MBA 2007 - EXAMINATION PAPER

PART I

Directions:

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

44. - If the item is a MAJOR OBJECTIVE in making the decision; that is, the outcome or result sought by the decision maker.

45. - If the item is a MAJOR FACTOR in arriving at the decision; that is consideration, explicity mentioned in the passage that is basic in determining the decision.

46. - If the item is a MINOR FACTOR in making the decision: a less important element bearing on or affecting a Major Factor, rather than a Major Objective directly.

47. - If the item is a MAJOR ASSUMPTION made deliberately; that is a supposition or projection made by the decision maker before considering the factors and alternatives.

48. - If the item is an UNIMPORTANT ISSUE in getting to the point; that is a factor that is insignificant or not immediately relevant to the situation.

PASSAGE I

The Problem Suraj & Co. a major publisher, is offered the autobiography of a fabulous and mysterious business tycoon, However, there is a question as to whether or not the offer is genuine, and whether this is the kind of book Suraj should publish. If the autobiography is truly the billionaire's life story, a great deal of money can be made. The logical step would be to approach the billionaire directly to ascertain if he did indeed write the book, but the go between warns that if this is done, Suraj will be turned down. Should the publisher make a contract with the go-between?

The Company. Suraj, & Co., is one of the world's larges publishers. A great part of its sales revenue is derive from scientific textbooks and magazines. Its trade book division, which publishes novels and general non-fiction, is a recently organized branch of the eighty-year-old company. This division has been unprofitable through most of its existence, although high hopes are held for it.

The Proposal Under Consideration. Pretam Suraj, who has been president for two years, listens carefully to a proposal made by Dhan Singh, head of the trade book division, at an executive editorial meeting where major projects are approved or turned down. Singh states that Barath Sind, a Suraj author of four novels and three non-fiction books, has established contact with Jehangir Dass, a brilliant business tycoon. The eccentric Dass, has tentatively agreed to allow Suraj to publish his autobiography, provided that Sind does the actual writing, based on taped interviews between the author and the business executive. Dass has shunned interviews and any public contact for almost two decades. He has become a "man of mystery", although his fabulous business deals have been national news.

The Terms. Sind is to receive Rs. 1,00,000 as an advance against royalties. Dass is to receive Rs. 2,50,000 as an advance against royalties. The royalty will be 15% of the price of the book. Suraj also must share on

a fifty-fifty basis all subsidiary revenue, such as would result from the publication of excerpts in magazines, etc., with Sind and Dass. According to Sind, the billionaire will only deal with him and no one else.

Possible Subsidiary Deals. Singh asserts that such a book would be a coup for Suraj. Singh has had informal contacts with National, a news magazine with a very large circulation. Twinights, a major book club; and Vale, a very large paperback publisher. Representatives of these firms have expressed strong interest in the Dass autobiography. Payments to Suraj from these companies would be substantial and would probably pay for the printing of the book. Singh predicts that 100,000 copies of the Suraj edition would be sold, adding that this figure is probably low. An excellent profit could be realized.

Is It Really Dass's Story? Singh is questioned on the authenticity of Sind's tale in light of Dass's obvious distaste for the public spotlight. Singh says he considers Sind to be completely honest, an opinion he has formed over years of acquaintance with the writer. But why, Singh is asked, cannot Suraj deal with Dass directly? He replies that Dass apparently wishes to keep his contacts with the outside world to a bare minimum. According to Sind, the billionaire would scuttle the deal if Suraj attempted to meet with him.

Proof of Authenticity. Singh produces a handwritten agreement, signed "Jehangir Dass" which authorizes Sind as his sole agent. The note has been checked by a leading handwriting expert who, after checking samples of Dass's writing of 20 years ago, has declared it to be authentic.

Opinions. Pretam Suraj considers the matter carefully. On the negative side, there is some doubt as to whether the manuscript is indeed Dass's. Moreover, this is not the type of book that Suraj would ordinarily publish. It smacks a little of sensationalism which might reflect upon the Conservative, solid image of Suraj & Co.

On the other hand, as Singh said, publication certainly would be a coup. Profits are almost guaranteed. Singh seems to have taken adequate precautions concerning the validity of Sind's story.

Alternatives. Pretam Suraj thinks about contacting Dass directly or through the tycoon's executives or friends. This he rejects because Dass might call off the deal and go to another publisher. He defers the decision until further proof of authenticity is forthcoming. Too much delay might result in the book going to another publisher.

Decision. He finally decides to publish without reaching Dass directly, persuaded by the available documents and the confidence inspired by Mr. Sind. Despite misgivings and the problems involved, Pretam Suraj approves the project.

Questions:

1. The company needs a 'best-seller'
2. Sind might not be telling the truth.
3. If Suraj circumvents Sind and contacts Dass directly, the deal might be called off.
4. Delay might mean that Dass's autobiography would be published by another company.
5. The book might not be authentic.
6. Suraj's image might be damaged if it were to publish the autobiography.
7. Publication of the book would be a coup for Suraj

8. Barath Sind is an established author.
9. Suraj is one of the world's largest publishers.
10. The autobiography is not the kind of book that Suraj usually publishes.

PASSAGE II

Bells Company is a large publisher of school textbooks. It has a 15 % share of the Indian market, as well as a successful operation exporting to other English-speaking countries. Last year its net earnings were Rs. 21 million. Until now Bells has been able to maintain a satisfactory growth rate by adding texts on new subjects to their line. At present, however, all school subject areas seem to be adequately represented in the Bells catalogue, and the Bells Board of Directors has approved the purchase of a number of smaller, but prosperous and established, businesses in an effort to preserve Bells' current rate of profit increase and to lessen its dependence on a single project.

Board member Manu Khalid proposed that one of Bells' new acquisitions be a company publishing romance novels. However, he urged that a well-established company with significant readership should be chosen, since Bells had no familiarity with this new market. Khalid argued that the sales of any such enterprise could be increased if Bells' staff editors and illustrators reworked already accepted romance manuscripts, turning out artistically and stylistically polished products. The board fully endorsed Khalid's program.

Two weeks later, the board met to decide which one of the three publishing firms suggested for purchase should be acquired. Bells' researchers had studied one company purveying expensive editions, another producing moderately priced paperbacks, and a third marketing inexpensive comic-book-format romances. The board intended to greatly expand whichever company it bought, and to use the new acquisition as a springboard from which to lake over, during the next decade, a significant portion of the romance-novel market.

In considering which business to buy, the board focused on purchase price, prospects for expansion, publisher-name recognition, competition, potential markets, already existing distribution capacity, management efficiency, and employee relations. The board members agreed-that a cordial and cooperative attitude on the part of the present owners would be necessary In order to assure a smooth transition. While printing costs would normally considered in comparing the three operations, Bells had decided to use its own printers to manufacture the romance novels; accordingly, such costs were not taken into account in evaluating the three companies.

First considered was Golden Eagle Productions, which sold leather-bound editions of classic romances to bookstores and, by mail, to individuals. Golden Eagle had a rather large following of well-heeled customers, faced no significant competition, and consistently ranked at the top of the list in name-recognition surveys. Last year, Golden Eagle earned Rs. 4 million in profits before taxes on sales of Rs. 21 million.

While management efficiency was good, Golden Eagle's authors and leather crafts people were dissatisfied with their pay and working conditions; it was common knowledge in the industry that Golden Eagle had a "morale problem." In order to

enter the romance-novel market on a really large scale, as planned. Bells would need to initiate a Rs. 5 million expansion effort right away, to be followed up in the future with additional outlays. Another negative point was that the board was afraid that marketing moderately priced and even inexpensive novels under the Golden Eagle name, a necessary move given their expansion program, would alienate present Golden Eagle customers without drawing in sufficient new readers to replace them. Purchase price of this firm would probably be about Rs. 15 million.

Larger than Golden Eagle was Enlightened Living, the second company, a publisher of medium-priced paperback romances. Because of a highly efficient sales program both in India and overseas. Enlightened Living had attained a net profit of Rs. 44 million last year, on sales of Rs. 108 million. Management was expert at keeping production flowing and at constantly' increasing distribution. If Bells bought this firm, only Rs. 2 million would be needed for expansion. A few of Enlightened Living's staff members were so skilled that Bells could use them to write school texts when they were not working on romance novels.

But Enlightened Living did have some drawbacks. It faced a good deal of competition, and for some reason it always scored low on name-recognition surveys. Although they spent rather lavishly on advertising, management could not seem to improve name-recognition. Finally, there was a labour-relations problem involving the company's sales force.

The last of the three companies under consideration was small but successful. Twilight, had Rs. 6 million in net profits on Rs. 9 million in sales last year. Ranking high in name-recognition surveys, Twilight produced small comic books with romantic themes. Management had evolved work routines that allowed each artist's talents to be used optimally, and production was streamlined for volume output. Twilight's distribution system was respected throughout the field. Competition did exist, in the form of Gentle Site & Co., but it was clear that Twilight enjoyed the upper hand. There was ample room for expansion. The firm would probably sell for Rs. 10 million.

The board voted to make tentative efforts to all three of the companies, and to reconvene when responses were available in order to reach a final decision.

Questions:

11. Maintaining Bell's present profit rate.
12. Efficiency of the management of a publishing company under consideration.
13. Bell's Rs. 21 million net earnings last year.
14. Current printing costs at a firm under consideration.
15. Competition faced by a firm under consideration.
16. Continuing demand for romance novels during the next ten years.
17. Acquisition of a romance-novel publishing company that can be expanded to suit Bell's needs.
18. Willingness of the ownership of each company considered to sell to Bells.
19. Accuracy of the information presented to the board by the researchers.
20. Cooperative attitude of present owners of a firm to be acquired.

PART II

Directions:

Each passage in this section is followed by questions based on its contents. Read the

passages carefully and then answer the questions given below them by choosing the best answer to each question. Answer the questions on the basis of what is stated or implied in the passages.

PASSAGE I

The job of attracting the right young people into business will be facilitated if business will and the world at large understand the real benefits of an education designed to prepare young people for business and the fact that such an education does breed a broad focused person who can take up two walks of life if need be. The continued success of our business democracy requires no less.

Education for business must avoid the purely intellectual for something with a more pragmatic focus. And what is wrong with an education that has a pragmatic focus? Plato — in his Republic — was far more pragmatic than we ever think of being.

But even if education for business should be unashamedly pragmatic, it cannot be an end in itself. Any young person entering management, regardless of what degree he has earned, is going to continue his education throughout his life. Things are happening too fast today for anyone to feel fully educated after four years, or six years, or ten years! What he will have to do is to be retrained or retooled as the years go by. The kind of education needed is that which opens the young person's eyes to the need for a lifetime of study and gives him the foundation on which his continued study can be based.

Rather than being narrowly vocational, modern business education in many ways leads in the liberality of its approach. Beginning with courses in human relations, and ending up permeating all its activities is the concept of participative management. Why? Because as business becomes more scientific, more intellectual, more complex, no one man can have the total knowledge required to make sound decisions arbitrarily. When things become so highly complex, group management is the logical answer.

It is in modern business education that this type of leadership is taught and researched. This is of crucial importance to the well-being of our nation, because if the leaders of our business democracy cannot meet the challenge of the collective economy which boasts it will bury us, we may indeed be buried - and not just economically. Modern business education teaches how to lead without a sacrifice of freedom; how to exercise control and direction, while at the same time respective opinions of others more qualified in highly specialized areas, as well as respecting their essential dignity as humans; and how to learn to lead by freeing the latent potentialities of gifted advisers - not by stifling them.

Perhaps it will be the business schools of this nation which will remind higher education not only democracy and strong leadership arc not contradictory terms, but leadership can and must be taught. No other part of our university system seemingly is paying much, in any attention to doing something about, rather than talking about, education for democratic leadership. To some faculties, leadership itself is a jingoistic word barking back echoes of Teddy Roosevelt. Not so, to the faculties of modern business schools - and not so to the masses of students who are revolting against the lofty disengagement

of many academics from the complex - and often unclean realities of our world.

Thus business will be serving the nation's interest as well as its own - if it recognizes that the right kind of young people it needs for tomorrow's managers are the brighter students who are purely intellectual, or purely pragmatic; if it offers them a career that will satisfy their values; and if it does what it can to encourage their development.

Questions:

21. According to the author, the business community can be best served by the student who is
1) practical
2) intellectual
3) a Liberal Arts major
4) practical as well as intellectual
5) jingoistic

22. The passage implies that
1) a business education is better than a Liberal Arts education.
2) business schools are in the forefront in the matter of liberalizing curricula
3) a Liberal Arts education is superior to a technical education
4) education is of little importance to the success of the business world
5) business is not challenging to most students

23. According to the passage, the economic health of our country depends mainly on
1) businessmen
2) business school faculties
3) government supervision
4) the general public
5) group management

24. According to the author
1) business is an end in itself.

2) the college - trained business leader should continue his education throughout life
3) the role of the businessman in business education has not been clearly defined
4) Plato disengaged himself from the realities life
5) business education is essential to success in t business world

25. Which of the following describes business education today?
I Interest in human relations
II Realization of individual limitations
III Concept of participative management
1) I only   2) II only
3) I and II only   4) I and III only
5) I, II and 111

26. It is obvious that
1) our business leaders are incapable of competing with the collective economy system.
2) things are going along at an unwholesome rate of speed.
3) business is growing less complex
4) Teddy Roosevelt is favourably regarded by the author
5) students prefer that their professors take a active role in solving world problems

27. The author views the business schools of this country as a prod to education to see to it that
1) the ability to lead must be part of the curriculum
2) business education is just as important as any other type of education
3) professors get off their "high horses'' and teach realistically
4) a new emphasis is to be placed upon innovation
5) businessmen must not be disregarded is what they to offer educators

28. The author indicates that

1) business methods have drastically changed in the last decade
2) there has been too much government interference in business
3) the larger universities are far too impersonal in their dealings with students
4) the importance of vocational education is much over-rated
5) business success in the final analysis spells success for the entire nation

29. Businessmen, according to the passage, must recognize that
   1) they must set an example for young people
   2) greater financial support of business schools is necessary
   3) business schools must be autonomous to function properly
   4) a primary result of a business education should be the development of individuals with a wide range
   5) government intervention in business schools is inevitable

30. The most appropriate title for this passage is
   1) Businessmen and Business Schools
   2) Youth and Business
   3) Business Schools
   4) Bright Students and Business
   5) The Relationship between Business Education and Business

PASSAGE II

The economic condition of the low-income regions of the world is one of the great problems of our time. Their progress is important to the high-income countries, not only for humanitarian and political reasons but also because rapid economic growth in the low-income countries could make a substantial contribution to the expansion and prosperity of the world economy as a whole.

The governments of most high-income countries have in recent years undertaken important aid programs both bilaterally and multilaterally and have thus demonstrated their interest in the development of low-income countries. They have also worked within the General Agreement of Tariffs and Trade (GATT) for greater freedom of trade and recognizing the special problems of low-income countries have made special trading arrangements to meet their needs. But a faster expansion of trade with high-income countries is necessary if the low-income countries are to enjoy a satisfactory rate of growth.

This statement is therefore concerned with the policies of high-income countries toward their trade with low-income countries. The recommendations are based the conviction that a better distribution of world resources and a more rational utilization of labour are in the general interest. A liberal policy on the part of high-income countries with respect to their trade with low-income countries will not only be helpful to the low-income countries but, when transitional adjustments have taken place, it will be beneficial to the high-income countries as well.

It is necessary to recognize however that in furthering the development of low-income countries, the high-income countries can play only a supporting role. If development is to be successful the main effort must necessarily be made by the people of the low-income countries. The high-income countries are more over likely to provide aid and facilitate trade more readily and extensively where the low-income countries are seen to be making

sound and determined efforts to help themselves, and thus to be making effective use of their aid and trade opportunities.

It is then necessary that the low-income countries take full account of the lessons that have been learnt from the experience of recent years if they wish to achieve successful development and benefit from support from high-income countries. Among the most important of these lessons are the following:

Several damage has been done by inflation. A sound financial framework evokes higher domestic saving and investment as well as more aid and investment from abroad. Budgetary and monetary discipline and a more efficient financial and fiscal system help greatly to mobilize funds for investment and thereby decisively influence the rate of growth. Foreign aid should also be efficiently applied to this end.

The energies of the people of low-income countries are more likely to be harnessed to the task of economic development where the policies of their government aim to offer economic opportunity for all and to reduce excessive social inequalities.

Development plans have tended to concentrate on industrial investment. The growth of industry depends however on concomitant development in agriculture. A steady rise in productivity on the farms, wherein almost all low-income countries a majority of the labour force works, is an essential condition of rapid over-all growth. Satisfactory development of agriculture is also necessary to provide an adequate market for an expanding industrial sector and to feed the growing urban population without burdening the balance of payments with heavy food imports. Diminishing surpluses in the high-income countries underline the need for a faster growth of agricultural productivity in low-income countries. Success in this should, moreover, lead to greater trade in agricultural products among the low-income countries themselves as well as to increased exports of softie agricultural products to the high-income countries.

There can be no doubt about the urgency of the world food problem. Adequate nourishment and a balanced diet are not only necessary for working adults but are crucial for the mental and physical development of growing children. Yet, in a number of low-income countries where the diet is already insufficient the production of food has fallen behind the increase in population. A continuation of this trend must lead to endemic famine. The situation demands strenuous efforts in the low-income countries to improve the production, preservation and distribution of food so that these countries are better able to feed themselves.

Questions:

31. The economic conditions of the low-income countries are important to high-income countries because of
    I economic reasons
    II political reasons
    III cultural reasons
    1) I only   2) III only
    3) I and II only   4) II and III only
    5) I, II and III

32. According to the passage, governments of most high-income countries have
    1) not worked for free trade with low-income countries

2) undertaken important and programs for low-income countries

3) injected massive doses of capital into low-income countries

4) provided training programs for low-income country entrepreneurs

5) helped improve the educational systems of low-income countries

33. The major subject with which the passage is concerned is

1) trade policies of high-income countries towards low-income countries

2) foreign trade problems of low-income countries

3) fiscal and monetary problems of low-income countries

4) trade arrangements under the GATT organisation

5) general economic problems of low-income countries

34. If low-income countries expect aid from high-income countries, they must do all of the following except

1) spend the aid wisely

2) put their own houses in order first

3) learn from the experience of developed countries

4) curb inflation

5) de-emphasize agricultural development in favour of industrial growth

35. Which of the following is mentioned for its influence upon the rate of economic growth?

1) an efficient financial and fiscal system

2) a trade surplus

3) a democratic government

4) little reliance upon foreign aid

5) a budgetary surplus

36. Industrial growth depends upon a parallel growth of the

1) labour force

2) agricultural system

3) balance of payments

4) urban population

5) monetary system

37. The passage states that participation of high-income countries should be limited to

1) ten percent of their GNP

2) a supporting role

3) regulations stipulated by GATT

4) what low-income countries can absorb

5) monetary aid only

38. In order to better enlist the support of the population in economic development efforts, low-income countries should

1) not accept more foreign aid than they can use

2) budget the capital wisely

3) reduce excessive social inequalities

4) concentrate on commercial development

5) establish agricultural communes

39. Which of the following represents a major problem in the agricultural systems of low-income countries?

I The increase in food production is less than population growth

II Food distribution is inefficient

III Food prices are too high

1) I only   2) III only

3) I and II only   4) II and III only

5) I, II and III

40. If low income countries could develop economically at a faster rate, the result would be

1) less inflation

2) lower deficits in their balance of trade

3) liberal trade policies

4) better distribution of world resources

5) more equitable fiscal policies

PART III

41. A conveyor belt moves grain at the rate of 2 tons in 5 minutes and a second conveyer belt moves grain at the rate of 3 tons in 7 minutes. How many minutes will it take to

move 20 tons of grain using both conveyer belts?

1) 12
2) $16\frac{4}{7}$
3) $18\frac{3}{28}$
4) 21
5) $24\frac{4}{29}$

42. If 15 men working independently and at the same rate can manufacture 27 baskets in an hour, how many baskets would 45 men working independently and at the same rate manufacture in 40 minutes.

1) 27
2) 35
3) 40
4) 54
5) 81

43. A tank contains 10 litres of water. If a pump takes 15-x/10 minutes to pump one litre of water out of the tank, how many minutes will take for the pump to empty the tank?

1) x
2) 15-10x
3) 150-10x
4) 150-x
5) 15-x

44. If the length of the rectangle is increased by 20% and the width is decreased by 20% then the area

1) decreases by 20%
2) decreases by 4%
3) remains the same
4) increases by 10%
5) increases by 20%

45. A house costs Mr. Ram, C rupees in 1995. Three years later he sold the house for 25% more than he paid for it. He has to pay a tax of 50% of the gain. (The gain is the selling price minus the cost). How much tax must Mr. Ram pay?

1) $\frac{1}{24}C$
2) $\frac{C}{8}$
3) $\frac{1}{4}C$
4) $\frac{C}{2}$
5) 0.6C

46. 8% of the people eligible to vote are between 18 and 21. In an election 85% of those eligible to vote who were between 18 and 21 actually voted. In that election, people between 18 and 21 who actually voted were what percent of those people eligible to vote?

1) 4.2
2) 6.4
3) 6.8
4) 8
5) 68

47. It costs 'g' paise a km for petrol and 'm' paise per km for all other costs to run a car. How many rupees will it cost to run the car for 100 km?

1) (g + m)/100
2) 100g + 100m
3) g + m
4) g + 0.1m
5) g

48. A cab driver's income consists of his salary and tips. His salary is Rs.500 a week. During one week his tips were 5/4 of his salary. What fraction of his income for the week came from tips?

1) 4/9
2) 1/2
3) 5/9
4) 5/8
5) 5/4

49. Given that x and y are real numbers, let $S(x, y) = x^2 - y^2$. Then $S(3, S(3, 4)) =$

1) -40
2) -7
3) 40
4) 49
5) 56

50. It is 185 km from Villupuram to Chennai. If a bus takes 2 hours to travel the first 85 km, how long must the bus take to travel the final 100 km in order to average 50 km an hour for the entire trip?

1) 60 min
2) 75 min
3) 94 min
4) 102 min
5) 112 min

51. An automobile tire has two punctures. The first puncture by itself would make the tire flat in 9 min. The second puncture by itself would make the tire flat in 6 min. How long will it take for both punctures together to make the tire flat? (Assume the air leaks at a constant rate.)

1) $3\frac{3}{5}$ min
2) 4 min

3) $5\frac{1}{4}$ min   4) $7\frac{1}{2}$ min

5) 15 min

52. If 'a' is less than 'b', which of the following numbers is greater than 'a' and less than 'b'?
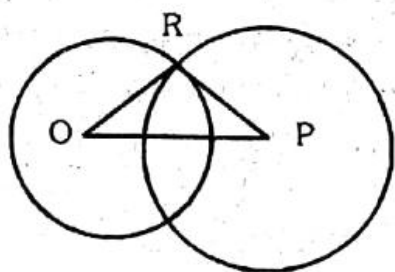
1) $(a + b)/2$ 2) $(ab)/2$

3) $b^2 - a^2$ 4) ab

5) $b - a$

53. In the figure, OR and PR are radii of circles. The length of OP is 4. If OR=2, what is PR? PR is tangent to the circle with center O.
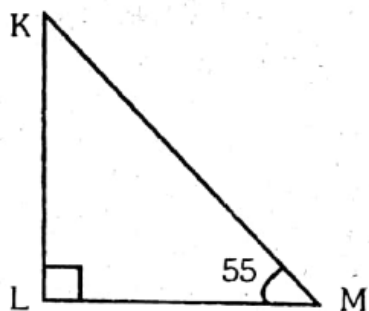

1) 2   2) 5/2

3) 3   4) $2\sqrt{3}$

5) $3\sqrt{2}$

54. Consider the diagram shown below. Which of the following statements is true?

1) KM < KL   2) KM < LM

3) KL + LM < KM   4) KL < LM

5) KL > LM

55. In a survey of the town of 'X', it was found that 65% of the people surveyed watched the news on television. 40% read newspaper and 25% read newspaper and watched the news on television. What percent of the people surveyed neither watched the news on television nor read a newspaper?

1) 0%   2) 5%   3) 10%

4) 15%   5) 20%

56. A screwdriver and a hammer currently have the same price. If the price of a screwdriver rises by 5% and the price of the hammer goes up by 3%, how much more will it cost to buy 3 screwdrivers and 3 hammers?

1) 3%   2) 4%   3)5%

4) 8%   5) 24%

57. If the radius of the circle is increased by 6%, then the area of the circle Is increased by

1) 0.36%   2) 3.6%   3) 6%

4) 12.36%   5) 36%

58. A water tank has two drains. When only drain I is open, the tank will empty itself in 4 hours. When both drain I and II are open, the tank empties in 2½ hours. How long does it take for the tank to empty if only drain II is open?

1) $1\frac{1}{2}$ hours   2) 2 hours   3) 4 hours

4) $5\frac{1}{2}$ hours   5) $6\frac{2}{3}$ hours

59. A drawer contains 6 red socks and 4 blue socks. What is the probability that if 2 socks are picked (without looking) from the drawer, both of the socks will be red?

1) 2/15   2) 4/15   3) 1/3

4) 2/5   5) 3/5

60. The area of the isosceles triangle ABC is 48. AD = DC and AE = EB. Let x be the area of the rectangle DEFG. Then x equals

1) 6   2) 12   3) 18

4) 24   5) 36

PART IV

Directions:

Each of the following problems has a question and two statements which are

labeled (1) and (2) in which certain data are given. You have to decide whether the data given in the statements are sufficient for answering the question. Using the data given in the problem plus your knowledge of mathematics and every day facts, choose:

1) If you can get the answer from (1) ALONE but not from (2) alone.

2) If you can get the answer from (2) ALONE but not from (1) alone.

3) If you can get the answer from BOTH (1) and (2) TOGETHER, but not from (1) alone or (2) alone,

4) If EITHER statement (1) ALONE or statement (2) ALONE suffices.

5) If you CANNOT get the answer from statements (1) and (2) TOGETHER, but need even more data.

Questions:

61. How much is the average salary of the 30 assembly workers? The foreman is paid a salary of Rs. 12,000.

1) The total salary paid to the assembly workers and the foreman is Rs.3,12,000.

2) The foreman's salary is 120% of the average salary of the assembly workers.

62. How far is it from town 'A' to town 'B'? Town 'C' is 12 km east of town 'A'.

1) Town 'C' is south of town 'B'

2) It is 9 km from town 'B' to town 'C'

63. Is DE parallel to AB?
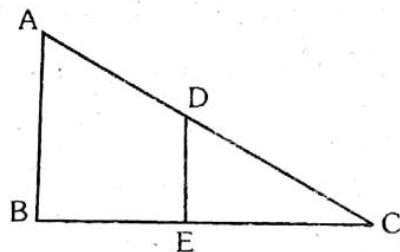
1) The triangles DEC and ABC are similar

2) CE = EB

64. How many of the numbers x and y are positive? Both x and y are less than 20.

1) x is less than 5   2) x + y = 24

65. A sequence of numbers is given by the rule $a_n = a_{n-1} + 2$. Is a_{10} an even integer?

1) a_1 is even   2) a_9 is 24

66. Which side of triangle ABC is the longest? y = 40°
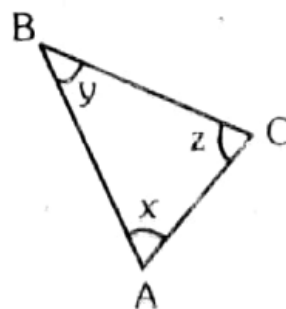
1) z > y   2) x = 40°

67. If x=k. is the expression $x^3 + ax^2 + bx$ equal to zero?

1) a = 0   2) $-b = k^2$

68. The figure represents a square and a semicircle. What is the combined area of the above figure?

1) The radius of the semicircle is 7

2) A side of the square is 14

69. How many metre long is the edge of a certain cubical box?

1) The number of cubic metre in its volume is 9 times the number of metre in its edge

2) The number of square metre in its total surface area is 18 times the number of metre in its edge

70. Docs T = 24?

    1) The average (average mean of A, B and T is 8

    2) -A = B

71. Is the radius of circle O a whole number?

    1) The circumference of circle O is 2n

    2) The ratio of the circumference of circle O to the area of circle O is 1/2

72. Is a^2 integer?

    1) a is a negative whole number

    2) $4a^2$ is an integer

73. What is the distance from point A to point C?

    1) The distance from point A to point B is 5"

    2) The distance from point B to point C is 4"

74. Are two triangles congruent?

    1) They are both equilateral triangles

    2) They both have equal bases and equal height

75. A cylindrical tank has a radius of 10 m and its height is 20 m. How many litres of a liquid can be stored in the tank?

    1) A litre of the liquid occupies about 0.1 space

    2) The diameter of the tank is 20 m

76. Do the rectangle ABCD and the square EFGH have the same area.
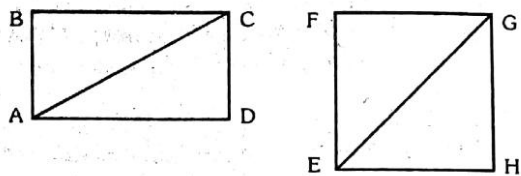
    1) AC = EG, AB = $\frac{1}{2}$ EH

    2) The area of triangle ABC is not equal to the area of triangle EFG

77. John and Lal are standing together on a sunny day. John's shadow is 3.2 m long. Lal's shadow is 2.9 m long. How long is Lal?

    1) John is 1.9 m tall

    2) John is standing 0.6 m away from Lal

78. What is the radius of the circle with center O?
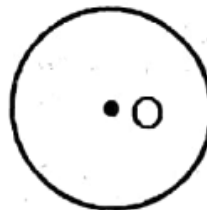
    1) The area of the circle is 25π

    2) The area of the circle is divided by the diameter of the circle is equal to π times $\frac{1}{2}$ of the radius of the circle

79. There are 450 boxes to load on a truck. A and B are working independently but at the same time take 30 minutes to load the truck-How long should it take for B working by himself to load the truck?

    1) A loads twice as many boxes as B

    2) A would take 45 minutes by himself

80. Does a circle with diameter d have greater area than a square of side s?

    1) $d < (\sqrt{2})s$ 2) $d < s$

PART V

Directions:

In each of the following sentences four words or phrases have been underlined. Only one underlined part in each sentence is not acceptable in standard English. Pick up that part (1) or (2) or (3) or (4). If there is no mistake mark (S).

Questions:

81. This young pianist <u>is a person with</u> great
                      (1)   (2)
    promise <u>and who</u> should <u>be</u> encouraged.
                (3)   (4)
    <u>No error.</u>
       (5)

82. The risks <u>to</u> the workers in <u>contracting</u> a
            (1)   (2)
    <u>work-related</u> disease <u>seems</u> very great.

(3)   (4)
No error.
  (5)

83. It is not clear whether <u>these are</u> <u>after-the-fact</u>
             (1)
(2)
interpretations or something <u>felt by</u> the
                    (3)
children at <u>the time</u>. <u>No error</u>.
        (4)   (5)

84. My aunt, <u>whom we admire</u> almost too much,   (1)
has <u>given we</u> <u>boys ten</u> rupees each to spend (2)   (3)
<u>at the fair</u> tomorrow. <u>No error</u>.
    (4)   (5)

85. <u>In her note</u> the teacher <u>asked the principal</u> to (1)   (2)

give some chalk from his supply room to <u>whomever of</u> <u>us boys</u> would go down to pick (3)   (4)
it up. <u>No error</u>.
      (5)

86. When the final <u>story has been</u> written for that   (1)
final newspaper <u>sometime in the future</u> you can   (2)
be sure <u>that it's substance</u> will be some violent   (3)
<u>act that</u> has occurred. <u>No error.</u>
  (4)   (5)

87. <u>To join</u> the club, <u>a deposit must be made</u> in
(1) (2)   (3)
<u>advance</u>. <u>No error</u>.
  (4)   (5)

88. <u>One of the</u> salesmen's cases <u>was</u> lost,
   (1)   (2)
because <u>he</u> had been careless
     (3)
<u>while checking out of the hotel</u>. <u>No error</u>.
     (4)   (5)

89. The new labour contract, <u>together with </u>the
             (1)
fringe benefit package and inflation cause, <u>have</u>
 (2)
only a limited chance <u>of being</u> approved by   (3)
management during the next <u>collective bargaining sessions</u>. <u>No error</u>.
    (4)   (5)

90. <u>Who's</u> book <u>was</u> <u>lying</u> on the table when
 (1)   (2) (3)
the fire drill <u>occurred</u>? <u>No error</u>.
       (4)   (5)

91. Whenever these three <u>eminent</u> scientists
                (1)
spoke to <u>each other</u> an argument
      (2)
<u>was bound</u> to ensure. <u>No error.</u>
  (3)   (4)   (5)

92. Neither Ram nor Sam <u>has</u> the slightest idea to   (1)
<u>whom</u> this letter should be addressed <u>to</u>
  (2)   (3)
because the original envelope <u>has been lost</u>. <u>No error</u>.
(4)   (5)

93. <u>After the battle</u> was over, the <u>solders</u>
  (1)   (2)
<u>will advance</u> to the <u>front lines</u>. <u>No error</u>.
  (3)   (4)   (5)
to the front lines. No error.

94. He <u>is</u> <u>more clever</u> <u>than</u> <u>his sister</u>. <u>No error</u>.
  (1) (2)   (3)   (4)   (5)

95. <u>This</u> new model travels faster <u>then</u> last
 (1)   (2)
year's model, <u>which it supercedes</u>.
 (3)   (4)
No error.
  (5)

96. The set of texts required for this assignment is <u>to be found</u> in the library, so

(1)
that everyone of the students is able to
   (2)   (3)
refer to it at all times. No error.
       (4)   (5)

97. We strongly recommend that John is told
                                    (1)
about his physical condition as soon as
possible in order to allow him to make the
necessary (3)   (4)
arrangements. No error.
                (5)

98. Sanjay, the foreman of the production line.
                                    (1)
told Mr. Dileep that he had inadvertently
                         (2)   (3)
shipped out a defective batch. No error.
          (4)   (5)

99. Sameer is among the very few individuals
                (1)
who critics regard as genuinely significant
 (3)   (4)
in both the history of art and the history of
   (4)
literature. No error.
            (5)

100. Despite the revolutionary implications of
Darwin's theories, which won
                          (1)
practically universal acceptance among
        (2)   (3)
biologists and other scientists within a
relatively short time, as compared with
other intellectual movements of similar
importance. No error.
          (4)   (5)

MBA 2007 – ANSWERS

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

MBA 2007 - DETAILED SOLUTIONS

49. (1)

The company has to come out with a 'best seller' to improve its image.

50. (2)

This is a major factor - this is checked from the samples of Dass's writing of 20 years ago.

51. (4)

This is the assumption that Suraj has and that is why they were not contacting Dass directly.

52. (2)

Delay is to be avoided as otherwise other publishers would take up the work.

53. (3)

This becomes a minor factor since Suraj has taken steps for verification.

54. (5)

On the contrary if autobiography is published it will push up the image of the company.

55. (2)

Yes. It-will improve the image of the company.

56. (2)

This is a major factor because relying on Sind being an established author only Suraj is taking up the work.

57. (2)

This is a major factor that has helped the company to take up the new assignment on a large scale.

58. (5)

This becomes an unimportant one' as the Suraj management has decided to go ahead with publication in order to push up the image of the company.

59. (1)

This is the major objective and that is why Bell is proposing to acquire new units.

60. (2)

The working of the new unit along with the existing company will depend on the efficiency of the management of publishing company under consideration.

61. (3)

minor factor -not directly related to the issue.

62. (5)

considering the main issue this is an unimportant factor since after take over Bell's policies will prevail.

63. (2)

This will decide the competence of the new unit to be acquired.

64. (4)

An assumption that has prompted the company to go in for a new venture.

65. (1)

This is major objective now.

66. (2)

Only if the willingness of the ownership is there can the deal be put through and hence major factor.

67. (2)

This is a major factor because the decision depends on the information provided.

68. (2)

certainly major factor without which the deal cannot be achieved/completed.

41. (5)

Time taken by the first belt to move

1 ton $= \frac{5}{2}$ min.

Time taken by the second belt to move

1 ton $= \frac{7}{3}$ min.

To move 1 ton work done by the first belt

in 1 mm $= \frac{2}{5}$

To move 1 ton work done by the second belt 3

in 1 min $= \frac{3}{7}$

∴ Work done by both belts in 1 min (to move 1 ton) $= \frac{2}{5} + \frac{3}{7} = \frac{29}{35}$

Time taken to move 1 ton by both belts = $\frac{27}{15}$ Time taken to move 20 tons by both belts $= \frac{35}{29} \times 20 = \frac{700}{29} = 24\frac{4}{9}$

42. (4)

1 person's 1 hour work $= \frac{27}{15}$

∴ 45 person's 1 hour work $= 45 \times \frac{27}{15}$

∴ 45 men's 40 minutes work $= 45 \times \frac{27}{15} \times \frac{40}{600}$

= 54 buckets

Shortcut

$M_1 T_1 W_2 = M_2 T_2 W_1$

$15 \times 60 \times W_2 = 45 \times 40 \times 27$

$W_2 = \frac{45 \times 40 \times 27}{15 \times 60}$

= 54 buckets

43. (4)

Time Taken to empty the tank

$= 10\left(15 - \frac{X}{10}\right)$ minutes = (150-x) minutes

44. (2)

Let the length be ℓ and width be b

Then Area = ℓb

New length $= \frac{120}{100}\ell = \frac{6}{5}\ell$

New breadth $= \frac{80}{100}b = \frac{4}{5}b$

New Area $= \frac{6}{5}\ell \times \frac{4}{5}b = \frac{24}{25}\ell b$

decrease in Area $= \ell b - \frac{24\ell b}{25} = \frac{\ell b}{25}$

% decrease $= \frac{\left(\frac{\ell b}{25}\right)}{\ell b} \times 100 = \frac{100}{25} = 4\%$

Shortcut

∴ change $= x - y - \frac{xy}{100}$

$= 20 - 20 - \frac{20 \times 20}{100} = -4$

∴ 4% decrease (since negative sign) in Area.

45. (2)

C.P = Rs. C

S.P $= C + \frac{25}{100}C = C + \frac{C}{4}$

∴ Gain $= \frac{C}{4}$

Tax = 50% of gain

$= \frac{50}{100} \times \frac{C}{4} = \frac{C}{8}$

∴ Tax = Rs. $\frac{C}{8}$

46. (3)

Let the people eligible to vote be R

Then people eligible to vote between 18 and 21 $= \frac{8P}{100}$

In the election people who voted between 18 and 21 $= \frac{85}{100} \times \frac{8P}{100}$

∴ Required % $= \frac{\left(\frac{85}{100} \times \frac{8P}{100}\right)}{P} \times 100$

$= \frac{85 \times 8}{100} = 6.8\%$

47. (3)

Total cost to run a car per km. = (g+m) paise Total cost to run 100 km. = 100(g+m) paise

= (g+m) rupees

48. (5)

Salary = Rs. 500

Tips $= \frac{5}{4} \times 500 = 625$

Required fraction $= \frac{625}{500} = \frac{5}{4}$

49. (1)

S(x, y) = x²-y²

S(3, 4) = 3²-4²

= 9-16= -7

∴ S(3, S(3, 4)) = S(3, -7) = 3² -(-7)²

= 9 - 49 = -40

50. (4)

Let time taken to travel 100 km be x hrs.

Average speed $= \frac{\text{Total distance}}{\text{Total time taken}}$

$\Rightarrow 50 = \frac{85+100}{2+x} = \frac{185}{2+x}$

$\Rightarrow 2 + x = \frac{185}{50} \Rightarrow x = \frac{185}{50} - 2$

$\Rightarrow \frac{185-100}{50} = \frac{85}{50} = \frac{17}{10}$ hrs.

$= \frac{17}{10} \times 60$ minutes = 102 minutes

51.   (1)

Work done by the first puncture in 1 min.

$= \frac{1}{9}$

Work done by the second puncture in 1 min. $= \frac{1}{6}$

Work done by both punctures in 1 min.

$= \frac{1}{9} + \frac{1}{6} = \frac{32+3}{18} = \frac{5}{18}$

∴ Time taken for both punctures together

to make the tire flat $= \frac{18}{5}$ min. $= 3\frac{3}{5}$ min.
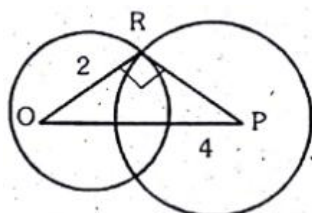
52.   (1)

Let a=8; b=10

then $\frac{a+b}{2} = 9$

$b^2 - a^2 = 100\text{-}64 = 36$

b-a = 10-8 = 2

$\frac{ab}{2} = \frac{80}{2} = 40$

ab = 80 ∴ a $< \frac{a+b}{2} <$ b

53.   (4)

Angle between the tangent and radius of a circle is 90°. Given PR is a tangent and OR is a radius of the first circle ⇒ ∟ORP = 90°

⇒ ΔORP is a right angled triangle.

∴ $OP^2 = OR^2 + RP^2$

$4^2 = 2^2 + RP^2$

$RP^2 = 16\text{-}4 = 12$

$RP = \sqrt{12} = 2\sqrt{3}$

54.   (5)

In a triangle
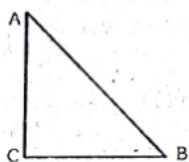
if ∟A<∟B then CB<AC
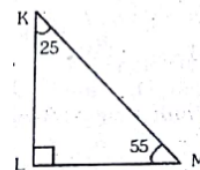
Therefore,

∟K = 25°; ∟M = 55°

∴ ∟K < ∟M

∴ LM < KL

55.   (5)
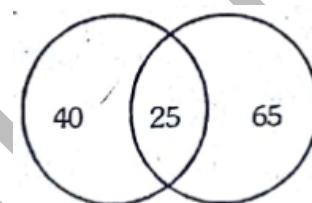
n(NUT) = n(N) + n(T)-n(N∩T)

= 40+65-25=80%

∴ People neither watched the TV nor newspaper = 100-80 = 20%

56.   (2)

Let the price of each screwdriver = Rs. x

Total price of 3 screwdriver+3 hammer = 3x+3x=6x

New price of screwdriver $= \frac{105}{100}$x

New price of hammer $= \frac{103}{100}$x

∴ New total price of 3 screwdirver+3 hammer

$= \frac{105x \times 3}{100} + \frac{103x \times 3}{100}$

∴ Increase in price

$\frac{105x \times 3}{100} + \frac{103x \times 3}{100} - 6x = 3x\left[\frac{208}{100} - 2\right] =$

$3x\left[\frac{8}{100}\right]$

∴ % increase $= \frac{3x\left[\frac{8}{100}\right]}{6x} \times 100 = 4\%$

57.   (4)

Let the radius of the circle be r

Then Area $= \pi r^2$

New Radius $= \frac{106}{100}r = \frac{53}{50}r$

New Area $= \pi\left[\left(\frac{53}{50}\right)r\right]^2 = \pi\left[\left(\frac{53}{50}\right)\right]^2 r^2$

18

Increase in Area $= \pi \left(\frac{53}{50}\right)^2 r^2 - \pi r^2$

$= \pi r^2 \left(\frac{53^2}{50^2} - 1\right)$

$= \pi r^2 \left(\frac{2809 - 2500}{2500}\right) = \frac{309\pi r^2}{2500}$

% increase $= \frac{\left(\frac{309\pi r^2}{2500}\right)}{\pi r^2} \times 100 = \frac{309}{25} =$ 12.36%

Shortcut

% increase $= 2x + \frac{x^2}{100} = 2 \times 6 + \frac{6\times 6}{100}$

$= 12 + \frac{36}{100} = 12 + \frac{9}{25} = \frac{309}{25}$

$= 12.36\%$

58. (5)

Work done by pipe 1 in 1 hr $= \frac{1}{4}$

Work done by pipe II in 1 hr $= \frac{1}{x}$

Work done by I and 11 in 1 hr $= \frac{1}{2\frac{1}{2}} = \frac{1}{\left(\frac{5}{2}\right)} = \frac{2}{5}$

$\therefore \frac{1}{4} + \frac{1}{x} = \frac{2}{5}$

$\Rightarrow \frac{1}{x} = \frac{2}{5} - \frac{1}{4} = \frac{8-5}{20} = \frac{3}{20}$

$\therefore$ Time taken by pipe II alone to empty the tank $= \frac{20}{3} = 6\frac{2}{3}$ hr.

59. (3)

Required probability $= \frac{6_{C_2}}{10_{C_2}}$

$= \frac{\left(\frac{6\times 5}{1\times 2}\right)}{\left(\frac{10\times 9}{1\times 2}\right)} = \frac{6\times 5}{10\times 9} = \frac{1}{3}$

60. (*)

Given informations are not clear. In the problem nothing is mentioned about F and G. So we cannot derive the answer.

61. (4)

From (1) Total salary of assembly workers = 312000-12000 = 300000 Average salary of the assembly workers

$= \frac{300000}{30}$

(1) alone is sufficient to get the answer.

From (2) let the average salary of assembly workers be x. 120

Then $\frac{120}{100}$ x $= 12000$

From the equation we can derive the salary of assembly workers.

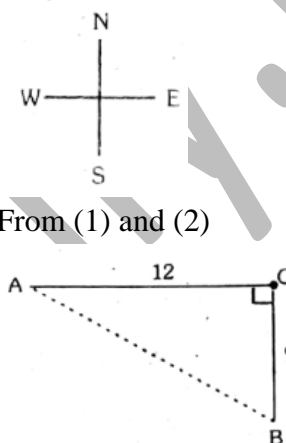$\therefore$ (2) alone is sufficient to get the answer.

$\therefore$ The correct choice is 4.

62. (3)

1) alone is notsufficient

2) alone is not sufficient.
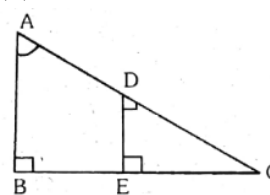

From (1) and (2)

$AB = \sqrt{12^2 + 9^2}$

$\therefore$ Using (1) and (2) we can derive the answer.

$\therefore$ Required choice is 3.

63. (1)

From (1) ADEC and ABC are similar.

$\Rightarrow \angle A = \angle D; \angle B = \angle E$

$\therefore$ AB is parallel to DE

1) alone is sufficient

2) alone is not sufficient

The correct choice is (1).

64. (2)

From (2) x+y = 24

$\therefore$ The numbers are (19, 5), (18, 6), (17, 7),

$\therefore$ So, we can derive the answer.

∴ 2 alone is sufficient.

∴The correct choice is 2.

65. (4)

From (1) a_1 is even

⇒ $a_2 = a_1 + 2$ is even

$a_3 = a_2 + 2$ is even

$a_4 = a_3 + 2$ is even

∴ a_{10} is also even.

∴ (1) alone is sufficient to derive the answer. From (2) $a_9 = 24$
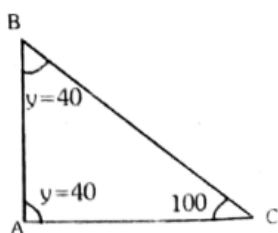
∴ $a_{10} = a_9 + 2 = 24 + 2 = 26$

∴ a_{10} is even

∴ Required choice is 4.

66. (2)

(1) is not sufficient.

From (2) x = 40°

∟C is greatest ⇒ AB is the longest.

∴ (2) alone is sufficient.

∴ Required choice is (2)

67. (3)

(1) alone is not sufficient

(2) alone is not sufficient

From (1) and (2)

$a = 0$; $-b = k^2$

Also $x = k$; (given)

∴ $x^3 + ax^2 + bx = k^3 + (0 \times k^2) + (-k^2 \times k)$

$= k^3 - k^3 = 0$

∴ Both (1) and (2) are required.

∴ Required choice is 3.

68. (4)

Let O be the centre of the semicircle

∴ OC = OB = radius

From (1) radius = 7 (i.e.) OC = 7

⇒ DC = 2×OC = 14
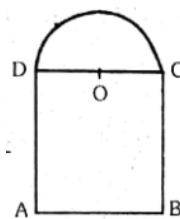
∴ Required area $= \frac{1}{2}(\pi \times 7^2) + 14^2$

So (1) alone is sufficient.

From (2) side of the square is 14 ⇒ DC = 14

∴ OC = 7 i.e., radius = 7

Required area $= \frac{1}{2}(\pi \times 7^2) + 14^2$

∴ (2) alone is sufficient.

∴ Required choice is 4.

69. (4)

Let the edge of the cube be x m.

From (1)

Volume = 9 x edge

⇒ $x^3 = 9x$

$x^2 = 9 ⇒ x = 3$

∴ (1) alone is sufficient

From (2)

Surface area = 18x

⇒ $6x^2 = 18x$

⇒ $x = 3$

∴ (2) alone is sufficient.

∴ Required choice is 4.

70. (3)

(1) alone is not sufficient

(2) alone is not sufficient

From (1) and (2)

Average $= \frac{A+B+T}{3} = 8 = \frac{A+(-A)+T}{3} = 8$

⇒ T = 24

∴ Required choice is 3.

71. (4)

(1) alone is sufficient.

(2) alone is sufficient.

72. (1)

From (1) a is (-ve) whole number

then a^2 = positive whole number

(1) alone is sufficient

From (2) $4a^2$ is integer.

If $a = 2$

then $4a^2 = 16$ = integer

if $a = \frac{1}{2}$

$4a^2 = 4 \times \frac{1}{4} = 1$ = integer

$\therefore$ (2) alone is not sufficient,

$\therefore$ Required choice is 1.

73. (5)

(1) alone is not sufficient.

(2) alone is not sufficient.

Since the directions (or) angle between AB and BC is not given (1) and (2) are not sufficient. We need more data.

$\therefore$ Required choice is 5.

74. (3)

From (1) and (2) two triangles are congruent.

75. (1)

Volume $= \pi \times 10^2 \times 20$

From (1) 1 litre $= 0.1 m^3$
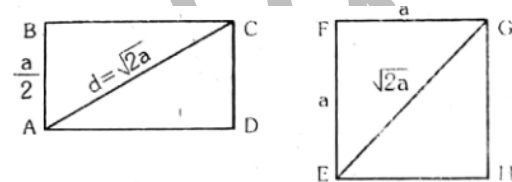
No. of litres of liquid in the tank

$= \frac{\text{volume of the tank}}{0.1} = \frac{\pi \times 10^2 \times 20}{0.1}$

$\therefore$ (1) alone is sufficient to derive the answer.

$\therefore$ (2) alone is not sufficient

$\therefore$ Required choice is 1.

76. (4)

From (1) $AC = EG$. $AB = \frac{1}{2} EH$

Let the side of the square be a

Then diameter $EG = \sqrt{2}a$

Since $EG = $ C

$\Rightarrow AC = \sqrt{2}a$

Also $AB = \frac{1}{2} EH = \frac{a}{2}$

$\therefore BC = \sqrt{(\sqrt{2}a)^2 - \left(\frac{a}{2}\right)^2}$

$\therefore$ We can derive the length of the rectangle.

Area of the rectangle $= \frac{a}{2} . BC$

Area of the square $= a^2$

From this we can get the required answer.

So (1) alone is sufficient

From (2) area of ΔABC

area of AEFG

But area of rectangle $= 2 \times$ area of ΔABC

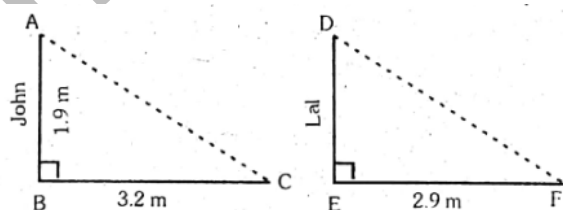Area of square $= 2 \times$ area of ΔEFG

So area of rectangle $\neq$ area of the square

So (2) alone is sufficient to derive the answer.

$\therefore$ Correct choice is 4.

77. (1)

From (1) John is 1.9 m tall.

ΔABC and ΔDEF are similar.

$\therefore \frac{AB}{ED} = \frac{BC}{EF}$

$\frac{1.9}{ED} = \frac{3.2}{2.9}$

$ED = \frac{1.9 \times 2.9}{3.2}$; Lai s height $= \frac{1.9 \times 2.9}{3.2}$

So (1) alone is sufficient to derive the answer.

(2) alone is not sufficient

$\therefore$ Correct choice is 1.

78. (1)

From (1)

Area $\pi r^2 = 25\pi$

$\Rightarrow r = 5$ (1) alone is sufficient to derive the answer.

From (2) $\frac{\pi r^2}{2r} = \pi\left(\frac{r}{2}\right)$

$\Rightarrow \frac{\pi r}{2r} = \frac{\pi r}{2r}$

This is not sufficient to derive the radius of the circle.

⇒ Correct choice is 1.

79. (4)

Let time taken by A be x and by B be y.

Then $\frac{1}{x} + \frac{1}{y} = \frac{1}{30}$

From (1)

work of A:B = 2:1

∴ Time taken by A and B (i.e.) x:y = 1:2

x = k; y = 2k

∴ $\frac{1}{k} + \frac{1}{2k} = \frac{1}{30}$

So y value can be derived.

So (1) alone is sufficient.

From (2) x = 45

∴ $\frac{1}{45} + \frac{1}{y} = \frac{1}{30}$

y value can be derived from the above equation.

So (2) alone is sufficient.

∴ Correct choice is 4.

80. (5)

(1) and (2) are not sufficient to derive the answer. Because they are not giving any informations about π. So we need more data.

81. (3) delete 'and'
82. (4) correct as 'seem'
83. (2) correct as 'factual'
84. (2) correct as 'given us'
85. (3) correct as 'whoever'
86. (1) correct as 'is'
87. (1) change as 'In order to'
88. (5) No error.
89. (2) change 'has'
90. (1) change 'Whose'
91. (4) change 'arise'
92. (3) delete 'to'
93. (3) change 'would advance'
94. (2) change 'cleverer'
95. (2) change 'than'
96. (2) change 'each and everyone'
97. (2) change 'be told'
98. (4) delete 'out'
99. (2) change 'whom'
100. (2) delete 'practically'