

XAT 2012

Verbal Ability and Logical Reasoning

1. "On a wing and a prayer the Indian team landed in Heathrow to take on their formidable opponents". From the above sentence it can be inferred that the Indian team was
- A high in spirits
 - B well prepared
 - C over confident
 - D under prepared
 - E buoyant
2. It _____ not look like a great deal today, but back then it was a coup: no man before _____ to import tea directly into Ireland. The option that will best fill the blanks in the above sentences would be:
- A may, has dared
 - B may, had dared
 - C might, have dared
 - D might, have ever dared
 - E may, ever dared
3. "It was AC Milan's success in Europe in the sixties that introduced the 'libero' as the Italian default and, a quarter of a century later, it was AC Milan's success in Europe that killed it off." Which of the following was not implied in the above sentence?
- A AC Milan was successful in Europe in the sixties with the help of a 'libero'
 - B AC Milan was successful in Europe in the late eighties without a 'libero'
 - C The 'libero' was an Italian default for almost a quarter of a century.
 - D AC Milan was not successful in Europe for almost a quarter of a century.
 - E The Italians seldom used a 'libero' since late eighties.
4. Choose the odd one:
- A Chaos / Order
 - B Fact / Fiction
 - C Virtue / Vice
 - D Study / Analyse

E Light / Darkness

5. The 2001 census showed a sharp fall in the literacy rate compared to 1991, but an increase in the literacy rate by 2006 suggests that between 1991 and 2006 India progressed in terms of literacy rate. Which of the following statements, if true, best refutes the above argument?

- A One of the causes of more literacy is the increased population growth rate.
- B Although there was no census in 2006 the information about the literacy rate is reliable.
- C Many of those who were illiterate in 2001 become literate by 2006.
- D The rate of fall in literacy rate between 1991 and 2001 was more than the rate of rise in literacy rate between 2001 and 2006.
- E The rise in literacy rate between 2001 and 2006 was due to persistent campaign on television and FM radio.

6. Ravindra Dubey was guilty of embezzlement. It means that Ravindra Dubey

- A did not pay his bills.
- B misappropriated assets he was entrusted with.
- C engaged in circulating black money in the economy.
- D cheated on his spouse.
- E misreported educational qualification.

7. Read the sentences and choose the option that best arrange them in a logical order.

- A. Some of these are tangible while others are not.
- B. The micro factors look at brand building, product development, competition, pricing, decision making within organizations etc.
- C. Another way to classify these factors is to distinguish which of them are macro in nature and which of them are micro.
- D. The macro factors comprise government policies, state of the economy, changing demographics etc.
- E. The factors influencing forecasts include social, technological, economic, political, religious, ethnic, governmental, and natural factors.

- A E-A-C-D-B
- B E-C-B-D-A
- C A-E-C-D-B
- D D-B-A-C-E
- E E-D-B-A-C

Instructions [8 - 12]

Read the following passage and provide appropriate answers for the questions

There is an essential and irreducible 'duality' in the normative conceptualization of an individual person. We can see the person in terms of his or her 'agency', recognizing and respecting his or her ability to form goals, commitments, values, etc., and we can also see the person in terms of his or her 'well-being'. This dichotomy is lost in a model of exclusively self-interested motivation, in which a person's agency must be entirely geared to his or her own well-being. But once that straitjacket of self-interested motivation is removed, it becomes possible to recognize the indisputable fact that the person's agency can well be geared to considerations not covered - or at least not fully covered - by his or her own well-being. Agency may be seen as important (not just instrumentally for the pursuit of well-being, but also intrinsically), but that still leaves open the question as to how that agency is to be evaluated and appraised. Even though the use of one's agency is a matter for oneself to judge, the need for careful assessment of aims, objective, allegiances, etc., and the conception of the good, may be important and exacting. To recognize the distinction between the 'agency aspect' and the 'well-being aspect' of a person does not require us to take the view that the person's success as an agent must be independent, or completely separable from, his or her success in terms of well-being. A person may well feel happier and better off as a result of achieving what he or she wanted to achieve - perhaps for his or her family, or community, or class, or party, or some other cause. Also it is quite possible that a person's well-being will go down as a result of frustration if there is some failure to achieve what he or she wanted to achieve as an agent, even though those achievements are not directly concerned with his or her well-being. There is really no sound basis for demanding that the agency aspect and the well-being aspect of a person should be independent of each other, and it is, I suppose, even possible that every change in one will affect the other as well. However, the point at issue is not the plausibility of their independence, but the sustainability and relevance of the distinction. The fact that two variables may be so related that one cannot change without the other, does not imply that they are the same variable, or that they will have the same values, or that the value of one can be obtained from the other on basis of some simple transformation. The importance of an agency achievement does not rest entirely on the enhancement of well-being that it may indirectly cause. The agency achievement and well-being achievement, both of which have some distinct importance, may be casually linked with each other, but this fact does not compromise the specific importance of either. In so far as utility - based welfare calculations concentrate only on the well-being of the person, ignoring the agency aspect, or actually fails to distinguish between the agency aspect and well-being aspect altogether, something of real importance is lost.

8. According to the ideas in the passage, the following are not true expect:

- A The value of a person's well-being cannot be obtained from the value of her agency.
- B A person's agency aspect is independent of her well-being aspect.
- C A person's agency is important because her well-being must depend on her agency.
- D A person's agency must be entirely geared towards her own well-being.
- E A person's well-being will be dependent on her agency in all circumstances.

9. In the case of Japan, there is a strong empirical evidence to suggest that systematic departure from self-interested behavior, in the direction of duty, loyalty and goodwill have played a substantial part in industrial success. Which of the following is closest to the ideas presented in the passage?

- A Japanese are duty bound selfless people.
- B The sense of well-being of the Japanese people gets consistently enhanced due to this systematic departure from the self-interested behavior.
- C Had there been no enhancement of their own well-being, the Japanese people would have not been dutiful.

- D Ability to achieve their country's objectives may have enhanced the sense of well-being of Japanese people. However the agency of the Japanese people in their industrial success is probably derived from factors beyond this sense of well-being.

- E** Japanese people's adherence to ethos of duty, loyalty and goodwill can well be explained within the paradigm of self- interested behavior.

10. Of the options presented below, which one is the best example for the ideas propounded in the passage?

- A** 'Change for Equality' was a campaign by women of Iran to remove discrimination against women in their country. Activities of the movement were attacked and jailed by the government, but the campaign continued.

- B** In January 2011, the Egyptian people came out against the regime to topple it. Their grievances included police atrocities, state emergency laws, lack of free election, and lack of freedom of speech, corruption, unemployment, food price inflation and low minimum wages.

- C** A worker immolated himself to highlight injustice being perpetrated by the management against the employees in the company.

- D** The factory workers carried on with the strike in demand for increased wages, even though they were not paid wages for the duration they were on strike.

- E** A politician went on a hunger strike against corruption which not only galvanized the state government in enacting new laws, but also increased his image in the minds of the voters.

11. Read the sentences given below and choose the option that is best in accordance with the ideas in the passage.

I. There is a need to distinguish between the agency aspect and the well-being aspect of a person.

II. A person can be conceptualized in terms of either agency or well-being.

III. A person is important, not just instrumentally, for the pursuit of well-being

- A** I only
B II only
C III only
D I and III
E II and III

12. The idea of agency, as used in the passage, is implied in all the options given below, except:

- A** A student arguing for a grade revision
B A lawyer arguing the case for his rich client
C A politician on dharma to gain publicity
D A hungry child crying for food
E An ascetic praying for world peace

13. Which of the following sentences is grammatically incorrect?

- A** Bats are able to fly in the dark.
B Bats can fly in the dark

- C Bats have the ability to fly in the dark.
- D Bats cannot fly in the dark if it rains.
- E Bats have the ability of flying in the dark, if it does not rain.

14. Alfredo, Diego and Lionel are discussing Argentinean football.

Alfredo: Argentina was a football powerhouse.

Diego: Argentina is a football powerhouse.

Lionel: Argentina will be a football powerhouse.

Which of the following cannot be inferred from the above conversation?

- A Lionel is optimistic about the future.
- B Alfredo, Diego and Lionel may disagree on certain things.
- C Diego views the present positively.
- D Alfredo completely disagrees with Diego.
- E Alfredo has positive feelings about the past.

15. Choose the grammatically correct sentence from the options given below.

- A Surprisingly, given the recent labour problems in the factory, the factory manager has enjoyed considerable support from they who had previously challenged his leadership.
- B Surprisingly, given the recent labour problems in the factory, the factory manager has enjoyed considerable support from them who had previously challenged his leadership.
- C Surprisingly, given the recent labour problems in the factory, the factory manager has enjoyed considerable support from he who had previously challenged his leadership.
- D Surprisingly, given the recent labour problems in the factory, the factory manager has enjoyed considerable support from those who had previously challenged his leadership.
- E Surprisingly, given the recent labour problems in the factory, the factory manager has enjoyed considerable support from that who had previously challenged his leadership.

16. Ethologists, people who study animal behavior, have traditionally divided an organism's actions into two categories: learned behavior (based on experience) and instinctive behavior (based on genotype). Some current scholars reject this distinction, claiming that all behavior is a predictable interaction of experience and genotype.

Which of the following, if true, most strengthens the arguments made in the sentence above?

- A All organisms with identical genotypes and identical experience sometimes respond differently in different situations.
- B All organisms with different genotypes and identical experience always respond identically in identical situations.
- C All organisms with similar genotypes and similar experience always respond differently in identical situations.
- D All organisms with identical genotypes and identical experience always respond identically in identical situations.

- E** All organisms with identical genotypes and different experience always respond identically in identical situations.

17. The benefits of psychotherapy result not only from the advice the therapist gives but also from the supportive relationship offered to the patient. Even though this relationship may cost large amounts of money over many years, most patients interpret the therapist's concern for them as genuine and identify this caring relationship as the primary factor in improving their mental health. However, recent studies have found that only eight percent of therapist/patient relationships continue after the patient terminates formal paid visits.

Which of the following is in accordance with the ideas contained in the passage? Choose the best option.

- A** therapists are equally concerned with moneymaking and their patients' well-being.
- B** reading published articles of reputed psychotherapists will hardly be beneficial.
- C** therapists can always treat mental illness without the use of prescription drugs.
- D** therapists who terminate relationships are likely to improve mental health of their patients.
- E** eight percent of patients will continue to improve after termination of therapy.

18. Most of the Asian countries have trade-deficit with China. Bangladesh's trade deficit with China this year has increased by 35%. Despite large increases in exports to China, Indonesia's trade deficit with China continues to increase. So does that of South Korea, home of Samsung Electronics, one of the world's largest manufacturers of electronic gadgets.

Which of the following, if true, would be most inconsistent with the above passage?

- A** China is the largest manufacturer of parts of electronic gadgets and Samsung Electronics imports parts for their gadgets from China.
- B** Exports to Bangladesh are insignificant in proportion of China's total exports.
- C** Exports to Indonesia from China decreased.
- D** Indonesia's chief exports are natural resources.
- E** China has trade deficit with Iran.

19. All who studied commerce enjoy sports. No tax consultant enjoys sports. All those who enjoy sports love classical music.

If the above sentences are true, which of the following also must be true?

- A** No one who enjoys classical music is a tax consultant by profession.
- B** Every tax consultant enjoys classical music.
- C** No tax consultant enjoys classical music.
- D** No tax consultant studied commerce.
- E** No one who studied commerce enjoy classical music.

20. The head _____ was annoyed to see a _____ in the soup.

The option that would best fill the blanks in the above sentence would be:

- A chief, house fly
- B chef, housefly
- C chief, house-fly
- D chef, house fly
- E chef, house-fly

21. Which word is the opposite of the word 'hypothesize'?

- A posit
- B propose
- C conjecture
- D refute
- E speculate

22. Read the sentences and choose the option that best arranges them in a logical order. (1 mark)

- A. In fact, it is considered as a dumping ground for unwanted people in quite a few organizations.
- B. In many parts of the country, traditional castes such as Kothari, Kotwal, Bhandari and Bhandarkar have for generations been dealing in procuring, stocking, distributing goods and merchandise.
- C. This is due to the fact that Indian traders have been trading with many parts of the world.
- D. However, though the concept of warehousing has been prevalent for over 2000 years, the warehouse has not yet obtained due recognition in modern times.
- E. The concept of warehousing or stores function is not new in India.

- A E-A-C-D-B
- B E-C-B-D-A
- C A-E-C-D-B
- D D-B-A-C-E
- E E-D-B-A-C

23. Concurrence means all of the following except:

- A Agreement
- B Accord
- C Consensus
- D Coincidence
- E Harmony

24. Read the sentences and choose the option that best arranges them in a logical order.
- i. All it has to do is to drive up the inflation rate-examples are the damage Lyndon Johnson's inflationary policies did to the US economy and the damage which consistently pro-inflationary policies have done to the economy of Italy.
 - ii. It is easy, the record shows, for a government to do harm to its domestic economy.
 - iii. Contrary to what economists confidently promised forty years ago, business cycles have not been abolished.
 - iv. They still operate pretty much the way they have been operating for the past 150 years
 - v. But there is not the slightest evidence that any government policy to stimulate the economy has impact, whether that policy be Keynesian, monetarist, supply - side or neoclassical.
- A (iii)-(iv)-(ii)-(i)-(v)
- B (iii)-(v)-(ii)-(i)-(iv)
- C (ii)-(iv)-(i)-(v)-(iii)
- D (ii)-(i)-(iii)-(iv)-(v)
- E (ii)-(i)-(v)-(iii)-(iv)
25. When income tax rates are reduced, there is an increase in taxable income, and an increase in taxable income results in increased total income tax revenues for the government. Which of the following is analogues to the argument above in terms of its logical features?
- A If the city municipal corporation increases taxes on property by 1% it will raise tax revenues, which can be used for garbage disposal management.
- B The Leader of the Opposition at the Parliament argued that a restriction on the import of Chinese manufacturing products will increase the sales of Indian manufacturing products.
- C An advertisement using more than 25 words of text will not be read, and when an advertisement is not read, the product is not sold. Therefore, the fewer words an advertisement has, the more effective it will be in promoting its product.
- D The balance of payment of a country will improve if the country reduces its imports and increases exports.
- E Citizens earning more than 15 lakh rupees per annum pay at an increased tax rate of 40% Citizens earning less than 1 lakh= rupees per annum can be exempted from paying income taxes without decreasing the revenues of the Income Tax Department
26. Not wanting to present an unwanted optimistic picture in the board meeting, the CEO estimated the sales growth _____.
- The option that will best fill the blank in the above sentence would be:
- A strictly
- B liberally
- C fancifully

D pessimistically

E conservatively

Instructions [27 - 30]

Read the following passage and provide appropriate answers for the questions

The idea of demarcating certain areas within the country as special economic zones to promote investment and growth is not new. A large country unable to provide the kind of facilities and environment that can attract foreign investment throughout the country often finds it feasible and attractive to carve up some of its areas where such facilities can be provided. The laws and procedures for setting up new industries are waived to make the area business-friendly with developed infrastructure and a one-window interaction with government. In addition, huge tax benefits are promised to lure investors. China's experience shows that if chalked out and implemented with care such a policy can accelerate the flow of capital and technology from abroad and thereby speed up growth.

However, SEZs may not be the best option in all situations to clear the bottlenecks in growth.

India's experience with export processing zones (EPZs) bears this out. They have failed in India for the simple reason that the factors that made the SEZs successful in China have been absent here. In India, as in China, EPZs were thought of as a way of providing an escape route from the stranglehold of control that prevailed over the Indian economy. But even while promising to ease the rigours of controls, Indian policy-makers could not give up their penchant for micromanaging from the centre and undoing the promised relaxations with all kinds of qualifications and "guidelines".

Over last two decades India has evolved into a market economy and much of governmental control has disappeared, but the flow of foreign direct investment has not reached anywhere near the levels of China. Besides, infrastructure building has fallen far short of what is required. Even after three years of the enactment of the Electricity Act (2003), private investment in electricity generation is still a trickle with the states refusing to give up the monopoly of their electricity boards in the matter of purchase of the power generated. While swearing by growth, governments at both the centre and the states cite the fiscal responsibility laws to plead their helplessness in making the required investments to improve infrastructure.

Given the situation, the SEZs have apparently been thought of as a simple way out. In its enthusiasm for SEZs the commerce ministry forgot two critical lessons of the Chinese experience, viz., that an SEZ must be of an adequate size to provide opportunities for reaping the benefits of large-scale operations and their number should be few. Every industry or economic activity worth its name is now seeking SEZ status. Proposals are now being floated to invite foreign educational institutions to come to India with promises of SEZ treatment! The finance ministry apprehends a loss of nearly 1,75,000 crore in direct taxes, customs duties and excise duties over the next five years.

27. The objective of the author in writing the above passage seems to be to

- A highlight the failure of Indian policy makers regarding EPZs.
- B narrate the pros and cons of SEZs.
- C compare between the Indian EPZs and Chinese SEZs.
- D oppose the proliferation of SEZs in India.
- E argue that India should imitate the Chinese policies regarding SEZs.

28. The author's arguments suggest the following conclusions, except

- A SEZs may be the best option for countries unable to provide infrastructure and business environment to attract foreign direct investment.
- B SEZs must be large enough to house large scale operations.

- C fiscal responsibility laws actually limit the investment on infrastructure by the Government of India.
- D government of India must limit the number of SEZs.
- E SEZs cause loss of tax revenue for the central Government.

29. The author does not oppose

- A SEZ treatment of foreign educational institutes in India.
- B qualifiers undoing relaxation of government control.
- C tax benefits to strategically promote SEZs.
- D monopoly of state electricity boards in power purchase.
- E lack of Government initiative in infrastructure development.

30. The passage was most likely written in the year:

- A 1991
- B 2001
- C 2003
- D 2006
- E 2011

Instructions [31 - 32]

Read the following passage and provide appropriate answers for the questions

This is one of the unanswered questions that I want to explore. I believe that this is certainly one of the deeper questions about technology. Why do I say so? Without evolution technologies seem to be born independently and improve independently. Each must come from some unexplained mental process, some form of creativity or thinking outside the box that brings it into existence and separately develops it. With evolution, new technologies would be birthed in some precise way from previous ones, albeit with considerable mid-wifing, and develop through some understood process of adaptation. In other words, if we could understand evolution, we could understand the most precious of processes: innovation. But, let me define evolution before I proceed further. The word evolution has two general meanings. One is the gradual development of something, as with the evolution of ballet or the English madrigal. The other is the process by which all objects of some class are related by ties of common descent from the collection of earlier objects. The latter is what I mean by evolution.

31. Which of the following can be inferred from the passage?

- I. The author's main concern is to develop a theory of innovation.
- II. The author is interested in putting forth a theory of technological evolution.
- III. The author believes before developing a theory of technological evolution, one needs to investigate whether technology evolves at all.
- IV. Evolution, as the author puts it, is a sense of common relatedness.

- A I and II
- B I and IV

- C II and IV
- D I, II and III
- E All the above statements

32. I. In 1867, S. Colum Gilfillan, a sociologist traced the evolution of ships from the dugout canoe to the modern steamship of the day.

II. Many theories propose the existence of a technology in many forms. From these variations, some perform better and are selected for further use and development.

III. Till date the people who have thought hardest about the general questions of technology have only been social scientists. They have viewed technology from the outside as stand-alone objects without studying earlier technologies.

IV. Some technologies, for example, the laser, the jet engine, the radar, the quick sort algorithm and the locomotive just appear, or at least they seem to just appear unlike novel biological species which are versions of earlier objects.

V. Radar descends from radio but you can vary 1930s radio circuits as radically you like but you will never get radar. Radar requires a different principle.

Assuming the above statements are true, which option would most strengthen the author's premise that the question that he has identified has not been solved as yet?

- A I and III
- B II and III
- C I, III and IV
- D II, V and III
- E IV, V and III

Decision Making

Instructions [33 - 34]

on the basis of the following letter.

To the Chairman:

Dear Mr. Sailesh,

At the December 3, 2011 meeting, it was decided that no two officers would hold positions on the same committee. It has recently come to my attention that both Chaitanya Rao and Ajit Singh will be serving in some capacity on the Cultural Committee, and both have been nominated for officer status. As you know, this is in direct disregard for the rules as voted by the Members Council last December 3, 2011. I would hope that sufficient action be taken by the Disciplinary Committee (on which committee both of the above are members) so that this problem will be remedied.

Sincerely,

Arvind Singh

33. Which of the following is an essential flaw that the writer of the letter overlooked?

- A Rao and Ajit are already serving together on the Disciplinary Committee.

- B The Chairman has no power in the matter.
- C The Members Council cannot pass rules limiting members.
- D Rao and Ajit are yet to be confirmed as officers.
- E Cultural Committee is only active during the annual festival.

34. If both the nominations are confirmed, which of the following exhaustively and reasonably, describes actions that may occur in the near future?

- A Arvind resigns his membership.
- B Either Rao or Ajit resigns his membership.
- C Ajit resigns his committee post on the Cultural Committee.
- D Rao resigns his position on the Cultural Committee.
- E Either Rao or Ajit resigns his position from the Cultural Committee, and the other resigns his position on the Disciplinary Committee.

Instructions [35 - 37]

on the basis of the information given in the following case.

Due to increased competition, Ginger Automobiles, the Indian subsidiary of Pepper Automobile Company (PAC) reported lower sales and profits. PAC expects its new model Limo, developed especially for value conscious customers of India and China, would revive its fortunes. In order to prevent customers from using competing products, PAC announced the launch of Limo six months before schedule. Due to unrest in its Indian supplier's plant, deliveries of essential components for its main plant was hampered, and hence it decided to launch Limo in China only as per the original plan. Within a short span of time, Limo captured 30% market share in China, which was 200% higher than expected. Indian customers who had looked forward to purchasing Limo were becoming increasingly unhappy to the non-availability of Limo in India. Ginger's dealers were worried about loss of business from the customers who might switch to other cars.

35. Statement I: In the Chinese market, Baft, and Hebe, are competing models in Limo's target market. Due to increase in sales of Limo by 200%, Baft and Hebe saw their market share decline by 10%.

Statement II: Baft and Hebe were not desired by the customers due to their new features.

Which of the following conclusions can be most justifiably made?

- A I alone
- B II alone
- C Either I or II
- D Neither I nor II
- E I and II together

36. Unhappy customers will not only leave the company, but also spread negative publicity about the company. The best way, among the options below, to deal with customers is

- A suggest to customers to wait.

- B** suggest to customers to consider purchasing any of the other PAC's models available in showrooms, with a substantial discount along with gifts.
- C** suggest to PAC to treat Indian and Chinese markets equally.
- D** promise the top management of PAC higher sales/profit from Indian market compared to Chinese market.
- E** suggest to the top management of PAC to manufacture essential components in either India or China.

37. Mr. Murugan from Chennai experienced the comfort of Limo during his visit to China. He was willing to deposit an approximate price of Limo to buy the first available unit from Mr. Ahmed, a dealer in Chennai, known for fair dealing. Ginger Automobile is yet to announce the actual price, and the process for allocation of the vehicles. In order to maximise his cash flow, Mr. Ahmed should

- A** collect the amount from Mr. Murugan. Later when the delivery is delayed, blame it on PAC's problems.
- B** collect 50% as advance and the remaining 50% after the confirmation of launch date by Ginger Automobiles.
- C** collect the amount Mr. Murugan is willing to deposit after clarifying that delivery is subject to the company policy.
- D** not collect the amount, but suggest to Mr. Murugan to write to Ginger Automobiles.
- E** collect the amount and transfer it to the account of Ginger Automobiles, instead of keeping it in his personal account.

Instructions [38 - 41]

On the basis of the information given in the following case.

Tina a blast furnace expert, who works as a technology trouble-shooter stays in Jamshedpur. She has got an important assignment in Delhi, which requires six hours to complete. The work is so critical that she has to start working the moment she reaches the client's premises. She is considering various options for her onward and return journey between Jamshedpur to Delhi. A quick search revealed that ticket from Jamshedpur to Delhi is available in two trains. Trains 12801 and 12443 depart from Jamshedpur station at 06:45 hrs and 15.55 hrs and reach Delhi next day at 04:50 hrs and 10:35 hrs respectively. Trains 12444 and 12802 start from Delhi at 17:20 hrs and 22:20 hrs and reach Jamshedpur next day at 10:35 hrs and 20:05 hrs respectively. Another option is to reach Ranchi by a three hour road trip and take a flight to Delhi from Ranchi. The distance between Ranchi and Delhi is covered in 105 minutes both-ways by any of the scheduled flights. Air India operates two flights, AI 9810 and AI 810, which depart Ranchi at 8:00 hrs and 15:25 hrs respectively. Flight number IT-3348 operated by Kingfisher Airlines departs Ranchi at 19:20 hrs. Return flights operated by Air India, AI 9809 and AI 809, depart Delhi at 5:50 hrs and 11:00 hrs respectively. Flight number IT-3347 operated by Kingfisher Airlines departs Delhi at 17:10 hrs. From Tina's home Jamshedpur railway station is five minutes drive, and her destination at Delhi is 90 minutes and 30 minutes drive from airport and railway station respectively. One has to reach the airport at least one hour before the scheduled departure to complete the boarding procedure. At every railway station she loses five minutes in navigating through the crowd.

38. If Tina wants to minimize the total time out of Jamshedpur, the best option for her, from the options given below, is:

- A** AI 9810 and return by IT 3347.
- B** AI 9810 and return by train number 12802.
- C** IT 3348 and return by AI 9809.

- D Train number 12443 and return by train number 12444.
- E AI 9810 and return by train number 12444.
39. Tina gets a message that her work has to be completed between 9:00 hrs. and 17:00 hrs. If she wants minimize the total time out of Jamshedpur, the best option, from the options given below, for her among the following is to go by
- A Train 12443 and return by Train 12444.
- B Train 12801 and return by Train 12802.
- C AI 9810 and return by AI 9809.
- D AI 810 and return by AI 9809.
- E IT 3348 and return by IT 3347.
40. Tina has to appear for an exam on 8 th of January in Jamshedpur and she can start from her residence in Jamshedpur only after 16:00 hrs of the same day. Choose the option, from the options given below, that will help her to minimize the total time out of Jamshedpur.
- A Go by Train 12443 and return by Train 12444
- B Go by Train 12443 and return by AI 9809
- C Go by IT 3348 and return by Train 12801
- D Go by AI 810 and return by Train 12801
- E Go by AI 9810 and return by AI 9809
41. If Tina decides to minimize the in-between waiting period, the option that she should choose from the options given below, will be:
- A Go by Train 12801 and return by IT 3347
- B Go by Train 12443 and return by Train 12802
- C Go by AI 9810 and return by Train 12802
- D Go by AI 810 and return by AI 9809
- E Go by IT 3348 and return by AI 809

Instructions [42 - 47]

on the basis of the information given in the following case.

Teknik Group of industries had businesses in different sectors ranging from manufacturing, construction, fish farming and hotels. These different businesses operated as semi-independent units managed by the unit level managers. Teknik's management had an internal consultancy group called as Business Advisory Group (known internally as BAG). The 15 experts in BAG were hired personally by Mr. Teknikwala, the owner of Teknik. He wanted this core group of experts to help his organization grow fast without facing the typical growth hurdles.

Most of them were specialists in fields like law, information technology, human resource management, and operations management. Almost all of them had experience spanning decades in the industry. Whenever any of the units faced any significant all units and it represented an extra work for those who were involved. This coordination was required to understand the different work processes and the users' requirements. This coordination activity was being extensively managed by the old timers as they were familiar with internal processes and people in the different units. An external consultant was also hired for customization and implementation. After two months, BAG teams had to fortnightly present their progress to Ms. Teknikwali's team. In the last meeting Ms. Teknikwali was dissatisfied. She explained her thinking that since ERP impacted every aspect of the business, the roll out had to be done faster. She wanted Mr. Shiv to get the implementation completed ahead of schedule. In the meeting she asked Mr. Shiv to get the people in IT team to be more productive. Not willing to disagree, Mr. Shiv committed to a roll-out schedule of complete ERP system in 6 months instead of earlier decided 14 months. Next day, Mr. Shiv presented the revised project milestone to BAG members. He told them that in order to meet the deadline, the members were expected to work on week-ends till the completion of the project. Along with that, they were also expected to maintain their earlier standards of delivery time and quality for the normal trouble-shooting and internal advisory work. Mr. Shiv also pointed out that anyone whose performance did not meet the expectations would be subjected to formal disciplinary action. The meeting ended without any member commenting on Shiv's ideas, although Mr. Shiv heard a lot of mumbling in the corridor. Over the week, Shiv noticed that the members seemed to avoid him and he had to make extra effort to get ideas from them. After a fortnight Shiv reviewed the attendance register and found the Mr. Lal, an old time member, had not come during the week-ends and certain decisions were held up due to lack of inputs from Mr. Lal. Mr. Shiv issued a written reprimand to Mr. Lal. He was speechless on receiving the reprimand but kept silent. It has been three days since that incident. Some of the senior members had put in request for transfer to other business units. It was rumoured that four problems, the unit level managers would put up a request for help to BAG. The problems ranged from installation of internal MIS systems, to financial advice related to leasing of equipment, to handling of employee grievances. Over a period of 20 years, Teknik's revenues grew from 100 crore to 10,000 crore with guidance of BAG and due to Mr. Tekinwala's vision. Given its reputation in the industry, many people wanted to start their careers in BAG. Often young MBAs fresh out of business schools would apply. However their applications used to be rejected by Mr. Teknikwala, who had a preference for people with extensive industry experience. Things changed after the unfortunate demise of Mr. Teknikwala. His daughter Miss. Teknikwali took up the family business. She was an MBA from one of the premier business schools, and was working in a different company when Mr. Tekinwala passed away. She preferred that BAG developed new ideas and therefore inducted freshly graduated MBAs from premier business schools. She personally supervised the recruitment and selection process. Now the entire group constituted of 50 specialists, out of which 35 were the old time members. She also changed the reporting relationships in the BAG group with some of the older members being made to report to the new members. In IT team, Mr. Shiv, a newly recruited MBA, was made in-charge. For the older members it was a shock. However, as most of them were on the verge of retirement, and it would be challenging to search for new jobs while competing with younger professionals, they decided to play along. After one month, all business units were caught up in the ERP fever. This was an idea pushed by Ms. Teknikwali who the need the need to replace the old legacy systems with latest ERP system integrating all the units of Teknik. This was heavily influenced by her experience in the previous where an ERP system was already up and running. Therefore she was not aware of the difference between installing an ERP system and working on an already installed one. The ERP implementation in Teknik Group required extensive coordination with senior level managers of senior legal experts had agreed to an offer from a law firm. Other senior members would sporadically come in late to work, citing health reasons. Almost all senior members now wanted a weekly work-routine to be prepared and given to them in advance so that they could deliver as per the schedule. This insistence on written communication was a problem as urgent problems or ad-hoc requests could not be foreseen and included. Also normal services to other business units were being unattended to, and there were complaints coming from the unit heads.

42. Which of the following could have been a better response of Mr. Shiv to Ms. Teknikwali's request to re-schedule the ERP implementation?

- A** Look at industry best practices regarding fast-tracking of ERP projects and then commit to a new deadline.

- B Consult the external consultant who was involved with ERP customization and implementation.
- C Create a smaller team of all the new recruits of BAG and present the idea to them alone.
- D Eliminate the reliance on external consultants as they would be slow.
- E Present the idea to BAG members and ask them to look at the feasibility of the entire plan.

43. Which of the following can be identified as the immediate cause for the problems in BAG?

- A Ms. Teknikwali's decision to appoint Mr. Shiv as project lead for ERP implementation.
- B The incompetence of the consultant who was implementing the ERP project.
- C Lack of information about what was happening in the ERP project.
- D Infighting between new recruits and the older members of BAG group.
- E Unilateral decision making by Shiv.

44. How should Mr. Shiv cope with the situation now? Choose the best option, considering Mr. Shiv's career would be at stake if the ERP project fails, and assuming that for carrying out the options, he has the necessary authority to do so.

- A Resign from BAG. The project cannot be done as per the re-scheduled time-table. Get a job in another company based on BAG's brand-name.
- B Inform Ms. Teknikwali about the situation and get help from her to deal with the old time members. Some old members need to be fired so that others are also disciplined.
- C Align the new members of the BAG group to his side by promising them rewards at end of the project. Obtain approval from Ms. Teknikwali for the same.
- D Develop work-routines aligned to the ERP project requirements. Hire extra resources for dealing with other ad-hoc requirements and for the ERP project requirements.
Create a joint team of old members and new members within BAG to take care of ad-hoc requirements.
- E They would be socialized in out-bound programmes like mountaineering etc., which will be conducted during week- ends.

45. Of all the problems being faced in BAG, which of the following is neither discussed nor hinted at?

- A Ms. Teknikwali's lack of faith on older members to implement new ideas.
- B The inability of the younger members to work along with the older members of BAG.
- C Mr. Shiv's intention to impress Ms. Teknikwali by agreeing to a tougher deadline.
- D Ms. Teknikwali's lack of understanding of the complexity of an ERP implementation.
- E Mr. Shiv's lack of understanding of the sensitivities of the older members of BAG.

46. After her father's demise, the best way Ms. Teknikwali could have gone about dealing with BAG group would have been to:
- A Discuss with the members as to what their views were about the company and solicit ideas on how to make it grow further.
 - B Retire the entire team and hire a fresh team according to her criteria and her requirements.
 - C Hire an external consultant who would have interacted with the BAG members on her behalf.
 - D Ask the unit managers about the performance of the BAG group's performance and productivity. After that have discussion with BAG members about unit managers' performance.
 - E Break down BAG into different sub-groups. It would be easy to tackle one sub-group at a time and do what she wanted to achieve.
47. It can be inferred from the above case that implementation of an ERP package in an organization requires creation of a team that has:
- A a mixture of experienced employees and newly graduated employees
 - B only young people with education in top schools and colleges
 - C sufficient number of people who are networked with powerful stakeholders in the organization
 - D right amount of problem solvers along with those who are abreast of the latest ERP technology
 - E people who have been involved with operations for a long duration of time along with people who are aware of the latest in ERP technology

Instructions [48 - 49]

on the basis of the information given in the following case.

Vivekananda Memorial Elocution Competition (VMEC) in Viswavijay Public School (VPS) has a history of forty years. Apart from the founder's day and annual day celebrations, it is the most important event of the school. In recent times, due to the increased popularity of reality shows on television channels, and for various other reasons, the elocution competition lost its appeal. Interest of both students and parents has been eroding over a period of time. To ensure sufficient audience, Mr. Ivan, Head of English Department, introduced choral recitation for junior section as a part of elocution competition. Three classes, each consisting of forty students, get short-listed for the final performance of choral singing on the day of VMEC. Most of the parents and family members of these students attend the function to encourage them. This initiative increased the number of people attending the elocution competition. Some teachers are unhappy with the emphasis given on the elocution competition, since they are expected to be present at the school on the day of competition, which normally happens on a weekend to accommodate the working parents. The teachers were not granted leave on the day of VMEC and they used to be unhappy regarding this aspect.

48. Ms Shabina, the principal of VPS, is aware that some of her teachers are unhappy. She wants to be seen as fair and just. Which option is the best one that she should exercise?
- A introduce separate music and dance competitions in same format as the elocution competition.
 - B appropriately compensate those teachers who volunteer to come for the extra day
 - C appoint a committee of teachers, parents and management representatives to come up with possible suggestions within a deadline

- D appoint a committee of teachers to come up with possible suggestions, and ensure that majority of committee members are staunch supporters of the current practices.
- E exercise the authority of the principal because she wants to retain all traditions.

49. A group of unhappy teachers have come up with a list of action plans for the consideration of their colleagues. The action plans are listed below.

- I. Exposing Mr. Ivan's intentions behind the inclusion of choral recitation.
- II. Conduct an open house discussion to gauge the unhappiness and to identify possible solutions.
- III. Introduce music and dance competition in same format as elocution competition
- IV. Demand compensation for their work on the day of VMEC.

Mr. Zacharia, one of the senior teachers and a well wisher of VPS, is asked to go through the action plans and make recommendations that benefits VPS the most. He would recommend:

- A Options I and II
- B Options II and IV
- C Options I and III
- D Options I and IV
- E Options I, II, and IV

Instructions [50 - 52]

on the basis of the information given in the following case.

Dev Anand, CEO of a construction company, recently escaped a potentially fatal accident. Dev had failed to notice a red light while driving his car and attending to his phone calls. His well-wishers advised him to get a suitable replacement for the previous driver Ram Singh, who had resigned three months back. Ram Singh was not just a driver, but also a trusted lieutenant for Dev Anand for the last five years. Ram used to interact with other drivers and gathered critical information that helped Dev in successfully bidding for different contracts. His inputs also helped Dev to identify some dishonest employees, and to retain crucial employees who were considering attractive offers from his competitors. Some of the senior employees did not like the informal influence of Ram and made it difficult for him to continue in the firm. Dev provided him an alternative job with one of his relatives. During the last three months Dev has considered different candidates for the post. The backgrounds of the candidates are given in the table below.

Name	Age	Educational Qualification	Experience	Expected Salary	Remark
Sunder	32	Post graduate	Seven years of driving experience	18,000 per month	Ex-employers are highly satisfied. Their only concern is about his tendency to switch jobs after every six months. Enjoys the newness in every job but tends to lose interest after six months. Not willing to commit for any more than six months
Mani	23	Studied up to Standard IX	One year	8,000 per month	Claims to have more than one year of experience, but can't provide any certificate to substantiate it. He has received a hike of 2,000 last month on account of his good performance as a driver.
Chintan	44	Graduate	20 years	20,000 per month	Working as a driver for the last one year after losing his previous job of a stenographer. He has been forced to take up the job of a driver.
Bal Singh	40	Litrate	More than 20 years	15,000 per month	Cousin of Ran Singh. Substituted Ram as Dev's driver whenever Ram was on leave. Currently working as a driver with Dev's in-laws. Strongly recommended by Ram. His knowledge and contacts in the firm is as good as Ram's.
Chethan	38	Standard XII	10 years	12,000 per month	Working as a temporary driver with Dev's major competitor for the last three years. The competitor has offered Chethan's service to Dev on a temporary basis. Chethan has also expressed his willingness to work on a long term basis, provided he is given an annual increment of 500, which is reasonable as per the market condition.

Dev is primarily looking for a stable and trustworthy driver, who can be a suitable replacement for Ram. His family members do not want Dev to appoint a young driver, as most of them are inexperienced. Dev's driver is an employee of the firm and hence the appointment has to be routed through the HR manager of the firm. The HR manager prefers to maintain parity among all employees of the firm. He also needs to ensure that the selection of a new driver does not lead to discontent among the senior employees of the firm.

50. From his perspective, and taking into account the family's concerns, Mr. Dev would like to have

- A Chethan
- B Chintan
- C Bal Singh
- D Mani
- E Sunder

51. In order to resolve the conflicting preferences, one of Dev's friends suggested Dev, his family members and the HR manager to identify their most and the least preferred candidates without considering the concerns of other stakeholders.

I. Dev's most and least preferred candidates: Bal Singh and Chetan respectively

II. Family members' most and least preferred candidates: Bal Singh and Chintan respectively

III. HR manager's most and least preferred candidates: Chethan and Bal Singh respectively

Which of the above three statements is/are in conformity with the information provided in the passage?

- A Option I
- B Option II
- C Options I and II
- D Options II and III
- E Option I, II and III

52. Who among the following five candidates is most likely to be rejected by the GM (HR)?

- A Chethan
- B Chintan
- C Bal Singh
- D Mani
- E Sunder

Instructions [53 - 55]

based on the case given below.

Ethical – a person is called unethical, when he deviates from principles. The principles and their use is often guided by two definitions: Moral: society’s code for individual survival Ethics: An individual’s code for society survival Naresh was a small time civil contractor in a small city. His major clients were the residents who wanted ad-hoc work like painting, building extensions to be done. His just prices had made him a preferred contractor for most of the clients who preferred him over other civil contractors. Always he followed the principle that client had to be kept happy – only by doing so it would be a win-win situation for both. However due to the unpredictability of such orders from residents, Naresh used to be idle for substantial part of the year. As a consequence, he could not expand his business. His two children were growing up and his existing business could not support their expenses. The medical expense of his elderly parents was another drain on his resources. The constant rise of prices in medical care and medicines was another issue. For Naresh, family’s concern was predominant. Naresh was, therefore, under pressure to expand his business. He was the sole earning member of his family, and he had to ensure their well being. He thought that by expanding his business, not only would he be able to care for his family in a better way, as well as offer employment to more number of masons and labourers. That would benefit their families as well. Naresh drew the boundary of his society to include himself, his family members, his employees and their family members. For expansion, the only option in the city was to enlist= as a contractor for government work. Before deciding, he sought advice from another contractor, Srikumar, who had been working on government projects for a long period of time. Srikumar followed the principle of always helping others, because he believed that he would be helped back in return some day. Srikumar had just one advice “The work is given to those who will win the bidding process and at the same time will give the maximum bribe. Prices quoted for work have to include bribes, else the bills will not get cleared and the supervisors will find multiple faults with the execution of work. This ensures survival and prosperity for contractors”. When asked about other contractors, Srikumar said “The government contractors are like a micro-society in themselves, almost like a brotherhood. Within that, they are highly competitive; however towards any external threat they are united to ensure no harm happens to any of their members”.

53. Naresh decided to work as a government contractor. Following Srikumar’s advice, he inflated the prices so that he could pay the bribes out the bills received.

- A Naresh is now totally unethical.
- B Naresh cannot be called totally ethical.
- C Naresh can be called ethical when it suits him.
- D Naresh is ethical to some extent.
- E Naresh is being totally ethical.

54. A new supervisor had joined a government department where both Naresh and Srikumar were bidding for work. During the bidding process for a particular project, in an open meeting with all contractors and officers from the department, he produced a document which had the rates at which Naresh had worked for private clients for similar building related work. He accused Naresh and Srikumar of over-pricing for

government work and threatened to disqualify them from the bidding process, if the rates are not brought down. Faced with that situation, Naresh gave a written reply that "I use materials of inferior quality for private work, and that is the reason for price difference". Srikumar supported Naresh in the meeting by saying that he had seen Naresh's work and he agreed. In this situation, it can be concluded that:

- A both Naresh and Srikumar are unethical.
- B Naresh is unethical while Srikumar is not.
- C both Naresh and Srikumar are ethical.
- D Naresh is ethical to a large extent, but no conclusion can be made about Srikumar.
- E Srikumar is unethical, but no conclusion can be made about Naresh.

55. Lankawala, another contractor, when faced with the new supervisor's demand to reduce prices for government work, asked him to guarantee that no bribes would be taken, and only then prices would be reduced. This was said in front of everyone. At this the supervisor forced Lankawala out of the meeting and threatened to black-list him. Lankawala did not say anything and walked away. Blacklisting of a contractor by one government department implied that Lankawala would not be able to participate in any government departments' works. In late evening, the city was abuzz with the news that the supervisor's dead body was seen on the railway tracks. In the investigations that followed, no one who attended the meeting recounted the happenings in the meeting to the police. Getting involved in murder cases could lead to unpredictable outcomes such as becoming the potential suspect, or an accessory to the crime. Furthermore, cases could drag on for years, and one would have to appear in court as witnesses in response to court's summons. This, for a contractor, was a serious threat to his business due to the disruptions created. However, Naresh wanted to speak out but was pressurized by Srikumar and other contractors not to, and as a result he did not. Due to this, the case was closed unresolved with no one found guilty. In this situation, it can be concluded that:

- A Srikumar is immoral, but ethical, while Naresh is not unethical.
- B Naresh is ethical and moral, while other contractors are immoral and unethical.
- C Naresh, Srikumar and other contractors are both immoral and unethical.
- D Other contractors are moral, and they prevented Naresh from being immoral.
- E Other contractors are unethical, but no conclusion can be made about Naresh.

Instructions [56 - 57]

on the basis of the information given in the following case.

Saral Co. is operating in seven north-eastern states of the country. The organization has a history of participative decision making, wherein people deliberate openly about pros and cons of every important decision, and a broad consensus is taken before taking the final decision. In Saral Co. every employee gets a salary proportional to the sales achieved. A new General Manager (GM) joined during the beginning of this month and challenged the organization's sole focus on sales to determine salaries. He urged the top management to include two more additional parameters in determining the salaries of the employees, viz. collection of information about competitors and the quality of relationship with the retailers.

56. Manohar, the highest earning employee for the last three years, vehemently opposes the GM's proposal. Which of the following could be most likely reason for him to oppose the proposal?

- A He considers the proposal as a serious threat to his favourable position in Saral Co.

- B He is not interested in collecting the information regarding competitors.
- C No clarity regarding the relative importance of the three parameters.
- D He is not interested in maintaining quality relationship with retailers.
- E He may need to work harder to earn the highest salary.

57. The top management of Saral Co. refused to implement the proposal of new GM from the beginning of next month, which of the following could be the most justified reason for the management's refusal?

- A To ensure that no manager will get credit for a major change soon after joining.
- B To avoid attracting criticism for their failure to implement a similar scheme.
- C His past experience is limited to seven north-eastern states only.
- D The GM is new to the organization and he would require some time to implement the new plan.
- E The top management would need time to deliberate and get consensus.

Quantitative Ability

58. Three Vice Presidents (VP) regularly visit the plant on different days. Due to labour unrest, VP (HR) regularly visits the plant after a gap of 2 days. VP (Operations) regularly visits the plant after a gap of 3 days. VP (Sales) regularly visits the plant after a gap of 5 days. The VPs do not deviate from their individual schedules. CEO of the company meets the VPs when all the three VPs come to the plant together. CEO is on leave from January 5th to January 28th, 2012. Last time CEO met the VPs on January 3, 2012. When is the next time CEO will meet all the VPs ?

- A February 6, 2012
- B February 7, 2012
- C February 8, 2012
- D February 9, 2012
- E None of the above

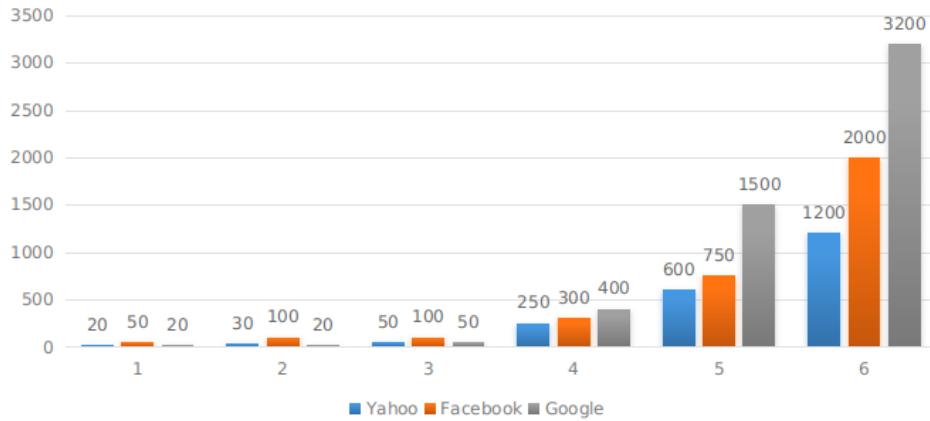
59. Ramesh analysed the monthly salary figures of five vice presidents of his company. All the salary figures are integers. The mean and the median salary figures are 5 lakh, and the only mode is 8 lakh. Which of the options below is the sum (in lakh) of the highest and the lowest salaries?

- A 9
- B 10
- C 11
- D 12
- E None of the above.

Instructions [60 - 62]

based on the following information

The following graphs shows the revenue (in \$ million) of three companies in their initial six years of operations, in an economy which is characterized by a persistent inflation.



60. In 2010, which could be a valid statement about the revenues (adjusted for inflation) of these three companies?
- A Revenues of all three companies were equal.
 - B Revenues of all three companies could be equal.
 - C Revenue of Yahoo was definitely less than Facebook which was definitely less than Google.
 - D Total of Yahoo and Facebook was definitely higher than that of Google.
 - E None of the above.
61. The difference in the average percentage increase in revenues, from 4th to 6th year, of Yahoo and Facebook is:
- A 35%
 - B 40%
 - C 45%
 - D 50%
 - E 55%
62. What would have been Facebook's revenue (in \$ million) in its sixth year of operation if the company had matched Google's percentage growth in revenues from the fifth to the sixth year? Choose the option that is nearest to the answer.
- A 1600
 - B 1700
 - C 1900

D 2100

E None of the above

63. Tina, Mina, Gina, Lina and Bina are 5 sisters, aged in that order, with Tina being the eldest. Each of them had to carry a bucket of water from a well to their house. Their buckets' capacities were proportional to their ages. While returning, equal amount of water got splashed out of their buckets. Who lost maximum amount of water as a percentage of the bucket capacity?

A Tina

B Mina

C Gina

D Lina

E Bina

64. Ram, a farmer, managed to grow shaped- watermelons inside glass cases of different shapes. The shapes he used were: a perfect cube, hemi-spherical, cuboid, cylindrical along with the normal spherical shaped watermelons. Thickness of the skin was same for all the shapes. Each of the glass cases was so designed that the total volume and the weight of the all the water- melons would be equal irrespective of the shape. A customer wants to but water-melons for making juice, for which the skin of the water- melon has to be peeled off, and therefore is a waste. Which shape should the customer buy?

A Cube

B Hemi-sphere

C Cuboid

D Cylinder

E Normal spherical

65. A man borrows 6000 at 5% interest, on reducing balance, at the start of the year. If he repays 1200 at the end of each year, find the amount of loan outstanding, in , at the beginning of the third year.

A 3162.75

B 4125.00

C 4155.00

D 5100.00

E 5355.00

66. A spherical metal of radius 10 cm is molten and made into 1000 smaller spheres of equal sizes. In this process the surface area of the metal is increased by:

A 1000 times

- B 100 times
- C 10 times
- D No change
- E None of the above

67. Gopal sells fruit juice mixture using orange juice and pineapple juice. Gopal prepares this mixture by drawing out a jug of orange juice from a 10 litre container filled with orange juice, and replacing it with pineapple juice. If Gopal draws out another jug of the resultant mixture and replaces it with pineapple juice, the container will have equal volumes of orange juice and pineapple juice. The volume of the jug in litres, is

- A 2
- B < 2 and ≤ 2.5
- C 2.5
- D > 2.5 and ≤ 3
- E ≥ 3

68. Nikhil's mother asks him to buy 100 pieces of sweets worth 100/-. The sweet shop has 3 kinds of sweets, kajubarfi, gulabjamun and sandesh. Kajubarfi costs 10/- per piece, gulabjamun costs 3/- per piece and sandesh costs 50 paise per piece. If Nikhil decides to buy at least one sweet of each type, how many gulabjamuns should he buy?

- A 1
- B 2
- C 3
- D 4
- E 5

69. A potter asked his two sons to sell some pots in the market. The amount received for each pot was same as the number of pots sold. The two brothers spent the entire amount on some packets of potato chips and one packet of banana chips. One brother had the packet of banana chips along with some packets of potato chips, while the other brother just had potato chips. Each packet of potato chips costs 10/- and the packet of banana chips costs less than 10/-. The packets of chips were divided between the two brothers so each brother received equal number of packets. How much money should one brother give to the other to make the division financially equitable?

- A 1
- B 2
- C 4
- D 5
- E 7

70. A city has a park shaped as a right angled triangle. The length of the longest side of this park is 80 m. The Mayor of the city wants to construct three paths from the corner point opposite to the longest side such that these three paths divide the longest side into four equal segments. Determine the sum of the squares of the lengths of the three paths.

- A 4000 m
- B 4800 m
- C 5600 m
- D 6400 m
- E 7200 m

Instructions [71 - 72]

Answer question based on the following information.

Ramya, based in Shanpur, took her car for a 400 km trip to Rampur. She maintained a log of the odometer readings and the amount of petrol she purchased at different petrol pumps at different prices (given below). Her car already had 10 litres of petrol at the start of the journey, and she first purchased petrol at the start of the journey, as given in table below, and she had 5 litres remaining at the end of the journey.

	Odometer Reading (Km)	Petrol purchased (Litre)	Rate of Petrol (/litre)
Start of journey	400	20	30
	600	15	35
	650	10	40
End of journey	800		

71. What has been the mileage (in kilometers per litre) of her car over the entire trip?

- A 8.00
- B 8.50
- C 9.00
- D 9.50
- E None of the above

72. Her car's tank-capacity is 35 litres. Petrol costs 45/- litre in Rampur. What is the minimum amount of money she would need for purchasing petrol for the return trip from Rampur to Shanpur, using the same route? Assume that the mileage of the car remains unchanged throughout the route, and she did not use her car to travel around in Rampur.

- A 1714
- B 1724
- C 1734
- D 1744
- E Data insufficient to answer.

73. A medical practitioner has created different potencies of a commonly used medicine by dissolving tablets in water and using the resultant solution. Potency 1 solution: When 1 tablet is dissolved in 50 ml, the entire 50 ml is equivalent to one dose. Potency 2 solution: When 2 tablets are dissolved in 50 ml, the entire 50 ml of this solution is equivalent to 2 doses, ... and so on. This way he can give fractions of tablets based on the intensity of infection and the age of the patient. For particular patient, he administers 10 ml of potency 1, 15 ml of potency 2 and 30 ml of potency 4. The dosage administered to the patient is equivalent to

- A > 2 and ≤ 3 tablets
- B > 3 and ≤ 3.25 tablets
- C > 3.25 and ≤ 3.5 tablets
- D > 3.5 and ≤ 3.75 tablets
- E > 3.75 and ≤ 4 tablets

74. Ram prepares solutions of alcohol in water according to customers' needs. This morning Ram has prepared 27 litres of a 12% alcohol solution and kept it ready in a 27 litre delivery container to be shipped to the customer. Just before delivery, he finds out that the customer had asked for 27 litres of 21% alcohol solution. To prepare what the customer wants, Ram replaces a portion of 12% solution by 39% solution. How many litres of 12% solution are replaced?

- A 5
- B 9
- C 10
- D 12
- E 15

75. City Bus Corporation runs two buses from terminus A to terminus B, one from each of the terminuses such that each bus makes 5 round trips in a day. There are no stops in between. These buses ply back and forth on the same route at different but uniform speeds. Each morning the buses start at 7 AM from the respective terminuses. They meet for the first time at a distance of 7 km from terminus A. Their next

meeting is at a distance of 4 km from terminus B, while travelling in opposite directions. Assuming that the time taken by the buses at the terminuses is negligibly small, and the cost of running a bus is 20 per km, find the daily cost of running the buses (in)

- A 3200
- B 6800
- C 4000
- D 6400
- E None of the above

76. Shyam, a fertilizer salesman, sells directly to farmers. He visits two villages A and B. Shyam starts from A, and travels 50 meters to the East, then 50 meters North-East at exactly 45° to his earlier direction, and then another 50 meters East to reach village B. If the shortest distance between villages A and B is in the form of $a\sqrt{b} + \sqrt{c}$ meters, Find the value of $a+b+c$.

- A 52
- B 54
- C 58
- D 59
- E None of the above.

77. Three truck drivers, Amar, Akbar and Anthony stop at a road side eating joint. Amar orders 10 rotis, 4 plates of tadka, and a cup of tea. Akbar orders 7 rotis, 3 plates of tadka, and a cup of tea. Amar pays 80 for the meal and Akbar pays 60. Meanwhile, Anthony orders 5 rotis, 5 plates of tadka and 5 cups of tea. How much (in) will Anthony pay?

- A 75
- B 80
- C 95
- D 100
- E None of the above.

78. A computer program was tested 300 times before its release. The testing was done in three stages of 100 tests each. The software failed 15 times in Stage I, 12 times in Stage II, 8 times in Stage III, 6 times in both Stage I and Stage II, 7 times in both Stage II and Stage III, 4 times in both Stage I and Stage III, and 4 times in all the three stages. How many times the software failed in a single stage only?

- A 10
- B 13

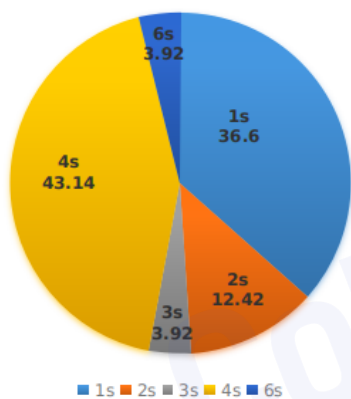
- C 15
- D 17
- E 35

79. Suresh, who runs a bakery, uses a conical shaped equipment to write decorative labels (e.g., Happy Birthday etc.) using cream. The height of this equipment is 7 cm and the diameter of the base is 5 mm. A full charge of the equipment will write 330 words on an average. How many words can be written using three fifth of a litre of cream?

- A 45090
- B 45100
- C 46000
- D 43200
- E None of the above.

Instructions [80 - 81]

The following pie chart shows the percentage distribution of runs scored by a batsman in a test innings.



80. If the batsman has scored a total of 306 runs, how many 4s and 6s did he hit?

- A 31 and 3 respectively
- B 32 and 2 respectively
- C 32 and 3 respectively
- D 33 and 1 respectively
- E 33 and 2 respectively

81. If 5 of the dot balls had been hit for 4s, and if two of the shots for which the batsman scored 3 runs each had fetched him one run instead, what would have been the central angle of the sector corresponding to the percentage of runs scored in 4s? {Use data from the previous question}

- A 160

- B 163
- C 165
- D 167
- E 170

82. Carpenter Rajesh has a circular piece of plywood of diameter 30 feet. He has cut out two disks of diameter 20 feet and 10 feet. What is the diameter of the largest disk that can be cut out from the remaining portion of the plywood piece?

- A > 8.00 feet and ≤ 8.20 feet
- B > 8.21 feet and ≤ 8.40 feet
- C > 8.41 feet and ≤ 8.60 feet
- D > 8.61 feet and ≤ 8.80 feet
- E > 8.81 feet and ≤ 9.00 feet

83. Lionel and Ronaldo had a discussion on the ages of Jose's sons. Ronaldo made following statements about Jose's sons:

- i. Jose has three sons.
- ii. The sum of the ages of Jose's sons is 13.
- iii. The product of the ages of the sons is the same as the age of Lionel.
- iv. Jose's eldest son, Zizou weighs 32 kilos.
- v. The sum of the ages of the younger sons of Jose is 4.
- vi. Jose has fathered a twin.
- vii. Jose is not the father of a triplet.
- viii. The LCM of the ages of Jose's sons is more than the sum of their ages.

Which of the following combination gives information sufficient to determine the ages of Jose's sons?

- A i, ii, iii and iv
- B i, ii, iv and vi
- C i, ii, iii and v
- D i, ii, v and vii
- E i, ii, v and vi

84. Ram and Shyam form a partnership (with Shyam as working partner) and start a business by investing 4000 and 6000 respectively. The conditions of partnership were as follows:

1. In case of profits till 200,00 per annum, profits would be shared in the ratio of the invested capital.
2. Profits from 200,001 till 400,000 Shyam would take 20% out of the profit, before the division of remaining profits, which will then be based on ratio of invested capital.
3. Profits in excess of 400,000, Shyam would take 35% out of the profits beyond 400,000, before the division

of remaining profits, which will then be based on ratio of invested capital.

If Shyam's share in a particular year was 367000, which option indicates the total business profit (in) for that year?

- A 520,000
- B 530,000
- C 540,000
- D 550,000
- E None of the above

85. A property dealer bought a rectangular piece of land at 1000/sq. ft. The length of the plot is less than twice its breadth. Due to its size, there were no buyers for the full plot. Hence he decided to sell it in smaller sized pieces as given below. The largest square from one end was sold at 1200/sq. ft. From the remaining rectangle the largest square was sold at 1150/sq. ft. Due to crash in the property prices, the dealer found it difficult to make profit from the sale of the remaining part of the land. If the ratio of the perimeter of the remaining land to the perimeter of the original land is 3 : 8, at what price (in) the remaining part of the land is to be sold such that the dealer makes an overall profit of 10%?

- A 500/sq. ft.
- B 550/sq. ft.
- C 600/sq. ft.
- D 650/sq. ft.
- E None of the above.

CollegeDekho

Answers

Verbal Ability and Logical Reasoning

1.D	2.B	3.D	4.D	5.D	6.B	7.A	8.A
9.D	10.E	11.D	12.E	13.E	14.D	15.D	16.D
17.A	18.C	19.D	20.B	21.D	22.B	23.E	24.E
25.C	26.E	27.D	28.C	29.C	30.D	31.A	32.E

Decision Making

33.D	34.E	35.D	36.B	37.C	38.B	39.D	40.E
41.A	42.E	43.E	44.D	45.B	46.A	47.D	48.B
49.B	50.C	51.A	52.C	53.E	54.D	55.A	56.E
57.E							

Quantitative Ability

58.C	59.A	60.E	61.B	62.A	63.E	64.E	65.C
66.E	67.D	68.A	69.B	70.C	71.A	72.D	73.B
74.B	75.B	76.E	77.D	78.B	79.E	80.E	81.E
82.C	83.E	84.D	85.B				

CollegeDekho

Explanations

Verbal Ability and Logical Reasoning

1. D

The phrase "On a wing and a prayer" means to do something without preparation and hoping to succeed. From the sentence it can be inferred that the Indian team was under prepared and hoping to succeed.

Hence, the correct answer is Option D

2. B

From the narrative, it is clear that the act of importing tea into Ireland is an event of the past and that perhaps doing so today is not a "big deal". This means that the act of importing tea should be spoken of in the past perfect tense as we are referring to a past event (of importing tea directly) when standing at a point which itself is a point of past from today's perspective (the point when it was considered a coup). Hence, "had dared" is the most apt for the second blank and hence, B should be the answer.

The sequence of events has to be understood like this: daring to import tea ---> being considered as a coup ----> not a big deal today.

3. D

The given sentence implies that 'libero' was introduced as the Italian default due to Milan's success and it was killed a century later due to their success.

Option D implies the opposite of what has been mentioned in the given sentence. All other option can be implied.

Hence, option D is the correct answer.

4. D

Antonym of Chaos is Order.

Antonym of Fact is Fiction.

Antonym of Virtue is Vice.

Antonym of Light is Darkness.

Synonym of Study is Analyse.

All pairs other than D are antonyms of each other.

Option D is the odd one out because study and analyse are synonyms of each other.

5. D

The argument is that India made up for the loss incurred in literacy rate from 1991 to 2001 by improving in the 5 year span from 2001 to 2006.

This can be refuted if it can be proven that the progress made in 2001 to 2006 was not good enough in amount to cover the losses incurred in the previous 10 year period. So even if India improved in 2001-06, the improvement might have been marginal and hardly substantial.

This is given to us by option D. Hence, the answer.

6. B

'Embezzlement' means theft or misappropriation of funds placed in one's trust or belonging to one's employer.

Option B represents the most appropriate meaning of the given sentence.

Hence, option B is the correct answer.

7. A

From the given sentence, we can infer easily that sentence C precedes sentences D and B. We place sentence D and then B because sentence C mentions macro factors first and then micro ones. Hence, C-D-B is a mandatory sequence.

This is available only in options A and C.

Obviously, the sequence cannot start with sentence A and hence, the sequence E-A-C-D-B has to be the answer.

8. A

Consider these sentences from the 4th line of given passage:

"This dichotomy is lost in a model of exclusively self- interested motivation, in which a person's agency must be entirely geared to his or her own well-being. But once that straitjacket of self-interested motivation is removed, it becomes possible to recognize the indisputable fact that the person's agency can well be geared to considerations not covered - or at least not fully covered - by his or her own well-being."

They make it clear that the author believes it is incorrect to completely align a person's agency to his/her well being. It is very likely that a person's agency might not be related completely with his/her idea of well being.

This idea is reflected in option A.

Option B is not true because it says that both the said issues are completely independent which is not the case. The author clearly mentions that there can be a good correlation between the two but not always or in a complete sense.

Hence, only A can be thought of as the true sentence.

9. D

The key focus of the passage is to let the reader know that the sense of agency in a person and the sense of well being, even though very strongly correlated, are individual and independent factors. While they may heavily influence each other, one should not mistake them to be the same thing or even assume that knowing the value of one can help us easily arrive at the value of another.

This can be applied to the industrial success in Japan by understanding that helping their country achieve success in industrial world must have given a sense of satisfaction and achievement (i.e. agency) and to the Japanese people, and also improved their sense of own well being, it is not necessarily the only driver behind the success. The agency of people in contributing to industrial success must also have some roots in reasons other than personal well-being.

This is best reflected in the option D.

10. E

The closing lines of the passage act as a good guide here. It says that if we forget the individuality of the sense of agency and sense of well being and end up correlating them all the time, then we might end up drawing incorrect inferences.

In the last option given to us, we can see that a politician is going on a hunger strike which means he is putting his sense of well being (by depriving his body of necessity of food) on the backburner but ends up fulfilling his sense of agency by achieving a good image in the minds of his voters. If we would have thought that sense of well being and sense of agency are correlated all the time, then we might never have understood the rationale behind the politician's hunger strike (and some might even have deemed such an event as an impossibility). The incident of hunger strike is a proof that sense of agency might well be driven NOT by sense of well being all the time. And this is the point of the entire passage. Hence, it is an apt answer.

11. D

Sentence 1 and 3 can be inferred from the passage. Sentence 2 is incorrect because of these lines form the passage:

"The fact that two variables may be so related that one cannot change without the other, does not imply that they are the same variable, or that they will have the same values, or that the value of one can be obtained from the other on basis of some simple transformation."

This makes it clear that knowing the value of sense of agency doesn't necessarily mean that the value of sense of well being can be easily calculated. The 2 issues might be very closely correlated but they are not the same thing and thus, not linked 100% of the time completely.

12. **E**

We have been explained sense of agency by these words:

"We can see the person in terms of his or her 'agency', recognizing and respecting his or her ability to form goals, commitments, values, etc."

Option A,B,C,D can be seen as people being driven by their sense of agency. However, E is out of sync with the given sentence as an ascetic is someone who has renounced the world and thus, in terms of understanding of the sense of agency, he must hardly have any interest in world affairs. Hence, for him to be praying for world peace, he must be driven by something other than an immediate sense of agency. Hence, it is the answer.

13. **E**

'Ability of' is incorrect in option E. The correct usage is 'ability to'. All other options are grammatically correct. Hence, option E is the correct answer.

14. **D**

Alfredo has a good thought about the past while Diego has a good thought about the present.

This does not mean that Alfredo would disagree heavily with Diego and be adamant that only the past state of Argentinian football was a bright one and the present is not. Hence, D is incorrect.

15. **D**

'those' is the appropriate pronoun to be used in the given context.

Answer is option D.

16. **D**

The main point of the paragraph is that the behavior of all organisms is an outcome of the interaction between experience and genotypes. Hence, all organisms with identical genotypes and identical experience will always behave in identical manner. This is given in option D.

Hence, option D is the correct answer.

17. **A**

The passage states that even though psychotherapy is expensive, the supportive relationship offered by therapists benefits patients a lot. But in the last line, it has been mentioned that very few therapists continue this relationship after the paid visits are terminated. Hence, we can infer that they are equally concerned with money-making. Option A is the correct answer.

All other options are irrelevant or alien to the passage.

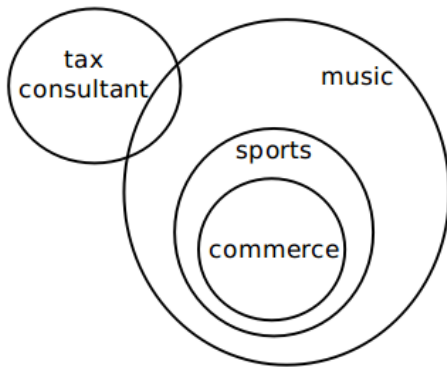
18. **C**

In the given paragraph, it has been mentioned that exports to China from Indonesia has increased significantly. At the same time the trade deficit of Indonesia with China has widened. Trade deficit is exports minus imports. If the trade deficit has widened then the imports should have increased at a higher rate as compared to the exports.

So, option C which mentions the decrease in exports to Indonesia from china is inconsistent with the information given in the passage.

Hence, option C is the correct answer.

19. **D**



From the venn diagram, we can see that only option D is possible.
Hence, option D is the correct answer.

20. **B**

Before the first blank, 'head' is present. So, 'chief' which has the same meaning as 'head' cannot fill the first blank. Thus, the first blank would be filled by 'chef'.
Housefly is the name of an insect which could fill the second blank.
Hence, option B is the correct answer.

21. **D**

'Hypothesize' means to put forward something as a hypothesis. 'Refute' means to disprove. So, 'refute' is the most appropriate antonym.
Hence, option D is the correct answer.

22. **B**

D-A will be a mandatory pair as we can see that these 2 statements tell us about the negative perception around warehousing. E-C is a good pair which tells us about and the reason for warehousing being a common occupation/function in India. This is available to us only in option B and hence, the answer.

23. **E**

Concurrence is synonymous with all the given words except 'harmony'.
Harmony which means Orderly combination of elements as a whole.
Hence, option E is the correct answer.

24. **E**

We can see that the (ii)-(i) and (iii)-(iv) are two mandatory pairs. Sentence (v) comes either immediately after (i) or before (ii).
This makes only A or E feasible. Option A cannot be a desirable sequence because it positions (ii) (which talks about Govt. actions) immediately after (iv) (which talks about business cycles staying the same). This is not a smooth idea flow.

In comparison, option E makes a good switch from the ideas of (iii)-(iv) to the impact of Govt. actions. Hence, the answer.

25. **C**

The given situation talks about a benefit getting reaped by a counter-intuitive step. If Govt. wants increased tax revenues then a straightforward suggestion would have been to increase tax rates. Any suggestion to reduce tax rates would be thought of as complete opposite of desired result. But as the situation given in the question explains, it actually helps the Govt. in fulfilling its goal.

Similarly, if a product is to be advertised, it is expected that the prospective customer be told about it in as much detail as possible. But that would backfire as no one bothers reading long ads. So brief ads with less than 25 words which would initially seem too short to advertise the product well turn out to be the best way to market the product. This is analogous to the income tax rate situation of the Govt. Hence, the answer.

26. E

It is given that the CEO did not want to give an unneeded optimistic picture. This is another way of saying that the CEO wanted to be pragmatic and willing to give a realistic picture. Hence, options like B and C get ruled out. Strictly is not relevant to the context.

Pessimistic is not the right word because the CEO was not going to announce bad news or bad forecasts. The CEO simply wanted to avoid exuberance - this does not mean being overtly negative.

Hence, E is the correct choice.

27. D

In the last paragraph author mentioned that " SEZ must be of an adequate size to provide opportunities for reaping the benefits of large-scale operations and their number should be few." In the first half of the passage author define SEZ's, EPZ's and their shortcomings as compared to China. But the main argument of the author was that there is a proliferation of SEZs in India which is not suitable for its economy.

Option A would have been correct if it mentions SEZ instead of EPZ.

Option B and Option C are mentioned but not the objective of the passage.

Option E is incorrect author mentioned that though India had imitated the Chinese policies but are not successful.

28. C

In the last line of third paragraph its given that " While swearing by growth, governments at both the center and the states cite the fiscal responsibility laws to plead their helplessness in making the required investments to improve infrastructure. "

Option 3 is a misrepresentation of what is given in the paragraph. It states that fiscal responsibility laws limit the investment on infrastructure by the Government of India. But paragraph mentions that it is a reason which is given by the government, actual reason is not mentioned. So Option 3 is incorrect.

29. C

In the 1st paragraph, it is given that "In addition, huge tax benefits are promised to lure investors." Author do not oppose the tax benefits provided in the SEZs. Option C is correct.

Author does oppose SEZ treatment of foreign educational institutes in India as mentioned in the last paragraph "Proposals are now being floated to invite foreign educational institutions to come to India with promises of SEZ treatment! The finance ministry apprehends a loss of nearly 1,75,000 crore in direct taxes, customs duties and excise duties over the next five years."

Option B is incorrect as given "But even while promising to ease the rigours of controls, Indian policy-makers could not give up their penchant for micromanaging from the center and undoing the promised relaxations with all kinds of qualifications and "guidelines". " So author disapprove qualifiers which undo relaxation of government controls.

Option D and E are also mentioned in the third paragraph.

30. D

It is mentioned in the paragraph "Even after three years of the enactment of the Electricity Act (2003)" So the correct answer is 2006, Option D.

31. A

Statement I: Since this is the author's primary concern in the passage, this is a correct statement.

Statement II: This statement can also be understood as the author's contention to put forth a theory of the development of technologies. This should not be confused with the theory of evolution that the author described in the passage. Thus, this statement is also correct.

Statement III: Since this statement is nowhere mentioned and stated in the passage, this is not a correct statement.

Statement IV: Evolution as a 'sense of relatedness' is a very vague description. Thus, this is not a correct statement.

Thus, the correct option is A.

32. E

The author has mentioned two processes through which technologies have been born. The unanswered question is about the innovation process, which the author wants to understand.

Options I and II present the cases for the process of evolution.

Options III, IV and V present the cases for the process of innovation.

Thus, the correct option is E.

Decision Making

33. D

Consider the sentence: ".....and both have been nominated for officer status." Option D proves that they are yet to become officers. It means that they are not holding the same positions.

Hence, option D is the correct answer.

34. E

As in the meeting on December 3, it was decided that no two officers would hold positions on the same committee; either one of them should resign from the Cultural Committee, and the other should resign from the Disciplinary Committee to avoid any conflicts.

Thus, the correct option is E.

35. D

In statement 1 :

It was informed in statement 1 that the 30 percent market share reached was 200 percent higher than what was originally expected. Hence the ideal was originally 10 percent market share and hence an increase of 20 percent in total.

Since Baft and Hebe are the competitors it does not necessarily mean that each of them exactly lost 10 percent market share each. There are multiple possibilities on how this case can be generated.

Statement 2 :

Statement 2 cannot be confirmed because no detail has been informed about the new features of Baft and Hebe. The work on the Limo model has been described but nothing about Baft and Hebe.

36. B

The question asks for a way to appease the customers who were expecting to buy the Limo in India.

Option A: Suggesting the customers to wait. Since the failure to meet the deadlines in time was the responsibility of the company, requesting them to wait would only worsen the situation for the dealers.

Option B: Offering the customers a discount on other PAC models. Though this is an act that might create losses for the company. This might appease the customers and might avoid the customer's wrath towards the company. But since the failure to meet the deadlines was from the company's side they must act to gain the favor of customers.

Option C: This is an act of uncertainty because the PAC cannot be blamed for the disruptions in the Indian supplier side. If they delay the opening in the China market to expect a simultaneous start with the Indian market they might face losses in both the market.

Option D: Promising the top management of sales will in no way appease the customers and hence must be avoided.

Option E: Suggesting the company to manufacture the components in India or China. Since they were already being manufactured in India. This advice is not offering anything new. The pros and cons of manufacturing in a Chinese plant for Indian market are not clear

37. C

Since in the question, we were asked for a way where Mr. Ahmed maximizes the cash flow :

Option A: Collecting the amount from Mr. Murugan maximizes his cash flow but blaming the issue on the PAC part is not justifiable.

Option B: Collecting the 50 percent advance without completely unaware of the pricing could actually give him a loss if it is priced at an amount higher than the expected price.

Option C: Collecting the amount from Murugan maximizes the current money flow and making him aware of the uncertainties is the best way moving forward because this makes him flexible with negotiations.

Option D: Not collecting the amount will not maximize his cash flow and hence the key objective fails.

Option E: Shifting the amount to the company's account will not maximize the cash flow of Mr. Ahmed.

38. B

Tabulated form of the data:

Train	Jamshedpur	Delhi
T12801	6:45(S)	4:50(D)
T12443	15:55(S)	10:35(D)
T12802	20:05(D)	22:20(S)
T12444	10:35(D)	17:20(S)

S - Source station D - Destination Station

Flight	Jamshedpur	Delhi
AI9810	8:00(S)	9:45(D)
AI810	15:25(S)	17:10(D)
IT3348	19:20(S)	21:05
AI9809	7:35(D)	5:50(S)
AI809	12:45(D)	11:00(S)
IT3347	18:55(D)	17:10(S)

Extra time taken if flight is the mode of travel = 3 hours(Road trip) + 1 hour(early arrival)

Option (A):

Source is Jamshedpur(AI9810)

Time of departure from home = 8:00 - 4 hour = 4:00

Arrival time at Delhi = 9:45

She can depart by flight earliest by 9:45 + 1:30(Airport to work) + 6:00(Work time) + 1:30(Work to Airport) + 1:00(Early Arrival) = 19:45

IT3347 departs from Delhi at 17:10. So, she reaches Jamshedpur by 18:55(2nd day) + 3:00(Road Trip) = 21:55(2nd day)

Total Time = 41 hours 55 mins.

Option (B):

Starting from Jamshedpur (AI9810) = 4:00

Arrival time at Delhi = 9:45

She can depart by train earliest by 9:45 + 1:30(Airport to work) + 6:00(Work time) + 00:30(Work to station) + 0:05(Wait time) = 17:50

Train 12802 departs from Delhi(RS) at 22:10 and reaches Jamshedpur by 20:05(2nd day).

Total time = 40 hours 5mins.

Option (C):

Starting from Jamshedpur = 19:20 - 4 hour = 15:20

Arrival time at Delhi = 21:05

She can depart by flight earliest by 21:05 + 1:30(Airport to work) + 6:00(Work time) + 1:30(Work to Airport) + 1:00(Early Arrival) = 7:05(2nd day)

AI9809 departs from Delhi at 5:50. So, she can reach Jamshedpur by 7:35(3rd Day) + 3:00(Road Trip)=10:35(3rd Day)

Total Time = 43 hours 15mins.

Option (D):

Starting from Jamshedpur = 15:55

Arrival time at Delhi (RS) = 10:35(2nd day)

She can depart from Delhi (RS) earliest by 10:35(2nd day) + 00:30(Station to Work) + 0:05(Wait time) + 6:00(Work time) + 00:30(Work to station) + 0:05(Wait time) = 17:45(2nd day)

Train 12444 departs from Delhi (RS) at 17:20. So she will catch the train the next day.

Since the total hours is more than 48, this is not the answer,

Option (E):

Starting from Jamshedpur = 4:00

Arrival at Delhi airport = 9:45

She can depart from Delhi (RS) earliest by 9:45 + 1:30(Airport to work) + 6:00(Work time) + 00:30(Work to station) + 0:05(Wait time)= 17:50

So, she can start only on day 2 at 17:20.

Thus, since she will be out for more than 48 hours, this is not the correct answer.

Thus, the correct answer is B.

39. D

Flight	Jamshedpur	Delhi
AI9810	8:00(S)	9:45(D)
AI810	15:25(S)	17:10(D)
IT3348	19:20(S)	21:05
AI9809	7:35(D)	5:50(S)
AI809	12:45(D)	11:00(S)
IT3347	18:55(D)	17:10(S)

S - Source station D - Destination Station

Train	Jamshedpur	Delhi
T12801	6:45(S)	4:50(D)
T12443	15:55(S)	10:35(D)
T12802	20:05(D)	22:20(S)
T12444	10:35(D)	17:20(S)

Option (A):

The start of Tina will be at 15:55.

She will reach Delhi at 10:35

She can depart from Delhi (RS) earliest by = 10:35 + 00:30(Station to Work) + 0:05(Wait time) + 6:00(Work time) + 00:30(Work to station) = 17:40

The next train will get her to Jamshedpur on the 12th at 10:35

Tina will be out of Jamshedpur from 15:55 to 10:35(3rd Day), i.e. 66 hrs. 40 min.

Option (B):

The start of Tina will be at 06:45.

She will reach Delhi at 04:50

She can depart from Delhi (RS) earliest by = 04:50 + 00:30(Station to Work) + 0:05(Wait time) + = 5:25

The work will start at 9:00 hrs, and she will finish by 15:00 hrs. By train 12802, she would reach Jamshedpur on 20:05 hrs (3rd Day).

She is out of Jamshedpur for 61 hrs., 20 min.

Option (C):

As train AI9810 departs from Ranchi at 8:00 hrs. She has to reach the airport at 7:00 hrs, and so she has to start from Jamshedpur at 4:00 hrs. The Flight reached Delhi at 9:45 am, and she would reach the client's place at 11:45 am. As she has to finish the work by 17:00 hrs., she would have to wait till the next day and finish it by 15:00 hrs. She could catch the Flight only on day 3, and she would reach Ranchi at 7:35 hrs and reach Jamshedpur at 10:35 hrs.

She is out of Jamshedpur for 54 hrs 35 min.

Option (D):

As AI810 departs from Ranchi at 15:25 hrs, she has to be at the airport at 14:25 hrs and leave Jamshedpur at 11:25 hrs. She reaches Delhi and would be able to work on the project from 9:00 hrs to 15:00 hrs on day 2. She can catch the Flight only on day 3 and would reach Ranchi at 7:35 hrs and can reach Jamshedpur at 10:35 hrs on Jan 11th.

She was out of Jamshedpur for 47 hrs 10 minutes.

Option (E):

Similar to option C, this approach will also take 54 hrs 35 min.

Since option D approach takes the least time; the correct option is D.

40. E

Train	Jamshedpur	Delhi
T12801	6:45(S)	4:50(D)
T12443	15:55(S)	10:35(D)
T12802	20:05(D)	22:20(S)
T12444	10:35(D)	17:20(S)

S- Source station

D- Destination Station.

Flight	Jamshedpur	Delhi
AI9810	8:00(S)	9:45(D)
AI810	15:25(S)	17:10(D)
IT3348	19:20(S)	21:05
AI9809	7:35(D)	5:50(S)
AI809	12:45(D)	11:00(S)
IT3347	18:55(D)	17:10(S)

Option (A):

Starting from Jamshedpur = 15:55

Arrival time at Delhi (RS) = 10:35(2nd day)

She can depart from Delhi (RS) earliest by 10:35(2nd day) + 00:30(Station to Work) + 0:05(Wait time) + 6:00(Work time) + 00:30(Work to station) + 0:05(Wait time) = 17:45(2nd day)

Train 12444 departs from Delhi (RS) at 17:20. So she will catch the train the next day.

The train reaches Jamshedpur on 12th Jan at 10:35.

Tina will be out of Jamshedpur from 9th (15:55) to 12th (10:35), i.e. for 66 hrs. 40 mins.

Option (B):

Starting from Jamshedpur = 15:55

Arrival time at Delhi (RS) = 10:35(2nd day)

She can depart from Delhi (RS) earliest by 10:35(2nd day) + 00:30(Station to Work) + 0:05(Wait time) + 6:00(Work time) + 01:30(Work to airport) + 01:00(early arrival time) = 19:40(10th)

So, she can take AI9809 on the 11th at 5:50.

She can reach Jamshedpur on 11th at 5:50 + 1:45 + 3:00 (for flying time + Road travel to Jamshedpur) = 10:35 (11th)

She was out of Jamshedpur for 11th (10:35) - 9th(15:55) = 42 hrs. 40 mins.

Option (C) and (D) are inconsistent with the conditions as train 12801 doesn't depart from Delhi.

Option (E):

Source is Jamshedpur(AI9810)

Time of departure from home = 8:00 - 4 hour = 4:00

Arrival time at Delhi = 9:45

She can depart by flight earliest by 9:45 + 1:30(Airport to work) + 6:00(Work time) + 1:30(Work to Airport) + 1:00(Early Arrival) = 19:45

So, she can board AI9809 on 10th Jan at 5:50

So, she will reach Jamshedpur at 5:50 + 1:45(flying time) + 3:00(travel to Jamshedpur to Ranchi) = 10:35(10th)

She is out of Jamshedpur from 4:00 (9th) to 10:35(10th), i.e. 30 hrs. 35 mins.

Thus, the correct option is E.

41. A

Train	Jamshedpur	Delhi
T12801	6:45(S)	4:50(D)
T12443	15:55(S)	10:35(D)
T12802	20:05(D)	22:20(S)
T12444	10:35(D)	17:20(S)

S- Source, D- Destination

Flight	Jamshedpur	Delhi
AI9810	8:00(S)	9:45(D)
AI810	15:25(S)	17:10(D)
IT3348	19:20(S)	21:05
AI9809	7:35(D)	5:50(S)
AI809	12:45(D)	11:00(S)
IT3347	18:55(D)	17:10(S)

Option (A):

Tina will reach Delhi by Train 12801 at 4:50.

She will finish her work and then will go to Delhi airport and check in by $4:50 + 9:05$, i.e. 13:55.

Since the flight departs at 17:10, the waiting period is 3 hrs. 15 mins.

Option (B):

Tina will reach Delhi by Train 12801 at 10:35.

She will finish her work and then will go to Delhi and navigate through the crowd and will reach by $10:35 + 7:10$, i.e. 17:45.

Since the train departs by 22:20, the waiting period is 4 hrs. 35 mins.

Option (C):

Starting from Jamshedpur = 4:00

Arrival at Delhi airport = 9:45

She can depart from Delhi (RS) earliest by $9:45 + 1:30$ (Airport to work) + $6:00$ (Work time) + $00:30$ (Work to station) + $0:05$ (Wait time) = 17:50

Since the train departs at 22:20, the waiting period is 4 hrs. 30 mins.

Option (D):

Arrival at Delhi airport by AI810 = 9:45

Tina finishes her work and reaches the airport, and can check-in in 10 hours, i.e. she can check in by 3-10. But the flight AI9809 departs at 5-50.

Hence, the waiting period is 2 hrs. 40 mins.

Option (E):

Starting from Jamshedpur = $19:20 - 4 \text{ hour} = 15:20$

Arrival time at Delhi = 21:05

She can depart by flight earliest by 21:05 + 1:30 (Airport to work) + 6:00 (Work time) + 1:30 (Work to Airport) + 1:00 (Early Arrival) = 7:05 (2nd day)

. Since the flight AI809 departs at 11-00. The waiting period is 3 hrs. 55 mins.

Thus, the correct option is E.

42. E

Option A: As already stated in the paragraph, it is a different picture altogether to work in an ERP installed company and installing ERP in a company. Thus, taking precedent from other lead ERP companies would not be a feasible solution.

Option B: The crux of the problem is the lack of consultation from the BAG members. Thus taking advice from an external consultant won't help much with the situation.

Option C: This option can potentially exacerbate an already bad situation. This is not the correct option.

Option D: This option can be discarded for the same reason as option B.

Option E: This could have been the aptest response as compared to what Mr Shiv did.

Thus, the correct option is E.

43. E

Option A: Since this is not the main reason for the problems, this is not the correct answer.

Option B: For the same reason as option A, this is not the correct answer.

Option C: Although lack of experience is one of the reasons for the problems BAG was facing, this option cannot be attributed as the immediate cause for the problems. Thus, this is not the correct option.

Option D: This is nowhere mentioned and implied.

Option E: Since the crux of the problem was the lack of consultation from the other members of BAG, it was Mr Shiv's unilateral decision-making which created the whole issue.

Thus, the correct option is E.

44. D

To woo all the senior members, Mr Shiv will have to develop work routines along the lines of ERP project requirements.

From the last lines of the question, it can be seen that normal services to other business units were being unattended to, and hence, he must have the extra resources for dealing with the issue.

Since option D captures the essence of the solution in the aptest manner, the correct answer is D.

45. B

" However, as most of them were on the verge of retirement, and it would be challenging to search for new jobs while competing with younger professionals, they decided to play along."

It can be seen that without any consultations, 15 youngsters were brought into the BAG, and the experienced were made to work with them.

They accepted the condition as opposing it won't bear any fruit, and they had been working since. There is no indication or implication, therefore, that the youngsters and the old timers didn't get along.

Thus, the correct option is B.

46. A

The best way to be in charge is to understand the company's position from the perspective of its existing members. Since they are well aware of the company's prospects, their advice on growth potentials becomes all more important.

Thus, the correct option is A.

47. **D**

Options A, B, and C can be refuted from the case study presented by the question.

The best way to implement the ERP package would be to create a team of professionals who have an in-depth understanding of this technology. Simply being aware of the technology would not work if it had to be implemented on such a large level.

Thus, the correct option is D.

48. **B**

Since Ms Shabina is well aware of the feelings of her teachers about their working on weekends, she should make their participation optional and compensate the teachers who are volunteering appropriately.

Thus, the correct option is B.

49. **B**

Option 1: Since the issue lies in the overlap of the weekend and the competition, just eliminating the choral recitation is not going to be enough for the cancellation of the competition on the weekend.

Option 2: This can be a viable option as this is targeting the core of the issue.

Option 3: It can be eliminated on the same grounds as option 1.

Option 4: This is also a viable option to woo the teachers into participating in the competition.

Thus, the correct option is B.

50. **C**

Since Ram has been a very trusted employee to him for the last five years, Dev would very much like to employ his recommendation. Thus, the correct option is C.

51. **A**

Statement 1: Since Ram Singh recommended Bal Singh, he would be the most preferred candidate for Dev. Also, as Chetan is working for a major competitor of Ram, he would be the least preferred candidate. Thus, this statement is correct.

Statement 2: Since Ram Singh recommended Bal Singh, he would be the most preferred candidate for Dev's family also. Also, as his family members do not want Dev to appoint a young driver, their least preferred choice would be Mani. Thus, this statement is incorrect.

Statement 3: Although because of past relationships with the company's senior managers, Bal Singh would be a possible least preferred candidate for HR, as Chetan has past work experience in a competitor company, he will not be HR's most preferred candidate. Thus, this statement is incorrect.

Since only statement 1 is correct, the correct option is A.

52. **C**

Since HR needs to ensure that the selection of a new driver does not lead to discontent among the senior employees of the firm, Bal Singh will be the most likely candidate to be rejected by him.

Thus, the correct option is C.

53. **E**

"Ethical - a person is called unethical when he deviates from principles. The principles and their use is often guided by two

definitions: Moral: society's code for individual survival Ethics: An individual's code for society survival".

Since the society's code of government contractors involves bribing and inflating, Naresh is acting totally ethical from a Moral point of view.

Also, since 'prices quoted for work have to include bribes, else the bills will not get cleared, and the supervisors will find multiple faults with the execution of work. This ensures survival and prosperity for contractors'; giving bribes is not against the Ethics code.

Thus, the correct option is E.

54. **D**

"Ethical - a person is called unethical when he deviates from principles. The principles and their use is often guided by two

definitions: Moral: society's code for individual survival Ethics: An individual's code for society survival".

In this situation, the case presented by Naresh was moral, as it was necessary for his survival, and to some extent, it puts the onus of the issue on him rather than his society; he can be considered ethical to some extent.

While for Srikumar, nothing can be commented on as there is not enough data to comment on his ethics.

Thus, the correct option is D.

56. **E**

Since Mahesh has been the highest earning employee for the last 3 years, he has been working very hard to get his sales getting reflected in his salary. Now, because of the inclusion of two more parameters, the most plausible explanation is the increase in the already increased workload.

Since option E is right on the money, the correct option is E.

57. **E**

Because of the General manager's lack of understanding of the environment of the company, it would be wrong to implement his idea in the very next month. Assessment of the potential of the idea and arriving at a consensus on the policy are the most plausible for their refusal.

Thus, the correct option is E.

Quantitative Ability

58. **C**

VP (HR) visits the plant after a gap of 2 days i.e every third day. Similarly, VP (Operations) visits the plant every fourth day and VP (Sales) visits the plant every sixth day. To find the number of days after which all the three will come together is the lowest common multiple of 3, 4 and 6 which is 12. So, every 12th day, all three VPs would come together. If their meeting was held on 3rd January, then their subsequent meetings would be held on 15th January, 27th January, 8th February, 20th February and so on. However, the CEO is not available till 28th January. So, their next meeting would be held on 8th February. hence, option C is the correct answer.

59. **A**

Median = 5 , Mode = 8

Mean = 5, => Sum of 5 salaries = 25

As mode is 8, it will occur 2 times but not 3 (∵ sum is 25)

Also, median is 5, the third salary is 5 and the first two are less than 5

=> Sum of third , fourth and fifth salary = 5 + 8 + 8 = 21

Sum of first two = 25 - 21 = 4

First and second salaries cannot be same (∵ mode is 8)

=> First and second salary = 1 and 3

∴ Sum (in lakh) of the highest and the lowest salaries = 1 + 8 = 9

60. E

We are not aware that which year, out of the given year is 2010. Hence, we can say that the data is insufficient. Therefore, option E is the best suitable answer.

61. B

The revenue of Yahoo in 4th year = 250 millions.

The revenue of Yahoo in 6th year = 1200 millions.

Therefore, average percentage increase in Yahoo's revenue in a year = $\left[\left(\frac{1200}{250}\right)^{0.5} - 1\right] * 100 = 119\%$

The revenue of Facebook in year 4 = 300 millions

The revenue of Facebook in year 6 = 2000 millions

Therefore, average percentage increase in Facebook's revenue in a year = $\left[\left(\frac{2000}{300}\right)^{0.5} - 1\right] * 100 = 159\%$

Therefore, the required difference = $159 - 119 = 40\%$. Hence, option B is the correct answer.

62. A

Google's percentage growth in revenues from the fifth to the sixth year = $\frac{3200 - 1500}{1500} \times 100 = 113.33$ percent.

Therefore, Facebook's revenue in the 6th year = $\frac{100 + 113.33}{100} \times 750 = 1600$ millions.

Therefore, option A is the correct answer.

63. E

Let the capacities of bucket of water carried by Tina, Mina, Gina, Lina and Bina respectively be W_T, W_M, W_G, W_L, W_B

It is given that : $W_T > W_M > W_G > W_L > W_B$

Let them spill x litres of water from the bucket.

Thus, %age of water spilled by them respectively be

$$= \frac{x}{W_T} \times 100, \frac{x}{W_M} \times 100, \frac{x}{W_G} \times 100, \frac{x}{W_L} \times 100, \frac{x}{W_B} \times 100$$

$$\therefore W_T > W_M > W_G > W_L > W_B$$

$$\therefore \frac{x}{W_T} \times 100 < \frac{x}{W_M} \times 100 < \frac{x}{W_G} \times 100 < \frac{x}{W_L} \times 100 < \frac{x}{W_B} \times 100$$

Thus, Bina lost maximum amount of water as a percentage of the bucket capacity.

64. E

Let the volume of watermelon = V

Total surface area = S

Thickness of the skin = t

$$\Rightarrow \text{Volume usable for juice} = V - St$$

Hence, if total surface area is minimum then usable volume of the watermelon will be max.

For equal volume, sphere has the least surface area.

Ans - (E)

65. C

Amount man gets after 1 year

$$= 6000 + \left(\frac{6000 \times 5 \times 1}{100}\right) - 1200$$

$$= 6000 + 300 - 1200 = 5100$$

∴ Amount at the beginning of third year, i.e. after 2 years

$$= 5100 + \left(\frac{5100 \times 5 \times 1}{100}\right) - 1200$$

$$= 5100 + 255 - 1200 = 4155$$

66. E

Radius of larger sphere = $R = 10$ cm

Let radius of each of the smaller spheres = r cm

$$\Rightarrow \frac{4}{3}\pi R^3 = 1000 \times \frac{4}{3}\pi r^3$$

$$\Rightarrow 10^3 = 1000r^3$$

$$\Rightarrow r = \sqrt[3]{1} = 1 \text{ cm}$$

Initial surface area of sphere = $4\pi R^2 = 4\pi \times 100 = 400\pi$

Final surface area of 1000 spheres = $1000 \times 4\pi r^2 = 1000 \times 4\pi = 4000\pi$

∴ Increase in surface area = $4000\pi - 400\pi = 3600\pi$

$$\Rightarrow \frac{3600\pi}{400\pi} = 9 \text{ times}$$

67. D

Let volume of jug = v litre

After first replacement, volume of orange juice = $(10 - v)$ litre

Volume of pineapple juice = v litre

After second replacement, volume of orange juice remaining

$$= (10 - v) - \left(\frac{10-v}{10}v\right) = \frac{(10-v)^2}{10}$$

Volume of pineapple juice remaining = $v - \frac{v^2}{10} = \frac{v(10-v)}{10}$

Total volume of pineapple juice = $\frac{v(10-v)}{10} + v = \frac{20v-v^2}{10}$

It is given that container has equal volumes of both juices.

$$\Rightarrow \frac{(10-v)^2}{10} = \frac{20v-v^2}{10}$$

$$100 + v^2 - 20v = 20v - v^2$$

$$2v^2 - 40v + 100 = 0$$

$$\Rightarrow v^2 - 20v + 50 = 0$$

$$\Rightarrow v = 17.07, 2.93$$

∴ Container is 10 litres, $\Rightarrow v \neq 17.07$

∴ $v = 2.93$ litres

68. A

Let Nikhil buy x , y and z pieces of kajubarfi, gulabjamun and sandesh respectively. ($x, y, z \geq 1$)

$$\Rightarrow x + y + z = 100 \text{ -----Eqn(I)}$$

$$\text{Also, } 10x + 3y + \frac{1}{2}z = 100$$

$$\Rightarrow 20x + 6y + z = 200 \text{ -----Eqn(II)}$$

Subtracting eqn(I) from (II), we get :

$$\Rightarrow 19x + 5y = 100$$

$$\Rightarrow y = \frac{100-19x}{5}$$

If $x = 1$, y will not be natural. The only value of x for natural y is $x = 5$

$$\Rightarrow y = \frac{100-95}{5} = 1$$

∴ Nikhil must buy 1 gulabjamun.

69. **B**

Let 'n' be the number of potato chips bought by the brothers. Also let 'x' be the cost price of a banana chips. ($x < 10$)

Total number of chips purchases = $(n + 1)$. It is given that each brother has equal number of chips packets i.e. $(n + 1)$ is an even number or we can say that 'n' is odd.

Total amount spend by the brother on these chips packets = $10n + x$. It is given that the amount received for each pot was same as the number of pots sold.

Hence, we can say that $10n + x$ is a perfect square. We can see that the tens place digit is an odd number.

Perfect squares ending with an odd digit in the tens place = 16, 36, 196, 256 and so on {All $(10a \pm 4)^2$ type numbers}

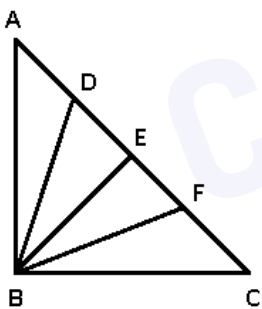
We can see that unit place is 6 in all cases and that will be the same as cost price of a banana chips packet.

The difference between the amount with the two friends = Cost price of 1 potato chips packet - Cost price of 1 banana chips packet = $10 - 6 = 4$

Hence, we can say that the brother, who has only chips packets with him, should given Rs.2 to the other brother so that they have the same amount with them.

Therefore, option B is the correct answer.

70. **C**



To find : $(BD)^2 + (BE)^2 + (BF)^2 = ?$

AC = 80 m

AD = DE = EF = FC = 20

Let $AB = a$ and $BC = b$

In $\triangle ABC$

$$(a)^2 + (b)^2 = (80)^2$$

Also, $(BE) = 1/2(AC) = 40$

$$\Rightarrow BE = 40$$

Using Apollonius theorem in $\triangle ABE$, as $AD = DE$

$$\Rightarrow (AB)^2 + (BE)^2 = 2[(BD)^2 + (AD)^2]$$

$$\Rightarrow (BD)^2 + 20^2 = \frac{1}{2}(a^2 + 40^2) \text{ -----Eqn(I)}$$

Similarly, for $\triangle BEC$, as $EF = FC$

$$\Rightarrow (BE)^2 + (BC)^2 = 2[(BF)^2 + (FC)^2]$$

$$\Rightarrow (BF)^2 + 20^2 = \frac{1}{2}(b^2 + 40^2) \text{ -----Eqn(II)}$$

Adding eqns (I) & (II), we get :

$$\Rightarrow (BD)^2 + (BF)^2 + 20^2 + 20^2 = \frac{1}{2}(a^2 + 40^2 + b^2 + 40^2)$$

$$\Rightarrow (BD)^2 + (BF)^2 + 20^2 + 20^2 = \frac{1}{2}(80^2 + 40^2 + 40^2)$$

$$\Rightarrow (BD)^2 + (BF)^2 = 4800 - 800 = 4000$$

$$\therefore (BD)^2 + (BE)^2 + (BF)^2 = 4000 + 40^2$$

$$= 4000 + 1600 = 5600$$

71. A

At the start, Ramya has 10 litres petrol. She purchased 20 litres, 15 litres and 10 litres.

At the end, she has left 5 litres of petrol.

$$\text{Petrol used} = (10 + 20 + 15 + 10 - 5) = 50 \text{ litres}$$

$$\text{Distance travelled} = 800 - 400 = 400 \text{ km}$$

$$\therefore \text{ Mileage of Ramya's car} = \frac{400}{50} = 8 \text{ km/litre}$$

72. D

Ramya's car has 5 litres in the tank. She can fill a maximum of 30 litres more as tank capacity is 35 litres.

The cost of petrol in Rampur is Rs. 45/litre. As the cost of petrol is lower at all the succeeding petrol pumps and hence to minimise the cost, she will fill enough petrol to reach first petrol pump i.e. 150 km.

Initially she can travel = $8 \times 5 = 40$ km using 5 litres of petrol

Hence to travel 110 km, she will need = $\frac{110}{8} = 13.75$ litre at the rate of Rs. 45/litre

On reaching the first petrol pump in the reverse journey, she will fill up enough petrol to reach the second petrol pump as the cost of petrol in the second pump is less than the cost of first pump and the distance is 50 km.

\Rightarrow She needs = $\frac{50}{8} = 6.25$ litres at the rate of Rs. 40/litre

For the rest of the journey (200 km), she will need = $\frac{200}{8} = 25$ litres at the rate of Rs. 35/litre

$$\therefore \text{ Total cost} = (13.75 \times 45) + (6.25 \times 40) + (25 \times 35)$$

$$= 618.75 + 250 + 875 = 1743.75 \approx \text{Rs.1744}$$

73. B

50 ml of potency 1 solution is equivalent to 1 tablet, 50 ml of potency 2 solution is equivalent to 2 tablets and so on.

Hence, 10 ml of potency 1 solution is equivalent to

$$= \frac{10}{50} = \frac{1}{5}$$

Similarly, 15 ml of potency 2 solution corresponds to = $\frac{15}{50} \times 2 = \frac{3}{5}$

and 30 ml of potency 4 solution corresponds to = $\frac{30}{50} \times 4 = \frac{12}{5}$

\therefore Required dosage

$$= \frac{1}{5} + \frac{3}{5} + \frac{12}{5}$$

$$= \frac{16}{5} = 3.2 \text{ tablets}$$

74. **B**

Let Ram replaces x litres of 12 % sol. with 39 % solution

Now, quality of 12 % solution in 27 litre = $\frac{12}{100} \times 27$

=> After replacing we have volume of 12 % solution

$$= \left(\frac{12}{100} \times 27\right) - \left(\frac{12x}{100}\right) + \left(\frac{39x}{100}\right)$$

$$= \frac{324+27x}{100}$$

This is equal to 27 litre of 21 % solution.

$$\Rightarrow \frac{324+27x}{100} = \frac{21}{100} \times 27$$

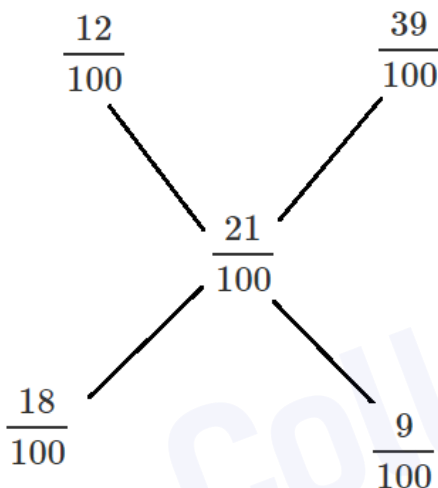
$$\Rightarrow 27x = 567 - 324 = 243$$

$$\Rightarrow x = \frac{243}{27} = 9$$

Alternate Solution:

The mixture of two solutions 12% alcohol and 39% alcohol should yield 21% alcohol solution.

Using allegation:



The ratio = $18/9 = 2:1$

So the amount of 39% solution required = $27 \times 1 / (2+1) = 9$

75. **B**

Let the distance between two termini = P km

Let the speed of the bus started from Terminus A be x and that of the bus started from terminus B be y .

The two buses met at a distance of 7km from Terminus A

Since the time of travel for both buses is the same.

$$\frac{7}{x} = \frac{P-7}{y}$$

$$\frac{x}{y} = \frac{7}{P-7} \quad \text{----- Eq (1)}$$

They met again at a distance of 4 km from terminus B.

Distance travelled by bus which started from Terminus A = $P+4$

Distance travelled by bus which started from Terminus B = $2P-4$

$$\text{So } \frac{x}{y} = \frac{P+4}{2P-4} \quad \text{---Eq (2)}$$

On solving Eq 1 & 2, we get $P=17$ km

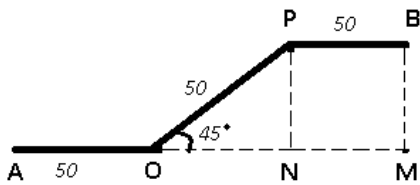
Each bus covers a distance of $17 \times 2 = 34$ km on a round trip.

Each bus makes 5 round trips in a day $= 34 \times 5 = 170$ km

Cost of running one bus $= 170 \times 20 = 3400$

\therefore Cost of running both buses $= 3400 \times 2 = \text{Rs. } 6,800$

76. E



Shortest distance between A and B $= d = \sqrt{(AM)^2 + (BM)^2}$ -----Eqn(1)

In $\triangle OPN$

$$\Rightarrow \sin 45 = \frac{PN}{PO}$$

$$\Rightarrow \frac{1}{\sqrt{2}} = \frac{PN}{50}$$

$$\Rightarrow PN = \frac{50}{\sqrt{2}} = 25\sqrt{2}$$

$$\Rightarrow BM = PN = 25\sqrt{2}$$

Again, $\tan 45 = \frac{PN}{OP}$

$$\Rightarrow OP = 25\sqrt{2}$$

$$\Rightarrow AM = 50 + 25\sqrt{2} + 50 = 100 + 25\sqrt{2}$$

Using eqn(I), we get :

$$\Rightarrow d^2 = (100 + 25\sqrt{2})^2 + (25\sqrt{2})^2$$

$$\Rightarrow d^2 = 10000 + 5000\sqrt{2} + 1250 + 1250 = 12500 + 5000\sqrt{2}$$

$$\Rightarrow d^2 = 2500(5 + 2\sqrt{2}) = 2500(5 + \sqrt{8})$$
 -----Eqn(II)

Also, it is given that : $d = a\sqrt{b + \sqrt{c}}$

$$\Rightarrow d^2 = a^2(b + \sqrt{c})$$
 -----Eqn(III)

Comparing, eqn(II) & (III), we get :

$$\Rightarrow a^2(b + \sqrt{c}) = 2500(5 + \sqrt{8})$$

$$\Rightarrow a = 50, b = 5, c = 8$$

$$\therefore a + b + c = 50 + 5 + 8 = 63$$

77. D

Let cost of 1 roti, 1 tadka and 1 tea be Rs. x, y, z respectively.

Acc to ques,

$$\Rightarrow 10x + 4y + z = 80 \leftarrow \text{Equation 1}$$

$$\text{and } 7x + 3y + z = 60 \leftarrow \text{Equation 2}$$

We have three equations and two unknowns. So let us try to find the value of x and y in terms of z .

Multiplying Equation 1 with 3 and subtracting 4 times (Equation 2) from it gives,

$$3 * (10x + 4y + z) - 4 * (7x + 3y + z) = 3 * 80 - 4 * 60$$

$$\text{Or, } 2x - z = 0$$

$$\Rightarrow x = \frac{z}{2}$$

$$\text{Substituting it in Equation 1, we get } 6z + 4y = 80 \text{ or } y = 20 - \frac{3}{2}z$$

$$\text{To find : } 5x + 5y + 5z = ?$$

$$= 5\left[\frac{z}{2} + \left(20 - \frac{3z}{2}\right) + z\right]$$

$$= 5 \times 20 = 100$$

78. B

Let the software fails a , b and c times in a single stage, in two stage and in all stages respectively.

$$\text{Given : } c = 4$$

$$\text{To find : } a = ?$$

$$\text{Solution : } a + 2b + 3c = 15 + 12 + 8$$

$$\Rightarrow a + 2b + 3c = 35 \text{ -----Eqn(I)}$$

$$\text{Also, } b + 3c = 6 + 7 + 4$$

$$\Rightarrow b + (3 \times 4) = 17$$

$$\Rightarrow b = 17 - 12 = 5$$

Using eqn(I),

$$\Rightarrow a + (2 \times 5) + (3 \times 4) = 35$$

$$\Rightarrow a + 10 + 12 = 35$$

$$\Rightarrow a = 35 - 22 = 13$$

79. E

Height = 7 cm and Radius = 0.25 cm

$$\text{Volume of cone} = \frac{1}{3}\pi r^2 h$$

$$= \frac{1}{3} \times \frac{22}{7} \times (0.25)^2 \times 7 = 0.458 \text{ cm}^3$$

$\therefore 0.458 \text{ cm}^3$ can write 330 words

$$\Rightarrow 1 \text{ cm}^3 \text{ can write} = \frac{330}{0.458} = 720.05 \text{ words}$$

$$\text{Now, 1 litre} = 1000 \text{ cm}^3$$

$$\Rightarrow \frac{3}{5} \text{ litre} = \frac{3}{5} \times 1000 = 600 \text{ cm}^3$$

$$\therefore 600 \text{ cm}^3 \text{ can write} = 600 \times 720.05$$

$$\approx 4,32,000 \text{ words}$$

80. E

$$\text{Total runs scored in 4's} = \frac{43.16}{100} \times 306 = 132$$

$$\text{Therefore, total number of 4's scored by the batsman} = \frac{132}{4} = 33$$

$$\text{Total runs scored in 6's} = \frac{3.92}{100} \times 306 = 12$$

$$\text{Therefore, total number of 6's scored by the batsman} = \frac{12}{6} = 2$$

Hence, we can say that option E is the correct answer.

81. E

Net increment in the number of runs due to 5 the dot balls resulting in 4s and two 3s resulting in two 1s = $4 \times 5 - 2 \times 2 = 16$.

Therefore, the total number of runs scored by the batsman = $16 + 306 = 322$ runs.

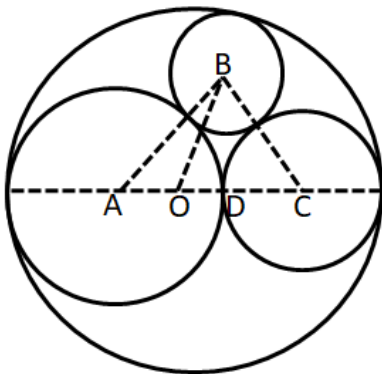
The number of runs scored by 4's = $132 + 20 = 152$ {We know that batsman scored 132 runs from 4s alone}

The angle subtended by 4's = $\frac{152}{322} \times 360 = 169.93 \approx 170$.

82. C

It is given that the 3rd disk also has the maximum diameter. This is possible only when all 3 discs touch each other externally.

Also the sum of the diameter of the two disks is $10+20 = 30$ feet. Hence, we can say that centres of these two disk lie on a diameter of original plywood. The figure can be drawn as shown below,



Here, in the diagram O is the centre of original disk. A and C are the centres of disks having radius 10 feet and 5 feet respectively. D is the touching point of circles with centre A and C.

Let 'x' be the radius of the disk that is to be cut out from the remaining part.

We can say that $AO = OD = CD = 5$ feet. Also, $AB = 10+x$, $BC = 5+x$, $OB = 15-x$ and $AC = 15$ feet.

Also, let 'y' be the length of BD.

By applying apollonius theorem in triangle ABD,

$$AB^2 + BD^2 = 2(OB^2 + OD^2)$$

$$(10 + x)^2 + y^2 = 2((15 - x)^2 + 5^2)$$

$$x^2 + 20x + 100 + y^2 = 500 - 60x + 2x^2$$

$$y^2 - x^2 + 80x = 400 \dots (1)$$

Similarly, by applying apollonius theorem in triangle OBC,

$$OB^2 + BC^2 = 2(BD^2 + DC^2)$$

$$(15 - x)^2 + (5 + x)^2 = 2(y^2 + 5^2)$$

$$2x^2 - 20x + 250 = 2y^2 + 50$$

$$2x^2 - 2y^2 - 20x + 200 = 0 \dots (2)$$

By equation (1) and (2) we can say that,

$$160x - 20x + 200 = 800$$

$$x = 600/140 = 30/7$$

Therefore, the diameter of the largest disk that can be cut out from the remaining portion of the plywood piece = $2 \times 30/7 = 8.57$ feet. Hence, option C is the correct answer.

83. E

Statement iii and iv are redundant. Thus, we can cancel out first three options.

From (i) , (ii) , (v), we have :

Let A,B,C be the ages of Jose's sons in ascending order

$$\text{and } A + B + C = 13$$

$$\text{and } A + B = 4$$

$$\Rightarrow C = 13 - 4 = 9$$

Now, from (vi) we get $A = B$

$$\Rightarrow A = B = \frac{4}{2} = 2$$

\therefore i, ii, v and vi are required to answer the question.

84. D

Ratio of profits earned by Ram : Shyam = 4000 : 6000

$$= 2 : 3$$

If profit < 2,00,000

$$\% \text{ of profit earned by Shyam} = \frac{3}{5} \times 100 = 60\%$$

If 2,00,000 < profit < 4,00,000, he gets 20 % and 60 % of the remaining profit.

$$\% \text{ of profit earned by Shyam} = 20\% + .80 \times 60\% = 68\%$$

If profit > 4,00,000

$$\% \text{ of profit earned by Shyam} = 35\% + .65 \times 60\% = 74\%$$

$$\text{Now, for first 2,00,000 profit earned by Shyam} = \frac{60}{100} \times 2,00,000 = \text{Rs. } 1,20,000$$

$$\text{For second 2,00,000 profit earned by Shyam} = \frac{68}{100} \times 2,00,000 = \text{Rs. } 1,36,000$$

Let total profit earned by them = Rs. (4,00,000 + x)

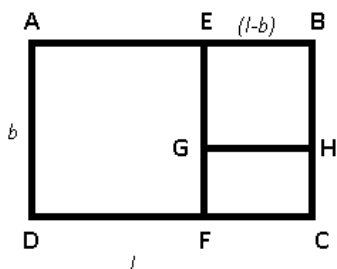
$$\Rightarrow \text{From Rs. } x \text{ profit, Shyam received} = 3,67,000 - 1,20,000 - 1,36,000 = \text{Rs. } 1,11,000$$

$$\Rightarrow \frac{74}{100} \times x = 1,11,000$$

$$\Rightarrow x = 1,11,000 \times \frac{100}{74} = 1,50,000$$

\therefore Total profit = 4,00,000 + 1,50,000 = Rs. 5,50,000

85. B



Let length = l ft and breadth = b ft

ABCD is original plot. First square AEFD is sold of side = $DF = b$, $\Rightarrow FC = (l - b)$

After that square EBHG is sold of side $GH = (l - b)$

$$\Rightarrow HC = b - (l - b) = (2b - l)$$

$$\text{Perimeter of remaining land GHCF} = 2 \times [(l - b) + (2b - l)]$$

$$= 2b$$

$$\text{Perimeter of original land ABCD} = 2(l + b)$$

Acc to ques

$$\Rightarrow \frac{2b}{2(l+b)} = \frac{3}{8}$$

$$\Rightarrow 8b = 3l + 3b$$

$$\Rightarrow 5b = 3l$$

Only one combination is possible, i.e. $l = 5$ and $b = 3$ (\because It is given that $l < 2b$)

$$\Rightarrow \text{Area of land} = 5 \times 3 = 15 \text{ sq. ft}$$

$$\Rightarrow \text{Cost of land} = 15 \times 1000 = \text{Rs.}15,000$$

$$\text{For overall profit to be } 10\%, \text{ S.P.} = 15,000 \times \frac{110}{100}$$

$$= \text{Rs.}16,500$$

$$\text{Side of AEFD} = b = 3$$

$$\Rightarrow \text{S.P. of AEFD} = 3^2 \times 1200 = \text{Rs.}10,800$$

$$\text{Side of EBHG} = (l - b) = 5 - 3 = 2$$

$$\text{S.P. of EBHG} = 2^2 \times 1150 = \text{Rs.}4,600$$

$$\text{Length of remaining rectangular land GHCF} = (l - b) = 5 - 3 = 2$$

$$\text{Breadth} = (2b - l) = 6 - 5 = 1$$

$$\text{Let selling price per sq. ft of GHCF} = \text{Rs.}x$$

$$\text{S.P. of GHCF} = 2 \times 1 \times x = \text{Rs.}2x$$

\therefore Total S.P.

$$\Rightarrow 10,800 + 4,600 + 2x = 16,500$$

$$\Rightarrow 2x = 16,500 - 15,400$$

$$\Rightarrow x = \frac{1100}{2} = \text{Rs.}550$$