**SECTION I**
Number of questions 50

1. A boy appears for 5 papers, each of the same number of maximum marks. He scores in each of the papers in the ratio of 6: 7: 8: 9: 10. If his average score in all the five papers together was 60%, then in how many papers did he get more than 50% marks ?

   1. 2   2. 3   3. 4   4. 5

2. A square of side 2 m is made to form an octagon by chipping off triangular portions from its sides. If the octagon so formed is regular in nature, then the side of the octagon is:

   1. $\sqrt{2}/(\sqrt{2} + 1)$ 2. $2/(\sqrt{2} + 1)$ 3. $\sqrt{2}/(\sqrt{2} - 1)$ 4. $2/(\sqrt{2} - 1)$

3. Numbers x and y are positive and odd, and the number z is also positive but even. Then which of the following is not true?

   1. $(x - z)^2 y$ is even   2. $(x - z) y$ is odd   3. $(x - z) y^2$ is odd   4. $(x - y)^2 z$ is even

4. If $x > 5$ and $y < -1$, then which of the following statement is true?

   1. $x > -4y$ 2. $x + 4y > 1$ 3. $-4x < 5y$ 4. None of these

5. There are 2 lights, one red and the other green. The red one flashes 3 times every minute and the green one flashes 5 times every two minutes. If the lights start flashing together, then the total number of times both will have flashed together in an hour is

   1. 30   2. 24   3. 48   4. None of these

6. There are in all 128 boxes of Oranges. Each contains at least 120 Oranges and a maximum of 144 Oranges. Then the minimum number of boxes that will have the same number of Oranges is

   1. 5   2. 103   3. 3   4. 6

7. If the 9th of Dec 2001 is a Sunday, then what day was it on the 9th of Dec 1971?

   1. Wednesday   2. Tuesday   3. Saturday   4. Thursday

8. There are four gates for a circular compound having a wall around it. The four gates are in the North, South, East and the West directions. A house lying outside the compound, 3 km directly in line of the gate in the North, is just visible when we move 9 km to the east from the gate in the South. Then the diameter of the compound wall is :

   1. 6 km   2. 9 km   3. 12 km   4. None of these

9. A rectangular pool is 20 m wide and 60 m long. Around it is a walkaway of uniform width. If the area of this walkway is 516 sq m, what is the width of the walkway?

   1. 43 m   2. 4.3 m   3. 3 m   4. 3.5 m

10. Manisha has to multiply 2 numbers together, but she uses 35 instead of 53 in this product, and finds that the product has increased by 540. What is this increased product?

   1. 1050   2. 540   3. 1440   4. 1590

11. In the triangle DEF above, EC = AC, CF = BC. Angle D = 40°. What is the measure of ∠ACB?
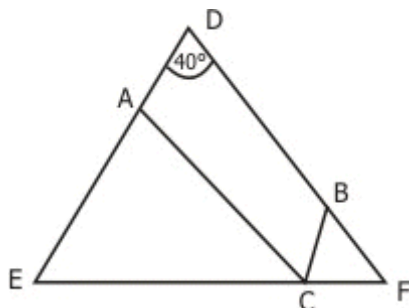
    1. 140°   2. 70°   3. 100°   4. None of these

12. 2 friends X and Y both start their employment on the 1st Jan 1950. X starts off with an initial salary of Rs. 300 per month and with an annual increment of Rs. 30 per month. Y starts of with an initial salary of Rs. 200 per month but with six monthly increments of Rs. 15. All salaries are given on the last day of the calendar month. What is the total salary drawn by X and Y till the 31st of Dec 1959?

    1. Rs. 93,300   2. Rs. 93,200   3. Rs. 93,100   4. None of these

13. In a 4-digit number, the sum of the first two digits is equal to that of the last two digits. The sum of the first and last digits is equal to the third digit. Finally the sum of the second and fourth digits is twice the sum of the other two digits. What is the third digit of the number ?

    1. 5   2. 8   3. 1   4. 4

14. Euclid has just created a triangle whose longest side is 20. If the length of the other side is 10 cm and the area of the triangle is 80 sq. cm, then what is the length of the longest side?

    1. $\sqrt{260}$ 2. $\sqrt{250}$ 3. $\sqrt{240}$ 4. $\sqrt{270}$

15. All the page numbers of the pages of a book are added up to 1000, but there is a mistake committed during this addition. One page is counted twice. What is the page number of the page counted twice?

    1. 44   2. 45   3. 10   4. 12

16. A college has to finance its new project by way of donations. It gets 75% of the money required by collecting Rs. 600 each from 60% of the population they expect to donate the money. What will be the per head contribution that will be required from the remaining people ?

    1. Rs 300   2. Rs 250   3. Rs 400   4. Rs 500

17. A ladder leans against a vertical wall. The top of the ladder is 8m above the ground. When the bottom of the ladder is moved 2 m farther away from the wall, the top of the ladder rests against the foot of the wall. What is the length of the ladder?

    1. 10 m   2. 15 m   3. 20 m   4. 17 m

18. m is the smallest positive integer such that $n > m$. Also if it is known that $n^3 - 7n^2 + 11n - 5$ is positive, then the possible value of m is:

    1. 4   2. 5   3. 8   4. None of these

19. Based on the figure below, what is the value of x, if $y = 10$?

1. 10   2. 11   3. 12   4. None of these

20. Three Maths classes : X, Y, and Z, take an algebra test.

The average score in class X is 83.
The average score in class Y is 76.
The average score in class Z is 85.
The average score of all students in classes X and Y together is 79.
The average score of all students in classes Y and Z together 81.

What is the average for all the three classes ?

1. 81   2. 81.5   3. 82   4. 84.5

21. In the rectangle above ABCD, DE = EF = FC. What is the ratio of the area of triangle BEF to the area of rectangle ABCD?

1. 1/6   2. 1/8   3. 1/9   4. None of these

22. Two sides of plot measure 32 meters and 24 meters and the angle between them is a perfect right angle. The other two sides measure 25 meters each and the other three angles are not right angles. What is the area of the plot in m^2?

1. 768   2. 534   3. 696.5   4. 684

23. Three friends, returning from a movie, stopped to eat a restaurant. After dinner, they paid their bill and noticed a bowl of mints at the front counter. Sita took 1/3 of the mints, but returned four because she had a momentary pang of guilt. Fatima then took ¼ of what was left but returned three for similar reasons. Eswari then took half of the remainder but threw two back into the bowl. The bowl had only 17 mints left when the raid was over. How many mints were originally in the bowl ?

    1. 38   2. 31   3. 41   4. None of these

24. x and y are both greater than 0. Also the sum of x and y is 1. What is the minimum value of $(x + (1/x))^2 + (y + (1/y))^2$?

    1. 12   2. 20   3. 12.5   4. 13.3

25. A finishes a piece of work in 4 days. B takes double the time of A. C takes double the time of B and D takes double the time of C. The four of them are grouped into 2 pairs. One pair takes 2/3rd the time needed by the second pair. Who are the members of the first pair?

    1. A, B   2. A, C   3. B, C   4. A, D

26. In a race A beats B by 12 metres and C by 18 metres. In another race of same length B beats C by 8 meters. The speed of A, B & C remain constant. Then length of the track in metres is:

    1. 48   2. 36   3. 72   4. 60

DIRECTIONS *for questions 27 – 28: Manasa is going from Mumbai to Pune which are 200 km apart at the speed of 60 kmph.*

Palto Automobiles Test drive Results

27. How much fuel would be required for the journey in litres ?

    1. 13.33   2. 12.5   3. 14.60   4. None of these

28. Manasa wants to reduce the fuel consumption, then which of the following should she do ?

    1. Increase the speed from 60 kmph   2. Decrease the speed from 60 kmph
    3. Maintain the speed at 60 kmph   4. Cannot be determined

29. Shyama and Vyom walk up an escalator (moving stairway). The escalator moves at a constant speed. Shyama takes three steps for every two of Vyom's steps. Shyama gets to the top of the escalator after having taken 25 steps, while Vyom (because his slower pace lets the escalator do a little more of the work) takes only 20 steps to reach the top. If the escalator were turned off, how many steps would they have to take to walk up?

1. 44   2. 50   3. 60   4. 80

30. At a certain fast food restaurant, Brian can buy 3 burgers, 7 shakes, and one order of french fries for Rs. 120 exactly. At the same place it would cost Rs. 164.5 for 4 burgers, 10 shakes, and one order of french fries. How must would it cost for ordinary meal of one burger, one shake, and one order of french fries?

1. Rs. 31   2. Rs. 41   3. Rs 21   4. None of these

31. a, b, c and d are 4 positive and real *numbers*. The *product* of $abcd$ is 1. *What* is the minimum *value* of $(1+a)(1+b)(1+c)(1+d)$?

1. 4   2. 1   3. 16   4. 18

32. There's a lot of work in preparing a birthday dinner. Even after the turkey is in the oven, there's still the potatoes and gravy, yams, salad, and cranberries, not to mention setting the table. Three friends, Asit, Arnold and Afzal, work together to get all of these chores done. The time it takes them to do the work together is six hours less than Asit would have taken working alone, one hour less than Arnold would have taken alone, and half the time Afzal would have taken working alone.

How long did it take them to complete the chores working together?

1. 20 minutes   2. 30 minutes   3. 40 minutes   4. 50 minutes

33. Rohit is rowing his boat in the river. He takes 6 hours less for rowing downstream than for rowing upstream in a trip that is 12 miles one way. If his rowing rate is doubled, then he takes 1 hour less for rowing downstream than for rowing upstream. What is the speed of the current of the river in miles/h?

1. 7/3   2. 4/3   3. 5/3   4. 8/3

34. Fresh Grapes contain 90 % water by weight. Dried grapes contain 20 % water by percentage. What will be the weight of dried grapes, when we begin with 20 kg. of fresh grapes?

1. 2 kg   2. 2.4 kg   3. 2.5 kg   4. None of these

35. A Fibonacci series of numbers is one in which any number in the sequence is the sum of the previous two terms. The first two terms for such a sequence are determined arbitrarily. In a particular Fibonnaci sequence of numbers, the difference between the squares of the seventh and the sixth terms is 517. What is the value of the 10th term?

1. 147   2. 76   3. 123   4. None of these

36. Owner of an art shop on a regular basis keeps on increasing the prices of all the products by x %, then after some time, he will reduce the prices by x %. This constitutes his one cycle. At the end of one cycle the price of a painting reduced by Rs. 441, and at the end of second such cycle he sold it at a price of Rs. 1944.81. Then the original price of the painting in Rs. is :

    1. 2756.25   2. 2256.25   3. 2500   4. 2000

37. In the latest census of two villages Chhota Shahar and Motha Shahar, the following statistics were observed. The number of males in Chhota Shahar were more than the corresponding number of males in Motha Shahar by 4522. The number of females in Motha Sshahar were more than the number of males in Motha Shahar by 4020. The number of females in Chhota Shahar were double the number of males in Motha Shahar. The number of females in Chhota Shahar were 2910 less than the number of females in Motha Shahar. How many males were there in Chhota Shahar?

    1. 11,264   2. 14,174   3. 5,632   4. 10,154

38. x and y are real numbers such that, $2 < x < 3$ and $-8 < y < -7$. Which of the following expressions will have the least value?

    1. $(x^2)y$ 2. xy^2 3. $5xy$ 4. None of these

39. Two trains run between the stations of A and B, which are 180 km apart. X and Y start simultaneously from A and B at 11 am and move towards each other. X runs nonstop between A and B at the speed of 70 km/h. Y runs at 50 kmph, but stops for 15 minutes at C, which is 60 km from B. At what distance from A do the trains X and Y cross each other?

    1. 112 km   2. 118 km   3. 120 km   4. None of these

40. There are coins of denomination 1 Re, 2 Rs, & 5 Rs. There total number is 300. Total amount is Rs. 960. When the number of 1 Re. & 2 Rs. coins are interchanged, the total value is decreased by Rs. 40. The total number of 5 Rs. coins are :

    1. 100   2. 140   3. 60   4. 150

41. In a certain number system, the product of 44 and 11 is 1034. What is 3111 of this particular number system in the decimal system?

    1. 406   2. 1086   3. 213   4. 691

42. One rupee coins worth Rs. 158 are put into separate bags, such that any amount between Rs. 1 and Rs. 158 can be handed over without having to open any of the bags to remove coins. What are the total number of bags required for this?

    1. 11   2. 12   3. 13   4. None of these

43. $a = b^2 - b$; $b \geq 4$; $a^2 - 2a$ is divisible by

    1. 15   2. 20   3. 24   4. None of these

44. How many 5 digit number can be formed from the digits 1, 2, 3, 4, 5, 6 which are divisible by 4 and digits are not repeated ?

    1. 144   2. 168   3. 192   4. 186

DIRECTIONS **for questions 45 – 46:** The batting average (BA) of a test batsman is computed from runs scored and innings played- completed innings and incomplete innings (not out) in the following manner:

r_1 = number of runs scored in completed innings.
n_1 = number of completed innings.
r_2 = number of runs scored in incomplete innings.
n_2 = number of incomplete innings.

$BA = (r_1 + r_2)/n_2$

To better assess a batsman's accomplishments, the ICC is considering two other measures MBA_1 and MBA_2 defined as follows:

$MBA_1 = r_1/n_1 + (n_2/n_1) \times max\ [0, [r_2/n_2 - r_1/n_1]]$
$MBA_2 = (r_1 + r_2)/(n_1 + n_2)$

45. Based on the information provided, which of the following is true ?

1. $MBA_1 \leq BA \leq MBA_2$
2. $BA \leq MBA_2 \leq MBA_1$
3. $MBA_2 \leq BA \leq MBA_1$
4. None of these

46. An experienced cricketer with no incomplete innings has a BA of 50. The next time he bats, the innings is incomplete and he scores 45 runs. It can be inferred that

1. BA and MBA_1 will both increase.
2. BA will increase and MBA_2 will decrease.
3. BA will increase and not enough data is available to assess change in MBA_1 and MBA_2.
4. None of these

47. What are the total number of distinct paths from A to F? Movement is allowed in the direction of arrows.

1. 5   2. 9   3. 10   4. 11

48. There are 6 balls of different colours and six boxes of colours same as that of the balls. Each ball has to be placed in a box. The number of ways in which these balls can be placed if at least two of the balls are in the box of different colour than that of the ball is

1. 1   2. 729   3. 720   4. 719

49. A set of consecutive positive integers beginning with 1 is written on the blackboard. A student came along and erased one number. The average of the remaining numbers is 35 7/17. What was the number erased?

1. 7   2. 8   3. 9   4. None of these

50. In some code, letters *a, b, c, d* and *e* represents numbers 2 , 4 , 5 , 6 and 10. We just don't know which letter represents which number. Consider the following relationships:

i) $a + c = e$,   ii) $b - d = d$, and   iii) $e + a = b$

Which statement below is true?

1. $b = 4$, $d = 2$ 2. $a = 4$, $e = 6$ 3. $b = 6$, $e = 2$ 4. $a = 4$, $c = 6$

End of Section I

SECTION II
Number of questions 50

PASSAGE I

In the modern scientific story, light was created not once but twice. The first time was in the Big Bang, when the universe began its existence as a glowing, expanding, fireball, which cooled off into darkness after a few million years. The second time was hundreds of millions of years later, when the cold material condensed into dense nuggets under the influence of gravity, and ignited to become the first stars.

Sir Martin Rees, Britain's astronomer royal, named the long interval between these two enlightenments, the cosmic "Dark Age". The name describes not only the poorly lit conditions, but also the ignorance of astronomers about that period. Nobody knows exactly when the first stars formed, or how they organised themselves into galaxies - or even whether stars were the first luminous objects. They may have been preceded by quasars, which are mysterious, bright spots found at the centres of some galaxies.

Now, two independent groups of astronomers, one led by Robert Becker of the University of California, Davis, and the other by George Djorgovski of the Caltech, claim to have peered far enough into space with their telescopes (and therefore backwards enough in time) to observe the closing days of the Dark Age.

The main problem that plagued previous efforts to study the Dark Age was not the lack of suitable telescopes, but rather the lack of suitable things at which to point them. Because these events took place over 13 billion years ago, if astronomers are to have any hope of unravelling them they must study objects that are at least 13 billion light years away. The best prospects are quasars, because they are so bright and compact that they can be seen across vast stretches of space. The energy source that powers a quasar is unknown, although it is suspected to be the intense gravity of a giant black hole. However, at the distances required for the study of Dark Age, even quasars are extremely rare and faint.

Recently some members of Dr. Becker's team announced their discovery of the four most distant quasars known. All the new quasars are terribly faint, a challenge that both teams overcame by peering at them through one of the twin Keck telescopes in Hawaii. These are the world's largest, and can therefore collect the most light. The new work by Dr. Becker's team analysed the light from all four quasars. Three of them appeared to be similar to ordinary, less distant quasars. However, the fourth and most distant, unlike any other quasar ever seen, showed unmistakable signs of being shrouded in a fog of hydrogen gas. This gas is leftover material from the Big Bang that did not condense into stars or quasars. It acts like fog because new-born stars and quasars emit mainly ultraviolet light, and hydrogen gas is opaque to ultraviolet. Seeing this fog had been the goal of would-be Dark Age astronomers since 1965, when James Gunn and Bruce Peterson spelled out the technique for using quasars as backlighting beacons to observe the fog's ultraviolet shadow.

The fog prolonged the period of darkness until the heat from the first stars and quasars had the chance to ionise the hydrogen (breaking it into its constituent parts, protons and electrons). Ionised hydrogen is transparent to ultraviolet radiation, so at that moment the fog lifted and the universe became the well-lit place it is today. For this reason, the end of the Dark Age is called the "Epoch of Re-ionisation". Because the ultraviolet shadow is visible only in the most distant of the four quasars, Dr. Becker's team concluded that the fog had dissipated completely by the time the universe was about 900 million years old, and one-seventh of its current size.

51. Astronomers find it difficult to study the Dark Age because:

1. suitable telescopes are few.
2. the associated events took place aeons ago.
3. the energy source that powers a quasar is unknown.
4. their best chance is to study quasars, which are faint objects to begin with.

52. The fog of hydrogen gas seen through the telescopes:

1. is transparent to hydrogen radiation from stars and quasars in all states.
2. was lifted after heat from stars and quasars ionised it.
3. is material which eventually became stars and quasars.
4. is broken into constituent elements when stars and quasars are formed.

53. In the passage, the Dark Age refers to:

1. the period when the universe became cold after the Big Bang.
2. a period about which astronomers know very little.
3. the medieval period when cultural activity seemed to have come to an end.
4. the time that the universe took to heat up after the Big Bang.

54. The four most distant quasars discovered recently:

1. could only be seen with the help of large telescopes.
2. appear to be similar to other ordinary quasars.
3. appear to be shrouded in a fog of hydrogen gas.
4. have been sought to be discovered by Dark Age astronomers since 1965.

PASSAGE II

Studies of the factors governing reading development in young children have achieved a remarkable degree of consensus over the past two decades. This consensus concerns the causal role of phonological skills in young children's reading progress. Children who have good phonological skills, or good "phonological awareness", become good readers and good spellers. Children with poor phonological skills progress more poorly. In particular, those who have a specific phonological deficit are likely to be classified as dyslexic by the time that they are 9 or 10 years old.

Phonological skills in young children can be measured at a number of different levels. The term phonological awareness is a global one, and refers to a deficit in recognising smaller units of sound within spoken words. Developmental work has shown that this deficit can be at the level of syllables, of onsets and rimes, or of phonemes. For example, a 4-year old child might have difficulty in recognising that a word like valentine has three syllables, suggesting a lack of syllabic awareness. A 5-year old might have difficulty in recognising that the odd word out in the set of words fan, cat, hat, mat is fan. This task requires an awareness of the sub-syllabic units of the onset and the rime. The onset corresponds to any initial consonants in a syllable, and the rime corresponds to the vowel and to any following consonants. Rimes correspond to rhyme in single-syllable words, and so the rime in fan differs from the rime in cat, hat, and mat. In longer words, rime and rhyme may differ. The onsets in val:en:tine are /v/ and /t/, and the rimes correspond to the spelling patterns 'al', 'en', and 'ine'.

A 6-year-old might have difficulty in recognising that plea and pray begin with the same initial sound. This is a phonemic judgement. Although the initial phoneme /p/ is shared between the two words, in plea it is part of the onset 'pl', and in pray it is part of the onset "pr'. Until children can segment the onset (or the rime), such phonemic judgements are difficult for them to make. In fact, a recent survey of different developmental studies has shown that the different levels of phonological awareness appear to emerge sequentially. The awareness of syllables, onsets, and rimes appears to emerge at around the ages of 3 and 4, long before most children go to school. The awareness of phonemes, on the other hand, usually emerges at around the age of 5 or 6, when children have been taught to read for about a year. An awareness of onsets and rimes thus appears to be a precursor of reading, whereas an awareness of phonemes at every serial position in a word only appears to develop as reading is taught. The onset-rime and phonemic levels of phonological structure, however, are not distinct. Many onsets in English are single phonemes, and so are some rimes (e.g., sea, go, zoo).

 The early availability of onsets and rimes is supported by studies that have compared the development of phonological awareness of onsets, rimes, and phonemes in the same subjects using the same phonological awareness tasks. For example, a study by Treiman and Zudowski used a same/different judgement task based on the beginning or the end sounds of words. In the beginning sound task, the words either began with the same onset, as in plea and plank, or shared only the initial phoneme, as in plea and pray. In the end-sound task, the words either shared the entire rime, as in spit and wit, or shared only the final phoneme, as in rat and wit. Treiman and Zudowski showed that 4- and 5-year old children found the onset-rime version of the same/different task significantly easier than the version based on phonemes. Only the 6-year-olds, who had been learning to read for about a year, were able to perform both versions of the tasks with an equal level of success.

55. The single-syllable words Rhyme and Rime are constituted by the exact same set of:

A. rime(s).   B. onset(s).   C. rhyme(s).   D. phonemes(s).

1. A,B   2. A,C   3. A,B,C   4. B,C,D

56. Which one of the following is likely to emerge last in the cognitive development of a child?

1. Rhyme.   2. Rime.   3. Onset.   4. Phoneme.

57. A phonological deficit in which of the following is likely to be classified as dyslexia?

1. Phonemic judgement   2. Onset judgement.
3. Rime judgement.   4. Any one or more of the above.

58. The Treiman and Zudowski experiment found evidence to support the following:

1.   At age 6, reading instruction helps children perform, both, the same-different judgement task.
2.   The development of onset-rime awareness precedes the development of an awareness of phonemes.
3.   At age 4-5 children find the onset-rime version of the same/different task significantly easier.
4.   The development of onset-rime awareness is a necessary and sufficient condition for the development of an awareness of phonemes.

59. From the following statements, pick out the true statement according to the passage:

1.   A mono-syllabic word can have only one onset.
2.   A mono-syllabic word can have only one rhyme but more than one rime.
3.   A mono-syllabic word can have only one phoneme.
4.   All of the above.

PASSAGE III

The union government's present position vis-à-vis the upcoming United Nations conference on racial and related discrimination world-wide seems to be the following: discuss race please, not caste; caste is our very own and not at all as bad as you think. The gross hypocrisy of that position has been lucidly underscored by Kancha Ilaiah. Explicitly, the world community is to be cheated out of considering the matter on the technicality that caste is not, as a concept, tantamount to a racial category. Internally, however, allowing the issue to be put on agenda at the said conference would, we are patriotically admonished, damage the country's image. Somehow, India's virtual beliefs elbow out concrete actualities. Inverted representations, as we know, have often been deployed in human histories as balm

for the forsaken - religion being the most persistent of such inversions. Yet, we would humbly submit that if globalising our markets are thought good for the 'national' pocket, globalising our social inequities might not be so bad for the mass of our people. After all, racism was as uniquely institutionalised in South Africa as caste discrimination has been within our society; why then can't we permit the world community to express itself on the latter with a fraction of the zeal with which, through the years, we pronounced on the former?

As to the technicality about whether or not caste is admissible into an agenda about race (that the conference is also about 'related discriminations' tends to be forgotten), a reputed sociologist has recently argued that where race is a 'biological' category caste is a 'social' one. Having earlier fiercely opposed implementation of the Mandal Commission Report, the said sociologist is at least to be complemented now for admitting, however tangentially, that caste discrimination is a reality, although, in his view, incompatible with racial discrimination. One would like quickly to offer the hypothesis that biology, in important ways that affect the lives of many millions, is in itself perhaps a social construction. But let us look at the matter in another way.

If it is agreed - as per the position today at which anthropological and allied scientific determinations rest - that the entire race of *homo sapiens* derived from an originally black African female (called 'Eve') then one is hard put to understand how, on some subsequent ground, ontological distinctions are to be drawn either between races or castes. Let us also underline the distinction between the supposition that we are all god's children and the rather more substantiated argument about our descent from 'Eve', lest both positions are thought to be equally diversionary. It then stands to reason that all subsequent distinctions are, in modem parlance, 'constructed' ones, and, like all ideological constructions, attributable to changing equations between knowledge and power among' human communities through contested histories here, there, and elsewhere.

This line of thought receives, thankfully, extremely consequential buttress from the findings of the Human Genome project. Contrary to earlier (chiefly 19th century colonial) persuasions on the subject of race, as well as, one might add, the somewhat infamous Jensen offerings in the 20th century from America, those findings deny genetic difference between 'races'. If anything, they suggest that environmental factors impinge on gene-function, as a dialectic seen to unfold between nature and culture. It would thus seem that 'biology' as the constitution of pigmentation enters the picture first only as a part of that dialectic. Taken together, the originary mother stipulation and the Genome finding ought indeed to furnish ground for human equality across the board, as well as yield policy initiatives toward equitable material dispensations aimed at building a global order where, in Hegel's stirring formulation, only the rational constitutes, the right. Such, sadly, is not the case as everyday fresh arbitrary grounds for discrimination are constructed in the interests of sectional dominance.

60.   When the author writes "globalising our social inequities", the reference is to:

1.   Going beyond an internal deliberation on social inequity.
2.   Dealing with internal poverty through the economic benefits of globalisation.
3.   Going beyond an internal delimitation of social inequity.
4.   Achieving disadvantaged people's empowerment, globally.

61.   According to the author, 'inverted representations as balm for the forsaken':

1.   Is good for the forsaken and often deployed in human histories.
2.   Is good for the forsaken, but not often deployed historically for the oppressed.
3.   Occurs often as a means of keeping people oppressed
4.   Occurs often to invert the status quo.

62. Based on the passage, which broad areas unambiguously fall under the purview of the UN conference being discussed?

    A. Racial prejudice.
    B. Racial pride.
    C. Discrimination, racial or otherwise.
    D. Caste-related discrimination.
    E. Race-related discrimination.

    1. A, E
    2. C, E
    3. A, C, E
    4. B, C, D

63. According to the author, the sociologist who argued that race is a 'biological' category and caste is a 'social' one:

    1. Generally shares the same orientation as the author's on many of the central issues discussed.
    2. Tangentially admits to the existence of "caste" as a category.
    3. Admits the incompatibility between the people of different race and caste.
    4. Admits indirectly that both caste-based prejudice and racial discrimination exist.

64. An important message in the passage, if one accepts a dialectic between nature and culture, is that:

    1. The results of the Human Genome project reinforces racial differences.
    2. Race is at least partially a social construct.
    3. Discrimination is at least partially a social construct.
    4. Caste is at least partially a social construct.

PASSAGE IV

Billie Holiday died a few weeks ago. I have been unable until now to write about her, but since she will survive many who receive longer obituaries, a short delay in one small appreciation will not harm her or us. When she died we - the musicians, critics, all who were ever transfixed by the most heart-rending voice of the past generation - grieved bitterly. There was no reason to. Few people pursued self-destruction more whole-heartedly than she, and when the pursuit was at an end, at the age of forty-four, she had turned herself into a physical and artistic wreck. Some of us tried gallantly to pretend otherwise, taking comfort in the occasional moments when she still sounded like a ravaged echo of her greatness. Others had not even the heart to see and listen any more. We preferred to stay home and, if old and lucky enough to own the incomparable records of her heyday from 1937 to 1946, many of which are not even available on British LP, to recreate those coarse-textured, sinuous, sensual and unbearable sad noises which gave her a sure corner of immortality. Her physical death called, if anything, for relief rather than sorrow. What sort of middle age would she have faced without the voice to earn money for her drinks and fixes, without the looks - and in her day she was hauntingly beautiful - to attract the men she needed, without business sense, without anything but the disinterested worship of ageing men who had heard and seen her in her glory?

And yet, irrational though it is, our grief expressed Billie Holiday's art, that of a woman for whom one must be sorry. The great blues singers, to whom she may be justly compared, played their game from strength. Lionesses, though often wounded or at bay (did not Bessie Smith call herself 'a tiger, ready to jump'?), their tragic equivalents were Cleopatra and Phaedra; Holiday's was an embittered Ophelia. She was the Puccini heroine among blues singers, or rather among jazz singers, for though she sang a cabaret version of the blues incomparably, her natural idiom was the pop song. Her unique achievement

was to have twisted this into a genuine expression of the major passions by means of a total disregard of its sugary tunes, or indeed of any tune other than her own few delicately crying elongated notes, phrased like Bessie Smith or Louis Armstrong in sackcloth, sung in a thin, gritty, haunting voice whose natural mood was an unresigned and voluptuous welcome for the pains of love. Nobody has sung, or will sing, Bess's songs from *Porgy* as she did. It was this combination of bitterness and physical submission, as of someone lying still while watching his legs being amputated, which gives such a blood-curdling quality to her Strange Fruit, the anti-lynching poem which she turned into an unforgettable art song. Suffering was her profession; but she did not accept it.

Little need be said about her horrifying life, which she described with emotional, though hardly with factual, truth in her autobiography *Lady Sings the Blues.* After an adolescence in which self-respect was measured by a girl's insistence on picking up the coins thrown to her by clients with her hands, she was plainly beyond help. She did not lack it, for she had the flair and scrupulous honesty of John Hammond to launch her, the best musicians of the 1930s to accompany her - notably Teddy Wilson, Frankie Newton and Lester Young - the boundless devotion of all serious connoisseurs, and much public success. It was too late to arrest a career of systematic embittered self-immolation. To be born with both beauty and self-respect in the Negro ghetto of Baltimore in 1915 was too much of a handicap, even without rape at the age of ten and drug-addiction in her teens. But, while she destroyed herself, she sang, unmelodious, profound and heartbreaking. It is impossible not to weep for her, or not to hate the world which made her what she was.

65. Why will Billie holiday survive many who receive longer obituaries?

1. Because of her blues creations.
2. Because she was not as self-destructive as some other blues exponents.
3. Because of her smooth and mellow voice.
4. Because of the expression of anger in her songs.

66. According to the author, if Billie Holiday had not died in her middle age:

1. She would have gone on to make a further mark.
2. She would have become even richer than what she was when she died.
3. She would have led a rather ravaged existence.
4. She would have led a rather comfortable existence.

67. Which of the following statements is not representative of the author's opinion:

1. Billie Holiday had her unique brand of melody.
2. Billie Holiday's voice can be compared to other singers in certain ways.
3. Billie Holiday's voice had a ring of profound sorrow.
4. Billie Holiday welcomed suffering in her profession and in her life.

68. According to the passage, Billie Holiday was fortunate in all but one of the following ways:

1. She was fortunate to have been picked up young by an honest producer.
2. She was fortunate to have the likes of Louis Armstrong and Bessie Smith accompany her
3. She was fortunate to possess the looks.
4. She enjoyed success among the public and connoisseurs.

PASSAGE V

The narrative of Dersu Uzala is divided into two major sections, set in 1902 and 1907, that deal with separate expeditions which Arseniev conducts into the Ussuri region. In addition, a third time frame forms a prologue to the film. Each of the temporal frames has a different focus, and by shifting them Kurosawa is able to describe the encroachment of settlements upon the wilderness and the consequent erosion of Dersu's way of life. As the film opens, that erosion has already begun. The first image is a long shot of a huge forest, the trees piled upon one another by the effects of the telephoto lens so that the landscape becomes an abstraction and appears like a huge curtain of green. A title informs us that the year is 1910. This is as late into the century as Kurosawa will go. After this prologue, the events of the film will transpire even farther back in time and will be presented as Arseniev's recollections. The character of Dersu Uzala is the heart of the film, his life the example that Kurosawa wishes to affirm. Yet the formal organisation of the film works to contain, to close, to circumscribe that life by erecting a series of obstacles around it. The film itself is circular, opening and closing by Dersu's grave, thus sealing off the character from the modern world to which Kurosawa once so desperately wanted to speak. The multiple time frames also work to maintain a separation between Dersu and the contemporary world. We must go back farther even than 1910 to discover who he was. But this narrative structure has yet another implication. It safeguards Dersu's example, inoculates it from contamination with history, and protects it from contact with the industrialised, urban world. Time is organised by the narrative into a series of barriers, which enclose Dersu in a kind of vacuum chamber, protecting him from the social and historical dialectics that destroyed the other Kurosawa heroes. Within the film, Dersu does die, but the narrative structure attempts to immortalise him and his example, as Dersu passes from history into myth.

We see all this at work in the enormously evocative prologue. The camera tilts down to reveal felled trees littering the landscape and an abundance of construction. Roads and houses outline the settlement that is being built. Kurosawa cuts to a medium shot of Arseniev standing in the midst of the clearing, looking uncomfortable and disoriented. A man passing in a wagon asks him what he is doing, and the explorer says he is looking for a grave. The driver replies that no one has died here, the settlement is too recent. These words enunciate the temporal rupture that the film studies. It is the beginning of things (industrial society) and the end of things (the forest), the commencement of one world so young that no one has had time yet to die and the eclipse of another, in which Dersu has died. It is his grave for which the explorer searches. His passing symbolises the new order, the development that now surrounds Arseniev. The explorer says he buried his friend three years ago, next to huge cedar and fir trees, but now they are all gone. The man on the wagon replies they were probably chopped down when the settlement was built, and he drives off. Arseniev walks to a barren, treeless spot next to a pile of bricks. As he moves, the camera tracks and pans to follow, revealing a line of freshly built houses and a woman hanging her laundry to dry. A distant train whistle is heard, and the sounds of construction in the clearing vie with the cries of birds and the rustle of wind in the trees. Arseniev pauses, looks around for the grave that once was, and murmurs desolately, "Dersu." The image now cuts farther into the past, to 1902, and the first section of the film commences, which describes Arseniev's meeting with Dersu and their friendship.

Kurosawa defines the world of the film initially upon a void, a missing presence. The grave is gone, brushed aside by a world rushing into modernism, and now the hunter exists only in Arseniev's memories. The hallucinatory dreams and visions of Dodeskaden are succeeded by nostalgic, melancholy ruminations. Yet by exploring these ruminations, the film celebrates the timelessness of Dersu's wisdom. The first section of the film has two purposes: to describe the magnificence and inhuman vastness of nature and to delineate the code of ethics by which Dersu lives and which permits him to survive in these conditions. When Dersu first appears, the other soldiers treat him with condescension and laughter, but Arseniev watches him closely and does not share their derisive response. Unlike them, he is capable of immediately grasping Dersu's extraordinary qualities. In camp, Kurosawa frames Arseniev by himself, sitting on the other side of the fire from his soldiers. While they sleep or joke among themselves, he writes in his diary and Kurosawa cuts in several point-of-view shots from his perspective of trees that appear animated and sinister as the fire light dances across their gnarled,

leafless outlines. This reflective dimension this sensitivity to the spirituality of nature, distinguishes him form the others and forms the basis of his receptivity to Dersu and their friendship. It makes him a fit pupil for the hunter.

69. How is Kurosawa able to show the erosion of Dersu's way of life?

    1. By documenting the ebb and flow of modernisation.
    2. By going back farther and farther in time.
    3. By using three different time frames and shifting them.
    4. Through his death in a distant time.

70. Arseniev's search for Dersu's grave:

    1. Is part of the beginning of the film.
    2. Symbolises the end of the industrial society.
    3. Is misguided since the settlement is too new.
    4. Symbolises the rediscovery of modernity.

71. The film celebrates Dersu's wisdom:

    1. By exhibiting the moral vacuum of the pre-modern world.
    2. By turning him into a mythical figure.
    3. Through hallucinatory dreams and visions.
    4. Through Arseniev's nostalgic melancholy ruminations.

72. According to the author the section of the film following the prologue:

    1. Serves to highlight the difficulties that Dersu faces that eventually kills him.
    2. Shows the difference in thinking between Arseniev and Dersu.
    3. Shows the code by which Dersu lives that allows him to survive his surroundings.
    4. Serves to criticize the lack of understanding of nature in the pre- modern era.

73. In the film Kurosawa hints at Arseniev's reflective and sensitive nature:

    1. By showing him as not being derisive towards Dersu, unlike other soldiers.
    2. By showing him as being aloof from other soldiers.
    3. Through shots of Arseniev writing his diary, framed by trees.
    4. All of the above.

74. According to the author, which of these statements about the film are correct?

    1. The film makes its arguments circuitously
    2. The film highlights the insularity of Arseniev.
    3. The film begins with the absence of its main protagonist.
    4. None of the above.

PASSAGE VI

Democracy rests on a tension between two different principles. There is, on the one hand, the principle of equality before the law, or more generally, of equality and on the other, what may be described as the leadership principle. The first gives priority to rules and the second to persons. No matter how skilfully we contrive our schemes, there is a point beyond which the one principle cannot be promoted without some sacrifice of the other.

Alexis de Tocqueville, the great nineteenth century writer on democracy, maintained that the age of democracy, whose birth he was witnessing, would also be the age of mediocrity: in saying this he was thinking primarily of a regime of equality governed by impersonal rules. Despite his strong attachment to democracy, he took great pains to point out what he believed to be its negative side: a dead level plane of achievement in practically every sphere of life. The age of democracy would, in his view, be an unheroic age; there would not be room in it for either heroes or hero-worshippers.

But modem democracies have not been able to do without heroes: this too was foreseen, with much misgiving, by Tocqueville. Tocqueville viewed this with misgiving because he believed, rightly or wrongly, that unlike in aristocratic societies there was no proper place in a democracy for heroes and, hence, when they arose they would sooner or later turn into despots. Whether they require heroes or not, democracies certainly require leaders, and, in the contemporary age, breed them in great profusion; the problem is to know what to do with them.

In a world preoccupied with scientific rationality the advantages of a system based on an impersonal rule of law should be a recommendation with everybody. There is something orderly and predictable about such a system. When life is lived mainly in small, self-contained communities, men are able to take finer personal distinctions into account in dealing with their fellow men. They are unable to do this in a large and amorphous society, and organised living would be impossible here without a system of impersonal rules. Above all, such a system guarantees a kind of equality to the extent that everybody, no matter in what station of life, is bound by the same explicit, often written, rules, and nobody is above them.

But a system governed solely by impersonal rules can at best ensure order and stability; it cannot create any shining vision of a future in which mere formal equality will be replaced by real equality and fellowship. A world governed by impersonal rules cannot easily change itself, or when it does, the change is so gradual as to make the basic and fundamental feature of society appear unchanged. For any kind of basic or fundamental change, a push is needed from within, a kind of individual initiative which will create new rules, new terms and conditions of life.

The issue of leadership thus acquires crucial significance in the context of change. If the modem age is preoccupied with scientific rationality, it is no less preoccupied with change. To accept what exists on its own terms is traditional, not modern, and it may be all very well to appreciate tradition in music, dance and drama, but for society as a whole the choice has already been made in favour of modernisation and development. Moreover, in some countries the gap between ideal and reality has become so great that the argument for development and change is now irresistible.

In these countries no argument for development has greater appeal or urgency than the one which shows development to be the condition for the mitigation, if not the elimination, of inequality. There is something contradictory about the very presence of large inequalities in a society which professes to be democratic. It does not take people too long to realise that democracy by itself can guarantee only formal equality; beyond this, it can only whet people's appetite for real or substantive equality. From this arises their continued preoccupation with plans and schemes that will help to bridge the gap between the ideal of equality and the reality which is so contrary to it.

When pre-existing rules give no clear directions of change, leadership comes into its own. Every democracy invests its leadership with a measure of charisma, and expects from it a corresponding measure of energy and vitality. Now, the greater the urge for change in a society the stronger the appeal of a dynamic leadership in it. A dynamic leadership seeks to free itself from the constraints of existing rules; in a sense that is the test of its dynamism. In this process it may take a turn at which it ceases to regard itself as being bound by these rules, placing itself above them. There is always a tension between 'charisma' and 'discipline' in the case of a democratic leadership, and when this leadership puts forward revolutionary claims, the tension tends to be resolved at the expense of discipline.

Characteristically, the legitimacy of such a leadership rests on its claim to be able to abolish or at least substantially reduce the existing inequalities in society. From the argument that formal equality or equality before the law is but a limited good, it is often one short step to the argument that it is a hindrance or an obstacle to the establishment of real or substantive equality. The conflict between a

'progressive' executive and a 'conservative' judiciary is but one aspect of this larger problem. This conflict naturally acquires added piquancy when the executive is elected and the judiciary appointed.

75. Dynamic leaders are needed in democracies because:

1. They have adopted the principles of 'formal' equality rather than 'substantive' equality
2. 'Formal' equality whets people's appetite for 'substantive' equality.
3. Systems that rely on the impersonal rules of 'formal' equality loose their ability to make large changes.
4. Of the conflict between a 'progressive' executive and a 'conservative' judiciary.

76. What possible factor would a dynamic leader consider a 'hindrance' in achieving the development goals of a nation?

1. Principle of equality before the law
2. Judicial activism
3. A conservative judiciary.
4. Need for discipline.

77. Which of the following four statements can be inferred from the above passage?

A. Scientific rationality is an essential feature of modernity.
B. Scientific rationality results in the development of impersonal rules.
C. Modernisation and development have been chosen over traditional music, dance and drama.
D. Democracies aspire to achieve substantive equality.

1. A, B, D but not C
2. A, B but not C, D
3. A, D but not B, C
4. A, B, C but not D

78. Tocqueville believed that the age of democracy would be an un-heroic age because:

1. Democratic principles do not encourage heroes.
2. There is no urgency for development in democratic countries.
3. Heroes that emerged in democracies would become depots.
4. Aristocratic society had a greater ability to produce heroes.

79. A key argument the author is making is that:

1. In the context of extreme inequality the issue of leadership has limited significance.
2. Democracy is incapable of eradicating inequality.
3. Formal equality facilitates development and change.
4. Impersonal rules are good for avoiding instability but fall short of achieving real equality.

80. Which of the following four statements can be inferred from the above passage?

A. There is conflict between the pursuit of equality and individuality
B. The disadvantages of impersonal rules can be overcome in small communities.
C. Despite limitations, impersonal rules are essential in large system.
D. Inspired leadership, rather than plans and schemes is more effective in bridging inequality.

1. B, D but not A, C
2. A, B but not C, D
3. A, D but not B, C
4. A, C but not B, D

DIRECTIONS *for questions 81 – 85: The sentences given in each question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. Choose the most logical order of sentences from among the given choices to construct a coherent paragraph*

81.

A. Although there are large regional variations, it is not infrequent to find a large number of people sitting here and there and doing nothing.

B. Once in Office, they receive friends and relatives who feel free to call any time without prior appointment.

C. While working, one is struck by the slow and clumsy actions and reactions, indifferent attitudes, procedure rather than outcome orientation, and the lack of consideration for others.

D. Even those who are employed often come late to the office and leave early unless they are forced to be punctual.

E. Work is not intrinsically valued in India.

F. Quite often people visit ailing friends and relatives or go out of their way to help them in their personal matters even during office hours.

1. ECADBF   2. EADCFB   3. EADBFC   4. ABFCDE

82.

A. But in the industrial era destroying the enemy's productive capacity means bombing the factories which are located in the cities.

B. So in the agrarian era, if you need to destroy the enemy's productive capacity, what you want to do is burn his fields or if you're really vicious, salt them.

C. Now in the information era, destroying the enemy's productive capacity means destroying the information infrastructure.

D. How do you do battle with your enemy?

E. The idea is destroy the enemy's productive capacity, and depending upon the economic foundation, that productive capacity is different in each case.

F. With regard to defence, the purpose of the military is to defend the nation and be prepared to do battle with its enemy.

1. FDEBAC   2. FCABED   3. DEBACF   4. DFEBAC

83.

A. Michael Hofman, a poet and translator, accepts this sorry fact without approval or complaint.

B. But thanklessness and impossibility do not daunt him.

C. He acknowledges too – in fact he returns to the point often – that best translators of poetry always fails at some level.

D. Hofman feels passionately about his work, and this is clear from his writings.

E. In terms of the gap between worth and rewards, translators come somewhere near nurses and street cleaners.

1. EACDB   2. ADEBC   3. EACBD   4. DCEAB

84.

A. Passivity is not, of course, universal.

B. In areas where there are no lords or laws, or in froniter zones where all men go armed, the attitude of the peasantry may well be different

C. So indeed it may be on the fringe of the unsubmissive

D. However for most of the soil-bound peasants the problem is, not whether to be normally passive or active, but when to pass from one state to another.

E. This depends on an assessment of the political situation.

1. BEDAC   2. CDABE   3. EDBAC   4. ABCDE

85.

  A. The situations in which violence occurs and the nature of that violence tends to be clearly defined at least in theory as in the proverbial Irishman's question: 'Is this a private fight or can anyone join in?"

  B. So the actual risk to outsiders though no doubt higher than our society is calculable

  C. Probably the only uncontrolled application of force are those of social superiors to social inferiors, even here there are probably some rules.

  D. However binding the obligation to kill, members of feuding families engaged in mutual massacres will be genuinely appalled if by some mischance a bystander or outsider is killed.

  1. DABC   2. ACDB   3. CBAD   4. DBAC

DIRECTIONS *for questions 86 – 90: In each of the following sentence are left blank. Beneath each sentence, four different ways of completing the sentence are indicated. Choose the best alternative from among the four.*

86.   Since her face was free of _____ there was no way to _____if she appreciated what had happened.

  1. make-up, realize   2. expression, ascertain
  3. emotion, diagnose   4. scars, understand

87.   In this context, the _____ of the British labour movement is particularly _____

  1. affair, weird   2. activity, moving
  3. experience, significant   4. atmosphere, gloomy

88.   The Darwin who _____ is most remarkable for the way in which he _____ the attributes of the world class thinker and head of household.

  1. comes, figures   2. arises, adds
  3. emerges, combines   4. appeared, combines

89.   But_____are now regularly written not just as tools but for well established organisations and institutions, not all of which seem to be _____away

  1. reports, withering   2. stories, handling   3. books, dying   4. obituaries, fading

90.   Indian intellectuals may boast if they are so inclined of being _____ to the most elistist among the intellectual _____of the world.

  1. subordinate, traditions 2. heirs, cliques   3. ancestors, socieites   4. heir, traditions

DIRECTIONS *for questions 91 – 95: For the word given at the top of the sentences, match the directions of the below (A, B, C, D) with their corresponding usage on the right*

91.   **MELLOW**

	Dictionary definition		Usage
A	Adequately and properly aged so as to be free of harshness	E	He has mellowed with age
B	Freed from the rashness of youth	F	The tones of the old violin were mellow
C	Of soft and loamy consistency	G	Some wines are mellow.
D	Rich and full but free from stridency	H	Mellow soil is found in the Gangetic plains.

1	
A	E
B	G
C	F
D	H

2	
A	E
B	F
C	G
D	H

3	
A	G
B	E
C	H
D	F

4	
A	H
B	G
C	F
D	E

92.   **PURGE**

	Dictionary definition		Usage
A	Remove a stigma from the name of	E	The opposition was purged after the coup.
B	Make clean by removing whatever is superfluous, foreign	F	The committee heard his attempt to purge himself of a charge of heresy
C	Get rid of	G	Drugs that purge the bowels are often bad for the brain.
D	To cause evacuation of	H	It is recommended to purge water by distillation

1	
A	E
B	G
C	F
D	H

2	
A	F
B	E
C	H
D	G

3	
A	H
B	F
C	G
D	E

4	
A	F
B	H
C	E
D	G

93. **EXCEED**

	Dictionary definition		Usage
A	To extend outside of or enlarge beyond	E	The mercy of God exceeds our finite minds
B	To be greater than or superior to	F	Their accomplishments exceeded our expectation.
C	Be beyond the comprehension of	G	He exceeded his authority when he paid his brother's gambling debts with money from the trust.
D	To go beyond a limit set by (as an authority or privilege)	H	If this rain keeps up, the river will exceed its banks by morning.

1	
A	H
B	F
C	E
D	G

2	
A	H
B	E
C	F
D	G

3	
A	G
B	F
C	E
D	H

4	
A	F
B	G
C	H
D	E

94. **RELIEF**

	Dictionary definition		Usage
A	Removal or lightening of something distressing	E	A ceremony fellows the relief of a sentry after the morning shift.
B	Aid in the form of necessities for the indigent	F	It was relief to take off the tight shoes
C	Diversion	G	The only relief I get is by playing cards.
D	Release from the performance of duty	H	Disaster relief was offered to the victims

1	
A	F
B	H
C	E
D	G

2	
A	F
B	H
C	G
D	E

3	
A	H
B	F
C	G
D	E

4	
A	G
B	E
C	H
D	F

95. **INFER**

	Dictionary definition		Usage
A	To derive by reasoning or implication	E	We see smoke and the infer fire
B	To surmise	F	Given some utterance, a listener may infer from it all sorts of things which neither the utterance nor the uttered implied
C	To point out	G	I waited all day to meet him; from this you can infer my zeal to see him
D	To hint	H	She did not take part in the debate except to ask and question inferring that she was not interested in the debate.

1	
A	G
B	E
C	F
D	H

2	
A	F
B	H
C	E
D	G

3	
A	H
B	G
C	F
D	E

4	
A	E
B	F
C	G
D	H

DIRECTIONS *for questions 96 – 100: For each of the words below, a contextual usage is provided pick the word from the alternatives that is most inappropriate in the given context.*

96. **Parsimonious**. The evidence was constructed from very parsimonious scraps of information.

1. Frugal   2. Penurious   3. Thrifty   4. Altruistic

97. **Obviate**. The new mass transit system may obviate the need for the use of personal cars.

1. Prevent   2. Forestall   3. Preclude   4. Bolster

98. **Disuse**. Some words fall into disuse as technology makes objects obsolete.

1. Prevalent   2. Discarded   3. Obiliterated   4. Unfashionable

99. **Specious**. A specious argument is not simply a false one but one that has the ring of truth.

1. Deceitful   2. Fallacious   3. Credible   4. Deceptive

100. **Facetious**. When I suggested that war is a method of controlling population, my father remarked that I was being facetious.

1. Jovian   2. Jovial   3. Jocular   4. Joking

End of Section II

SECTION III
Number of questions 50

DIRECTIONS *for questions 101 – 103: Answer each of the questions independent of each other.*

101. A king has unflinching loyalty from 8 of his ministers from M1 to M8. But he has to select only 4 to make a cabinet committee. He decides to choose these 4 such that each selected person shares a liking with at least one of the other 3 person selected. The selected person must also hate at least one of the likings of any of the other three person selected.

M1 likes fishing and smoking, but hates gambling.
M2 likes smoking and drinking, but hates fishing.
M3 likes gambling but hates smoking.
M4 likes mountaineering but hates drinking.
M5 likes drinking but hates smoking and mountaineering.
M6 likes fishing but hates smoking and mountaineering.
M7 likes gambling and mountaineering but hates fishing.
M8 likes smoking and gambling but hates mountaineering.

Who are four people selected by the king ?

1. M1, M2, M5, M6   2. M3, M4, M5, M6   3. M4, M5, M6, M8   4. M1, M2, M4, M7

102. Balbir the butcher has gone out of his shop when a dog came and licked away piece of meat. A furious Balbir went out in search of the devil dog and started questioning his neighbors about the looks and features of the dog. But then Balbir not being very popular among his neighbors, they were not very keen on helping him out. So they answered his questions with two statements each one of which was definitely true and the other was definitely false. Following are the responses that Balbir got from the neighbors.

N1: the dog had black hair and a long tail.
N2: the dog had a short tail and was wearing a collar.
N3: the dog had white hair and was not wearing a collar.

Give the correct description of the dog:

1. Long tail and white hair with a collar   2. Short tail and black hair with a collar
3. Long tail and black hair without a collar   4. Long tail and white hair without a collar

103. A nautanki carnival has come to the village which was playing six different nautankis as per the duration and schedule given below:

Name of the Nautanki	Duration	Scheduled starting time and the shows
Sati Savitri	1 hour	9 am, 2 pm
Joru ka Gulam	1 hour	10:30 am, 11:30 am
Sunderkand	30 minutes	10 am, 11 am
Veer Abhimanyu	1 hour	10 am, 11 am
reshma aur Shera	1 hour	9:30 am, 12 noon, 2 pm
Jhansi ki Rani	30 minutes	11 am, 1:30 pm

On a given day you would like to witness all the nautankis, fulfilling the additional condition of observing a lunch break from 12:30 pm to 1:30 pm. Which of the following arrangements shall fulfill all the conditions above:

1. Sati Savitri comes first, Sunderkand in third slot and Jhansi ki Rani at the end.
2. Jhansi ki Rani first, Sunderkand fourth and Sati Savitri fifth.
3. Sati Savitri comes first, Sunderkand in third slot and Jhansi ki Rani at the fifth place
4. Veer Abhimanyu comes in third slot, Reshma aur Shera in fourth slot and Jhansi ki Rani fifth slot

DIRECTIONS *for questions 104 – 106: The figure shows an oil pipeline network among 5 cities. each pipeline has the load carrying capacity of 1000. and each destination has a specific requirement that has to met. The city of Vaishali and Jyotishmati have a requirement of 400 each. The requirement at Panchal is 700 where as that at Vidisha is 200. The load can be carried in the indicated direction only. It is further given that the load carried from Vaishali to Jyotishmati is 300.*
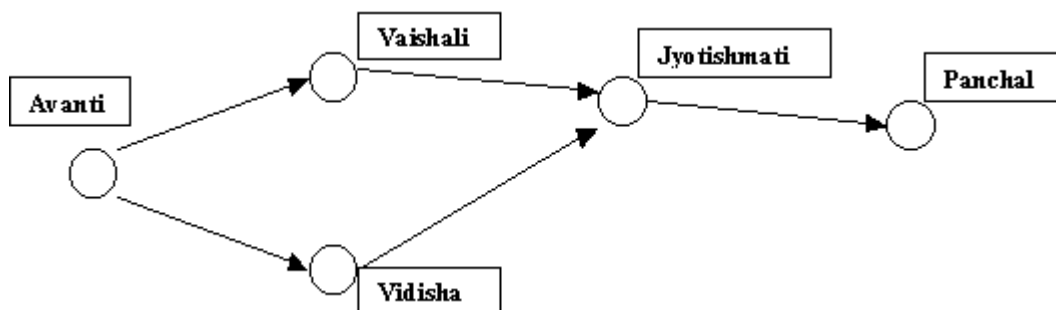
104. What is the free capacity in the Avanti – Vidisha pipeline:

1. 300   2. 200   3. 100   4. 0

105. What is the free capacity in the Avanti – Vaishali pipeline:

1. 0   2. 100   3. 200   4. 300

106. What is the quantity moved from Avanti to Vidisha:

1. 200   2. 800   3. 700   4. 1000

DIRECTIONS *for questions 107 – 110: Operation on sets are defined as C= A.B implies elements belonging to both A and B, D = A U B implies elements belonging to either set A or set B or both. Further a null set (f) is defined as a set that does not contain any element. In addition, the following sets are defined:*

     V is the set of vertebrates.
     M is the set of Mammals.
     D is the set of dogs.
     F is the set of fish.
     A is the set of alsatians.
     P is dog named Pluto

107. P.A = f and P U A = D, then which of the following is true:

  1. P and A are dogs   2. Pluto is an alsatian
     3. Pluto is not an alsatian   4. D is a Null set

108. If Y = F(D.V) is not a null set. Then which of the following is implied:

  1. All F are V   2. All D are V   3. Some F are D   4. None of these

109. If Z = (P.D) U M then it can be inferred that:

  1.   The elements of Z consist of Pluto the dog or any other mammal
  2.   Z implies any dog or mammal.
  3.   Z implies pluto or any other dog i.e. mammal
  4.   Z is a null set.

110. If X = M.D is such that X = D, which of the following is true:

  1. All D are M.   2. Some D are M   3. X is a Null set   4. All M are D

DIRECTIONS *for questions 111 – 116: Answer each of the questions independent of each other.*

111. Eight people carrying food baskets are going for a picnic on motorcycles. Their names are A, B, C, D, E, F, G, and H. They have four motorcycles, MI, M2, M3 and M4 among them. They also have four food baskets O, P, Q and R of different sizes and shapes and each can be carried only on motorcycles MI, M2, M3, or M4, respectively. No more than two persons can travel on a motorcycle and no more than one basket can be carried on a motorcycle. There are two husband-wife pairs in this group of eight people and each pair will ride on a motorcycle together. C cannot travel with A or B. E cannot travel with B or F. G cannot travel with F, or H, or D. The husband-wife pairs must carry baskets O and P. Q is with A and P is with D. F travels on M1 and E travels on M2 motorcycles. G is with Q, and B cannot go with R. Who is travelling with H?

  1. A   2. B   3. C   4. D

112. In a family gathering there are two males who are grandfathers and four males who are fathers. In the same gathering there are two females who are grandmothers and four females who are mothers. There is at least one grandson or a granddaughter present in this gathering. There are two husband-wife pairs in this group. These can either be a grandfather and a grandmother, or a father and a mother. The single grandfather (whose wife is not present) has two grandsons and a son present. The single grandmother(whose husband is not present) has two grand daughters and a daughter present. A grandfather or a grandmother present with their spouses does not have any grandson or granddaughter present.What is the minimum number of people present in this gathering?

   1. 10   2. 12   3. 14   4. 16

113. I have a total of Rs. 1000. Item A costs Rs. 110, item B costs Rs. 90, item C costs Rs. 70, item D costs Rs. 40 and item E costs Rs. 45. For every item D that I purchase, I must also buy two of item B. For every item A, I must buy one. of item C. For every item E, I must also buy two of item D and one of item B. For every item purchased I earn 1000 points and for every rupee not spent I earn a penalty of 1500 points. My objective is to maximise the points I earn. What is the number of items that I must purchase to maximise my points?

   1. 13   2. 14   3. 15   4. 16

114. Four friends Ashok, Bashir, Chirag and Deepak are out shopping. Ashok has less money than three times the amount that Bashir has. Chirag has more money than Bashir. Deepak has an amount equal to the difference of amounts with Bashir and Chirag. Ashok has three times the money with Deepak. They each have to buy at least one shirt, or one shawl, or one sweater, or one jacket that are priced Rs. 200, Rs. 400, Rs. 600, and Rs. 1000 a piece, respectively. Chirag borrows Rs. 300 from Ashok and buys a jacket. Bashir buys a sweater after borrowing Rs. 100 from Ashok and is left with no money. Ashok buys three shirts. What is the costliest item that Deepak could buy with his own money?

   1. A shirt   2. A shawl   3. A sweater   4. A jacket

115. In a "keep-fit" gymnasium class there are fifteen females enrolled in a weight-loss program. They all have been grouped in any one of the five weight-groups Wl, W2, W3, W4, or W5. One instructor is assigned to one weight-group only. Sonali, Shalini, Shubhra, and Shahira belong to the same weight-group. Sonali and Rupa are in one weight-group, Rupali and Renuka are also in one weight-group. Rupa, Radha, Renuka, Ruchika, and Ritu belong to different weight-groups. Sornya cannot be with Ritu, and Tara cannot be with Radha. Komal cannot be with Radha, Sornya, or Ritu. Shahira is in Wl and Somya is in W4 with Ruchika. Sweta and Jyotika cannot be with Rupali, but are in a weight-group with total membership of four. No weight-group can have more than five or less than one member. Amita, Babita, Chandrika, Deepika, and Elina are instructors of weight-groups with membership sizes 5, 4, 3, 2, and I respectively. Who is the instructor of Radha?

   1. Babita   2. Elina   3. Chandrika   4. Deepika

116. On her walk through the park, Harnsa collected 50 coloured leaves, all either maple or oak. She sorted them by category when she got home, and found the following:

   The number of red oak leaves with spots is even and positive.
   The number of red oak leaves without any spot equals the number of red maple leaves without spots.
   All non-red oak leaves have spots, and there are five times as many of them as there are red spotted oak
   leaves.
   There are no spotted maple leaves that are not red.
   There are exactly 6 red spotted maple leaves.
   There are exactly 22 maple leaves that are neither spotted nor red.
   How many oak leaves did she collect?

   1. 22   2. 17   3. 25   4. 18

DIRECTIONS *for questions 117 – 119: A group of 3 or 4 is to be selected out five boys Ram, Shyam, David, Peter and Rahim; and two girls Fiza and Kavita. The selection has to be made subject to the following conditions:*

If Shyam is selected, he would insists on Ram not being selected for the same team.
If Rahim is selected, then Shyam must also be selected and vice versa.
Kavita can be selected only if David is selected.
David does not like Peter's presence in the same team as his.
Ram insists that he would be in the team only if Peter is there. David would like to have Fiza in the same team as his.

117. Which of the following is a feasible group of four?

   1. Ram, Peter, Fiza, Rahim   2. Shyam, Rahim, Kavita, David
   3. Shyam, Rahim, Fiza, David   4. Fiza, David, Ram, Peter

118. Which of the following is a feasible group of three?

   1. David, Ram, Rahim   2. Peter, Shyam, Rahim
   3. Kavita, David, Shyam   4. Fiza, David, Ram

119. Which of the following statements is true?

   1. Kavita and Ram can be part of a group of four.
   2. A group of four can have two women.
   3. A group of four can have all four men.
   4. None of the above.

DIRECTIONS **for questions 120 – 123:** The following is a table describing garments manufactured based upon the colour and size of each lay. There are four sizes: M – Medium, L- Large, XL –Extra Large. There are three colours: Yellow, Red and White.

Lay No	Number of Garments											
	Yellow				Red				White			
	M	L	XL	XXL	M	L	XL	XXL	M	L	XL	XXL
1	14	14	7	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	42	42	21	0
3	20	20	10	0	18	18	9	9	0	0	0	0
4	20	20	10	0	0	0	0	0	30	30	15	0
5	0	0	0	0	24	24	12	0	30	30	15	0
6	22	22	11	0	24	24	12	0	32	32	16	0
7	0	24	24	12	0	0	0	0	0	0	0	0
8	0	20	20	10	0	2	2	1	0	0	0	0
9	0	20	20	10	0	0	0	0	0	22	22	11
10	0	0	0	0	0	26	26	13	0	20	20	10
11	0	22	2	11	0	26	26	13	0	22	22	11
12	0	0	2	2	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	20	20
14	0	0	0	0	0	0	0	0	0	0	22	22
15	0	0	10	10	0	0	2	2	0	0	22	22
16	0	0	0	0	1	0	0	0	1	0	0	0
17	0	0	0	0	0	5	0	0	0	0	0	0
18	0	0	0	0	0	32	0	0	0	0	0	0
19	0	0	0	0	0	32	0	0	0	0	0	0
20	0	0	0	0	0	5	0	0	0	0	0	0
21	0	0	0	18	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	26	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	22
24	0	0	0	8	0	0	0	1	0	0	0	0
25	0	0	0	8	0	0	0	0	0	0	0	12
26	0	0	0	0	0	0	0	1	0	0	0	14
27	0	0	0	8	0	0	0	2	0	0	0	12
Production	76	162	136	97	67	194	89	59	135	198	195	156
Order	75	162	135	97	67	194	89	59	135	197	195	155
Surplus	1	0	1	0	0	0	0	0	0	1	0	1

120.   How many lays are used to produce Extra-Extra large fabrics?

   1. 15   2. 16   3. 17   4. 18

121.   How many lays are used to produce yellow coloured fabrics ?

   1. 10   2. 11   3. 12   4. 14

122.   How many varieties of fabrics, which exceed the order, have been produced ?

   1. 3   2. 4   3. 5   4. 6

123.   How many lays are used to produce Extra-extra Large Yellow or Extra-extra Large White Fabrics?

   1. 8   2. 9   3. 10   4. 15

DIRECTIONS *for questions 124 – 129: Answer the questions based on the two graphs shown below. Figure 1 shows the amount of work distribution, in man-hours, for a software company between onsite and offsite activities. Figure 2 shows the estimated and actual work effort involved in the different offshore activities in the same company during the same period. [Note: onsite refers to work performed at the customer's premise and offshore refers to work performed at the developer's premise] There are*
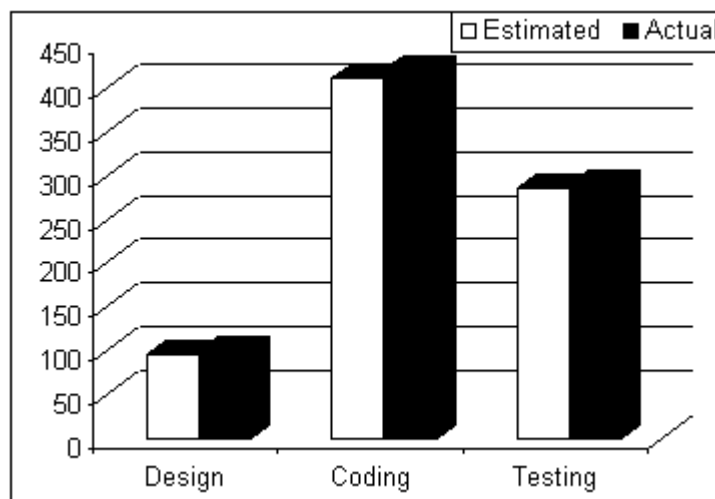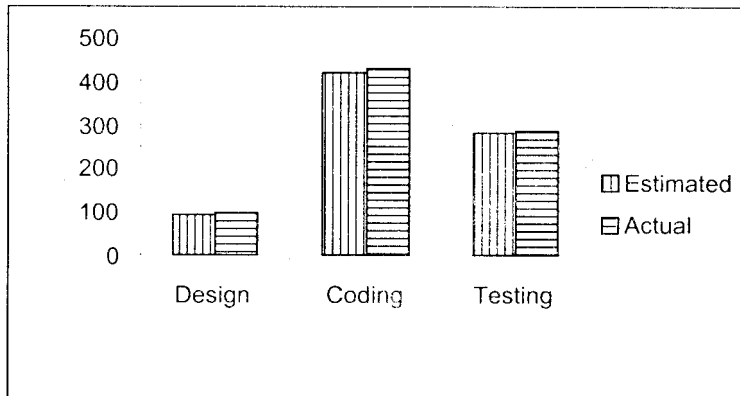
only three operations to be undertaken i.e., Design, Coding and Testing.

124. Which of the work requires as many man-hours as that spent in coding?

   1. Offshore, design and coding   2. Offshore coding
   3. Testing   4. Offshore,testing and coding

125. Roughly what percentage of the total work is carried out onsite?

   1. 40 percent   2. 20 percent   3. 30 percent   4. 50 percent

126. The total effort in man-hours spent onsite is nearest to which of the following ?

   1.   Estimated and actual effort for offshore
   2.   Estimated man hours of offshore coding
   3.   Actual manhours of offshore testing
   4.   Half of the manhours of estimated offshore coding

127. If 50 percent of offshore work were onsite, with distribution of effort between the tasks remaining the same, which is true about onsite work?

1. The amount of effort in coding is greater than the amount in testing
2. The amount of effort in coding is less than the amount in design
3. The amount of effort in design is greater than the amount in testing
4. The amount of effort in offshore testing is greater than the amount in total design

128. If 50 percent of offshore work were onsite, with distribution of effort between the tasks remaining the same,the proportion of testing carried out offshore would be:

1. 40 %   2. 30 %   3. 50 %   4. 70 %

129. If the total working hours were 100, which of the following tasks will account for approximately 50 hours?

1. Coding   2. Design   3. Offshore Testing   4. Offshore Testing and Design

DIRECTIONS *for questions 130 – 133: Answer these question based on the table given below concerning the busiest twenty international airports in the world.*

No.	Name	International Airport Type	Code	Location	Passengers
1	Hartsfield	A	ALT	Atlanta, Georgia, USA	77939536
2	Chicago-O/hare	A	ORD	Chicago, Illinois, USA	72568076
3	Los Angeles	A	LAX	Los Angles, California, USA	63876561
4	Heathrow Airport	E	LHR	London, United Kingdom	62263710
5	DFW	A	DFW	Dallas/Ft. Worth, Texas, USA	60000125
6	Haneda Airport	F	HND	Tokyo, Japan	54338212
7	Frankfurt Airport	E	FRA	Frankfurt, Germany	45858315
8	Roissy-Charles de Gaulle	E	CDG	Paris, France	43596943
9	Sam Francisco	A	SPO	San Francisco, California, USA	40387422
10	Denver	A	DIA	Denver, Colorado, USA	38034231
11	Amsterdam Schiphol	E	AMS	Amsterdam, Netherlands	36781015
12	Minneapolis-St. Paul	E	MSP	Minneapolis-St.Paul USA	34216331
13	Detroit Metropolitan	A	DTW	Detroit, Michigan USA	34038381
14	Miami	A	MIA	Miami, Florida, USA	33899246
15	Newark	A	EWR	Newark, New Jersey, USA	33814000
16	McCarran	A	LAS	Las Vegas, Nevada, USA	33669185
17	Phoenix Sky Harbor	A	PHX	Phoenix, Arizona, USA	33533353
18	Kimpo	FE	SEL	Seoul, Korea	33371074
19	George Bush	A	IAH	Houston, Texas, USA	33089333
20	John F. Kennedy	A	JFK	New York, New York USA	32003000

130. Of the five busiest airports, what is the percentage of passengers handled by Heathrow airport?

    1. 30   2. 40   3. 20   4. 50

131. What percentage of the top 10 airports are in the United States of America?

    1. 60   2. 80   3. 70   4. 90

132. How many A category airports account for > 40 million passengers?

    1. 4   2. 5   3. 6   4. 7

133. How many non US airports handle greater than 30 million passengers?

    1. 5   2. 6   3. 10   4. 14

DIRECTIONS *for questions134 – 136: The question has two pie charts first depicting the percentage break up the total crude oil tonnage of the various transportation available. The second pie given the percentage break up of the total cost incurred. The total tonnage is 12 million tonnes and the total cost incurred is Rs. 30 million.*
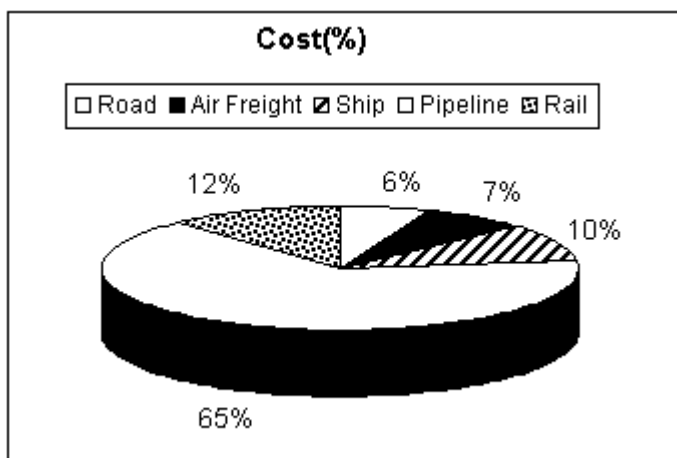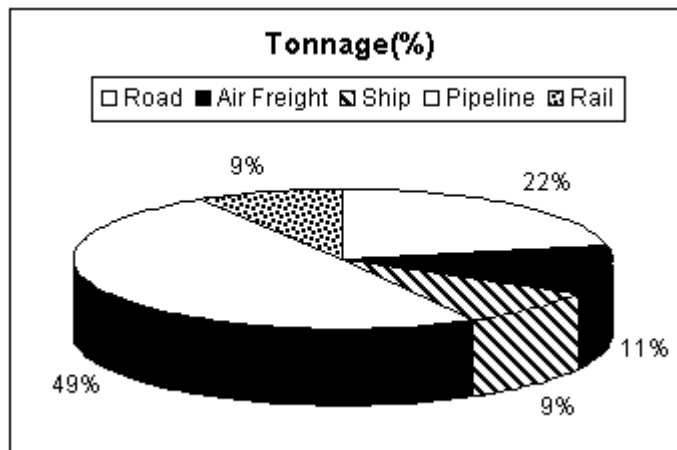
134. If P, Q, R be the cost incurred per ton of crude oil by ship, air freight and road respectively then find the correct relationship between P, Q, R :

    1. R > Q > P   2. P > R > Q   3. P > Q > R   4. R > P > Q

135. The cost incurred Rs. per ton for transportation of crude by rail and road (in Rs.) is :

1. 3   2. 1.5   3. 4.5   4. 8

136. Of all the options available the cheapest mode of transport is :

1. Road   2. Rail   3. Ship   4. Pipline

***DIRECTIONS* for questions137 – 139:** Answer the following questions based on the data below:
Each of the Six companies in an industry have to perform exactly six operations A, B, C, D, E, and F.
the percentage distribution of efforts for these six companies on these operations are given below:
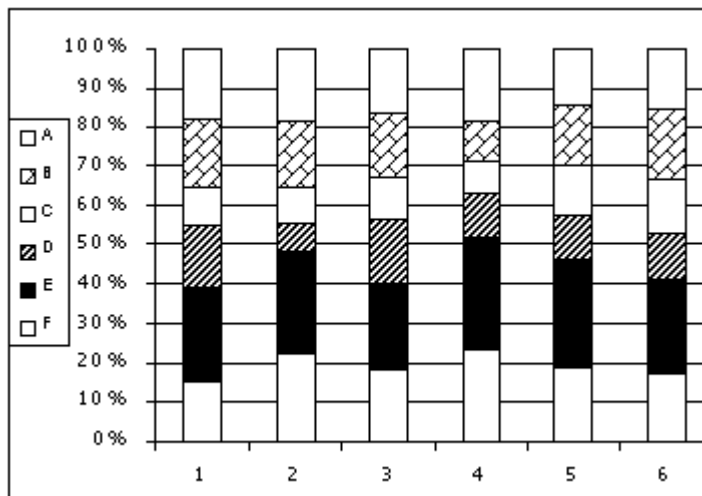
137. If the effort allocated to various operations is changed in the sequence: B and C are interchanged, then C and D are interchanged and finally D and E are interchanged. If the companies are now ranked in ascending order of the percentage effort allocated to operation E, then the rank of the company three is

1. 2   2. 3   3. 4   4. 5

138. If it is possible that the companies can remove outright the operations B, C, and D and redistribute the spared effort equally among all operations, then which operation will show maximum across all companies and all operations.

1. The company one in operation E   2. The company four in operation E
3. The company five in operation E   4 .The company five in operation E

139. A new technology is introduced in company 4 such that the efforts allocated to operations B, C, D, E and F gets equally divided among these. What is the change in percentage effort of E?

1 Reduce by 12.3   2. Reduce by 5.6   3 Increase by 12.3   4 Increase by 5.6

140. The Sharmas, The Banerjees and The Pattabirhamins eat different dishes for their lunch. The three families eat at different times and in different coloured chinaware. The following information is available about their eating habits:

The Sharmas eat at noon.
The family serving fried brinjal uses blue coloured chinaware
The Banerjees eat at two in the afternoon.
The family serving sambhar does not use red coloured chinaware
The family eating at 1 pm serves fried brinjal for lunch
The Pattabrahmins do not use white coloured chinaware
The family eating last serves makki ki roti
Which of the following statements is true?

1. The Bannerjees eat at 12.
2. The Sharma family eats sambhar in the white dinner set.
3. The Pittabrahmins eat brinjal in the red dinner set.
4. None of these

141. Mr. Ranga has three children about whose ages and dates of birth, he is always confused. However he has the following information available to help him out with the facts :
The Boy born in June is aged 7 years
One child whose name is not Anshuman is aged 4 years
Vaibhav is elder than Suprita
One boy was born in September. His name is not Vaibhav.
Suprita's Birthday falls in April
The youngest child is two years old.
Which of the following statements is true?

Based on the above clues, which one of the following statements is true?

1. Vaibhav is the oldest, followed by Anshuman who was born in September, Suprita was born in April and is the youngest.
2. Anshuman, the eldest of the three was born in June. Suprita is 4 and Vaibhav is 2.
3. Vaibhav is 7. Suprita was born in April and Anshuman is 2.
4. None of the above

DIRECTIONS *for Questions 142 to 143: Elle is three times older than Zaheer. Zaheer is half as old as Waheeda. Yogesh is elder than Zaheer.*

142. What is sufficient to estimate Elle's age ?

1. Zaheer is ten years old
2. Yogesh and Waheeda are both older than Zaheer by the same number of years
3. Both of the above
4. None of the above

143. Which of the following statements can be inferred from the information above

1. Yogesh is elder than waheeeda
2. Elle is older than waheeda
3. Elle's age may be less than that of waheeda
4. None of the above

DIRECTIONS *for questions 144 to 150: Each question is followed by two statements A and B. answer the question using the following instructions:*

Choose 1 if the question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.
Choose 2 if the question can be answered by using either statement alone.
Choose 3 if the question can be answered by using both statements together, but cannot be answered using either statement alone.
Choose 4 if the question cannot be answered even by using both statements together.

144.   Ram and Gopal bought apples from a fruit vendor. How many apples were bought by them?

   A.   Ram bought half as many apples as Gopak bought.
   B.   The dealer had a stock of 500 apples.

145.   On a given day a boat ferried 1500 passengers in 12 hours. How many round trips did the boat make?

   A.   The boat can carry 200 passengers at any time.
   B.   The boat takes 40 minutes each way with a 20 minute waiting time at the terminal

146.   What is the value of *x*?

   A.   *x* and *y* are unequal even integers, *x/y* is an odd integer
   B.   *x* and *y* are both even integers, each is less than 10 and the product of *x* and *y* is 12.

147.   What are the values of *m* and *n*?

   A.   *n* is an even integer and *m* is odd; $m > n$
   B.   the product of *m* and *n* is 30

148.   A square is inscribed in a circle. What is the difference between their areas?

   A. The diameter of the circle is 25√2cm
   B. The side of the square is 25cm

149.   How much time is required for downloading the software?

   A.   The data transfer rate is 6 kilobytes per second.
   B.   The size of the software is 4.5 megabytes

150.   Is the GDP of country X higher than that of country Y?

   A.   The GDPs of countries X and Y have been growing at a compounded annual growth rate of 5 % and 6 % respectively over the past 5 years.
   B.   Five years ago the GDP of country X was higher than that of country Y.

End of Section III

∇∇∇

Bulls Eye
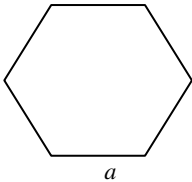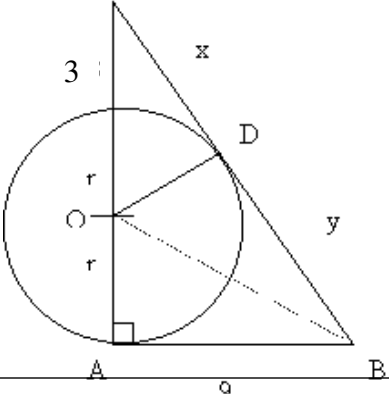
CAT – 2001

ANSWER KEY

1.	1	41.	1	81.	3	121.	4
2.	3	42.	4	82.	1	122.	2
3.	1	43.	3	83.	3	123.	4
4.	2	44.	3	84.	4	124.	1
5.	4	45.	4	85.	2	125.	3
6.	2	46.	2	86.	2	126.	3
7.	4	47.	3	87.	3	127.	4
8.	1	48.	4	88.	3	128.	4
9.	3	49.	1	89.	3	129.	1
10.	3	50.	2	90.	4	130.	3
11.	2	51.	2	91.	3	131.	1
12.	3	52.	2	92.	4	132.	2
13.	1	53.	1	93.	1	133.	2
14.	3	54.	1	94.	2	134.	3
15.	4	55.	4	95.	1	135.	2
16.	4	56.	4	96.	4	136.	1
17.	2	57.	4	97.	4	137.	2
18.	1	58.	3	98.	1	138.	4
19.	3	59.	1	99.	3	139.	1
20.	2	60.	1	100.	2	140.	2
21.	3	61.	3	101.	4	141.	3
22.	4	62.	2	102.	1	142.	1
23.	1	63.	4	103.	3	143.	2
24.	4	64.	4	104.	4	144.	4
25.	1	65.	1	105.	4	145.	4
26.	2	66.	3	106.	4	146.	4
27.	3	67.	4	107.	3	147.	4
28.	1	68.	2	108.	4	148.	2
29.	4	69.	3	109.	1	149.	3
30.	3	70.	1	110.	1	150.	4
31.	1	71.	4	111.	3		
32.	2	72.	4	112.	2		
33.	4	73.	4	113.	1		
34.	2	74.	3	114.	1		
35.	2	75.	3	115.	2		
36.	1	76.	3	116.	2		
37.	3	77.	1	117.	2		
38.	4	78.	1	118.	2		
39.	1	79.	4	119.	4		
40.	3	80.	4	120.	3		

CAT – 2001

EXPLANATIONS

1. Let the maximum marks in each paper be 100.
So he gets $6x$, $7x$, $8x$, $9x$ and $10x$ in each of the papers respectively.
Then 60% of total marks = $40x$
$\Rightarrow 300 = 40x \Rightarrow x = 7.5$
Hence the percentage marks in each paper is 45 %, 52.5 %, 60 %, 67.5 % and 75 % respectively.
So in 4 papers he got more than 50 % marks.
Ans. (3)

2.

a

Cos 45°=$(2 - a)/2a$
$\Rightarrow a = 2/(1+\sqrt{2})$.

3. Check the options, you will find that only option (1) is incorrect.

4. As no upper limit or lower limits are defined for the numbers x or y, thus we cannot be sure which of the options can be true.
You can check the options; you will find that only option (4) is correct.

5. Red light flashes once in every 1/3 of a minute.
Green light flashes once in every 2/5 of a minute.
Taking LCM of both the figures, we can find the time required by both to flash together = LCM of (1/3) and (2/5) = 2.
Hence they both flash once every two minutes.
Hence in 1 hour, they will flash 60/2 = 30 times.

6. If we start filling the first box with 120 Oranges, the second with 121 Oranges and so on, we will be able to fill 25 boxes, each with different number of Oranges in it.
Now all the other boxes will have to contain some number similar to that already contained in some other box.
Thus answer is 103. Option (2)

7. Total difference of years = 30 years. Leap years in these 30 years = 8. So odd no. of days = $8 \times 2 + 22$ (for ordinary years) = 38. So final odd no. of days = 38/7 = 3 days (take the remainder). On 9.12.2001 is Sunday so on 9.12.1971, it will be (7–3 = 4th day) Thursday.

8.

Making the equations : $OB^2 = OA^2 + AB^2$
$= OD^2 + BD^2$ or we can say
$r^2 + 9^2 = y^2 + r^2$ Therefore $y = 9$.
Making the equation $(3 + r)^2 - r^2 = x^2$ and
$(x + 9)^2 = (3 + 2r)^2 + 9^2$.
Solve for x and r.

9. Let the width of walkway = x m.
Area of walkway = 516
= $(60 + 2x) \times (20 + 2x) - 60 \times 20$.
So $516 = 1200 + 120x + 40x + 4x^2 - 1200$
$\Rightarrow 516 = 4x^2 + 160x$
$\Rightarrow x^2 + 40x - 129 = 0$
$\Rightarrow (x + 43)(x - 3) = 0$
$\Rightarrow x = 3, -43$ (–ve value is not possible).
So $x = 3$ m.

10. Let the number to be multiplied be z.
Then we can say $53x - 35x = 540$.
Solving we get $x = 30$.
Thus the new product she would have obtained is
= $30 \times 53 = 1590$.

11. From quadrilateral ADBC,
$(180° - x) + 40° + (180° - y) + z = 360°$.
$\Rightarrow -x - y + z + 40° = 0 \Rightarrow x + y - 40° = z$.
Also in ΔEDF, $\angle D = 180° - \angle E - \angle F \Rightarrow 40°$
$= 180 - x - y \Rightarrow x + y = 140°$.
So $z = 100°$.

12. The given data can help us form two sequences, they are as:
FOR X : The first term = $300 \times 12 = 3600$ (salary received in the first year)
Thereafter, he receives an increment of Rs. 30, i.e. an annual increment of Rs. 360.
Thus the common difference = Rs. 360.
Summing the values for 10 year period, and using the formula: , we get the total income of X as Rs. 52200.
FOR Y: The first term = $200 \times 6 = 1200$ (salary received in the first six months)
Thereafter, he receives an increment of Rs. 15, i.e. a six monthly increments of Rs. 90.
Thus the common difference = Rs. 90.
Summing the values for 20 terms (10 years, each period of 6 months).
Using the same formula, we get the total income of Y as Rs. 41100.
Summing both the values we get = Rs. 93,300.

13. Let a, b, c and d be the 4 digits of the number.
The equations we get $a + b = c + d$, $a + d = c$,
$b + d = 2(a + c)$.
Using 1 and 2, we can say that $a + b = a + 2d$.
So we get $b = 2d$.
Now $a + c = 3/2 d$ and $a - c = d - b = d - 2d = -d$.
Using the last two equations, we get $2c = 5/2 d$.
Or $c/d = 5/4$.
Since these are single digit numbers, the only values that satisfy this will be $c = 5$ and $d = 4$.

14. Let third side be x.
$S = (20 + 10 + x)/2 = (30 + x)/2$.
Now use Hero's formula for the area of the triangle

	and we can find the answer as 1st option.
15.	The first thing we will have to find out is the total number of pages in the book. Thus we need to find the sum of the first natural numbers, such that we reach to a number just short of 1000. For this we will have to go for hit and trial. Assume total number of pages as 44. Then sum of all the pages is 990, thus we can say that 990 + 10 = 1000. The page number added twice was 10.
16.	Total population be x. Then amount received right now is: $0.6x \times 600 = 360x$. This is 75% of the amount. Thus the total amount required is $480x$. Hence remaining amount = $480x - 360x = 120x$. So required contribution per head = $(120x/0.4 \, x) = 300$.
17.	Let distance from the wall be x. The length of the ladder is x + 2. Using the info in the question, we get the equation as $x^2 + 8^2 = (x+2)^2$. Solving we get x = 15, so the length of the ladder is 17 m.
18.	Upto n = 4, this equation is not satisfied. For n = 5, it is equal to 0. The least value for which it is satisfied is n = 6. Since n > m, so least value of m should be 5.
19.	We have to look for a right triangle with the difference in the sides of legs equal to 7 [(x- 3) – (x +4)]. Also if y = 10, then very likely that the two legs will be 6 and 8. So x will be either 9 or 11. If x = 11, then we get two sides as 8 and 15, which will form a right triplet 8, 15, 17. So x = 11 is the answer.
20.	Let the no. of students in classes are x, y, z respectively then. $83x + 76y = 79 (x + y)$ $\Rightarrow 4x - 3y = 0$ $\Rightarrow x : y = 3 : 4$ and $76y + 85z = 81 (y + z)$ $\Rightarrow 5y - 4z = 0$ $\Rightarrow y : z = 4 : 5$. Hence x : y : z = 3 : 4 : 5 $\Rightarrow$ x = 3k, y = 4k and z = 5k. Now average for all the three classes is $(83 \times 3k + 76 \times 4k + 85 \times 5k)/(3k + 4k + 5k) = 81.5$.
21.	Area of triangle BEF = ½ × EF × BC. Area of rectangle ABCD = DC × BC. Since EF = DC / 3, so required ratio = (½ × DC × BC) / (DC × BC × 3) = 1/6.
22.	If the quadrilateral is ABCD and ∠ABC = 90°, then $AC^2 = 24^2 + 32^2$ $\Rightarrow$ AC = 40. So area of Δ ABC = ½ × 24 × 32 = 384 m^2. Area of Δ ADC : Sides are 25, 25 and 40. Applying Hero's formula to these values, we get the area as 300 m^2. So total area = 384 + 300 = 684 m^2.
23.	Sita takes 1/3 of the total mints kept there..... which means total number of mints in the bowl should be a multiple of 3.
	There is no option, that satisfies this logic. (The actual answer is 48)
24.	For minimum value assume both to be equal x = 0.5 and y = 0.5. Thus the value of 1st term is 6.25, and similarly for the other term, the value is 6.25. Thus answer is 12.5.
25.	As is given: If A takes 4 days then B takes 8 days, C takes 16 days and D takes 32 days. A & D together take (4×32)/36 = 32/9 days, B & C together take (8 ×16)/24 = 16/3 days. As (32/9) / (16/3) = 2/3. So, the pairs are (A & D) and (B & C).
26.	Let length of track be X metres. Then A B C x x-12 x-18 x x-8 The ratio of speeds remains the same, so we can form the equation as x – 12 / x – 18= x / x – 8. Thus solving we get x = 48 m.
27.	Time taken in the given journey = (200)/(60) = (20)/(6) hrs. Required fuel = (20/6) × 4 = (40)/(3) = 13.33 litres.
28.	If speed is 40 km/hr, fuel consumption = (200/40) × 2.5 = 12.5 litres. So, for reducing fuel consumption, she should reduce speed from 60 km/hr.
29.	Given that escalator moves at a constant speed and Shyama takes three steps for every 2 steps of Vyom. Let escalator move x steps in the same time in which Shyama goes up 25 steps. Then total height of escalator = 25 + x steps. Now, Vyom goes up 25×2/3 steps in same time in which Shyama goes up 25 steps. Then total height of escalator = (50/3) + x + (10/3) + (x/5) = 20 + (6x/5) (Escalator go up x steps in which time Vyom go up 50/3 steps for Vyom's 1 step escalator goes up (x × 3) / 50 steps. For Vyom's (10/3) steps escalator go up x/5 steps) $\Rightarrow$ x = 25 So the required steps = 25 + 25 = 50
30.	3B + 7S + 1F = 120 …(I) and 4B + 10 S + 1F = 164.5 …(II). From (II) – (I), we get 1B + 3S = 44.5. Now from (I) we get 3B +7S + 1F = 120 $\Rightarrow$1B + 1S + 1F + 2B + 6S = 120 $\Rightarrow$ 1B +1S + 1F + 2(1B + 3S) = 120 $\Rightarrow$1B + 1S + 1F + 2 × 44.5 = 120 $\Rightarrow$ 1B + 1S + 1 F = 120 – 89. So 1B + 1S + 1F = Rs.31.
31.	For minimum value of product, let us assume that a = b = c = d = 1, then we get our answer as 16.
32.	Let they together will take x hour to do the work. Then Asit, Arnold, & Afbal will take respectively x + 6, x + 1 & 2x hrs. So 1/x = 1/(x+6) + 1/(x + 1) + 1/2x $\Rightarrow$ x = 2/3 hr = 40 minutes.
33.	Let speed of Rohit be x and of current be y. Then 12/(x + y) = {12/(x – y) - 6} $\Rightarrow$ $y^2 – x^2 + 4y = 0$………(1) and 12/(2x + y) = {12/(2x – y) -1} $\Rightarrow$ $4x^2 – y^2 - 24y = 0$………(2) eq. (1) × 4 + eq. (2)

	$\Rightarrow 3y^2 - 8y = 0$ $\Rightarrow y = 8/3$.
34.	Total weight of fresh grapes = 20 kg Weight of solid part = $(20 \times 10) /100 = 2$ kg. In dried grapes, water is 20%, so solid part is 80%. Hence total weight of dried grapes $= (2/80) \times 100 = 2.5$kg.
35.	Let the nth term be a_n. Given $a_7^2 - a_6^2 = 517 \Rightarrow (a_7 + a_6)(a_7 - a_6) = 517$ $\Rightarrow (a_7 + a_6)(a_7 - a_6) = 11 \times 47$ $\Rightarrow a_8 \times (a_6 + a_5 - a_6) = 11 \times 47$ $\Rightarrow a_8 \times a_5 = 11 \times 47$ $\Rightarrow a_8 = 47, a_5 = 11$ $\Rightarrow a_8 = a_7 + a_6 = 2a_6 + a_5 = 3a_5 + 2a_4$. So $a_4 = 7$. Now solve 7, 11, 18, 29, 47, 76, 123. So 10th term will be 123.
36.	Working backward from options (4) & (2) cannot be answer because after one cycle their value will be less than the selling price given. Option (3) is after I cycle will become 2059, so after cycle II it will be definitely less than the given price.
37.	Mc = no. of males in Chota Shahar, Mm = no. of males in Mota Shahar, Fc = no. of females in Chota Shahar, Fm= no. of females in Mota Shahar. Then Mc + 4522 = Mm….(1), Fm = Mm + 4020….(2), Fc = 2Mc …. (3), Fc = Fm – 2910 ….(4) From (1) Mm – Mc = 4522 ….(5) and From (2), (3), (4) 2Mc = Mm + 4020 – 2910 $\Rightarrow$ Mm – 2Mc = –1110 ….(6) Solving (5) and (6) for Mc we get Mc = 5632.
38.	Of the given options, X^2Y has the least value.
39.	Let us assume that they meet after x hours. So $70 \times x + 50 (x – 1/4) = 180$ $\Rightarrow 120x = 192.5$ $\Rightarrow x = (192.5/120)$. Thus the trains should meet at $(192.5/120) \times 70$ km. from A = 112 km.
40.	Given, there are coins of denomination of Re.1, Rs. 2 and Rs.5. Total number of coins 300. Total amount = Rs. 960. Let the number of coins of Rs. 1, Rs.2, Rs. 5 be x, y, and z respectively. Then $x + y + z = 300$ …..(1) $x + 2y + 5z = 960$ …. (2) $y + 2x + 5z = 920$ … (3) Solving equation (1) ,(2) and (3) we get $x = 60, y = 100, z = 140$.
41.	Let the base be n, then $n (4n + 4) (n + 1)$ $= n^3 + 3n + 4$ $\Rightarrow 4n^2 + 8n + 4 = n^3 + 3n + 4$ $\Rightarrow n^3 - 4n^2 - 5n = 0 \Rightarrow n = 0, -1, 5$. Hence base is 5. Therefore $3111 = 3 \times 125 + 25 + 5 + 1 = 406$.
42.	The coins can be broken into parts as 1, 2, 4, 8, 16, 32, 64, 31. Thus we will require 8 bags in all.
43.	We can write $a^2 – 2a = a (a - 2) = (b^2 – b)\{(b^2 – b) - 2\}$. This can be solved and re-written as $(b - 2)(b - 1) b (b + 1)$.
	This is a series of 4 consecutive numbers of which 2 will be definitely even (One definitely divisible by 4, other by 2) & one has to be definitely divisible by 3. Thus we get factors of $2 \times 3 \times 4 = 24$.
44.	The last two digit places can be filled in 8 ways. Remaining 3 places in $^4C_3 \times 3!$ ways. . Hence no. of 5 digit nos. which are divisible by 4 are $24 \times 8 = 192$.
45.	The increase or decrease in BA will depend on the performance of the batsman in the finished versus unfinished innings. In case the score in unfinished innings is very low, then the MBA_2 will decrease, in case it is higher, then MBA_2 will increase.
46.	In this case the unfinished innings score is lesser than the average of the finished innings, so MBA_2 will decrease. However as far as BA is concerned, even if he had scored a single run, BA would have increased. So answer is 2.
47.	ABCF, ABF, ADCF, ADEF, ADCEF, ABDEF, ABEF, ABCEF, ABDCF, ABDCEF i.e 10 ways.
48.	The number of all possible ways of putting 6 balls in 6 boxes is 6! There is only one correct way of putting the balls. It is not possible that only ball goes into the wrong box and remaining 5 into the right box. Thus if there is a mistake, at least 2 will be in the wrong box. Required number is 6! – 1 = 719.
49.	The average works out to 602/17. Now we know that the number of integers will be close to 17. After erasing the number of integers that remain is likely to be 68 (multiple of 17). In this case the sum of the number is $602/17 \times 68$ = 2408. If the number of integers were 69, (adding the erased number to 68 integers) then the sum comes out to be $69 \times 70/2 = 2415$. So the number that has been erased is 2,415 – 2,408 = 7.
50.	Using i) we can see that the only way it is possible is $2 + 4 = 6$ and $4 + 6 = 10$. So e can have values 6 or 10. But we know from iii) that e cannot be 10. So e has to be 6, b has to be 10. This gives us that a is 4, $d = 5$ and $c = 2$.
51.	Clearly stated: "The main problem that plagued previous efforts to study the Dark Age was not the lack of suitable telescopes, but rather the lack of suitable things at which to point them. Because these events took place over 13 billion years ago…" hence (2)
52.	Directly stated in the last paragraph.
53.	Stated in the first and second paragraphs.
54.	"All the new quasars are terribly faint, a challenge that both teams overcame by peering at them through one of the twin Keck telescopes…" hence (1).
55.	Note that the phoneme is same: \rh\ as is rhyme \ime\. Hence (4).
56.	"The awareness of syllables, onsets, and rimes appears to emerge at around the ages of 3 and 4, long before most children go to school." Hence phoneme comes last.
57.	"In particular, those who have a specific

	phonological deficit are likely to be classified as dyslexic by the time that they are 9 or 10 years old." Hence any one or more deficit would classify as dyslexia.	80.	Note that B is the opposite of what is stated, while D is also not true with respect to the passage, hence (4).
58.	Last paragraph "Treiman and Zudowski showed that 4- and 5-year old children found the onset-rime version of the same/different task significantly easier…"	81.	E introduces the subject, and should be followed by A and D then CF are related and the paragraph should end with C.
59.	Since the onset corresponds to any initial consonants in a syllable, a mono syllable word can have only one onset.	82.	The paragraph must start with F as it introduces the subject; then D, which is a question, must be answered by E.
60.	Globalising our inequities refers to making the issues global, hence (1).	83.	E begins the subject, followed by A and then C, "he acknowledges too…"
61.	"Inverted representations, as we know, have often been deployed in human histories as balm for the forsaken…" implies that the poor are kept poor by giving them false hopes or slogans.	84.	Passivity as a subject is introduced in A, followed by BCDE.
62.	First line: "United Nations conference on racial and related discrimination" implies racial and other discrimination would be discussed.	85.	The subject is introduced in A, followed by C and then DB are clearly related.
63.	"…at least to be complemented now for admitting, however tangentially, that caste discrimination is a reality" hence (4).	86.	The face was free from expression, hence difficult to ascertain if she appreciated.
64.	The line preceding the social construction talks about caste discrimination.	87.	The best choice is experience, which is significant.
65.	Billie Holiday will be remembered because she had the "most heart-rending voice of the past generation." Her voice had an element of sadness, not anger, hence (1).	88.	The person who emerges …combines the two things.
		89.	Since organizations are mentioned, it has to be reports.
66.	Billie Holiday was ravaged: "she still sounded like a ravaged echo of her greatness. Others had not even the heart to see and listen any more." Had she not died, this would have continued.	90.	Heir and tradition match.
		91.	A matches with G, B with E, and so on
		92.	A matches with F, B matches with H
67.	There is no clue that she actually welcomed suffering.	93.	A matches with H, B matches with F, and so on.
		94.	A matches with F (tight shoes), B matches with H (victims), and so on.
68.	It is not mentioned that others accompanied her.	95.	A matches with G, B with E, and so on.
69.	Can be inferred from the first few lines: "Each of the temporal frames has a different focus, and by shifting them Kurosawa is able to describe … erosion of Dersu's way of life.	96.	Parsimonious: stingy. Altruistic is unrelated.
		97.	Obviate: to make unnecessary. Bolster is to support.
		98.	Disuse: unfashionable; prevalent is opposite.
70.	"The film itself is circular, opening and closing by Dersu's grave…" hence (1).	99.	Specious: seemingly true but false statement; credible is true.
71.	"Yet by exploring these ruminations, the film celebrates the timelessness of Dersu's wisdom."	100	Facetious: joking; jovian is unrelated.
72.	The prologue helps to impose the past on the present, when there was lack of understanding of nature.	101	From the above information we can make a table having information about liking and disliking of various persons by table we get the solutions that is option no. (4). Ans. (4)
73.	All the given choices are mentioned in the passage point to his having sensitive nature.	102	It is clear from the above three statements in which one part is false and another is true. If we will follow from statement N1 by taking a statement false and another true we will get the description of the dog. Ans. (1)
74.	"The first image is a long shot of a huge forest, the trees piled upon one another by the effects of the telephoto lens so that the landscape…" Clearly, the protagonist is missing in thebeginning.		
75.	"A dynamic leadership seeks to free itself from the constraints of existing rules…" hence (3).	103	From the above given schedule we get the order as: Sati Savitri, Veer Abhimanyu, Sunder Kand, Joru Ka Gulam, Jhansi ki Rani and Reshma Aur Shera so the Ans. (3)
76.	Can be directly inferred from the last few lines.		
77.	Note that music, dance and drama are mentioned for appreciation, but not that they have to be chosen over something.	104	From the above information we can get oil pipeline from Avanti to Vidisha is 1000, Hence free capacity = 0. Ans (4)
		105	From the above information we can get oil quantity in pipeline from Avanti to Vaishali is 700. Hence free capacity = 300. Ans(4)
78.	Directly mentioned in the last lines of the second paragraph.	106	Quantity moved from Avanti to Vidisha = 1000. Ans(4)
79.	"But a system governed solely by impersonal rules can at best ensure order and stability; it cannot create any shining vision of a future in which mere formal equality will be replaced by real equality and fellowship."	107	There is no dog named Pluto that is Alsatian. Either Pluto named dog or Alsatian or both are dogs. Hence Ans. (3)
		108	We don't have complete data with us.
		109	Either Pluto named dog are Mammal or any other dog is Mammal or both are Mammals. Hence Ans. (1)
		110	X implies that all dogs which are Mammals, but X = D implies all dogs are Mammals. Hence Ans. (1)
		111	Motorcycle Tifin Box Persons

	M1	O	F+B
	M2	P	E+D
	M3	Q	A+G
	M4	R	C+H

Since B cannot with R and E, so he must go with O thus C will be with H. Ans. (3)

| 112 | A(M)----B(M)----C(M),D(F)-----E(M),F(M) |
| | P(F)----Q(F)-----R(F),S(M)-----T(F),U(F) |

There will be minimum 12 people in the gathering and they will satisfy all the constraints of the problem. Ans. (2)

113 In this question our first priority will be to spend full amount of Rs. 1000 so there should not be any penalty. Given :
D+2B (220 Rs.),   A+C (180 Rs.),   E (2B, D)
Now I will buy the articles in the following way to earn maximum points.
(2D +4B) = 440; B = 90; C = 70
(A+2B+C+D) = 400
Total money spent is Rs. 1000 and items will be 13.

114 Given :
A < 3B,   C > B,   D = C-B,   A = 3D
Basheer has total amount = Rs. 500 (because he bought a sweater costing Rs. 600 and borrowed Rs. 100 from Ashok and left with no amount)
So Ashok has total less than Rs. 1500 (A < 3B)
Ashok has atleast Rs 1000 amount
So we can write:- 333.34 < D < 500
So Deepak can buy a Shirt. Ans (1)

115 Radha, Rupa, Renuka,Ruchika, and Ritu are in different weight groups. Rupa is in group W1 with Sonali, Shubra, Shahira and instructor Amita, Kamal and Tara cannot be with Radha.
Soumya and Ruchika are in same group so Soumya cannot be in the group as Radha. Renuka and Rupali are in same group so Rupali and Radha cannot be in the same group. So with the above conclusion it is clear that no any females except Jyotika and Shweta can be with Radha in same group. Now Jyotika and Shweta are in weight group with total four members so at least one female must be in this group and who cannot be with Radha. So Radha must be alone in her group and her instructor mus be Elina. Ans. (2)

116 For Oak leaves :
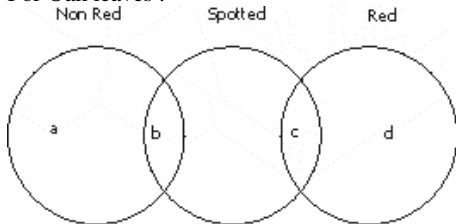
For Maple leaves :
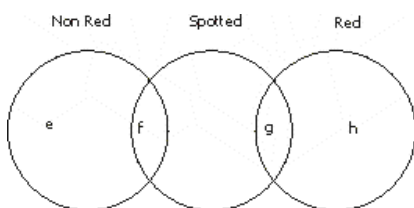
C must be even and positive, d = h, a = 0, b =5c
f = 0, g = 6, e = 22
Given : a + b + c + d + e + f + g + h = 50
Using above datas in the above equation :
d + 3c = 11; Since c is even positive so c must be 2

c = 2 and d = 5
Total Oak leaves = a + b + c + d = 17; Ans. (2)

117 David and Peter cannot be in the same team so option (3) must be eliminated. If Rahim is selected then Shyam must be selected so option (4) must be eliminated. David and Fiza must be in the same team so option (1) must be eliminated. Ans (2)

118 Only option (2) satisfies all the given conditions. Ans (2)

119 Working from the given data we see that none of the given options satisfy all the conditions. Ans (4)

120 Direct from the table we can count the number of lays as 17. Ans(3)

121 Direct from the table, count the no. of lays for Extra-Extra Large as 14. Ans(4)

122 Direct from the table we can find out how much order has surplus that is 4 orders so Ans(2)

123 Count the No. of lays required for producing yellow or Extra-Extra Large White fabrics Ans(4)

124 Check Each option and compare it with the quantity given in the question . Ans(1)

125 Total Man Hours Needed for Onsite = 290 Hr.
Total Man Hours for whole projects = 1100 Hr.
So %= 30
Ans.(3)

126 Total Man Hours Spent on the onsite = 290 Hr.
By Checking every option we will get the option 3 as the answer as Man Hr. neede for actual offshore testing is 290 Hr.
Ans. (3)

127 Checking each option We will get answer 4 because:
Man Hours for Testing offshore=145 Hr.
Man Hours for design= 130 Hr.
Ans. (4)

128 The Offshore testing = 145 Man Hrs.
Onsite Testing = 305 Man Hrs. %= 52%
So Ans. (4)

129 When total Man Hr. is 1100 Than Coding takes 520 Hrs. So Coding Will take 52Hrs in the project of 100 Hrs. Ans (1)

130 Approx. Heathrow Has traffic of 62500000 It will form Approx. 20% of the five most busiest airports. Ans (3)

131 Approximately add all the passengers of top 20 airports and find the total no. of pasenger of the top ten airports, percentage will be 60% so, Ans(1)

132 Ans(2)

133 By calculating theTraffic of Non USA busiest airports, there will be first 6 airports which will exceed the 30 million passengers so, Ans(2)

134 Given
P = Rs 2.78, Q = Rs 1.59, R = Rs 0.68<O:P></O:P>
On checking with option we get Ans. (3)

135 Required cost = (cost by rail & road)/(total tonnage capacity) = 54/36 = Rs. 1.5
Ans (2)

136 The cheapest mode of transportation is by road i.e. Rs. 0.68 per tonne. Ans (1)

137 From the above information if we will interchange the efforts allocated to various operations then finally we will get B = E.
So according to B the rank of company 3 is Three. Ans. (2)

138 From the table it is very clear that after this cycle company five will gain highest in operation E and

	that will be approximately 40%. Ans. (4)
139	Total of B, C, D, E and F for company 4= 81.5 So after this process the value of E will be = 16.3 So E will increase by 28.6 - 16.3 = 12.3 Ans. (1)
140	From above information we can deduce following relation between family and their dinnerand their Colour of Chinaware. At 12 noon ----> Sharma Family ------> have sambhar ------> white dinner set At 1 PM ------> Pittabrahmins --------> have brinjal ---------> blue dinner set At 2 PM ------> Bannerjee --------> have makka ki roti ---> red dinner set Hence Ans (2).
141	From above information we can deduce following relation between child and their age and their Birth date. Vaibhav ------> Boy ------> Born in June ------> 7 years old ......(1) Suprita ------> Girl ------> Born in April --------> 4 years old ......(2) Anshuman ----> Boy ------> Born in September ---> 2 years old .....(3) Hence Ans(3).
142	Arranging the given data we get the following equations : Elle = 3 Zaheer …(1) Zaheer = 0.5 Waheeda …(2) and Yogesh > Zaheer …(3) Option (1) is sufficient to get Elle's age as 30 years.
143	Combining the equations (1) and (2), we can say that Elle is older than Waheeda
144	Ans 4. Both statements are not sufficient to get the number of apples bought by Ram and Gopal.
145	Ans 4. By the both statements we cannot know that

	how many round will ferry make
146	From statement A, there are many pairs possible like (6, 2), (12, 4) etc. So statement A alone is not sufficient. From statement B, the possible pairs are (±4, ±3) and (±6, ±2). So statement B alone is not sufficient. Combining the 2 stmts gives the pairs as (±6, ±2). Since a unique value of x cannot be determine, the given data is not sufficient to answer the question. Ans (4).
147	Ans. (4) Statement (A) is not sufficient to give the answer. We will get the pairs (15,2), (10,3), (6,5). Statement B gives pairs as (±3, ±10), (±5, ±6), (±15, ±2). Combining we get (±15, ±2). So insufficient data.
148	Ans 2. If diameter is given, then side of square can be found. Similarly if side of square is given then the radius of circle can be found. Hence from both the statements, individually can provide the difference in areas
149	Ans 3. Combining both the statements, we got the answer.
150	Ans 4. From the first statement we cannot know what the GDP was 5 years ago. From second statement we know that x GDP is greater than y but don't know how much greater.

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