

TANCET MBA

Solved Original Question Paper - 2020

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PART - I

Directions : This section comprises two passages. After each passage questions consisting of items relating to the preceding passage are given. Evaluate each item separately in terms of the respective passage and choose your answer as per the following guidelines:

- If the item is a MAJOR OBJECTIVE in making the decision; that is, the outcome or result sought by the decision maker.
- If the item is a MAJOR FACTOR in arriving at the decision; that is basic in determining the decision.
- If the item is a MINOR FACTOR in making the decision; a less important element bearing the decision.
- If the item is a MAJOR ASSUMPTION made deliberately; that is a supposition or projection made by the decision maker before considering the factors and alternatives.

PASSAGE-I

The year of 2003, commenced with the swirled rumours that Mangalesh Kumar, who was then 60, was to sell off Getwell Hospitals, widely held homegrown drug maker he owned, to focus on Getwell Hospitals a budding chain of corporate Hospitals. Given the time and resources the latter would command, it was argued. Mangalesh Kumar narrow his bets. But the Group Chairman scotched all such rumours, Six years on, a crisis might force a rethink. In a double whammy, both the business are in need of substantial cash injections at a time when the market is in no mood to oblige. The INR.2,653 Crore, Getwell needs to raise nearly INR.1,000 Crore (at today's rate of INR.49.2 to the dollar) in the next few months to pay up debt owned to Foreign Currency Convertible Bond (FCCB) holders and banks, say analysts. : This is a toll order; Getwell's market capitalisation on 13th February was INR. 1,048 Crore, down 71 percent, from a year ago.

At INR.95 a share it now trading nowhere near the, INR.486 trigger for the conversion of debt into equity.

Closely held INR. 360-crore Getwell Hospitals is struggling to find investors to bankroll its growth after a failed attempt at raising INR. 800 crore through an Initial Public offering (IPO), withdrawn in February 2008. A Getwell spokesperson in Mumbai turned down BW'S request for an interview with Mangalesh Kumar.

Clearly, Mangalesh Kumar is stretched. Last week, he admitted to having pledged 43 percent of his 73.6 percent stake in group flagship Getwell with financial institutions to raise little over INR. 300 Crore for Get well Hospitals. Getwell Towers, its swank corporate headquarters in Mumbai, has been pawned. The search for suitors for Getwell's two European drug Companies - in a desperate bid to raise funds-has met with little luck. "While the issue is primarily financial restructuring, it does raise strategic questions for the promoter as well". says Manish Kaul, Managing director of private equity firm Chrys Capital in New Delhi, and an old pharma industry hand. One news report last week suggested that Mangalesh Kumar was looking for a "strategic sale" of Getwell. This could not be independently confirmed. In January, Getwell took shareholders' approval to raise INR. 500 crore through a preference share issue to pay back FCCB holders.

COSTLY HUBRIS?

Getwell's current problems have their origin in rapid expansion on borrowed funds in the days of easy money. Getwell spend roughly INR. 1700 Crore on buying the two European companies, now said to be on sale France's Negma Lerads, and Ireland's Pinewood Labs- in 2006-2007 at high valuations. Historically, Getwell's generics exports have lagged behind rivals such as Ranbaxy and Dr. Reddy's in performance and profile. These acquisitions were Mangalesh Kumar's moves to catch up. But the expansion has indebted the company to the tune of INR. 3,900 crore.

Getwell is now the largest Indian Generic pharmaceutical Company in Europe as a result of those acquisitions. "But his obsession with the market share has compromised its risk profile," says deal maker on condition of anonymity. Getwell's debt-to-equity ratio stands at roughly 2:2:1. Ballooning interest payments on foreign debt have impacted the bottom line. In the quarter ended September 2008, EBITDA rose 17 percent, yet net profit fell by 43 percent. Yet, when the market turned, Mangalesh Kumar's actions did not keep pace, feel some industry watchers. A source says late last year Mangalesh Kumar expected to recover most of what he paid for Negma and Pinewood, but buyers would not bite. "Those assets were acquired at peak value", says Mallika Baheti, pharma analyst at brokerage ShareKhan. "In today's scenario, these investments are unlikely to fetch the same valuations".

In a similar vein, even after Getwell Hospitals' failed IPO, Mangalesh Kumar did not climb down in his pricing negotiations with private equity (PE) players such as General Atlantic Partners. This is one reason why no deal has been struck, some say. Even now, Mangalesh Kumar - who is still talking to PE outfits - appears keen on extracting "the last pound of flesh" says one investment banker familiar with the negotiations, on condition of anonymity.

WHAT NEXT?

Some Industry watchers say that the group's immediate problems can be overcome if Mangalesh Kumar plays down his demands. Getwell Hospitals, says Kaul, "a robust and sustainable "business model, and getting in financial investors is "a question of valuation". Mangalesh Kumar, could still be in control, he says. As for Getwell, even if it were able to raise cash by selling off the two European companies, and a few other smaller assets such as its veterinary business, it will continue to make great demands on Mangalesh Kumar. For one, the company will be strategically weaker. Europe is Getwell's largest market, at 54 percent of 2007 sales. They will have to rework all their projections". Says Baheti.

In parallel, sales from the US, world's largest pharma market, will need a continuous investment in off-patient products to keep growing. Getwell's Biotech business - once touted as the future growth engine - has underperformed, some say, because, the firm has focused on the

global generics market. "They were early entrants in biotech and fairly active," says a manager in Getwell rival in Hyderabad with biotech interests", but the business seems to be suffering from a lack of attention rather than capability. Getwell was the first Indian firm to launch home-grown genetically engineered human insulin in the country in 2003. But even now, biotech is barely 3 percent of total revenues.

One more concern is what the current crisis could do to the employee morale. At the best of the times, Mangalesh Kumar, seen to have an autocratic management style, has had a problem retaining professionals. Getwell does not have a clear succession plan either. Given these facts, should Mangalesh Kumar pick his bets and exit his pharma business like promoters of Gurgaon's Ranbaxy Labs. Last year the Singh family of New Delhi sold their stake to Japan's Daiichi Sankyo for INR.10,000 crore to focus on hospitals and financial services.

With their blockbusters facing patent expiry, multinational pharmaceutical companies are keen on buying out generics firms. "While there is cause to sell the business, it is foolish to attempt that in such a market," says the banker. "From a timing perspective he should first extract himself from the current hole". Others believe that Mangalesh Kumar can stay in pharma business only by sharpening focus. Kaul, for instance, suggests a separation of the domestic formulation business and merging it into another strong player in the Indian market. In exchange, Mangalesh Kumar could hold stake in this combined entity, he says. That will allow him to focus Getwell's resources on the exports story, he feels.

"He has to make choices, says "Mumbai-based consultant who has worked closely with the firm, . "The group is in too many diverse areas, with too little capital and too much leverage". For 40 years, Mangalesh Kumar - who eschewed his family's bakery and retail business to strike out in health care - has run his companies on his own terms. Will he now be forced to sell on someone else's?

(QUESTION 1 - 10)

1. Finding suitors for Getwell's two European drug companies.
2. Getwell Hospitals finding investors to bankroll its growth.
3. Expansion on borrowed funds in the days of easy money and present situation.

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4. **Getwell spending roughly INR. 1,800 crore on buying two European Companies.**
5. **Promoter not climbing down in his pricing negotiations with private equity players.**
6. **Getwell Hospitals has a robust and sustainable business model.**
7. **Lack of attention rather than capability.**
8. **An autocratic Management Style and Getwell does not have a clear succession plan.**
9. **Too many diverse areas, with too little capital and too much leverage.**
10. **Expansion indebting the company to the tune of INR. 2,900 crore.**

PASSAGE-II

If religion be the opium of the masses, Prakash Mundhra is enjoying giving them a high. His company, Blessed Moments, makes "puja kits" for Diwali, an idea he conceived as a student at ABC Centre for Management Shinde, rejected the idea totally," says Mundhra. We had long arguments he didn't think there was a market for it. "Prof. Shinde was wrong. In its first Diwali season during October 2006. Blessed Moments sold more than 10,000 puja kits and achieved a turnover of INR. 35 Lakh. "I took a risk grins Prakash. "But it has worked out".

The seed of successful idea was sown when, as a first year student, Mundhra entered the "Mera Gaon, Mera Desh", business plan contest sponsored by ITC. participants had to develop strategies linked to ITC brands. Mundhra chose "Mangaldeep Agarbattis" and suggested branded puja items, such as haldi (Turmeric) and roli. That did not quite catch ITC'S fancy but he refined his plan and submitted. It won more contests, including Zee TV'S "BUSINESS BAAZIGAR". The idea of a branded puja items retail outlet (along the lines of Archies) won Mundhra the "mini baazigar" title and several prestigious business plan contests- IIM Lucknow, IIM Calcutta and IIT, Kharagpur, to name a few.

Yet, he was in a dilemma. He went through the placement process and accepted an offer from ICICI Prudential. "In the meantime, I entered six business plan contests and won five," he says. "I became more and more convinced about my idea - which was now a "puja kit" - and four days before I was to join my new job, I sent the HR Head an e-mail declining the offer. "Thus, Blessed Moments were born. The INR. 50,000 cash

award from Zee helped in the initial research and formulation stage of the product. "I calculated that another INR. 3-4 Lakhs would be enough to start off." He already had half the amount in hand as prize money from business plan contests. The balance, he raised from family and friends.

Armed with a few samples of his wares, Mundhra set up a stall at the Giftex exhibition in Mumbai August 2006. "The response was tremendous. When I won the "best product award" at Giftex, I knew I was on to something big." Based on enquiries alone, he took the decision of producing 12,000 puja kits. Eventually, corporate bookings and exports orders came in, and in the run-up to Diwali, the kits were stocked at retail outlets such as Asiatic and Akabrallys. "Strangely, 500 kits sold after Diwali," he says. Requests for kits for more occasions and more religions, have been pouring in. A "Grih pravesh puja kit" and "Vehicle puja kit" are already on the cards.

For a 27 year old with just one year's experience in the family business prior to his MBA, this is quite an achievement. But he is not the only dreamer. He belongs to a new breed of MBAs choosing the entrepreneurial patch right after graduating from a B-school. A one crore salary be damned, the buzz is about the guys who opted out of placement, because secretly, almost everyone craves to be in control of their own destiny - to be an entrepreneurial rock star.

But, like the proverbial struggling artist, you may need a "day job" to support yourself, Anoop Radhakrishnan, Zerine Rahiman, Shivakumar R, Abhisar Gupta and Sandeep Ramesh all graduated from IIM Lucknow in 2006. They formed UniAxess Healthcare, which focused on the relatively unorganised field of medical tourism. However, in its first nine months, UniAxess had no revenues. "We decided to go a little slow and analyse the market," says Ramesh. "No one has really cracked this business yet, and we wanted to avoid pitfalls."

Meanwhile, the bread was buttered by taking on consulting projects through another company they had formed called IndigoEdge. "Solvency is the key to survival," says Ramesh. "Do anything that will pay the bills (for the first year at least). "The team is quite kicked, though, about the quality of projects it has executed - from an impact study in public health in Karnataka, to a market estimation and entry project for a German Manufacturer.

Things have picked up steam on the medical tourism from now. UniAxess Health care received USD 1,000,000 (INR. 41 lakhs) from an angel investor based in Bangalore and opened up an office in Abu Dhabi. The company has handled 50 clients so far and expects to open offices in four countries by JULY 2008. But the bread, butter and even the jam continues to come from management consulting. "We are now in the private equity space, helping a furniture manufacturer raise INR. 100 crore for retail expansion", Ramesh says. As PE deals work on a commission basis (4 percent being the standard), the potential gains from such assignments are huge. The INR. 2 Lakh earned as commission so far on the medical tourism side pales in comparison.

The team had divided roles and responsibilities - while three members handle consulting, two concentrate on the medical tourism side, with three employees handling day-to-day operations. "The medical tourism business does not require expertise", says Ramesh "But need to trust you. That is something built over a period of time, through word of mouth. "Meanwhile, if consulting assignments are coming from unexpected quarters, no one is complaining, IndigoEdge or Uniaxess, the team is willing to go play chameleon if it makes sound business sense.

That is the sentiment that Mansur Nazeemudeen certainly identifies with. The 28-year old IIM-A graduate (Class of 2006) made headlines when he spurned a \$100,000 pre-Placement offer from the Deutsche bank to start a mobile gaming company. Tiger tail studies remains Nazimudeen's merry muse and his dating dream. But for now, he is poured his energies into a different kind of proposition- "Brehhaha" - a real - world hangout that marries the fun of playing board games with the flavor of excellent food. Situated in venture with Mansur building in his love for games and Sreeram Vaidyanathan (IIMA batch of 2005) providing the passion for food.

The cafe has achieved quite a buzz among the Yuppie set in the city with over 65 board games on offer a menu where no item costs more than INR. 70. Vaidyanathan highly recommends the chocolate and chilli concoction - 'Artic Chilly Brew'). Brehhaha was born in September 2006, when Sreeram had just quit his job with Microsoft and was toying with the idea of opening a deli. Brainstorming with Nazimuddin, a whole new concept took shape. It took five months to get

the project up and running, with real estate being one of the biggest roadblocks. "We invested our savings into Brehhaha. Hoping to break even in six months," says Nazimuddin. We may get there ahead of time, thanks to the tremendous response.

However, the 'breakeven' is a bit of a mirage as it does not include salaries for the promoters. "Entrepreneurship is about postponing short-term gains for a long-term bonanza,"grins Sreeram. A home and family support in the city means basics are taken care of, thankfully. "We have really enjoyed the process of creating something that users are so passionate about. It is labor of love. But at a fundamental level Brehhaha fulfils the need to 'do something', which is potentially a very big business." The duo are seeking to raise \$1 million (Rs. 4.1 crore) in venture capital funding in order to scale the business rapidly.

What if that does not happen? Will they stick it out and grow organically or seek out new pastures, or paymasters? Vaidyanathan does not rule out 'any possibilities'. This is, infact, his second fling - he ran doomed B2B dotcom venture before joining IIMA in 2003.

The bottom line is, entrepreneurship is all about dealing with surprises. Bowing to the winds of change, yet standing tall and proud through the storm. You might hit a boundary with your first shot. Or stand at the crease with your eye on the ball and determination in your heart. You might return to the pavilion, but return in style in a second innings. Anything can happen - but at least you lived your dream. The question is, are you willing to die for it?

PASSAGE-II (QUESTIONS 11-20)

11. Idea of puja kits conceived by Prakash Mundhra and its company sacred moments.
12. Starting of a company for manufacturer of puja kits.
13. Ensuring solvency and taking up consultancy assignments IndegoEdge.
14. Starting of a gaming company and rejecting placement offer of Dollars by 1,00,000 by Nazimuddin.
15. Sufficient demand for gaming company
16. Sriram Vaidyanatha's Brehhaha gaming fun with the coffee shop craze among the youth
17. Improving revenue and arranging of private equity deal for Rupees Hundred Crore.

18. Brewhaha will break even in six months time.
19. UniAcess having not generated any revenue for first nine months and continuance of the business.
20. The understanding, co-operation among the promoters and success of the group.

PART II

DIRECTIONS: Data sufficiency problems consist of a question and two statements, labelled (I) and (II), in which certain data are given. You have to decide whether the data given in the statements is sufficient for answering the question. Use the data given, plus your knowledge of mathematics and every day facts, to mark your answer as

- a) If the question can be answered with the help of statement I alone,
- b) If the question can be answered with the help of statement II, alone,
- c) If both, statement I and statement II are needed to answer the question, and
- d) If the question cannot be answered even with the help of both the statements.
21. What are the ages of the three brothers?
I. The product of their ages is 21.
II. The sum of their ages is not divisible by 3.
22. What is the price of mangoes per kg?
I. Ten kg of mangoes and two dozens of oranges cost ₹ 252.
II. Two kg of mangoes could be bought in exchange for one dozen oranges.
23. The area of Circle A is 25% less than Circle B. What is the radius of Circle A?
I. The perimeter of circle B = 40
II. The circumference of circle B is more than the diameter of the circle.
24. Mr. Muthu takes the morning train to his office from station A to station B, and his colleague Mr. Rajesh joins him on the way. There are three stations C, D and E on the way not necessarily in that sequence. What is the sequence of stations?
I. Mr. Rajesh boards the train at D.
II. Mr. Dev, who travels between C & D has two segments of journey in common with Mr. Muthu but none with Mr. Rajesh.
25. What is the volume of the cone?
I. The height of the cone is 10 cm.
II. The radius of the cone is 5 cm.

26. If a , b and c are integers, is $(a-b+c) > (a+b-c)$?
I. b is negative II. c is positive
27. How old is Sam in 1997?
I. Sam is 11 years younger than Anil whose age will be a prime number in 1998.
II. Anil's age was a prime number in 1996.
28. A school play required 24 actors among boys, girls and adults. If no actors take 2 roles, how many adult actors are needed?
I. The ratio of boys needed to girls is 2 to 1
II. The ratio of children needed to adults is 3:1
29. Is the GDP of country X higher than that of country Y?
I. 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
II. Five years ago the GDP of country X was higher than of country Y.
30. Is $x+y-z+t$ even?
I. $x+y+t$ is even. II. t and z are odd.
31. Geetanjali Express, which is 250 metre long when moving from Howrah to Tatanagar crosses Subarnarekha bridge in 30 seconds. What is the speed of Geetanjali Express?
I. Bombay Mail, which runs at 60 km/hour crosses the Subarnarekha bridge in 30 seconds.
II. Bombay Mail, when running at 90 km/hour crosses a lamp post in 10 seconds.
32. What is the selling price of the article?
I. The profit on sales is 20%
II. The profit on each unit is 25% and the cost price is Rs. 250.
33. What is the ratio of the two liquids A and B in the mixture finally, if these two liquids kept in three vessels are mixed together? (The Containers are of equal volume.)
I. The ratio of liquid A to liquid B in the first and second vessel is 3 : 5 : 3 respectively.
II. The ratio of liquid A to liquid B in vessel 3 is 4 : 3.
34. Ram and Gopal bought apples from a fruit vendor. How many apples were bought by them?
I. Ram bought half as many apples as Gopal brought
II. The dealer had a stock of 500 apples

35. What is x given $x > 0$?
I. $x^2 - 4x + 4 = 0$ II. $x^2 - 2y = 0$
36. If $x^3 + y^3$, what is the value of x ?
I. $y = 3$ II. $x < 0$
37. A man completed a certain journey on foot. How many miles did the man walk?
I. If the man had walked a mile per hour faster, he would have completed the journey in an hour less.
II. If the man had walked a mile per hour slower, he would have completed the journey in an hour and a half more.
38. What is the length of rectangle ABCD?
I. Area of the rectangle is 48 square units.
II. Length of the diagonal is 10 units
39. What is the number x ?
I. The LCM of x and 18 is 36.
II. The HCF of x and 18 is 2.
40. What is the first term of an arithmetic progression of positive integers?
I. Sum of the squares of the first and the second term is 116.
II. The fifth term is divisible by 7.

PART - III

PASSAGE I

Radically changing monsoon patterns, reduction in the winter rice harvest and a quantum increase in respiratory diseases - all part of the environmental doomsday scenario which is reportedly playing out in the South Asia. According to United Nations Environment Programme report, a deadly three-km deep blanket of pollution comprising a fearsome cocktail of ash, acids, aerosols and other particles has enveloped this region. For India, already struggling to cope with a drought, the implications of this are devastating and further crop failure will amount to life and death question for many Indians. The increase in premature burden on our crumbling health system. And there is no one to blame but been allergic to any mention of clean technology. Most mechanical two wheelers roll off the assembly line without proper pollution control systems. Little effort is made for R & D on simple technologies, which could make a vital difference to people's lives and the environment.

However, while there is no denying that South Asia must clean up its act, skeptics might question the timing of the haze report. The Johannesburg meet on Rio+10 is just two weeks

away and the stage is set for the usual battle between the developing world and the West, particularly the U.S. has adamantly refused to sign any protocol, which would mean a change in American consumption. U.N. environment report is likely to find a place in the U.S. arsenal as it points an accusing finger on countries like India and China. Yet the U.S. can hardly deny its own dubious role in the matter of erasing trading quotas. Richer countries can simply buy up excess credits from poorer countries and continue to pollute. Rather than try to get the better of developing countries, who undoubtedly have taken up environmental shortcuts in their bid to catch up with the West, the U.S. should take a look at the environment profligacy, which is going on within. From opening up virgin drinking water, US's policies are not exactly beneficial-not even to Americans. We realize that we are in this together and that pollution anywhere should be a global concern. Otherwise, there will only be more tunnels at the end of the tunnel.

41. Both official and corporate India is allergic to
A) failure of monsoon
B) poverty and inequality
C) slowdown in industrial pact
D) mention of monsoon technology
42. Which, according to the passage, is a life and death question to many Indians?
A) increase in respiratory diseases
B) use of clean technology
C) thick blanket of pollution over the region
D) failure in crops
43. Choose the word which is similar in meaning to the word 'profligacy' as used in the passage.
A) wastefulness
B) conservation
C) upliftment
D) criticalness
44. What we must realize, according to the passage?
A) no country should show superiority over other countries
B) U.N. is putting in hard efforts in the direction of pollution control
C) all countries must join hands in fighting pollution
D) nobody should travel through tunnel to avoid health hazards.

45. Choose the word which is most opposite in meaning to the word 'morbidity' as used in the passage.
A) powerfulness B) softness
C) healthiness D) acuteness
46. Which is rumbling health system of India?
A) Pollution
B) Premature Death
C) Economic conditions
D) Failure in monsoon

PASSAGE II

The existence of mammals on the earth can be traced back to at least the Triassic time. The rate of development was retarded, till evolution change suddenly accelerated in the oldest Paleocene. This resulted in an increase in average size, larger mental capacity, and special adaptations for different modes of life, during the Oligocene Epoch, with the appearance of some new lines and extinction of others. The Miocene and Pliocene times are especially significant as they mark the culmination of various groups and a continued approach toward modern characters. It is in the Miocene time that the mammals reached their peak with reference to variety and size.

The ability of the mammals to adapt to various modes of life finds a parallel in the reptiles of the Mesozoic time, and apart from their greater intelligence, the mammals apparently have not done much better than the corresponding reptilian forms. Undoubtedly the bat is a better flying animal than the pterosaur, but at the same time the dolphin and whale are hardly more fish like than the ichthyosaur. Quite a few of the swift-running mammals inhabiting the plains, like the horse and the antelope, must excel any of the dinosaurs. Although the tyrannosaurus was a more weighty and robust carnivore than perhaps any carnivorous mammal, the lion and the tiger, by virtue of their superior brain are far more efficient and dangerous beasts of prey. It is significant to note that various kinds of lifestyles, some took to grazing on the plains and were able to run swiftly (horse, deer, bison), others started living in rivers and swamps (hippopotamus, beaver), inhabiting trees (sloth, monkey), burrowing underground (rodent, mole), feeding on flesh (tiger, wolf), swimming in the water (dolphin, whale, seal), and flying in the air (bat). Human beings on account of their superior brain have been able to harness mechanical methods to conquer the physical world and adapt to any set of conditions.

Such adaptation to different conditions leads to a gradual change in form and structure. This is a biological characteristic of the youthful, plastic stage of a group. It is seen that early in its evolutionary cycle animal progress in its cycle becoming old and fixed, this capacity for change disappears. The generalized types of organisms retain longest the ability to make adjustments when required, and it is from them that new, fecund stocks take origin—certainly not from any specialized end products. With reference to mammals, we see their birth, plastic spread in many directions, increased specialization, and in some cases, extinction; this is characteristic of the evolution of life, which can be seen in the geologic record of life.

47. From the following, choose the most appropriate title for the above passage?
A) From Dinosaur to Man
B) Adaptation and Extinction
C) The Superior Mammals
D) The Geologic Life Span
48. According to the passage the chronological order of the geologic periods is:
A) Paleocene, Miocene, Triassic, Mesozoic
B) Paleocene, Triassic, Mesozoic, Miocene
C) Miocene, Paleocene, Triassic, Mesozoic
D) Mesozoic, Paleocene, Eocene, Miocene
49. From the above passage, we can infer that, the pterosaur
A) resembled the bat
B) was a Mesozoic mammal
C) was a flying reptile
D) inhabited the seas
50. As inferred from the passage, the largest number of mammals were found in which of the following periods?
A) Triassic period B) Eocene period
C) Oligocene epoch D) Miocene period
51. Among the following statements, which statement, if true, would weaken the argument put forth in the first sentence of Paragraph 1?
A) It has been found that the tyrannosaurus had a larger brain, than was previously known.
B) Within the next thousand years, mammals will become extinct.
C) Recently certain forms of flying ichthyosaurs have been discovered.
D) It has now been proved, that the tiger is more powerful than the carnivorous reptiles.

97. Intense feeling of happiness
 A) Euphoria B) Mania
 C) Pride D) Rendezvous
98. List of business or subjects to be considered at meeting
 A) Timetable B) Agenda
 C) Plan D) Schedule

99. A remedy for all diseases
 A) Stoic B) Panacea
 C) Marvel D) Belligerent
100. Habitually silent or talking little
 A) Taciturn B) Servile
 C) Verbose D) Loquacious

ANSWERS

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

ANSWERS WITH EXPLANATIONS

21. D) **Statement I :**
 The product of their ages is 21
 The possible values are 1, 3, 7 and 21, 1, 1
 ∴ It is insufficient
Statement II : Sum is not divisible by three.
 A lot of numbers are not divisible by three
 Both combined
 $1 + 3 + 7 = 11$ and $21 + 1 + 1 = 23$ still insufficient.
22. C) **Statement I :** Ten kg of mangoes and 2 Dozens of oranges cost 252
 $\Rightarrow 10'M' + 2'O' = 252$
 M – Mangoe ; O – Orange
Statement II : $2M = 1O$
 Both combined $14M = 252$
 $M = \frac{252}{14} = 18$
 Both statements are required to answer the question.
23. A) **Statement I**
 Perimeter of circle B = $40 = 2\pi r$
 $r = \frac{40}{2\pi} = \frac{20}{\pi}$
 Area of the circle = πr^2
 $= \pi \times \left(\frac{20}{\pi}\right)^2 = \frac{400}{\pi}$

- ∴ The value can be found.
Statement II : Wont be sufficient without statement I.
24. C) Statement in I alone or II alone wont be sufficient to answer the question. Both combined the sequence of stations can be identified.
 Dev travels with Muthu but not Rajesh which means Dev must have departed from station C and arrived at station D. It also gives the detail that there are two segments between C and D. Hence 'E' lies between C and D and Rajesh departed from D.
- | | | | | |
|---|---|---|---|---|
| A | C | E | D | B |
| | | | | |
25. C) Volume of cone = $\frac{\pi r^2 h}{3}$
 ∴ Both statement I and II are required to answer the question.
26. C) Statements I and II independently wont be sufficient. But when combined
 $a - b + c > a + b - c$
 $\Rightarrow -b + c > b - c$
 $\Rightarrow 2c > 2b$
 $\Rightarrow c > b$
 ∴ c is positive and b is negative.

27. D) **Statement I** : Since there are lot of prime numbers. The value cannot be defined.

Statement II : Similar as statement I

When both are combined the numbers are continues prime numbers like (5,7) (11,13) and so on.

∴ The question cannot be answered even with the help of both the statements.

28. B) **Statement I** : The ratio of boys and girls are given but no information about adults.

∴ It is not sufficient.

Statement II : The ratio of children to adult is 3 : 1

Children : boys + girls

$$3 : 1 = 24$$

$$18 + 6 = 24$$

∴ 6 adults

∴ Statement II alone is sufficient to answer the question.

29. D) Neither statement I and II alone nor combined is sufficient to answer the question because there is no absolute values of GDP is given.

30. C) From statement I and II

$$x+y = \text{odd}, t = \text{odd and } z = \text{odd}$$

$$\text{Then } (x+y) - z + t = \text{odd} - \text{odd} + \text{odd} = \text{odd}$$

$$\Rightarrow x + y - z + t \text{ is not even}$$

∴ Both statements are required.

31. C) **From statement I** :

Bombay mail covers 250m + length of bridge in 30 seconds.

∴ Length of Bombay mail + Length of Subarmarekha bridge

$$= 60 \times \frac{5}{18} \times 30 = 500$$

But exact length of the bridge is not known

∴ Statement I alone is not sufficient.

From statement II :

Speed of Bombay mail

$$= 90 \times \frac{5}{18} = 25 \text{ m/s}$$

$$\text{In 10 seconds it covers} = 10 \times 25 = 250\text{m}$$

(Length of Bombay mail)

But length of the bridge is not known

From both statements

Length of Bombay mail

$$= 500 - 250 = 250\text{m}$$

∴ Geetanjali Express covers

$$250 + 250 = 500 \text{ m in 30 seconds}$$

∴ Both statements are required.

32. B) **Statement I** : Cost price is not given so it is not sufficient

Statement II : Profit = 25%

$$\text{Cost price/unit} = 250$$

Selling price

$$= \left(\frac{100 + \text{profit percentage}}{100} \right) \times \text{cost price}$$

$$= \frac{100 + 25}{100} \times 250 = \frac{125}{100} \times 250$$

$$= \frac{125 \times 5}{2} = \frac{625}{2} = 312.5$$

∴ Statement II alone is sufficient.

33. C) Proportions of the liquid A in vessels 1, 2 and 3 are

$$\frac{3}{8}, \frac{2}{5} \text{ and } \frac{4}{7}$$

LCM of 8, 5 and 7 is 280 (Quantity in each container)

⇒ Quantity of liquid in a vessel 1, 2, 3 are

$$\frac{3}{8} \times 280 = 105; \frac{2}{5} \times 280 = 112;$$

$$\frac{4}{7} \times 280 = 160$$

$$\text{Total volume of A} = 105 + 112 + 160 = 377 \text{ litres}$$

$$\text{Total volume of B} = 840 - 377 = 463 \text{ litres}$$

∴ Both statements are required

34. D) Both statements are not sufficient to answer the question. Since there is no detail about the number of apples bought.

35. A) **Statement I**

$$x^2 - 4x + 4 = 0$$

$$(x - 4)(x - 1) = 0$$

$$x = 4 \text{ (or) } x = 1$$

Clearly $x > 0$

Statement II

$$x^2 - 2y = 0 \text{ cannot be solved to find } x$$

∴ Statement I alone is enough to answer the question.

36. D) **Statement I**

$$y = 3$$

$$x^3 + 3^3$$

∴ Statement I is not sufficient

Statement II

$$x < 0$$

This can't be used to find x .

∴ Both statement I and II are not sufficient.

37. D) In both the statements no certain value about the total distance covered or time or speed are given.

∴ Answer cannot be derived from both the statements.

38. D) **Statement I :**

Area of the rectangle = 48 sq. units

$$\Rightarrow L \times B = 48$$

∴ It is not sufficient.

Statement II :

Length of the diagonals is 10 units

$$= \sqrt{L^2 + B^2} = 10 \Rightarrow L^2 + B^2 = 100$$

From both statements

$$LB = 48$$

$$L^2 + B^2 = 100$$

$$(L+B)^2 = L^2 + B^2 + 2LB$$

$$= 100 + 2(48) = 196$$

$$\Rightarrow L + B = \sqrt{196} = 14$$

A certain value cannot be obtained

∴ Both statements either individually nor combined does not give answer.

39. C) From Both statements

$$18 \times x = 36 \times 2$$

$$x = \frac{36 \times 2}{18} = 4$$

Both statements are required to answer.

40. A) **Statement I :**

Sum of the first and second number is 116

The only possibility is $4^2 + 10^2 = 116$

Difference (d) = $10 - 4 = 6$

∴ Fifth term of the AP is

$$4 + 10 + 16 + 22 + \boxed{28}$$

∴ Statement I is enough to answer

Statement II

The fifth term is divisible by 7

$$\Rightarrow \frac{28}{7} = 4$$

Though it will not be useful in finding the series.

61. C) 138 142 146 150 ? 142 138

$$+4 \quad +4 \quad +4 \quad \quad \quad -4$$

$$\therefore 150 - 4 = 146$$

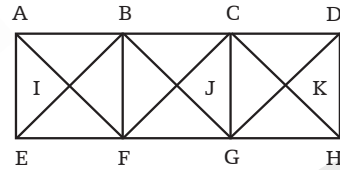
62. C) $64 : 8 \quad 16 : 4 \quad ? : 2$

$$8 \times 8 = 64$$

$$4 \times 4 = 16$$

$$2 \times 2 = 4$$

63. D)



Squares :

ABFE, BCGF, CDHG, BJFI, CKGJ - 5

Triangles

$\triangle AIE, \triangle ABF, \triangle AFE, \triangle BEF, \triangle IFE, \triangle BIF,$

$\triangle ABE - 8$

$\triangle BJF, \triangle BCJ, \triangle BGF, \triangle BCG, \triangle CFG, \triangle JGF,$

$\triangle CJG, \triangle BCF - 8$

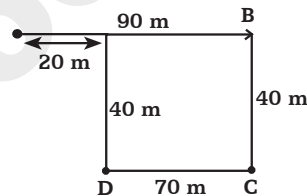
$\triangle CDG, \triangle CDK, \triangle CKG, \triangle CHG, \triangle DKH, \triangle H GK,$

$\triangle CDH, \triangle DHG - 8$

$\triangle ABC, \triangle BDG, \triangle EBG, \triangle FCH - 4$

$$\Rightarrow 8 + 8 + 8 + 4 = 28 \text{ triangles}$$

64. C)



65. C)

Women - 1, 2, $\boxed{3}$, 4

Good at crafts - $\boxed{3}$, 4, 5, 6

Home makers - 2, $\boxed{3}$, 5

66. A)

13, 17, 23, 63, 71

13, 17, 23 and 71 are prime numbers

∴ 63 is the odd one.

67. C)

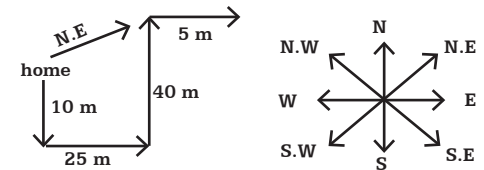
P U N C T U A L

4 7 8 1 9 7 6 5

↓ ↓ ↓ ↓

$$\Rightarrow 5786 - \text{LUNA}$$

68. A)



69. A)

0, 7, 26, 63, ?

$$1^3 - 1 = 0$$

$$2^3 - 1 = 8 - 1 = 7$$

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$$3^3 - 1 = 27 - 1 = 26$$

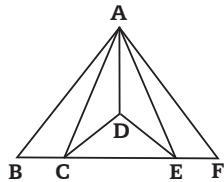
$$4^3 - 1 = 64 - 1 = 63$$

$$5^3 - 1 = 125 - 1 = \boxed{124}$$

70. B) $1^2 = 1$

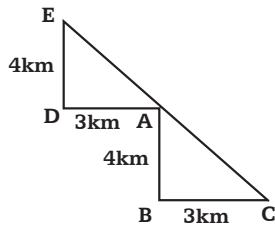
$$25^2 = \boxed{165}$$

71. B)



$\triangle ABC, \triangle ACD, \triangle ADE, \triangle AEF, \triangle CDE, \triangle ABF, \triangle ABE, \triangle ACF$ – 8 triangles

72. C)



$$AD^2 + DE^2 = AE^2 \Rightarrow 4^2 + 3^2 = 25$$

$$AB^2 + BC^2 = AC^2 \Rightarrow 4^2 + 3^2 = 25$$

$$AE^2 = 25 \Rightarrow AE = 5$$

$$AC^2 = 25 \Rightarrow AC = 5$$

$$\therefore 5 + 5 = 10$$

They are 10km apart.

73. D) $7 + 1^2 = 7 + 1 = 8$

$$8 + 2^2 = 8 + 4 = 12$$

$$12 + 3^2 = 12 + 9 = \boxed{21}$$

$$21 + 4^2 = 21 + 16 = 37$$

$$37 + 5^2 = 37 + 25 = 62$$

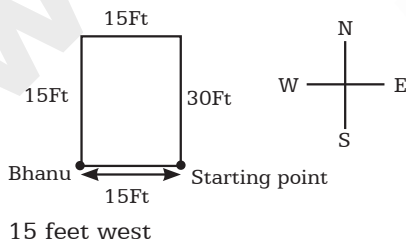
20 is the odd one.

74. B) Reason – number of letters – 1 $\Rightarrow 6 - 1 = 5$

Believed $\Rightarrow 8 - 1 = 7$

Government $\Rightarrow 10 - 1 = \boxed{9}$

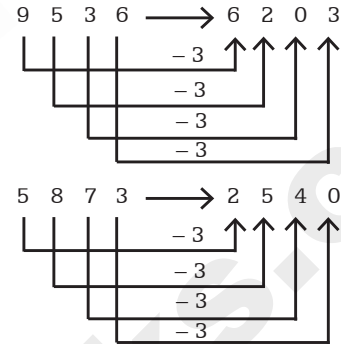
75. A)



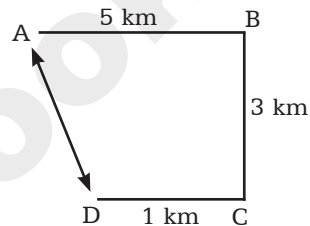
76. A) 0, ?, 8, 15, 24

$$0 \xrightarrow{+3} \boxed{3} \xrightarrow{+5} 8 \xrightarrow{+7} 15 \xrightarrow{+9} 24$$

77. A) G



78. A)



$$AB - DC = 5 - 1 = 4$$

$$\Rightarrow 4^2 + 3^2 = AD^2$$

$$16 + 9 = AD^2$$

$$AD^2 = 25$$

$$AD = 5 \text{ km}$$

79. A) D A R E F A T E

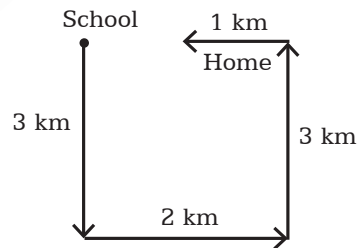
1 0 8 3 2 0 9 3

F A R E

↓ ↓ ↓ ↓

2 0 8 3

80. D)



The home was in east direction.

