GENERAL INSTRUCTIONS

1. DO NOT OPEN THE SEAL OF THIS BOOKLET UNTIL THE SIGNAL TO START IS GIVEN.
2. Use only an HB pencil to fill in the Answer Sheet.
3. In your Answer Sheet enter:
   (a) In Box 2 the **Application Number**.
   (b) In Box 3 the ten-digit **Admit Card Number**.
   (c) In Box 4 the **Centre Code**.
4. Keep only the admit card, pencil, eraser and sharpener with you. DO NOT KEEP with you books, rulers, slide rules, drawing instrument, calculators (including watch calculator), pagers, cellular phones or any other device or loose paper. These should be left at a place as indicated by the invigilator.
5. Ensure that your personal data has been entered correctly on Side 1 of the Answer Sheet.
6. This test has four sections. Each section has forty (40) questions.

Program applied for	Sections to be attempted	Time Duration
M.B.A/M.C.A.	I, II, III, IV	160 minutes
M.B.A	I, II, III	120 minutes
M.C.A	I, II, IV	120 minutes

7. In distributing the time over the sections, please bear in mind that you need to demonstrate your competence across all the sections that you attempt.

HOW TO ANSWER

8. Directions for answering the questions are given in the Test Booklet before each group of questions. Read these directions carefully and answer the questions by darkening the appropriate ovals.
9. There is only one correct answer to each question. There is no negative marking.
10. Do your rough work only on the Test Booklet in the space provided and NOT on the Answer Sheet.
11. Follow the instructions of the invigilator. Candidates found violating the instructions will be disqualified.

AFTER THE TEST

12. At the end of the test, remain seated. The invigilator will collect the Answer Sheet and the Test Booklet from you. Do not leave the hall till the invigilator announces, "You may leave now". The invigilator will make the announcement only after collecting the Answer Sheets from all the candidates in the room.

Candidates giving assistance or seeking/receiving help from any source in answering questions or copying in any manner in the test will forfeit their chances of being considered for admission. The Institutes reserve the right to exclude any question or questions from this Test Booklet for final evaluation.

SECTION-I : LANGUAGE COMPREHENSION

NUMBER OF QUESTIONS : 40

DIRECTIONS for questions 1 to 20: Read the following passages and answer the questions that follow.

PASSAGE-1

When we perceive an object, we automatically tend to label it (like nice, bad, wet, dry, light, dark, etc). And our mind reacts on the basis of our own mental labelling of an object. No wonder we tend to react to situations in a subjective manner. All perceived objects are conditioned by our senses and our own mind. This leads to the dramatic conclusion that we are not and by definition can never be objective!

Our labelling leads not only to problems like anger and attachment, but also to the more basic problem that we think we are somehow separate from the outside world. But are we separate from the outside world?

When we see something – for example a table – it appears to be separate from the rest of the world, just standing there by itself, but is that correct? How could the table stand there without the ground supporting it? How could the table exist without a carpenter making it from pieces of wood? The pieces of wood come from a tree, which comes from a seed, water, soil, air, the sun and its nuclear fusion of hydrogen atoms, etc. Every object needs causes and conditions to exist, just like we need our parents, food, air, clothes and many more things to exist. In this way, it becomes impossible to maintain that 'I' am separate from the outside world, however much it feels that way.

1. The writer says that we can never be objective because:

    1] we label all that we possess.
    2] we react to situations.
    3] we create our own mental labels of objects.
    4] we separate ourselves from the outside world.

2. The act of labelling all that we see:

    1] is the same for all people.
    2] is the same for people belonging to a region.
    3] depends upon the situation.
    4] depends on our personal conditioning.

3. By giving the example of the table, the writer shows how:

    1] the table is an independent entity.
    2] all things in this universe are interconnected.
    3] a table is actually not a table.
    4] objects made of wood cannot be separated from the world.

4. The feeling that 'I' am an independent being is not true because:

   1] every object needs causes and conditions to exist.
   2] we belong to our parents.
   3] we are social beings.
   4] this is the writer's subjective opinion.

5. According to the writer:

   1] the subjective act of labelling leads to emotional problems.
   2] nothing in this universe can have a separate existence.
   3] human beings are different from objects like a table.
   4] [1] and [2].

PASSAGE-2

Censorship is the control of forms of human expression; it is sometimes implemented by the government. The visible motive of censorship is often to stabilize or improve the society that the government has control over. It is most commonly applied to acts that occur in public circumstances, and most formally involves the suppression of ideas.

The content of school textbooks is often the issue of debate, since the target audience of school textbooks is young people, and the term "whitewashing" is the one commonly used to refer to selective removal of critical or damaging evidence or comment. The representation of every society's flaws or misconduct is typically downplayed in favour of a more nationalist or patriotic view.

6. According to the writer, censorship is:

   1] nothing but a government tool.
   2] a controlling device.
   3] a waste of time.
   4] exclusively for history text books.

7. Another word used to refer to 'censorship' in this passage is:

   1] suppression.
   2] damaging.
   3] whitewashing.
   4] socialization.

8. The apparent reason for censorship usually is:

   1] to stabilize the society.
   2] to keep some information secret.
   3] to protect governments.
   4] to promote patriotism.

9. According to the passage, an often debated area of censorship is with regard to:

1] history textbooks for school children.
2] school textbooks.
3] movies screened for children.
4] religious doctrines.

10. The content of school textbooks is open to debate because:

1] this is where most errors occur.
2] the target reader is young and has an impressionable mind.
3] most people read these books.
4] children will not protest against censorship.

PASSAGE-3

External factors such as money, prestige or family history can often influence initial career choices. However, as you discover more about yourself, you may find that the 'right' career choice for you is driven by more personal factors.

Ultimately the right career decision for you is based on your skills, your achievements, your interests and your values. The easiest way to start is with your academic achievements at school or at university. While some employers feel quite strongly that a pattern of achievement in education is likely to be repeated in later years, most others are interested in far more than a degree certificate and will look for certain skills in all aspects of a potential employee's life. Advising, coaching, communicating, analysing, researching and organising are only a few of the hundreds of skills that you may possess.

Assess your personal values and your interests and having done that, you may not have discovered the exact career you want to follow, but you will have discovered what you're good at, what you like and what you value.

11. According to the writer, initially we base our career choices on:

1] what our parents want us to do.
2] the kind of money we wish to earn.
3] our aptitude and skills.
4] [1] and [2].

12. While looking for our first job, if we are not sure of our skills, we should:

1] look at our performance in school and college exams.
2] meet a counselor.
3] find out our interests and values.
4] [1] and [3].

13. For those without job experience, some employers look at academic performance because

1] they trust the school scores.
2] that will give them an idea of your organizing skills.
3] a degree certificate says it all.
4] they see a pattern which they think will be repeated in work-life as well.

14. In order to know what we are good at, we should:

1] focus on our academics.
2] evaluate our personal values and interests.
3] move on from one job to another.
4] wait till we grow old enough to understand our skills.

15. Which of the following statements does the writer not say?

1] More than external factors, one should choose a career based on personal reasons.
2] If you don't have skills, you will never find the right career.
3] There are multiple skills that each one of us possesses.
4] Your academic scores can stand you in good stead while seeking a job.

PASSAGE-4

Lisa di Antonio, known to the world as Mona Lisa, was born in the slums of Naples in 1479. Her father was Florentine Nobel Antonio Maria DiNoldo Gherardini. Not much is known about her childhood. In 1495, at the age of 16, she got married, in Florence, Italy. Being of beauty and good marriage material, she caught the eye of Florences' noblest citizen, a wealthy Silk trader named Francesco del Giocondo, who was 19 years her senior. Lisa became his third wife.

Being poor most of her life, she was now richer than she could have ever imagined. Her husband, however, was always leaving her alone to go on business trips and never asked her to accompany him. Lisa decided to make good of her time when she met an old weird painter named Leonardo da Vinci. It is believed that her husband commissioned the painter to keep Lisa busy while another story says that she met Leonardo on her own.

She posed in 1503 for Leonardo at the age of 24 on a terrace over looking the mountains. She was dressed in Florentine fashion which was heavy and burdensome. This began to take its toll on the model. Da Vinci hired muses, jesters and musicians to keep her mood up and jolly while he painted. Being painted with oil on pinewood was a hard tedious task. It took 4 years to paint and even longer to try to get the mouth to look right. The dimension of the painting was 77 x 53 cm. He used a technique he created called 'Sfumato' which is the gradual dissolving of light and shade. This created the mysterious effect that makes the face look like it is following you at all times. The portrait is now smaller since two columns were cut off. This accounts for the terrace not being seen.

In 1507, Lisa's husband asked her to finally accompany him on a trip to Calabria. She left as soon as she packed her things, leaving her painting unfinished. Leonardo waited years before he finally gave up. Leonardo took the painting to France in 1516 and sold it to King of France, King Francis I, for $105,000, and was placed in his castle in Amboise. Leonardo died 3 years after selling his prized possession. The painting however over the years made its way to Fontainbleau, Paris, Versailles, and then to the private collection of Ludwig XIV. After the revolution, the painting was hung in the Louvre. Napoleon took his turn at owning the portrait and had it hanging in his bedroom. Of course, when he was banished from Naples, it then returned to the Louvre again. Her face was beginning to get a green cast from the varnish that was used in the painting process.

Nowhere is it told if the lady herself knew of its acclaim or if she even cared. Her death was recorded in 1528. But it was for certain that her long and boring stint as a model was worth every minute to Leonardo, being his most famous painting. Her aloof but alluring smile made its way through the ages making Mona Lisa one of the most celebrated, copied, stolen and parodied pieces of art in history.

There is little doubt of Lisa di Antonio's influence through history. So much so that rumors and theory fly even today. One theory has it that Leonardo included a self-portrait in the painting. It can be found along the left side while viewing from the forehead along her hairline. It seems to look like Da Vinci's profile. Another theory is that in the picture it is seen that Lisa isn't wearing a wedding ring that was very traditional at the time. Did this mean that she was Leonardo's mistress? This is one of the longest rumors about the masterpiece and its painter. A possible explanation theory even goes to say that the reason her smile was only slight was because of a problem with teeth nashing. That through stress she would nash her teeth. Of course the best theory came in the 16th century. A writer named Firenzuola taught us that for the time period of Mona Lisa, her smile of slightly parted corners of her mouth was considered a sign of elegance. This certainly can tell us something of the woman and her existence.

In many ways, she has inspired decades or admirers to react to this mysterious face. In 1911, she was stolen from the Louvre. It was the biggest art heist in history. An employee, Vinenzo Peruggia, placed the painting inside of his art smock and simply walked right out of the museum. It was suggested that he was hired by an Argentine con man, Eduardo de Valierno. It was two years later, in 1913, that the painting was found while trying to be sold. On December 30, 1956, a Bolivian, Ugo Ungaza Villegas, stared at the painting for hours. He then threw a rock at the painting permanently damaging the pigment near the left elbow. In the 60's and in the 70's, the painting went on tour in New York, Moscow and Tokyo allowing others to see the magnificence of Leonardo Da Vinci. But now due to international rule, the portrait is prohibited to travel. It is now housed permanently in the Louvre behind ropes and bullet-proof glass with conditioned air for protection. The sight of Lisa has also inspired a song in writers, Livingston and Evans, when they wrote the Nat King Cole classic, Mona Lisa.

For as long as we can view the curious beauty known as Mona Lisa, there will be theories and wonder. She has inspired history to be curious of the woman not just the sight of a famous painting. History lost track of Lisa di Antonio herself but her face will be remembered to centuries. As onlookers, we thank Lisa for being the bored housewife.

16.   The main idea in the passage is to:
    1] dispel the myths surrounding Mona Lisa.
    2] detail the process of the phenomenal painting of Mona Lisa and its sequential history.
    3] decipher the relation between Da Vinci and his creation.
    4] track the number of times the painting has been stolen and restored.

17.   Which of the following suggests that Mona Lisa was never really interested in her portrait?
    1] Da Vinci had to hire musicians and jesters to entertain Mona Lisa while he was painting.
    2] Mona Lisa hurried to accompany her husband on a trip without waiting for the painting to be finished.
    3] Lisa never returned to claim the painting in spite of its great reputation as a masterpiece.
    4] None of the above.

18. In which year did Da Vinci sell the painting?

    1] 1506   2] 1509   3] 1528   4] 1516

19. Match the dates on the left column with the events on the right.

    Dates   **Events**
    A. 1911   E. Mona Lisa accompanies husband to Calabria
    B. 1956   F. Attempt to damage the painting
    C. 1503   G. Painting stolen from the Louvre
    D. 1507   H. Mona Lisa posed for Leonardo

    1] A-G, B-E, C-H, D-F   2] A-G, B-F, C-H, D-E
    3] A-F, B-G, C-H, D-E   4] A-G, B-F, C-E, D-H

20. By vocation the author is likely to be:

    1] an art critic   2] an artist
    3] a historian   4] a researcher on renaissance paintings

DIRECTIONS for questions 21 to 28: In each of the following questions select the grammatically appropriate option.

21. 1] It is important that people concentrated on improving their own situations rather than interfere in others' affairs.
    2] It is important that people concentrate on improving their own situations rather than interfere in others' affairs.
    3] It is important that people concentrate on improving their own situations rather than interfering in others' affairs.
    4] It is important that people concentrate on improving their own situations rather than interfere in other's affairs.

22. 1] Bob and myself will help the victims.
    2] I and Bob will help the victims.
    3] Bob and I will help the victims.
    4] Bob and me will help the victims.

23. 1] The earthquake of last year's damaged the porcelain in the house.
    2] The earthquake of last year damaged the porcelain in the house.
    3] The earthquake of last year's damaged the porcelains in the house.
    4] The earthquake of last year damaged the porcelains in the house.

24. 1] Of the twin towers, the safer was the building what faced the sea.
    2] Of the twin towers, the safest was the building what faced the sea.
    3] Of the twin towers, the safer was the building that faced the sea.
    4] Of the twin towers, the safest was the building that faced the sea.

25. 1] The consumer demanded that the defective goods will be replaced by the store.
    2] The consumer demanded that the defective goods be replaced by the store.
    3] The consumer demanded that the defective goods would be replaced by the store.
    4] The consumer demanded that the defective goods shall be replaced by the store.

26. 1] The parents insisted that the children shall not leave the station until their train had arrived.
    2] The parents insisted that the children will not leave the station until their train had arrived.
    3] The parents insisted that the children left the station until their train had arrived.
    4] The parents insisted that the children not leave the station until their train had arrived.

27. 1] Whomever crosses this line first will win the race and be declared the faster.
    2] Whoever crosses this line first will win the race and be declared the faster.
    3] Whoever crosses this line first will win the race and be declared the fastest.
    4] Whomever crosses this line first will win the race and be declared the fastest.

28. 1] The receptionist who conveyed the message said it was for John and I.
    2] The receptionist who conveyed the message said it was for John and myself.
    3] The receptionist who conveyed the message said it was for John and me.
    4] The receptionist whom conveyed the message said it was for John and me.

DIRECTIONS for questions 29 to 40: In each of the following questions choose the option that best completes the sentence.

29. The prospects of any _____ progress on disinvestments in the immediate future is _____.
    1] further, standard   2] substantial, bleak
    3] future, illogical   4] legal, irrational

30. Such _____ in a cash-strapped state normally leads to charges of _____ but there are enough defenders of the Mulayam faith.
    1] audacity, corruption   2] greed, uprightness
    3] largesse, profligacy   4] avarice, loyalty

31. The _____ of the party came to a halt and a new sense of hope and purpose _____ the rank and file of the Congress throughout the country.
    1] democracy, frenzy   2] disintegration, enthused
    3] experimentation, jettisoned 4] agitation, aggravated

32. The media and concerned citizens would do well to keep a watchful eye on the scam, the true _____ of which are only slowly _____.
    1] extent, unfolding   2] defects, unrolling
    3] colours, palpable   4] ramifications, unfolding

33. But the real _____of French cooking is that artistic _____often spells business disaster.
    1] irony, doom   2] essence, pleasure
    3] paradox, success   4] flavour, beauty

34. She decided to stick to her decision _____ of the consequences.
    1] regardless   2] regard   3] regarding   4] regards

35. Food has always really been all about _____ – melding an interesting taste from here with a fascinating flavour from there.

   1] discrimination   2] innovation   3] refinement   4] fusion

36. If we allow our freedom of expression to be _____ just because we have to put up with a few delays we will be _____ what we achieved after years of struggle.

   1] lessened, lacking   2] amplified, claiming
   3] increased, foregoing   4] curtailed, foregoing

37. Arun asked Ravi _____ he had seen Prakash around.

   1] for   2] that   3] if   4] did

38. She was born _____ Rajapuram, _____ Karnataka.

   1] on……..for   2] in……..at   3] in……in   4] at…….on

39. The Americans _____ the War of Independence in 1945.

   1] fight   2] fought   3] fit   4] fights

40. Prasad _____ in the factory for six years, when his boss fired him.

   1] had been working   2] has been working
   3] will work   4] will be working

SECTION-II : MATHEMATICAL SKILLS

NUMBER OF QUESTIONS : 40

DIRECTIONS for questions 41 to 64: Choose the correct alternative.

41. Find 'x' if $\dfrac{7x + 5}{0.4} + \dfrac{5 - 3x}{0.5} = \dfrac{4x}{0.25}$.

    1] 4   2] 5   3] 6   4] 7

42. When 2 boxes of candles and 3 boxes of lamps are used, they make a perfect 2×9 arrangement and if 7 boxes of candles and 4 boxes of lamps are used, then they make a 9×4 arrangement with one item left aside. What is the number of lamps in one box?

    1] 5   2] 3   3] 4   4] 2

43. A bookseller gives two sucessive discounts of 20% and 15%. If he gets Rs.272 for a book, then find its marked price?

    1] Rs.365   2] Rs.380   3] Rs.400   4] Rs.420

44. Two persons A and B can complete a job in 6 hrs and 9 hrs respectively. They work for half an hour alternately. If A begins work at 7 am, when will the job be completed?

    1] 1:45 pm   2] 2:10 pm   3] 2:00 pm   4] 2:30 pm

45. ABCD is a rectangular field whose length is equal to 3 less than three times its breadth. If area of the field is 60 sq.m., then find the distance between two farthest points of the field?

    1] 10 m   2] 15 m   3] 13 m   4] 12 m

46. What is the probability that two cards drawn from a well shuffled pack of cards are red coloured face cards?

    1] $\dfrac{30}{221}$ 2] $\dfrac{33}{463}$ 3] $\dfrac{5}{442}$ 4] None of these

47. A man travels from point A to point B which are 80 km apart in 16 hrs and covers another 40 km from point B to point C in 8 hrs. Find his average speed?

    1] 6 km/hr   2] 7 km/hr   3] 4 km/hr   4] 5 km/hr

48. Which is the least possible number which when divided by 3, 4, 6 and 9 leaves 2 as a remainder and leaves zero as a remainder when divided by 17?

    1] 547   2] 561   3] 578   4] 595

49. The difference between the compound interest and simple interest for two years is Rs.6.25. If the principal sum is Rs.2500, then what is the rate percent per annum?

   1] 15   2] 5   3] 10   4] 12

50. In a glass jar there are some pink, blue, purple and orange chocolates. The number of blue chocolates is twice that of pink and the number of purple chocolates is 1 less than twice the number of blue chocolates. If out of the 60 chocolates in the jar, 19 are orange, then find the number of purple chocolates.

    1] 21   2] 22   3] 23   4] 24

51. What is the value of n, if $\dfrac{{}^{n}C_2}{{}^{(n-1)}C_3} = \dfrac{4}{5}$?

    1] 7   2] 8   3] 9   4] 10

52.
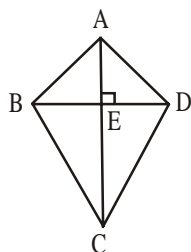
Area of ΔABD is $4\sqrt{3}$ sq.units. AE : EC = 1 : 3. Find the area of $\square ABCD$ given that ΔABD is an equilateral triangle.

    1] $15\sqrt{3}$ sq.units   2] $12\sqrt{3}$ sq.units   3] $8\sqrt{3}$ sq.units   4] $16\sqrt{3}$ sq.units

53. If Rs.3600 amount to Rs.4050 in $\dfrac{5}{2}$ years, then what will Rs.5400 amount to in $\dfrac{3}{2}$ years at the same rate percent per annum simple interest?

    1] Rs.5915   2] Rs.5850   3] Rs.5805   4] Rs.5785

54. Solve: $[\overline{12569 - 12063}$ of $3 \times 1 \div 6] \div 11$.

    1] 21   2] 23   3] 25   4] None of these

55. 40% of wine from a barrel containing 360 litres of wine is transferred into an empty cask. If 55% of the wine from the cask is removed, then find the approximate quantity of wine remaining in the cask.

    1] 61 litres   2] 63 litres   3] 65 litres   4] 67 litres

56. An amount of Rs.720 is distributed among A, B and C. A's share is equal to $\frac{3}{7}$ times share of B and C's share is $\frac{5}{3}$ times share of A. Find the shares of A, B and C?

   1] Rs.150, Rs.250, Rs.125   2] Rs.144, Rs.336, Rs.250
   3] Rs.144, Rs.336, Rs.240   4] Rs.175, Rs.275, Rs.150

57. Average of three numbers a, b and c is 180. Also, b = 2a and c = 2.4a. What is the new average if a number 'd', which is three fourth of c, is introduced?

   1] 60   2] 180   3] 220   4] None of these

58. The number 1801800 is divisible by:

   I. 11   II. 13   III. 25   IV. 8
   1] I, III and IV   2] II, III and IV   3] III and IV   4] All of these

59. Find the value of m if $x^2 + (4m - 2)x + 3(m + 1) = 0$ has equal roots?

   1] $-\frac{1}{4}, -1$ 2] $-\frac{1}{4}, -2$ 3] $-\frac{1}{4}, 2$ 4] $2, -\frac{1}{2}$

60. In a class of 60 students, 35 like Mathematics and 25 like History and Mathematics. Find the number of students who like only History?

   1] 20   2] 25   3] 35   4] 30

61. What is the last digit of the number $(177)^{27}$?

   1] 3   2] 1   3] 7   4] 9

62. A person sells two articles of the same cost price such that one sale brings him a profit while the other, a loss. If the selling price of one of them is Rs.216 and that of the other is Rs.144, then find the cost price of the articles if profit percentage is equal to loss percentage?

   1] Rs.190   2] Rs.175   3] Rs.180   4] Rs.160

63. In a family, the age of the mother is 5 more than three times the age of her son. Difference between age of father and son is four times the age of the son. Find the age of the father, if total age of the family is 95 years.

   1] 35 years   2] 50 years   3] 45 years   4] 40 years

64. A committee of 4 members is to be formed from 4 men and 5 women. Find the number of ways in which this can be done if the committee should contain exactly 3 women?

   1] $^4C_3 \times 5$ 2] $(^5C_3 \times 4) - 1$ 3] $^5C_3 \times 4$ 4] $^4C_2 \times 4$

65. $|x - 1| = 4$

$y^2 - 13y + 42 = 0$

DIRECTIONS for questions 66 to 80 : Choose the correct alternative.

66. A, B and C start a business by investing Rs.400, Rs.600 and Rs.800 respectively. A invests Rs.200 more after 4 months while B withdraws Rs.100 after 7 months. What is A's share out of total profit of Rs.454, earned at the end of the year?

1] Rs.174   2] Rs.156   3] Rs.128   4] Rs.106

67. A boat travels from Phoolnagar to Baharnagar and back everyday. When the boat travels towards Phoolnagar, it moves downstream and its speed is 98 km/hr, and while moving towards Baharnagar, its speed is 42 km/hr. If it takes 6 hrs to travel downstream, then how long does it take to travel upstream and what is the speed of the stream?

1] 12 hrs; 30 km/hr   2] 14 hrs; 28 km/hr
3] 14 hrs; 23 km/hr   4] 12 hrs; 32 km/hr

68. Solve: $\sqrt[3]{\dfrac{1000}{343} \times 3\dfrac{24}{64}}$

1] $\dfrac{7}{15}$ 2] $\dfrac{15}{7}$ 3] $\dfrac{17}{8}$ 4] $\dfrac{8}{17}$

69. What is the greatest length that can be used to measure exactly, the lengths: 1 m.26 cm, 3 m.96 cm and 10 m.80 cm?

1] 27 cm   2] 36 cm   3] 9 cm   4] 18 cm

70. On selling a bicycle for Rs.1800, Ravi loses 30%. In order to gain 40%, he must sell the bicycle for:

1] Rs.3500   2] Rs.3550   3] Rs.3650   4] None of these

71. A milkman carries 500 litres of milk with him and delivers 12% of the milk to Rahul, then delivers 15% of the remaining to Ramesh and then 20% of the remaining to Swapnil. Find the total quantity of milk delivered by him.

1] 255 litres   2] 214 litres   3] 235 litres   4] 200 litres

72. Find the odd one out in the given group of numbers: 9, 25, 49, 64, 121.

1] 121 2] 25 3] 64 4] 9

73. The incomes of three members A, B and C of a family are in the ratio 3 : 5 : 4 and their savings are in the ratio 2 : 3 : 1. Find the ratio of their expenses, if total income of the three is Rs.19200 and the total of their savings is Rs.2400?

1] 10 : 13 : 11 2] 10 : 17 : 15 3] 4 : 5 : 7 4] 6 : 3 : 7

74. Find the approximate value of $\dfrac{\sqrt{120.99} + \sqrt[3]{27.01} - \sqrt[5]{32.01}}{\sqrt[2.99]{215.95} - \sqrt[4.01]{256.07}}$.

1] 2 2] 4 3] 8 4] 6

75. In a cube, the body diagonal measures $20\sqrt{3}$ cm in length. Find the total surface area of the cube?

1] 2000 cm^2 2] 2200 cm^2 3] 2400 cm^2 4] None of these

76. If HCF and LCM of two numbers are 16 and 64 respectively and one of the numbers is 16, then what is the second number?

1] 64 2] 32 3] 128 4] None of these

77. What is the remainder when 7^8 is divided by 5?

1] 0 2] 3 3] 2 4] 1

78. If α and β are roots of the equation $2x^2 + 3x - 9 = 0$, then find the value of $2\alpha + 3\beta$. (given that $\alpha > \beta$).

1] 9 2] –6 3] 6 4] $-\dfrac{3}{2}$

79. Vivek's present age is seven less than Ram's age 3 years ago. Nitin's present age is equal to Vivek's age 5 years hence. Sum of their ages 3 years ago was 51. What will be Nitin's age 10 years hence?

1] 10 more than Vivek's present age.
2] 10 more than Ram's present age.
3] 2.5 times Vivek's age 3 years ago.
4] 2 more than Ram's age 5 years hence.

80. If $\dfrac{a + 2b}{bc} + \dfrac{b + 2c}{ca} + \dfrac{c + 2a}{ab} = 0$, then (a + b + c) = ? (given that a ≠ b ≠ c ≠ 0).

1] abc 2] 0 3] 3abc 4] 2

SPACE FOR ROUGH WORK

DIRECTIONS for questions 81 and 82: Choose the correct alternative.

81. Complete the series: 121, 200, 285, 376, 473, _____
     1] 530   2] 533   3] 539   4] 576

82. Complete the series: 30, 120, 480, 1920, _____
     1] 7180   2] 7200   3] 7680   4] 7820

DIRECTIONS for question 83: A certain relationship exists between elements of figure [a] and [b]. Choose the option that bears an identical relationship with figure [c].

83.

84.

DIRECTIONS for questions 84 and 85: Choose the option that will continue the series logically.

85.

K	P	M	R	O

T	R	S	U
1]	2]	3]	4]

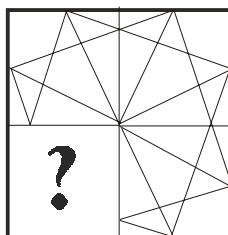*DIRECTIONS for questions 86 to 90: Choose the option that will replace the question mark so as to complete the series logically.*

86.

| 1] | 2] | 3] | 4] |

87.

| 1] | 2] | 3] | 4] |

88.

1]   2]   3]   4]

89.

1]   2]   3]   4]

90.
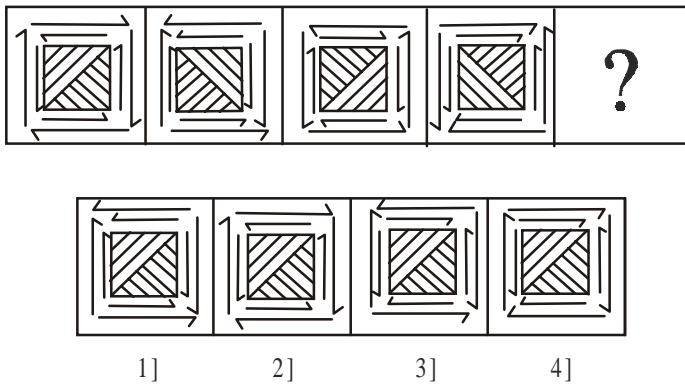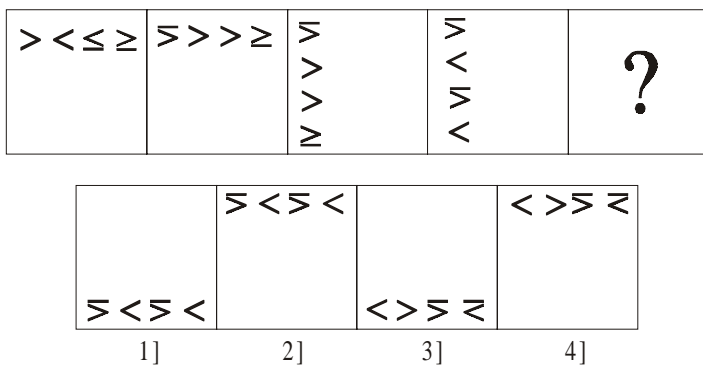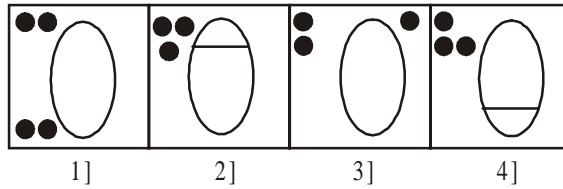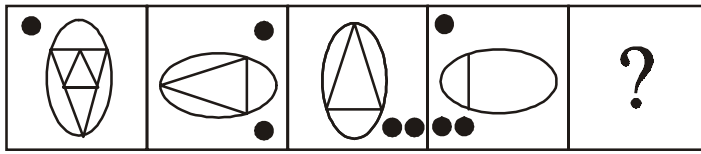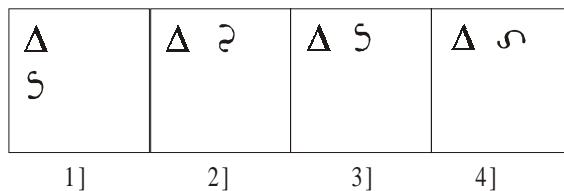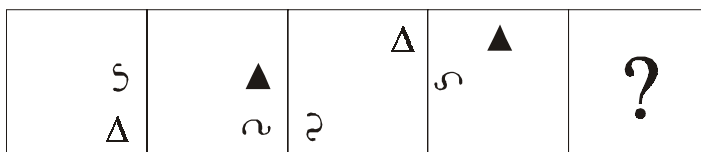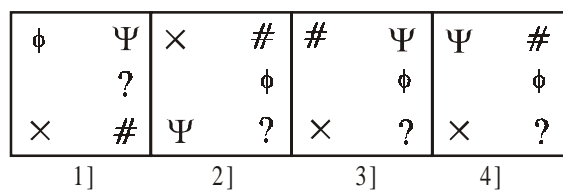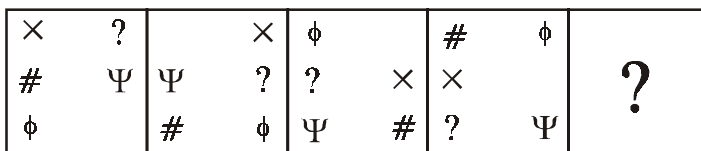
1]   2]   3]   4]

DIRECTIONS for questions 91 to 93: Choose from the options, the block that will replace the question mark so as to complete the master figure [X].
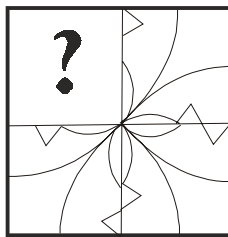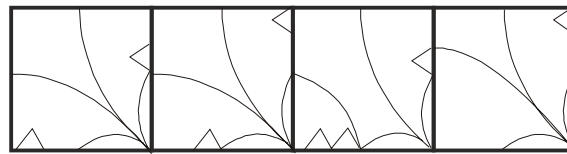
91.

[X]
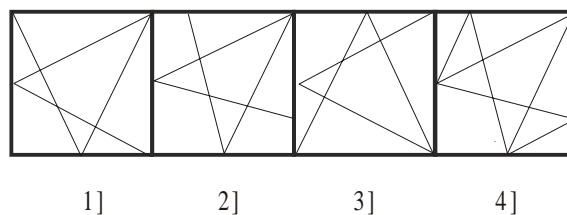
1]   2]   3]   4]
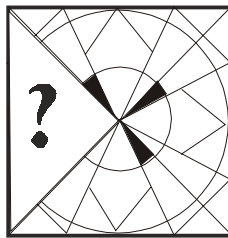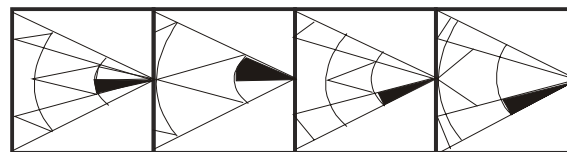
92.

[X]   1]   2]   3]   4]
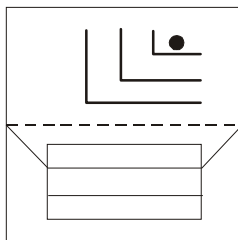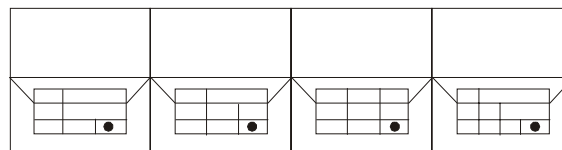
93.

[X]   1]   2]   3]   4]

DIRECTIONS for question 94: The figure [X] represents a transparent square sheet with a pattern. Choose the option that appears when the sheet is folded along the dotted line.
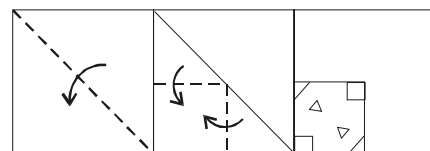
94.

[X]   1]   2]   3]   4]

DIRECTIONS for question 95: The question describes how a piece of paper is folded twice (Steps X and Y) and then cut (Step Z). Choose the option that best shows what the paper would look like when unfolded to normal size.
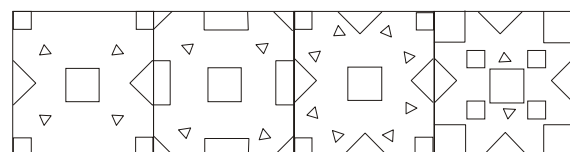
95.

[X]   [Y]   [Z]

1]   2]   3]   4]

96. If O means ×, Δ means +, @ means ÷, ~ means −, = means >, × means =, □ means <, which of the following statements is/are true?

    I. $\dfrac{4O4\Delta8\ @\ 8\ \sim\ 2}{\sqrt{2000\Delta5^2}} = \dfrac{4\ @\ 2}{1\Delta2^3}$

    II. $4\ \sim\ \sqrt{8}\ \times\ 8\ @\ 2\ \sim\ 2\sqrt{2}$
    III. $12\ @\ 3\ \sim\ 7\ \Delta\ 9\ \square\ 17\ @\ 2\ \Delta\ 8$
    1] I and II   2] Only I   3] I and III   4] All of these

97. If A ~ B means $AB + A^2$, $A \otimes B$ means $A + B + 2AB$, then find the value of
    $\left(\overline{9 \sim 2} \div 3\right) + \left(\overline{11 \otimes 4} \sim 7\right)$
    1] 12368   2] 10745   3] 11363   4] 11750

98. If in a coding language, '✧' means '+', '✶' means '−', '%' means '×', '@' means '÷' and
    x = 169 @ 13 % 7 ✶ 300 @ 10 % 3

    y = 750 @ 10 ✧ 25 ✶ $\overline{9 ✧ 7}$ % 4 ✶ 37

    then which of the following statements is false?
    1] x + y = 0   2] x > y   3] 4 − 3 = y   4] y < 0 < x

99. If a # b = $a^2 + b^2$, a \$ b = $\dfrac{a + b + 3}{2}$ and $\boxed{a} = \sqrt{a}$, then $\boxed{a \# b}$ = a \$ b holds true
    for:
    1] a = 1; b = 3   2] a = 3; b = 4   3] a = 2; b = 3   4] a = 4; b = 6

100. Find the value of : $\sqrt{\dfrac{1024}{512} \div 10 - 16 \times 4 - 4 \div 1 - \dfrac{\sqrt{625}}{25} \div \overline{26 + 20}}$ given that '+' stands for

     '−' ; '−' stands for '×', '×' stands for '÷' and '÷' stands for '+'.
     1] 12   2] 13   3] 14   4] 15

DIRECTIONS for questions 101 to 104: Choose the correct alternative.

101. The word which is formed by using the $2^{nd}, 4^{th}, 6^{th}, 7^{th}$ and 10th letter of the word PRECEDENCE means:

     1] apprehension   2] sect   3] evidence   4] belief

102. If you unscramble the word RDTCIE, it means all of the following except:
     1] praise   2] repute   3] faith   4] None of these

The word which is formed by using the 1st, 4th, 5th and 6th letter of the word ALIMONY means:

1] candour   2] whine   3] berate   4] bless

104. If even numbered letters of the word SURROGATE are selected, how many meaningful three letter words can be formed?

1] none   2] one   3] two   4] four

DIRECTIONS for questions 105 to 108: Each of the questions consists of two capitalized words which have a certain relationship with each other, followed by 4 pairs of words. Choose the pair that is NOT RELATED to each other in the same way as the capitalized pair.

105. RED   :   FURY
     1] black   :   evil
     2] blue   :   sky
     3] green   :   envy
     4] white   :   purity

106. GRAPE   :   WINE
     1] flour   :   cake
     2] fossil   :   oil
     3] index   :   book
     4] sand   :   glass

107. FORTHRIGHT   :   SECRETIVE
     1] honest   :   deceitful
     2] sophisticated   :   cosmopolitan
     3] better   :   inferior
     4] cultured   :   primitive

108. SLOW   :   SNAIL
     1] swift   :   cheetah
     2] knavish   :   fox
     3] light   :   petal
     4] faithful   :   dog

DIRECTIONS for questions 109 and 110: Find the odd one out.

109. 1] monk   2] warden   3] rector   4] rabbi

110. 1] swarm   2] envy   3] herd   4] pack

DIRECTIONS for questions 111 to 113: Each statement in the question below is followed by four arguments, I, II, III, IV. You have to classify them into strong and weak arguments and select the appropriate option. Strong arguments must be both important and directly related to the statement. Weak arguments may not be directly related or may be related to trivial aspects of the statements and may be of minor importance.

111. The government should discontinue the subsidy on fertilizers.
     I. Yes : Fertilizer subsidies are a big drain on the exchequer.
     II. No : Poor farmers will be hit most by the withdrawal of subsidy.
     III. Yes : Agriculture is a pampered sector and agricultural income is not taxed.
     IV. No : First the subsidy on kerosene should be withdrawn.
     1] I and II are strong   2] Only III is strong
     3] II and IV are strong   4] I, II and IV are strong

112. Cloning of humans should be completely banned.

   I. No : It gives another option to the couples who cannot have their own children.
   II. Yes : The cloning of any species, whether they be human or non-human, is ethically and morally wrong
   III. Yes : Cloning would lead to loss of identity, or sense of uniqueness and individuality
   IV. No : it would be a source of perfect transplant organs
   1] Only I and IV are strong.   2] All are strong.
   3] All are weak.   4] Only I is weak.

113. Students must be given the opportunity to assess the performance of their teachers.

   I. Yes : Feedback from students would help teachers to change their style of teaching for the benefit of the students.
   II. No : Students might bring in their personal bias which might dilute the effectiveness of the feedback.
   III. No : To judge a person one must be in a position of authority.
   IV. Yes : This would strengthen student-teacher relationship.
   1] I and II are strong   2] I and IV are strong
   3] only I is strong   4] I, III and IV are strong

DIRECTIONS for questions 114 and 115: You are given two sentences, A and B.

Mark [1], if A is the cause and B is the effect.

Mark [2], if B is the cause and A is the effect.

Mark [3], if A and B are both independent causes.

Mark [4], if A and B are not related.

114. A] The match was cancelled as illegal ticket holders created a riot-like situation.
     B] In the absence of administrative control, local goons sold false tickets.

115. A] They were late for the movie.
     B] They did not get good seats.

DIRECTIONS for questions 116 and 117: A statement is followed by two courses of action, A and B.

Mark [1], if A should be the course of action.

Mark [2], if B should be the course of action.

Mark [3], if A is to be followed by B as the course of action.

Mark [4], if B is to be followed by A as the course of action.

116. The students of this college frequently skip classes.

     A] A minimum attendance requirement must be fixed by the college.
     B] No student should be allowed to enter a class late.

117. The employee of the office has been caught embezzling the company funds.

     A] The concerned employee should be sacked.
     B] The employee's assets should be frozen.

The Hindi film "Lagaan" may have been made a little earlier if its director had opted for a violent climax. Ashutosh Gowarikar, writer and director of "Lagaan", was initially turned down by various producers and financiers. Perhaps his quaint tale about a non-violent triumph over oppression and humiliation seemed too far from the set formula of commercial cinema. One producer was willing to take on the project provided Gowarikar changed the story to kill the bad guy in the end. However, Gowarikar stuck to his convictions and the result is a rather Gandhian film that has become a run-away hit. This has reinforced a familiar truth that the audience of commercial films is not as bloodthirsty as many film producers would like to believe. But even more importantly, "Lagaan" is an example of how defiant and patient creativity can work wonders. For such determination sometimes breaks down stereotypical notions of what is possible and what people want.

118. The general perception of the audience, according to many producers, is considered to be revengeful.

119. "Lagaan's" success can be attributed to the fact that Gowarikar stuck to the convention of the film industry that believes it knows what is possible and what will be popular.

120. Creativity and determination defeated conventional ideas considered to be mandatory for successful commercial films.

SECTION-IV : LOGICAL REASONING

NUMBER OF QUESTIONS : 40

DIRECTIONS for questions 121 to 125: Choose the correct alternative.

121. If 'HELP' is coded as 8-5-3-7 and 'TEAR' is coded as '2-5-1-9', then what is the code for 'SCORE'?

1] 1-3-6-9-5   2] 1-3-9-6-5   3] 6-3-5-1-9   4] 5-6-9-1-3

122. If 'UNLIT' is coded as 'FMORG' and 'SOLID' is coded as 'HLORW', then 'SLIHV' is code for:

1] SHORE   2] HORSE   3] FIEROS   4] None of these

123. If 'AFTER' is coded as 1-6-20-5-18 and 'MARK' is coded as 13-1-18-11, then 'BLACK' is coded as:

1] 2-12-1-3-11   2] 5-3-6-4-4   3] 12-1-3-11-2   4] 6-3-4-5-4

124. If 'PIXEL' is coded as RGZCN and 'DOWN' is coded as FMYL, then 'MORAL' is coded as:

1] OMTYN   2] NTOYM   3] LNTYN   4] OMYNT

125. If 'OBLIGE' is coded as PCMJHF and 'LEAD' is coded as MFBE, then what is the code for 'PROBLEM'?

1] QSPCMFN   2] OQNAKDL   3] QSPCKDL   4] OQNAMFN

DIRECTIONS for questions 126 to 130 : Refer to the data below and answer the questions that follow.

The requirements for the post of an Assistant-Manager-Quality Assurance in a company are as follows:
A] Should have FDA approval, should have faced atleast one audit.
B] Should have 8-10 years of experience in any of the industries : Biotech, Pharma, Life Sciences, Clinical Research.
C] Educational qualification : PG in M.Pharma/Science.
D] He/she should not be older than 40 years as on July 1, 2006.
   If the candidate does not satisfy only condition [B], then he/she is to be referred to Manager-Quality Assurance. If the candidate does not satisfy only condition [D], then he/she is to be referred to the Project Manager.

Mark [1], if the candidate is selected for the post.

Mark [2], if the candidate is to be referred to the Manager-Quality Assurance.

Mark [3], if the candidate is to be referred to the Project Manager.

Mark [4], if the candidate is not selected.

126. Somdatta Dey has done his PG-M.Pharma and has 9 years of work experience in Clinical Research. He was born on 12th June, 1968.

127. Dilmohan Singh has 5 years of experience in Biotech industry and 5 years in Pharma industry. He is 38 years old as on December 1, 2004. He has done his PG-M.Pharma, has FDA approval and has faced 2 audits.

128. Mohit Kumar is 39 years old as on January 1, 2005. He has done his PG in Science. He has FDA approval and has faced 3 audits during his work experience of 7 years in Clinical Research sector.

129. Shirishe Gupta is not less than 39 years of age as on December 2004. She has a PG-M.Pharma degree. She has 7 years of work experience in Pharma industry and 2 years of experience as lecturer, she has an FDA approval and has faced one audit.

130. Shilpa Pal has FDA approval and has faced 3 audits in her 8 years of work experience in Biotech industry. She has done her PG in Science. She celebrated her 38th birthday on July 30th, 2003.

DIRECTIONS for questions 131 to 135: Answer the following on the basis of the information given below.

A machine when fed with a string of numbers generates an output after processing the string based on a unique logic. If the following input is fed into the machine, it generates the desired output in the following steps.

INPUT   : 315   289   275   809   125

STEP I : 809   289   275   315   125

STEP II : 809   315   275   289   125

STEP III: 809   315   289   275   125

In this case, STEP III is the desired ouput.

131. If the following INPUT is fed into the machine which of these would be the desired output?

INPUT   : 3245   829   555   189   5123

1] 5123   829   555   189   3245
2] 189   555   829   3245   5123
3] 5123   3245   829   555   189
4] 3245   5123   555   189   829

132. How many steps are required to generate the output of the following INPUT?

INPUT   : 513   829   725   215   908

1] 3   2] 2   3] 6   4] 4

133. Which number will appear at 5th position from left at step II for the following INPUT?

INPUT   : 13   21   52   91   24

1] 24   2] 91   3] 52   4] 13

134. Which number will appear at 4th position from the left in step III for the following INPUT?

INPUT : 125   111   121   131   212

1] 121   2] 125   3] 111   4] None of these

135. What will be the output of the INPUT given in question 134?

1] 212 131 125 121 111
2] 212 125 111 131 121
3] 111 121 131 125 212
4] 212 111 131 121 125

DIRECTIONS for questions 136 to 138: Refer to the sequence below and answer the questions that follow.

∧ 7 B ♯ D V 9 5 θ C ✶ K 6 ψ G Δ 4 ∈ J 2

136. If every alternate symbol starting from first on the left is dropped, then which will be the 10th element from the right in the resulting series?

1] K   2] 5   3] C   4] G

137. If the series is reversed, which would be the 7th element to the left of the 8th element from the right?

1] ψ   2] Δ   3] G   4] 4

138. If every 7th element in the series starting from left is dropped, then how many elements are present such that they have symbols on their either sides?

1] 0   2] 1   3] 2   4] 3

DIRECTIONS for questions 139 and 140: Choose the correct alternative.

139. Rati's dog Alex runs out of its kennel in the West direction. She chases it. She runs 40 m behind it and then walks 9 m in the South direction. She then walks 100 m to her left and finally after walking 20 m in the North direction, she finds it by the bush. How far is Alex from its kennel?

1] 60 m   2] 49 m   3] 61 m   4] 71 m

140. Sudama loads his handcart with 200 coconuts at Nariyalnagar. He pulls his cart along 16 km in the East direction and delivers 15 coconuts. He then moves 12 km in the North-East direction and delivers 20 coconuts. To deliver 30 coconuts to Keshav, he walks 40 km in the Southern direction. During the transaction with Keshav, he drops one coconut there by mistake and moves in the South-West direction and walks for 12 km with the remaining coconuts. In which direction with respect to Nariyalnagar did Sudama drop the coconut by mistake?

1] North-West   2] South-East   3] South-West   4] South

DIRECTIONS *for questions 141 to 144: Answer the following on the basis of the information given below.*

Five boys P, Q, R, S and T and five girls A, B, C, D and E are going for a picnic. They travel by motorbikes of five different companies viz., Yama, Hona, Suzk, Baja and LMV such that only two persons are riding on a bike. On every bike, one boy and one girl are seated.
1. A does not want to go by Baja
2. P does not want to go with B.
3. C will go with R only when he is riding a Yama.
4. D will never go with R when he is riding a Baja.
5. E does not like LMV motorbike.
6. T and C never ride the same motorbike.
7. A will go with T when he is riding Suzk.
8. C and Q ride together on the same bike if the bike is Hona.
9. R does not go with B.

141. Which of the following groups are possible?

    I. C, T, Yama   II. C, R, Hona   III. D, R, Suzk   IV. E, T, LMV

    1] I and II   2] III and IV   3] III and II   4] Only III

142. How many boys do not wish to go with B?

    1] 0   2] 1   3] 2   4] 3

143. Which of the following group is not possible?

    1] D, S, Suzk   2] A, Q, Hona   3] P, D, Baja   4] C, R, Baja

144. If R drives LMV, then which of the following statement is true?

    1] C will go with him   2] B will go with him
    3] E will go with him   4] D will go with him

DIRECTIONS *for questions 145 to 148: Answer the following on the basis of the information given below.*

There are 10 books viz., A, B, C, D, E, F, G, H, I and J. They fall into the following categories: Literature, Philosophy, Politics, Science and Sociology. The number of books under each category is not the same. These books have been written by the authors Paulo, Sen, Mehta, Bond, Laxman, Dalal, Anand and Kumar. Sen and Dalal have written 2 books each. A particular writer writes books only on one of the 5 subjects given above and,

1. Books on Sociology are written by Bond and Mehta.
2. Book A is written by Bond.
3. Books I and J are books on Philosophy.
4. Laxman writes on Politics.
5. Books written by Anand and Kumar are books on Literature.
6. Books E, F and G are on Science.
7. Book H is on Politics.
8. Books under the categories of Sociology and Literature are in alphabetical order.

145. If book D is written by Kumar, then which book does Anand write?

    1] Book C   2] Book A
    3] Book B   4] Cannot be determined

146. If book G is written by Paulo, then books written by Sen fall under which category?

    1] Sociology   2] Science

    3] Philosophy   4] Cannot be determined

147. Which of the following information is required to determine the complete matrix correctly?

    1] Books written by Sen are based on Science

    2] Books written by Dalal are based on Philosophy

    3] Both [1] and [2]

    4] None of these

148. Which of the following is definitely false?

    1] Sen writes a book on Science

    2] Paulo writes a book on Philosophy

    3] Dalal writes a book on Science

    4] None of these

DIRECTIONS for questions 149 to 152: Answer the following on the basis of the information given below.

In a family of 11 members and spanning across three generations, the following information is given about the family:

1. The number of males in the Ist, IInd and IIIrd generation are 1, 2 and 2 respectively. The number of females in each of the three generations is 2.
2. A is married to B, both being grandparents in the family and have two children. E is sister of A.
3. B is mother-in-law of M who is a female and also of S who is a male.
4. O is a cousin of F (both being grandchildren and of the same gender).
5. T is paternal aunt of F and K (who is a female), F and K both being siblings of opposite gender.
6. P is daughter of S and niece of Y.

149. S is married to

    1] Y   2] P   3] T   4] None of these

150. K's father is

    1] Y   2] P   3] T   4] None of these

151. O's aunt is

    1] T   2] S   3] Y   4] None of these

152. A is

    1] Father of S   2] Mother of T   3] Father of M   4] Father of Y
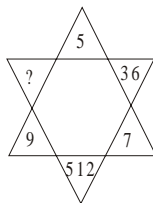
DIRECTIONS for questions 153 and 154: Choose the correct alternative.

153. For the given figure, choose from the options, the number that will replace the question mark.
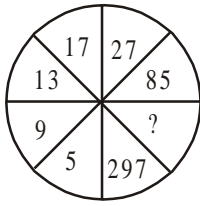
1] 163   2] 168   3] 175   4] 179

154. For the given figure below, choose from the options, the number that will replace the question mark.

1] 100   2] 1000   3] 10000   4] None of these

DIRECTIONS for questions 155 to 158: Answer the following on the basis of the information given below.

Six kids Tina, Amar, Harsh, Piya, Sweety and Sahil are participating in a fancy dress competition and are dressed as Jerry, Bravo, Cindrella, Noddy, Tweety and Minnie, not necessarily in the same order. We know that,
1. Cindrella walks in first.
2. Aman is dressed as Bravo.
3. Bravo has Harsh and Sweety following him in the same order.
4. Minnie walks after Sahil and before Aman.
5. Aman is the third kid after Tina, Tina not being second to appear and Aman not being the last to appear.
6. Noddy follows Tweety.
7. Jerry and Aman do not follow or lead each other.

155. Who is dressed as Minnie?

1] Sweety   2] Tina   3] Harsh   4] Piya

156. If the kids go on the stage thrice in the same order, then the kid who would be in the eleventh position is dressed as:

1] Tweety   2] Minnie   3] Jerry   4] Bravo

157. Who walks on the stage just after Cindrella?

1] Minnie   2] Jerry   3] Noddy   4] Tweety

158. The kid who walks between Aman and Sweety is dressed as:

1] Minnie   2] Tweety   3] Jerry   4] Noddy

DIRECTIONS for questions 159 and 160 : Refer to the data below and answer the questions that follow.
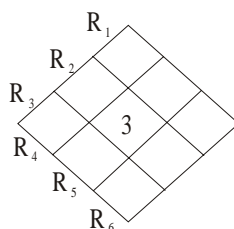
Arrange numbers 1 to 9 in the given grid such that

Sum of row R_1 = Sum of row R_5 = 11

Sum of row R_4 = Sum of row R_6 = 17

Sum of row R_2 = 14

Sum of row R_3 = 20

5 is present at the intersection of rows R_3 and R_6.

159. Which number is present at the intersection of rows R_3 and R_4?

1] 5   2] 6   3] 9   4] 2

160. Which number is present at the intersection of rows R_1 and R_6?

1] 1   2] 2   3] 8   4] 4

SPACE FOR ROUGH WORK