times {^5C_2} + {^7C_5} \times {^5C_1} + {^7C_6}$

$= \dfrac{5 \times 6 \times 7}{2 \times 3} \times \dfrac{4 \times 5}{2} + \dfrac{6 \times 7}{2} \times 5 + 7$

$= 350 + 105 + 7 = 462$

The correct answer is E.

Question 7

1.
Total population in Uttar Pradesh in 2001 = 1660 lakhs
Male population in Uttar Pradesh in 2001 = 875 lakhs
So, female population in Uttar Pradesh in 2001 = (1660 − 875) lakhs = 785 lakhs
Total population in Uttar Pradesh in 2006 = 1731 lakhs
Male population in Uttar Pradesh in 2006 = 911 lakhs
So, female population in Uttar Pradesh in 2006 = (1731 − 911) lakhs = 820 lakhs
Increase in female population in Uttar Pradesh from 2001 to 2006 = (820 − 785) lakhs = 35 lakhs

So, required percentage $= \dfrac{35}{785} \times 100 = 4.46\%$

The correct answer is E.

2.

Number of males per square metre in Uttar Pradesh in 2006 $= \dfrac{911 \text{ lakhs}}{2,38,576} \approx 382$

Number of males per square metre in Madhya Pradesh in 2006 $= \dfrac{360 \text{ lakhs}}{3,08,144} \approx 177$

Number of males per square metre in Andhra Pradesh in 2006 $= \dfrac{417 \text{ lakhs}}{2,75,068} \approx 152$

Number of males per square metre in Tamil Nadu in 2006 $= \dfrac{348 \text{ lakhs}}{1,30,058} \approx 268$

Number of males per square metre in Orissa in 2006 $= \dfrac{195 \text{ lakhs}}{1,55,707} \approx 125$

Therefore, the number of males per square metre is the least in Orissa in 2006.

The correct answer is E.

3.

The simple annual growth rate (SAGR) is simply the percent growth divided by N, the number of years.
In question (1), we calculated the percentage increase in the female population in Uttar Pradesh from 2001 to 2006 = 4.46%

Therefore, SAGR of the female population in Uttar Pradesh from 2001 to 2006 $= \dfrac{4.46}{5} = 0.89\%$

The correct answer is D.

4.

The average percentage of rural population in the given states in the year 2001

$= \dfrac{71+72+69+70+73+68+69}{7} = \dfrac{492}{7} = 70.28\%$

The correct answer is D.

Question 8
Common solution for question 1-4:
Given information can be tabulated as below:

Table 1: Automobile Production Trends				
	Passenger Vehicles	Commercial Vehicles	Three Wheelers	Total
2004	800	500	475	1775
2005	700	550	450	1700
2006	1025	675	475	2175
2007	1200	650	475	2325
2008	1250	600	350	2200

Table 2: Automobile Domestic Sales Trends				
	Passenger Vehicles	**Commercial Vehicles**	**Three Wheelers**	**Total**
2004	700	450	300	1450
2005	675	500	350	1525
2006	900	625	400	1925
2007	1050	600	375	2025
2008	975	550	350	1875
Total	**4300**	**2725**	**1775**	**8800**

Now, all questions can be solved easily.

1.

From table 1, we have the following data:

Percentage increase in automobile production in 2005 over 2004 = $\dfrac{1700-1775}{1775} \times 100 = -4.22\%$

Percentage increase in automobile production in 2006 over 2005 = $\dfrac{2175-1700}{1700} \times 100 = 27.94\%$

Percentage increase in automobile production in 2007 over 2006 = $\dfrac{2325-2175}{2175} \times 100 = 6.89\%$

Percentage increase in automobile production in 2008 over 2007 = $\dfrac{2200-2325}{2325} \times 100 = -5.37\%$

Hence, 2008 exhibits the highest percentage decrease over 2007 in automobile production.

The correct answer is E.

2.

Since, whatever was not sold domestically was exported, the annual export data can be tabulated as below:

Automobile Export Sales Trends				
	Passenger Vehicles	**Commercial Vehicles**	**Three Wheelers**	**Total**
2004	100	50	175	325
2005	25	50	100	175
2006	125	50	75	250
2007	150	50	100	300
2008	275	50	0	325

Growth in exports of automobiles in 2005 = $\dfrac{175-325}{325} \times 100 = -46.15\%$

Growth in exports of automobiles in 2006 = $\dfrac{250-175}{175} \times 100 = 42.85\%$

Growth in exports of automobiles in 2007 = $\dfrac{300-250}{250} \times 100 = 20\%$

Growth in exports of automobiles in 2008 = $\dfrac{325-300}{300} \times 100 = 8.33\%$

Hence, the maximum growth is in the year 2006 and the minimum growth is in the year 2008.

The correct answer is C.

3.
From table 2, we have the following data:
Domestic sale of commercial vehicle during the period 2004–2008 =2725
Domestic sale of passenger vehicle during the period 2004–2008 =4300
Domestic sale of three-wheeler during the period 2004–2008 =1715
Ratio of the domestic sale price of a commercial vehicle, a passenger vehicle, and a three-wheeler = 5 : 3 : 2
Required percentage

$$= \frac{2725 \times 5}{2725 \times 5 + 4300 \times 3 + 1715 \times 2} \times 100$$

$$= \frac{13625}{13625 + 12900 + 3430} \times 100$$

$$= \frac{13625}{29955} \times 100 = 45.48\% \approx 45\%$$

The correct answer is C.

4.
From table 2, we conclude that domestic sale increases in the years 2005, 2006 and 2007 only.
From table 1, we conclude that production increases in the years 2006 and 2007 only.
So, we have to compare the ratios for the years 2006 and 2007 only.
Ratio between absolute increase in domestic sales and absolute increase in production in the year 2006 =

$$\frac{400}{475} = 0.84$$

Ratio between absolute increase in domestic sales and absolute increase in production in the year 2007 =

$$\frac{100}{150} = 0.67$$

Therefore, the ratio is highest during 2006.
The correct answer is C.

Question 9
From statement 1:
x + y = Even
x² – y² = (x + y)(x – y) = (Even) × (x – y)
When an even number is multiplied by another even number, the result is always an even and when an even number is multiplied by an odd number, again the result is always an even. Therefore, we get a unique answer from statement 1 alone.
So, statement 1 alone is sufficient.

From statement 2:
x – y = Odd
x² – y² = (x + y)(x – y) = (x + y) (Odd)
When an odd number is multiplied by another odd number, the result is always an odd number while when an odd number is multiplied by an even number, the result is always an even number. Therefore, we do not get a unique answer from statement 2.
So, statement 2 alone is not sufficient.

The correct answer is A.

Section II. Logical Reasoning

Question 1

Argument Construction:
Though automation is essential for cost management, it should not be adopted in the healthcare industry as it will take away the human touch which, as per several studies, is strongly desired by many patients.

A. The author makes no statement about the surety of automation being adopted in healthcare. He/she merely highlights the disadvantages of such action.
B. Though this is an inference that can be drawn from the passage, it is not the central idea being discussed.
C. This statement goes beyond the scope of the passage.
D. This is a judgmental and moralistic statement.
E. Correct. The author, while accepting the benefits of automation, is essentially highlighting the negative outcomes of automation in the health care industry in order to reinforce its undesirability.

The correct answer is E.

Question 2

Conclusion I: The statement says that the government has spoiled many top ranking financial institutions by appointing bureaucrats as directors of these institutions. However, we can draw no conclusions about the reasons why these bureaucrats have had this negative impact. It is possible that bureaucrats also have the required expertise in finance but are indulging in nepotism or corruption and it is this conduct that has spoiled these institutions. Thus, conclusion I cannot be drawn.

Conclusion II: This is a vague conclusion that has no direct bearing on the argument. The scope of 'financial work' of an institution is not defined and might include normal financial dealings of any institution. Such interactions don't require any financial expertise on part of the directors.

The correct answer is D.

Question 3
Common solution for questions 1 to 4:
Time duration for tasks A, B, C, D and E are given below:
Task A: 9:00 am – 11:00 am
Task B: 11:00 am – 12:00 pm
Task C: 12:00 pm – 1:00 pm
Task D: 11:00 am – 2:00 pm
Task E: 2:00 pm – 3:00 pm

1.
The earliest time at which Ajay could complete task C is 1:00 pm.
The correct answer is C.

2.

If Ajay takes 2 hours for task B, then the time duration for tasks A, B, C, D and E are given below:

Task A: 9:00 am – 11:00 am

Task B: 11:00 am – 1:00 pm

Task C: 1:00 pm – 2:00 pm

Task D: 11:00 am – 2:00 pm

Task E: 2:00 pm – 3:00 pm

So, Ajay can start task E at 2:00 pm.

The correct answer is C.

3.

The earliest time at which Ajay could complete all tasks is 3:00 pm.

The correct answer is D.

4.

If Ajay were to start task D after the completion of task C, and take a break for an hour, then the new time duration for tasks A, B, C, D and E are given below:

Task A: 9:00 am – 11:00 am

Task B: 11:00 am – 12:00 pm

Task C: 12:00 pm – 1:00 pm

Task D: 1:00 pm – 4:00 pm

Rest time: 4:00 pm – 5:00 pm

Task E: 5:00 pm – 6:00 pm

Therefore, Ajay completes all tasks at 6:00 pm.

The correct answer is D.

Question 4

The pattern followed is as below:

$8 \times 7 - 4 \times 3 = 56 - 12 = 44$
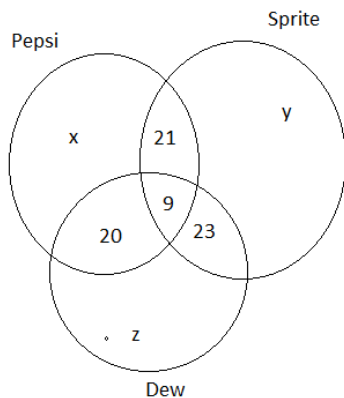
$7 \times 9 - 8 \times 4 = 63 - 32 = 31$

Similarly, $5 \times 10 - 6 \times 2 = 50 - 12 = 38$

The correct answer is B.

Question 5

Common solution for questions 1 to 2:

From the information given in the question, we can draw the following Venn diagram:

Total number of guests = 278

So, x + y + z + 21 + 20 + 9 + 23 = 278
Or, x + y + z = 205 --- (1)
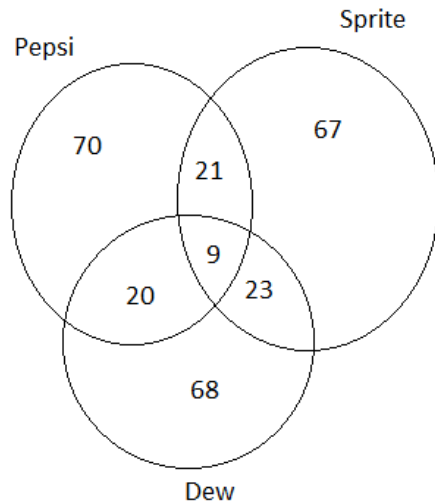As, there were equal numbers of bottles of each of the three kinds (Pepsi, Dew and Sprite), we have:
x + 21 + 9 + 20 = y + 21 + 9 + 23 = z + 20 + 23 + 9
Or, x + 50 = y + 53 = z + 52--- (2)
On solving Eq. (1) and (2), we get:
x = 70, y = 67 and z = 68
So, final Venn diagram is as below:

1.
Number of guests who enjoyed Dew or Sprite but not Pepsi = 68 + 23 + 67 = 158
The correct answer is E.

2.
Number of guests who enjoyed Pepsi and Dew but not Sprite = 70 + 20 + 68 = 158
The correct answer is E.

Question 6

Argument Construction:

The supply of illegal, adulterated and local alcohol has become a major concern for both citizens and local administration. A meeting of all the stakeholders has been organized that includes members of the local community as well. The response has to be delivered from the perspective of the district administration.

   A.   Telling people that the problem lies solely with them, without taking any responsibility for the issue is only going to make matters worse. The passage states that the local people are already upset with the administration for not doing enough. In this case, placing all the blame on the people will further aggravate them.
   B.   This is a vague and insufficient response. Merely asking people to refrain from indulging in this behavior exhibits a passive and desultory approach that does not address the central issue.
   C.   Just like option A, this response also absolves the administration of all accountability and will only result in escalation of people's anger.

D. Correct. Such issues require a coordinated and comprehensive approach. While the administration cannot tackle the problem on its own, it also cannot place the entire burden of responsibility on the people. Therefore, acknowledging the importance of local participation and inviting collaboration will pave the way for a concerted effort on the part of the local people. This will also help assuage the feeling of anger amongst the community.

E. This is again a vague and passive approach that can devolve into apathy and unrest amongst the people.

The correct answer is D.

Question 7

This question actually expects the test takers to identify the number of pairs of letters in a word in which the number of letters between the first letter and the second letter of a pair must have the same number of letters as in English alphabet. For example, the positional difference between **E and I** in English alphabet is three (F,G and H are between them); the positional difference between **E and I** in the word CHILDREN is also three (L,D and R are between them). Hence, **(E, I)** is one such pair.

Similarly, in the word 'CHILDREN', the other pairs can be identified as below:

- (H, I): The number of letter between 'H' and 'I' in English alphabet is **zero** as there is no letter between 'H' and 'I'. Similarly in the word 'C**HI**LDREN' the number of letter between 'H' and 'I' is also zero as there is no letter between 'H' and 'I'.
- (H, N): The number of letter between 'H' and 'N' in English alphabet is **five** as there are five letters between 'H' and 'N'. Similarly in the word 'C**H**ILDRE**N**' the number of letter between 'H' and 'N' is also five as there are five letters between 'H' and 'N'.
- (I, N) : The number of letter between 'I' and 'N' in English alphabet is **four** as there are four letters between 'I' and 'N'. Similarly in the word 'CH**I**LDRE**N**' the number of letter between 'I' and 'N' is also **four** as there are four letters between 'I' and 'N'.

Therefore, there are four such pairs – (E, I), (H, I), (H, N) and (I, N).
The correct answer is C.

Question 8

Option A: English speaking bachelors living in Delhi are indicated by region 7. So, this option is true.
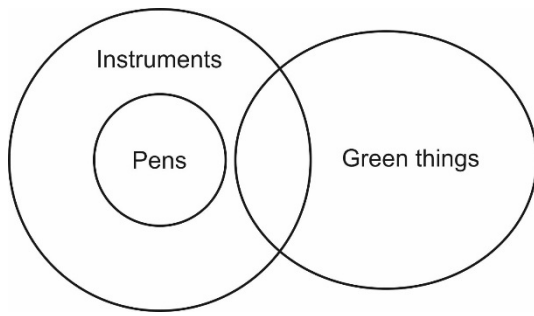
Option B: Region 8 indicates the bachelors who do not know the English language but they are in Delhi. So, this option is true.
Option C: Regions 7 and 9 indicates English speaking persons who are neither tourists nor are they in Delhi. So, this option is true.
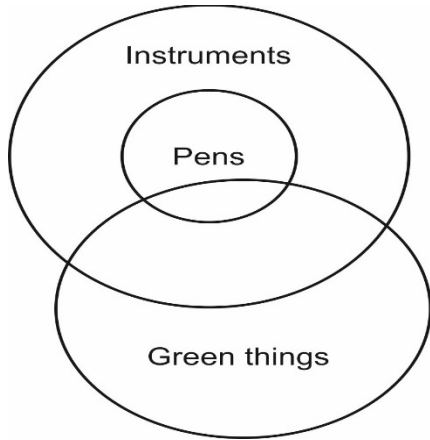**Option D:** No region indicates bachelors who is tourists and lives in Delhi. So, this option is **not** true.
The correct answer is D.

Question 9

OR

Option A: We know all pens are instruments. However, this does not mean that all instruments are pens. Thus, option A is not necessarily true.

Option B: Correct. As can be seen from the Venn diagrams, if some green things are instruments then it follows that some instruments are green.

Option C: We only know that some green things are instruments. From this we cannot draw any conclusion regarding the relation between pens and green things.

Option D: As explained above, we cannot establish a conclusive relationship between pens and green things.

Option E: Only statement (3) is correct.

The correct answer is B.

Section III. Language Skills

Question I

Topic- Excessive Inventory
Scope- The various ways in which overstocks can be disposed

Passage Map
P 1- The causes that lead to accumulation of extra stocks
P 2- Two ways of disposing extra stocks- through liquidator or dumping
P 3- An alternative approach to deal with this repeated occurrence

1. (A) The passage is not pointing out a problem. It is analyzing a phenomenon and the different approaches to deal with it.
   (B) The tone of the author is not negative or critical at all.
   (C) Correct. The author has highlighted a problem and then discussed the various ways in which it can be dealt with.
   (D) This is the main idea of the first paragraph, not the entire passage.
   (E) The passage goes beyond mere evaluation of two approaches. It also presents a third, more viable alternative and discusses its merits.
   The correct answer is C.

2. (A) This information is not available in the passage.
   (B) This information is not available in the passage.
   (C) This goes beyond the scope of the argument.
   (D) Even if this were true, the organizations would stand to make some money on merchandise that is otherwise an absolute waste for them. Also, the passage merely states that the 'liquidators may pay less'. This does not mean that they often do so.
   (E) Correct. It is stated in the passage that organizations get a straight tax write-off for dumping their products. This clearly implies that dumping entails a financial benefit for the organizations. Since both the options (using liquidators and dumping) provide some tangible advantage to the organization, the reason manufacturers will most likely avoid using a liquidator is that using liquidators provide no tax write-offs.
   The correct answer is E.

3. (A) Correct. Refer to the following lines from the first paragraph- *"Certain styles and colors prove unpopular………. Occasionally the competition introduces a better product……...But in many cases the public's buying tastes simply change……."*. All these statements indicate that excess inventory is largely a product of insufficient market analysis.
   (B) The concluding lines of the second paragraph are merely presenting the various public relations' scenarios that might result from dumping products. Hence, this option is incorrect.
   (C) This is a tricky option. Though it appears correct, please note that the option talks about 'changes' in the federal tax laws whereas the third paragraph only talks about new provisions in the law.

(D) This statement conflicts with the information provided in the passage.
(E) This is beyond the information provided in the passage.
The correct answer is A.

4. (A) Correct. Since the government is incentivizing the organizations to contribute their products to charity; the only reason manufactures will find this option less viable is when the costs exceed the benefits being provided.
(B) This information is contradicted by the information provided in the passage. Refer the lines, *"The drawback is the remote possibility of getting caught by the news media."*
(C) This information is contradicted by the information provided in the passage. Refer the lines, *"The corporation takes a straight cost write-off on its taxes and hauls the merchandise to a landfill…."*.
(D) Even if this were true, the new tax allows the corporations to deduct the cost of the product donated plus half the difference between cost and fair market selling price, with the proviso that deductions cannot exceed **twice cost**. Therefore, the organizations stand to gain more by contributing their product to charity.
(E) This option is not relevant to the argument being presented.

The correct answer is A.

Question 2
Sentences B and A form a mandatory pair as A gives an example of the opinion expressed in B. The order of C and D can be decided by applying chronology. While D states that the tradition still exists; statement C talks about how it is manifested today. This makes BADC the correct sequence.

The correct answer is C.

Question 3
The aim is to find the phrase which is making the given statement grammatically incorrect. The clue word in the given sentence is 'separated'. This indicates that the subjects are distinct. Keeping this in mind one may analyze the given sentence.

(A) 'Though' is correct.

(B) 'almost' is correctly used.

(C) Correct. Since they are not together anymore, Salim's and Javed's stories are also separate. Thus, both the nouns will take an apostrophe ('s).

(D) 'were published' is a grammatically correct expression.

(E) There is an error in C.

The correct answer is C.

Question 4

Option D is the right answer as 'deb' is the correct sequence of prepositions to be used in the given set of sentences.

As we can see:

1. After the burglary, the office bought a sophisticated security system as an insurance *against* any such losses. We use *against* to refer to negative, hostile or opposing actions to an event.

2. She put *up* a brave front at the end of the meeting. *Put up* refers to exhibiting determination or strength in a difficult situation.

3. Sunil decided to avail himself *of* the opportunity to go to Australia for training. To *avail oneself of something* is to take advantage of it.

The correct answer is D.

Question 5

This is an analogy based question. The idea here is to find the option which draws a similar relationship to that of the given pair. Start by making a bridge between the words given in the question stem— 'allusion' and 'reference' are synonyms that refer to 'the action of mentioning or remarking about something'. The relationship shared is that of synonyms.

Now, plug the bridge into the answer choices:

(A) 'Bombast' refers to pompous language, intended to impress people. 'Broadcast' means to transmit a program through radio or television. The words are unrelated to each other. Incorrect.

(B) 'Dearth' indicates a lack or scarcity of something while 'affection' indicates a feeling of fondness or liking. Incorrect.
(C) While 'opulence' indicates great wealth or luxury; 'grandiloquence' is a synonym of 'bombast'. It refers to loud, pompous talk that contains no real substance. These words are unrelated. Incorrect.
(D) 'Ostentation' refers to the pretentious show of wealth. 'Swagger' refers to arrogant behavior or conduct. Incorrect.
(E) 'Paucity' and 'scarcity' are synonyms that refer to the dearth or shortage of something. Correct.
The correct answer is E.