31. We can infer, when the author tells us that the 20th anniversary of the Hungarian border crossing was paid less attention than various other anniversaries, that he feels

(1) that it wasn't as significant an event as it first seemed.

(2) that the telescope, the oil well, Ninja Turtles and Woodstock, are more relevant to life today than that crossing was.

(3) that the west is gradually forgetting the Cold War.

(4) that the west is forgetting the significance of the end of the Cold War.

32. Which one of the following is NOT among Garton's thoughts about 1989?

(1) It was a year when a long-running conflict between credos ended.

(2) It was a year when a nation was re-united with its neighbour.

(3) It was a year as important 1914 and 1945.

(4) It was a year when Soviet power was dismantled.

33. Which of the following does the author feel is a post-Cold War lesson that America may have learnt?

(1) That, under certain circumstances, democracy can be born out of aggression.

(2) That democratic capitalism is the most proven path to human liberation.

(3) That the State must play a greater role in the support of private enterprise.

(4) That without superpower conflict, the world is actually more peaceful.

34. Which of the following does the author feel is a post-Cold War lesson that America has not learnt?

(1) That the capitalist method can be applied even in rigidly controlled economies.

(2) That radical economic reform can result in spectacular growth rate.

(3) That there are inadequacies in the system of central planning.

(4) That State ownership of enterprise is fraught with risk.

35. The author uses the word 'telling' twice, towards the end of the last paragraph, in describing a situation. What does he mean to convey with the use of this word?

(1) The situation is indicative of the priorities of the U.S. administration.

(2) The U.S. administration and its officials have not looked beyond the situation

that was apparent to them.

(3) The U.S. administration recognised that the situation was relevant only to the erstwhile East bloc.

(4) That political and military strength are the priorities of the U.S. administration.

DIRECTIONS *for questions 36 to 40:* **Each of the following questions has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most __appropriate__ way.**

36.   The possibilities are truly unimaginable especially because we do not yet really understand the mysterious, boundless quality of this unique form of power. Knowledge inhabits a more ethereal realm with principles we are only now coming to grasp and purposes we can only imagine. Unlike other resources we are accustomed to, information is a fluid that constantly alters as it moves, increasing as it interacts and overflows as it crosses boundaries. Unlike other raw materials, knowledge can't be used up.

(1) Strangely, the more you dispense, the more you generate.

(2) Not surprisingly, it dazzles our imagination and taps talent that is limitless and especially powerful.

(3) Predictably, the more you give, the more you get.

(4) Therefore, forced by the necessity to cope with a complex new era, countries will become a storehouse of knowledge.

37.   Meat grown in a petri dish? Sounds like science fiction, but it isn't. Scientists at Windhaven University in the Netherlands have grown invitro meat using cells from a live pig to replicate growth in a petri dish. They haven't been able to actually taste the pork they have grown because of lab rules. Nevertheless, there's potential here for some huge benefits.

(1) It would not only lead to a ban on killing animals for food, but strengthen the measures to fight poaching.

(2) If meat can be grown in the lab rather than in farms, then people need not make sacrifices for the sake of Mother Earth.

(3) They can, so to say, have their rack of lamb and eat it too.

(4) It could mean not only an end to killing animals for food, but also a significant saving of energy on maintaining abattoirs.

38.   The question of economic growth is thrown into further confusion by the methods used to measure it. Fundamentally, economics is myopic. It measures reality by its current market price. The intrinsic value of real things, their essential character which remains unchanged even when their

price on the market fluctuates, is not an issue to the economist. He is like Oscar Wild's cynic.

(1) Someone who is consigned permanently to the present, spurring both the past and the future.

(2) Someone, who knows the price of everything and value of nothing.

(3) Someone, who basks in the glories of growth unmindful of the cost.

(4) Someone, who worships price and assumes that 10% richer in monetary terms is 10% richer in happiness.

39. Recent studies show exploratory play - the restless, unstoppable drive to push every button and pull every string-helps children discover how the physical world works. Their equally unstoppable "pretend" play - the parade of alternate identities, imaginary friends and wild fantasies - helps them work out all the possible ways that people would be. The picture that emerges from this research is that babies and young children are not so much defective as different from adults. They have equally complex and powerful, but very different minds and brains, suited to their distinctive evolutionary role. Babies are brilliant learners but terrible planners. They have fantastically creative and visionary imaginations, but absolutely no executive capacity.

(1) So, human development is more like reverse metamorphosis than simple growth.

(2) Little wonder then, that they make adults dance to their tunes.

(3) They are the R & D guys and adults are the CEOs.

(4) So, child indeed is the father of man.

40. How different our lives are when we really know what is deeply important to us, and keeping that picture in mind, we manage ourselves each day by the way we want to be and do what really matters most. If the ladder is not leaning against the right wall, every step we take just gets us to the wrong place faster. We may be very busy. We may be very efficient.

(1) But we will be truly effective only when we begin with the end in mind.

(2) And we may gain new perspectives.

(3) Perhaps fame, achievement, money, or some of the other things we strive for are not part of the wall.

(4) But, if we are not focussed, success will always elude us.

DIRECTIONS *for questions 41 to 45:* **Read the following passage and answer the questions that follow it.**

Even though the individual members of every race may be much the same, human societies differ considerably in their levels of technology and organization. Some societies, like those of New Guinea, are just emerging from the Stone Age cultures, while others, like those of Finland or Taiwan, are highly educated and lead in manufacturing sophisticated goods for the global economy. Is the difference solely because New Guineans were dealt a bad hand in items of geography and resources, or could there be some genetic difference, may be in the nature of sociality, that helped keep New Guineans and others in the Stone Age while propelling other peoples on a quite different trajectory?

Jared Diamond of the University of California, Los Angeles, has advocated a geographical answer to this question. In his book Guns, Germs, and Steel he argues that because more domesticable species of plant and animal existed in Eurasia, agriculture got started there first, giving Europeans a head start in economic development. Accustomed to living in crowded environments, Europeans built up immunity to many diseases, including those contracted from their domestic animals, such as influenza, measles and smallpox, and these diseases were devastating to non-urban peoples on other continents.

In Diamond's view it was the economic head start and the germs, not any inherent difference in abilities, that enabled Europeans to conquer other peoples. "History", he says, "followed different courses for different peoples because of difference among peoples' environments, not because of biological differences among peoples themselves".

As Diamond explains, having spent many years studying the birds of New Guinea, he came to know the inhabitants well and was impressed with their evident intelligence. New Guineans, in Diamond's view, are probably more intelligent than Westerners, and the reason, he says, is genetic. The chief selective pressure on Westerners was the need to acquire resistance to the disease rampant in their crowded communities, whereas in New Guinea, where the chief cause of death is war, murder or starvation, one needed one's wits to survive; "in mental ability New Guineans are probably genetically superior to Westerners."

But if the New Guineans had the smarts, why was it the dumber, disease ridden Westerners who figured out how to escape from the deadening cycle of Stone Age tribalism and perpetual warfare, a problem the New Guineans never cracked? Because Westerners lucked out in their geography, Diamond argues. Eurasia had a greater absolute number of plant and animal species and more of them proved suitable for domestication.

The Chinese lost their technological edge, also for a geographical reason, in Diamond's view: the connectedness of the Chinese mainland allowed one ruler to dominate and make irreversible errors, like destroying the Chinese fleet, whereas in Europe, with its balkanisation and competing statelets, diversity thrived and the best had a better chance of winning out. By

colonial times, this left Europeans as the winners, thanks to their superior geography.

Single cause explanations generally make historians roll their eyes but the boldness and ingenuity of Diamond's thesis certainly puts geography more on the map than it was before. Yet, does genetics have no role at all in shaping human history?

Many readers who like the political implications of Diamond's thesis that Western dominance is an accident of geography and therefore no race is better than any other - may skip over his premise of New Guinean genetic superiority. But if New Guineans adapted genetically by developing the intellectual skills to survive in their particular environment, as Diamond says is the case, why should not other populations have done exactly the same?

In attributing western advance solely to geography, while tacitly excluding the genetic explanation invoked for the New Guineans, Diamond focuses on the development of agriculture. But archaeologists now believe that in the Near East sedentism came long before agriculture: first people settled down, abandoning the foraging way of life. Then they took to cultivating wild plants. Then, probably by accident, they developed domestic varieties of plant and animal species. The critical step was not domestication, but sedentism. This finding would seem to undercut an important part of Diamond's case because, unlike the case with agriculture, it's harder to see any geographical reason why sedentism should have risen in one society and not another. Given that the human form was undergoing another genetically driven change around this time, the gracilisation of the skull and skeleton, a genetic explanation for sedentism would not be so implausible. People such as the Nutufians perhaps responded to their environment with a different kind of sociality that enabled them to abandon the foraging way of life and settle down in fixed communities.

If sedentism was indeed prompted by an evolutionary change, it was one that may have occurred independently in different populations, as has happened with properties like pygmy stature, lactose tolerance and doubtless many others.

Such genetic adaptations, if they occurred, could not spread through the world's population like wildfire, since it can take many generations for gene frequencies in a population to change. Instead, they would take place at different rates in different populations. This wide spread in start times for the forager-settler transition could help explain why human societies throughout the world have attained such different levels of development.

41.   Jared Diamond's thesis that geography determines the progress of a nation is borne out by all of the following EXCEPT

(1) The technological superiority of Taiwan and the progress made by that

nation.

(2) The stagnation in the once technologically advanced China.

(3) The superior intelligence of New Guineans who had to outwit their enemies in order to survive

(4) The climatic conditions of Eurasia that helped agriculture thrive there.

42.   The passage

(1) strengthens Diamond's thesis of geography being the sole cause for the progress of nations.

(2) examines the possible roles genes and geography could have played in shaping human history.

(3) offers an alternative theory to negate Diamond's thesis.

(4) finds an answer to the question, "What caused different countries to grow at different rates?"

43.   The inconsistency in Jared Diamond's argument is that:

(1) He wants to rule out racial difference and so is ready to accept any other explanation.

(2) He looks at different aspects of development while comparing different countries.

(3) The inherent abilities of the population is not taken into account.

(4) He uses genetics to explain one country's development while excluding it in another context.

44.   What, according to the passage, could be an explanation for different rates of development in different parts of the world?

(1) The genes of the native population that propels the country on a particular course.

(2) Geographical features and economic resources that a country is blessed with.

(3) The fact that sedentism preceded the development of agriculture.

(4) Evolutionary changes that led to genetic adaptation took place at different rates in different populations.

45.   As understood from the passage, which of the following statements is/are NOT true?
A. Diversity enables the best to survive while uniformity hampers progress.
B. Survival instinct forced the New Guineans to become sharper mentally.
C. Genetics could not have led to sedentism.
D. Jared Diamond sees agriculture as the reason for the greater progress made by Europeans.

(1) Only C
(2) B and C
(3) A and D
(4) B and D

Quantitative Ability

DIRECTIONS *for questions 46 to 53:* **Answer the questions independently of each other.**

46. **Each of four girls, A, B, C and D, had a few chocolates with her. A first gave 1/3rd of the chocolates with her to B, B gave 1/4th of what she then had to C and C gave 1/5th of what she then had to D. Finally, all the four girls had an equal number of chocolates. If A had 80 chocolates more than B initially, find the difference between the number of chocolates that C and D initially had.**

(1) 20
(2) 30
(3) 15
(4) Cannot be determined

47. **In a survey conducted to find out the readership of three newspapers A, B and C, it was found that the number of people who read newspaper A is at least 20 and at most 40, the number of people who read newspaper B is at least 50 and at most 70, the number of people who read newspaper C is at least 70 and at most 83. It was also found that 8 people read all the three newspapers and 85 people read at least two of the three newspapers. Find the minimum number of people who read both A and B but not C.**

(1) 1
(2) 2
(3) 3
(4) 0

48. **There are twenty-five identical marbles to be divided among four brothers such that each of them gets no less than three marbles. In how many ways can the marbles be divided among the four brothers?**

(1) 286
(2) 364
(3) 455
(4) 560

49. **Several identical cuboids of dimensions 4 cm × 3 cm × 2 cm are put together to form a large cube. What is the least possible volume (in cu.cm) of such a cube?**

(1) 216
(2) 1728
(3) 5832
(4) 13824
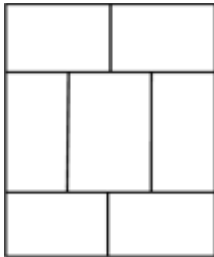
50.

In the figure above, seven congruent rectangles are assembled together perfectly to form a bigger rectangle of perimeter 130 cm. Find the area (in sq.cm) of the bigger rectangle.

(1) 1000
(2) 1056
(3) 750
(4) 1050

51.   Three filling pipes R, S and T together, can fill an empty tank in 2 hours, S can fill the tank four times faster than T. Initially R alone is opened and after x hours, it is closed and immediately S and T are opened together. The tank is full after another y hours. If the tank was filled in a total of 4 hours, and $x \neq y$, find the time (in hours) that T alone would take to fill the tank.

(1) 6
(2) 12
(3) 20
(4) 24
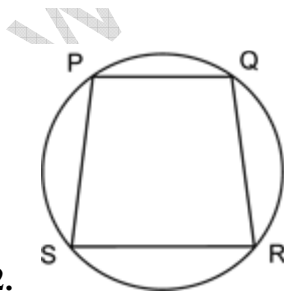
52.

In the figure above, PQRS is a cyclic quadrilateral, where PQ = p cm, QR = q cm, RS = r cm and PS = s cm. If (PQ) (QR) = 3(PS) (RS) and ∠PQR =

120°, then s =

(1) $p + r - q$

(2) $q + r - p$

(3) $p + q - r$

(4) $\dfrac{p + q + r}{3}$

Find the value of $\dfrac{1}{1 + \dfrac{1}{1 + \dfrac{1}{1 + \dfrac{1}{1 + \ldots}}}}$.

53.

(1) $\dfrac{\sqrt{5} - 1}{2}$

(2) $\dfrac{\sqrt{3} - 1}{2}$

(3) $\dfrac{\sqrt{2} + 1}{2}$

(4) $\dfrac{\sqrt{5} + 1}{2}$

DIRECTIONS *for questions 54 and 55:* **Answer the questions on the basis of the information given below.**

The people of an island named Tingo use the number system to the base 5. The students of that island had recently taken an exam called BAT, a management entrance test, to gain admissions into their top B-schools. Answer the following two questions that appeared in that exam.

54.   The number N, expressed to the base five is 2323……23 upto a total of hundred digits. The remainder when N^{4231} is divided by 4 is
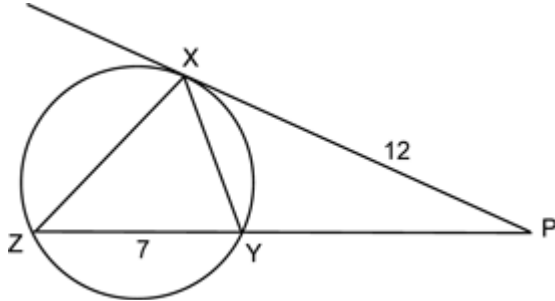
(1) 0

(2) 1

(3) 2

(4) 4

55.   A number written to the base five is called an *oven* number, if it is exactly divisible by 3. Which of the following is not an *oven* number?

(1) $(4213)^{2143}$

(2) $(1423)^{2143}$

(3) $(1243)^{2143}$

(4) $(3421)^{2143}$

56. In the figure below, PX = 12 cm, YZ = 7 cm and the perimeter of PXY is 27 cm. Find the perimeter of ∆PXZ.

(1) 36 cm

(2) 27 cm

(3) 22.5 cm

(4) 31.5 cm

57. If a four-digit natural number is 7083 more than the number formed by reversing the order of its digits, then how many such natural numbers are possible?

(1) 18

(2) 24

(3) 27

(4) 36

58. Two trains, T_1 and T_2, simultaneously pass through a station on two parallel tracks without stopping at the station. The platform P_2 passed by the train T_2 is 50% more in length than the platform P_1 passed by train T_1. The train T_1 runs at a speed of 72 kmph, while the other train is 25% slower and 50% longer. What is the ratio of the times taken by the trains T_1 and T_2 in passing the platforms P_1 and P_2 respectively?

(1) 4 : 3

(2) 3 : 1

(3) 1 : 2

(4) Cannot be determined

59. P is a point outside the circle with centre O. If a straight line drawn through P intersects the circle at points A and B such that $AB = 4\sqrt{6}$ cm and 90° < ∠AOB < 120°, which of the following could be the radius (in cm) of the circle?

(1) 4

(2) 5

(3) 6

(4) 7

60. **Find the total number of ways in which a black square and a white square can be selected from a chessboard such that both the squares lie either in the same row or in the same column.**

(1) 256

(2) 512

(3) 128

(4) 64
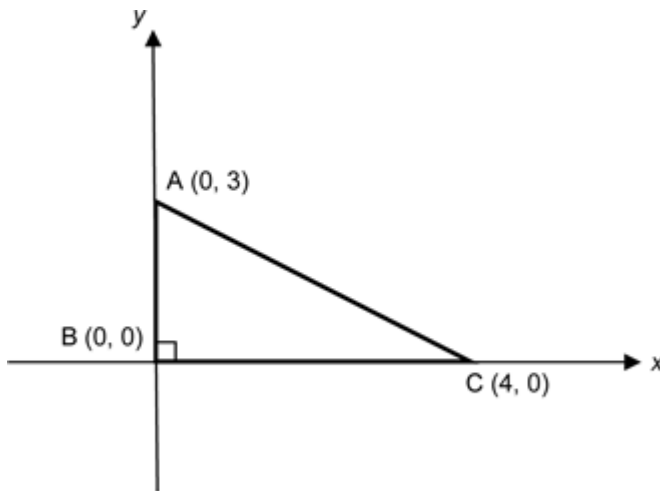
61.

In the above triangle ABC, find the co-ordinates of the foot of the perpendicular drawn from B to AC.

(1) $\left(\dfrac{4}{5}, \dfrac{3}{5}\right)$

(2) $\left(\dfrac{32}{25}, \dfrac{24}{25}\right)$

(3) $\left(\dfrac{4}{5}, \dfrac{12}{5}\right)$

(4) $\left(\dfrac{36}{25}, \dfrac{48}{25}\right)$

62. **If $4^{[\log_2 \log_3 (4x+1)]} - \log_3 (4x+1)^6 + 8 = 0$ and $x > 4$, find $\log_4 (x - 4)$.**

(1) 2

(2) 3

(3) 4

(4) 6

63. Ours is a big family. I have thrice as many brothers as sisters and my sister Bharathi has four times as many brothers as sisters. How many children do my parents have?

(1) 15

(2) 16

(3) 21

(4) 20

64. A and B have written an entrance exam and scored 55 marks and 85 marks respectively. Every question answered correctly fetches one mark but the negative marks per wrong answer for the first twenty wrong answers is different from that for the remaining wrong answers. A and B attempted 160 and 150 questions respectively. If A and B correctly answered 50% and

of the questions that they attempted respectively, find the negative mark for each wrong answer beyond the first twenty wrong answers.

(1) 1/2

(2) 1/3

(3) 1/4

(4) 2/3

65. A certain sum is invested at simple interest. If the sum becomes *k* times itself in 16 years and 2*k* times itself in 40 years, in how many years will it become 4*k* times itself?

(1) 96 years

(2) 88 years

(3) 80 years

(4) 64 years

SOLUTIONS

Logical & Data Interpretation

1. Market price per share = P.E × EPS
It is greater than Rs.500 but less than Rs.1000 for Dr. Reddy's Laboratories, Sun Pharmaceuticals Industries, Jindal Steel and Power, Madras Cements, Oil and Natural Gas Corporation, Hindustan Petroleum Corporation, HCL Infosystems, Hughes Software. A total of eight companies. **Choice (4)**

2. Dividend is more than Rs.10 for Oil and Natural Gas Corporation $\left(\dfrac{11.6 \times 3.6 \times 72.6}{100}\right)$,

Hindustan Petroleum Corporation $\left(\dfrac{8.6 \times 3.9 \times 59.3}{100}\right)$, and Hero Honda

$\left(\dfrac{33.4 \times 3.7 \times 14.7}{100}\right)$. A total of 3 companies. **Choice (2)**

3. NPM (%) = PAT as percentage of sales.
By observation this is more than 50% only for Hinduja TMT. Hence it is highest for Hinduja TMT. **Choice (1)**

4. Change in sales for any company = $\dfrac{\text{Sales} \times \%\text{change in sales}}{(100 + \%\text{change in sales})}$

From observation choices (1) and (4) can be eliminated. Among choices (2) and (3)

HPCL → $56680 \times \dfrac{13.9}{113.9} \cong 6900$ and

ONGC → $36175 \times \dfrac{27.5}{127.5} \cong 7800$ **Choice (3)**

5. As none of the persons is a Haralal, Gabbar Singh could not have worn a red or green shirt. If Gabbar had worn a red shirt, then Amar could not have made such a statement. If Gabbar had worn a green shirt, then Anthony could not have made such a statement.
∴ Gabbar should have worn a yellow shirt. **Choice (2)**

6. As both are saying Feroz is wearing a red hat, both must belong to same type.
As Dhiraj is saying that Feroz is wearing a yellow shirt and Suraj is saying that Feroz is wearing a green shirt, both of them cannot belong to same type, which is a contradiction.
∴ Such a conversation is not possible. **Choice (4)**

7. Given, Veeru always tells the truth.

∴Jai is a Lalpila. i.e. he mistakes red as yellow and as he is saying that Basanti is wearing a yellow saree, we can say that Basanti is not wearing a red saree. She is wearing a saree of yellow or green or some other colour. As Jai says that Veeru is a Haralal, Veeru cannot be Haralal. He can be either a Lalpila or a Pilhara. He cannot be a Lalpila, as if he was a Lalapila, then the saree must be of red colour, which is a contradiction.

∴Veeru is a Pilhara and the saree is of green colour.　　　　　　　　Choice (2)

8. Given, Veeru always tells the truth.

∴Jai is a Lalpila. i.e. he mistakes red as yellow and as he is saying that Basanti is wearing a yellow saree, we can say that Basanti is not wearing a red saree. She is wearing a saree of yellow or green or some other colour. As Jai says that Veeru is a Haralal, Veeru cannot be Haralal. He can be either a Lalpila or a Pilhara. He cannot be a Lalpila, as if he was a Lalapila, then the saree must be of red colour, which is a contradiction.

∴Veeru is a Pilhara and the saree is of green colour.　　　　　　　　Choice (1)