TANCET MBA
Question Paper 2015

MBA 2015 – EXAMINATION PAPER

PART – 1

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:

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

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

3. 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.

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

PASSAGE I

Mr. Edward Crom, a building contractor by profession, met with an old friend, Mr. Ratan Dass, a marketing consultant. Mr. Crom was excited about a business opportunity and wanted to obtain Dass‟s evaluation of its prospects. Formmat, a small company producing foam rubber mattresses, was in financial trouble, and its owners were anxious to sell it. The company had been established some twenty years, but its market share had steadily declined over the last five years. Since Mr. Crom had no previous experience in the mattress business, he requested that his friend to find out what he could about the company.

Mr. Dass first analyzed the company‟s resources. Its best resource was its product and brand name. Foam rubber mattresses are made of imported latex and are extremely firm, unlike synthetic rubber mattresses made of polyurethane. However, synthetics are much cheaper than foam rubber mattresses. Latex mattresses are known for their orthopedic and anti-allergic qualities, among others. The Form mat brand name had very nearly become a generic term for all types of rubber mattresses. Formmat, however, was the only latex mattress produced locally.

Apart from a superior product, the company had few resources. Its equipment, while satisfactory, was old and had been fully depreciated. It operated in leased premises on a year-to-year basis, although the landlord was willing to conclude a long-term agreement on favourable terms. On the other hand, the company‟s labor force was experienced and dedicated and its production manager had more than ten years‟ experience in latex manufacturing.

Mr. Joe Davies, president of the company, was past seventy years-old and was anxious to retire. He had tried to retire previously, but had failed to train a successor. Apart from Gordron Frederick, the sales manager, no one else shared responsibility for marketing or administration. Gordron Frederick let Ratan Dass know that if the company were sold, he had no intention of remaining. Frederick had eighteen years‟ experience in the mattress industry, including twelve years with Formmat. If Frederick left the company, Crom might be hard pressed to find a suitable replacement. This was another issue that Ratan Dass would have to study.

Formmat‟s financial position was precarious. The company was heavily in debt and its line of credit fully extended. There was some question as to

whether the company would be able to purchase enough latex to keep production going, but Mr. Davies assured Ratan Dass that the company had a bank letter of credit to purchase an additional three month"s supply.

In spite of Mr. Davies"s optimism, the fact was that his company had steadily lost market share. Once a dominant mattress manufacturer, with fifty percent of the local market, its market share had now declined to less than ten percent. Mr. Davies attributed this decline to inroads made by spring mattress manufacturers, who had only begun production five years ago. Spring mattresses now accounted for seventy percent of the total market, Davies"s company ten percent, with the remaining twenty percent shared by a number of small plants producing synthetic rubber mattresses. Spring mattresses had some attributes similar to those of foam rubber, such as orthopedic qualities. They were less costly to manufacture, but sold to the consumer at about the same price as Formmat mattresses.

Because of Formmat"s financial difficulties, it coased advertising in newspapers and no radio. Little if any advertising had been done in other media over the past five years. As a result, retailers were reluctant to handle the product line. By constrast, two of the larger spring mattresses manufacturers had advertised heavily in the mass media. One of these manufacturer"s products was sold exclusively by the largest furniture chain in the country.

During his study of the mattress market, a number of retailers had expressed the opinion to Mr. Dass that a whole generation of young people were largely unaware of Formmat products because of the lack of advertising. One retailer was quoted as saying: "It is true older people remember Formmat, but these mattresses last for almost twenty years. The big market is not the replacement market, but sales generated by family formation. Thousands of young couples get married every year, and every marriage means another mattress sale. But these young people only see advertisements for spring mattresses. It is obviously easier for my salesman to sell a mattress which his customers have seen in countless advertisements than one which is relatively unknown."

Dass was aware of the fact that if Formmat was ever to regain some of its lost market share, it would have to launch a major advertising program to educate young adults about the important attributes found in its products. A major question that needed an immediate answer was: "To what extent are people aware of Formmat mattresses and their attributes?" Other questions involved the attitudes of people toward foam rubber mattresses in general and how these attitudes compared to those towards spring mattresses. Mr. Dass ordered a market research survey to obtain answers to his questions. In brief, the study revealed that a large segment of the population over twenty-five years of age was aware of Formmat mattresses and had favorable attitudes toward their attributes. About three-quarters of these people expressed a preference for foam rubber mattresses for their children (by contrast with other mattresses for their own use). Awareness among younger segments of the population of the attributes of foam rubber mattresses in general, and of Formmat in particular, was very low. Few young people expressed an intention to buy foam rubber mattresses.

On the basis of the preliminary research result, Crom was optimistic that he could turn the company around. In support of his belief, he cited the recognition of the company among a

significant portion of the population, and the fact that they would buy a Formmat for their children. He believed that once retailers became aware that new management had taken over the company, they would be willing to stock the product. Crom was aware that the research findings were not always in agreement with his conclusions. However, the finding that young people were relatively unaware of Formmat did not seem to worry him. He felt that a well-designed advertising program would convince may people to buy a foam rubber mattress, rather than any competing type. Moreover, the introduction of a new management team would instill confidence among Formmat"s bankers. Credit lines would be increased, thereby improving the company"s financial position. However, before making a final decision as to whether to purchase Formmat, Mr. Crom waited for Ratan Dass"s final report and recommendations.

Questions:

1. Public awareness of the high quality of Formmat mattresses

2. The anti-allergic qualities of Formmat mattresses

3. Attitude of older consumers towards Formmat mattresses.

4. Willingness of retailers to stock Formmat products in the future.

5. Formmat"s present market share

6. Ratan Dass recommendations.

7. Plausibility of changing consumer attitudes through advertising.

8. Orthopedic qualities of Formmat mattresses.

9. Frederick"s intention to leave.

10. Likelihood that credit lines could be increased.

PASSAGE II

The success of the Xcel Corporation in the investment-conscious country of Djibotland was recently the subject of a government inquiry. Djibotland is a developing country about the size of New Delhi with a population of ten million people. It has a small but growing industrial base, and several multinational business concerns have established manufacturing plants in various parts of the country.

Government policy in Djibotland has traditionally favored foreign investment. Leaders of all political parties have been virtually unanimous in their belief that foreign investment in Djibotland would contribute to speeding that country"s economic development, a major priority of both the ruling coalition and opposition parties. Of special interest to the government were those industries that exported a significant share of their total output. Since Djibotland had a relatively small population, there was a limit to the amount of goods that could be produced for the local market. Also, the government did not want to encourage foreign investors to compete with local industry, even though new industries might alleviate the already high unemployment rate.

A final reason for encouraging export-intensive industries was to earn badly needed foreign exchange. Djibotland had a chronic deficit in its balance of trade; that is its imports were regularly greater than its exports. This meant that it had to use scarce foreign exchange to pay for the growing deficit. Therefore, Djibotland welcomed potential investors that would promise to export a significant share of their total output. So when executives of Xcel Corporation proposed to establish a shoe manufacturing plant which would be export-intensive, it received ready approval from the government.

Government support for the enterprise was given not only because of the promise to export, but also because of the high unemployment rate in the country. However, approval was given despite the fact that there was at the time surplus shoe production in Djibotland, most factories having

large excess capacities and underworked labor forces. It was known that Xcel had promised the government, among other things, to (1) employ hundreds of workers, (2) reduce the price of shoes by some 30 percent, and (3) export more than half its output.

In return for these promises, Xcel received the following concessions from the government:

1. Land was given to the company on a lease basis for a period of 99 years, rent-free.
2. A government-owned contracting firm built the factory at low subsidized prices.
3. The company received loans at very low interest rates for an extended period of time. These loans could be renewed at company request at lower than the prevailing market interest rate.
4. The government trained workers at the plant at no expense to the company.

Production commenced one year after the first equipment arrived at the new plant. It took another half year to properly train the new work force to operate the sophisticated equipment which was introduced. After the "running in" period, production continued smoothly for about a year until a labor dispute occurred. It appeared that management wanted to dismiss about 10 percent of the work force owing to a what a company spokesman called "a temporary slack in demand" for Xcel"s products. The labour union representing the company"s work force refused to accept any reduction in the work force and threatened a strike if workers were terminated. After some discussion, union representatives agreed that the company might be justified in laying off some workers, but nowhere near the 10 percent figure that management desired. At any rate, the union claimed that the company must first submit its request to a joint union-management grievance committee which was authorized under the current labor agreement to deal with such disputes. Management agreed to the union demand. After several days of bargaining, an agreement was worked out whereby Xcel would be allowed to terminate most part-time workers, amounting to only one percent of the total work force. Although the agreement brought about a temporary solution to the current problem, labor-management relation at Xcel continued to be streamed as management was convinced that more workers were redundant than the union cared to admit.

After another six months, it became apparent that what management had termed "a temporary slack in demand" was realty a failure of the company to sell the quantity of shoes that had been forecast before production began. Actual sales never reached the target quantity, and, as a result, the company lost Rs. 10 million in such of its first two year of operation. The Indian representatives on the board of directors-who constituted a majority-voted to terminate the company"s operations in Djibotland. Shortly after the vote, bankruptcy hearing began.

Because Xcel was located in an underdeveloped area of the country, the government was worried about the political ramifications if production ceased. The company employed 500 workers, and quite a few shopkeepers were dependent upon their patronage. When government representatives asked Xcel management what could be done to keep the company operating, they received the following answer. Management was willing to continue production if the government granted the company an additional fifty-million loan on favourable terms. If the government could not grant such a loan, then another alternative was to purchase the company from Xcel at a "reasonable" price.

The government was in a dilemma. On the one hand, it was concerned about the political consequences if Xcel should continue the bankruptcy proceedings. On the other hand, if it granted the loan, it might be setting a precedent for any other company that was in financial difficulties. Moreover, there was certain risk involved in lending the money to a company in bad shape. The government appointed a special committee to investigate the financial condition of Xcel and decide the issue.

One month later, the committee submitted its report. The major finding was that Xcel had not kept any of its original promises to the government. For one thing, Xcel's shoe prices were no lower than those of any of its competitors. As for exports, not only had the company failed to reach its promised goal of 50 percent, but as of the bankruptcy hearings, its exports for a five-year period only amounted to 5 percent of total output. In light of these developments, the government felt that it had to make a quick decision in the Xcel affair in such a way as to avoid criticism from the opposition.

Questions:

11. Ability of Xcel to survive if the fifty million loan was granted.

12. High unemployment inDjibotland.

13. Dependence of shopkeepers on the existence of Xcel.

14. Continued operation of Xcel.

15. Strained worker-management relations at Xcel

16. Export potential of Xcel.

17. Need for a quick decision by the government as to whether to grant the loan requested by Xcel.

18. Availability of government funds needed to support Xcel.

19. Prevention of layoffs of workers at Xcel

20. Political consequence of an Xcel bankruptcy.

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 question on the basis of what is stated or implied in the passages.

PASSAGE I

A living language is, a throbbing, vital thing, ever changing, ever growing and mirroring the people who speak and write it. It has its roots in the masses, though its superstructure may represent the culture of a few. How, then, can, "We" can change it or shape it to our liking by resolutions or orders from above? And yet, I find this a widely prevalent notion that we can force a language to behave in a particular manner if we only will it so. Variation is but the mirror of the rapid changes taking place among the people who use it. If a language loses touch with the people, it loses its vitality and becomes an artificial, lifeless thing.

Attempts to force the growth of a language in a particular direction are likely to end in distorting it and crushing its spirit. What should be the policy of the State in regard to language? The Congress has briefly but clearly and definitely stated this in the resolution on Fundamental Rights: "The culture, language and script of the minorities and of the different linguistic areas shall be protected-" By this declaration the Congress is bound, and no minority or linguistic group can require a wider assurance. Further, the Congress has stated in its constitution, as well as in many resolutions, that, while the common language of the country should be Hindustani, the provincial languages should be dominant in their respective areas.

A language cannot be imposed by a resolution, and the Congress desires to develop a common language and carry on most of our work in the provincial languages would be pious wishes,

ignored by the multitude, if they did, not fit in with existing conditions and the needs of the situation. We have thus to see how far they so fit in. Our great provincial languages are no dialects or vernaculars as the ignorant sometimes call them. They are ancient languages with a rich inheritance, each spoken by many millions of persons, each tied up inextricably with the life and culture and ideas of the masses as well as of the upper classes. It is axiomatic that the masses can only grow educationally and culturally through the medium of their own language.

Questions:

21. **Which of the following is the central theme of the above passage?**

   1) The importance of choosing a national language over the vernaculars.
   2) Highlighting the importance of language being the uniting force.
   3) Highlighting the quest before policymakers in deciding India''s language policy.
   4) A two language model and its appropriateness in a diverse country like india.

22. **What does the author say about the importance of language?**

   a) Language emanates out of people and owes its dynamism to them.
   b) Language is a means of spreading unity and brotherhood.
   c) Language is amenable to change both from within as well as from outside influences.

Choose the correct code:

1) (a) and (b)   2) (b) and (c)
3) (a) and (c)   4) All of the above

23. **What can be the consequences if we try to impose a change on language?**

   a) Then the language will lose its vitality and become artificial.

   b) The masses will not use such a language and so it might perish.
   c) The spirit of the language may get crushed and language gets distorted.

Choose the correct code:

1) (b) only   2) (a) and (b)
3) (c) only   4) (a) and (c)

24. **What does the author say about the provincial languages?**

   a) These languages cannot be called vernaculars as they have a rich tradition behind them.
   b) Official work should be done in the common language but education can be imparted in provincial.
   c) The provincial language can effectively compliment the common language.

Choose the correct code:

1) (a) and (b)   2) (a) and (c)
3) (b) and (c)   4) All of the above

25. **How does the author propose to protect the rights of the minorities?**

   a) By offering a constitutional guarantee of protecting their language.
   b) By allowing use of provincial language along with Hindustani as a common language.
   c) By keeping provincial language unchanged to avoid isolating the educated from the masses.

Choose the correct code:

1) (a) and (b)   2) (c) and (a)
3) (b) and (c)   4) All of the above

PASSAGE II

The Alaska pipeline starts at the frozen edge of the Arctic Ocean. It stretches southward across the largest and northemmost state in the United States, ending at a remote ice-free seaport village nearly 800 miles from where it begins. It is massive in size and extremely complicated to operate. The steel pipe crosses windswept plains and endless miles of delicate tundra that tops the

frozen ground. It weaves through crooked canyons, climbs sheer mountains, plunges over rocky crags, makes its way through thick forests, and passes over or under hundreds of rivers and steams. The pipe is 4 feet in diameter, and up to 2 million barrels (or 84 million gallons) of crude, oil can be pumped through it daily. Resting on H-shaped steel racks called "bents," long sections of the pipeline follow a zigzag course high above the frozen earth. Other long sections drop out of sight beneath spongy or rocky ground and return to the surface later on.

The pattern of the pipeline"s up-and-down route is determined by the often harsh demands of the arctic and subarctic climate, the tortuous lay of the land, and the varied compositions of soil, rock, or permafrost (Permanently frozen ground). A little more than half of the pipeline is elevated above the ground. The remainder is buried anywhere from 3 to 12 feet, depending largely upon the type of terrain and the properties of the soil. One of the largest in the world, the pipeline cost approximately $8 billion and is by far the biggest and most expensive construction project ever undertaken by private industry. In fact, no single business could raise that much money, so 8 major oil companies formed a consortium in order to share the costs. Each company controlled oil rights to particular shares of land in the oil fields and paid into the pipeline-construction fund according to the size of its holdings. Today, despite enormous problems of climate, supply shortage, equipment breakdowns, labor disagreement, treacherous terrain, a certain amount of mismanagement, and even theft, the Alaska pipeline has been completed and is operating.

Questions:

26. **The passage primarily discusses the pipeline"s**
1) operating costs
2) employees

3) consumers
4) construction

27. **According to the passage, 84 million gallons of oil can travel through the pipeline each**
1) day
2) week
3) month
4) year

28. **The phrase "Resting on" is closest in meaning to**
1) Consisting of
2) Supported by
3) Passing under
4) Protected with

29. **The author mentions all of the following as important in determining the pipeline"s routs EXCEPT the**
1) climate
2) lay of the land itself
3) local vegetation
4) kind of soil and rock

30. **How many companies shared the costs of constructing the pipeline?**
1) 3
2) 4
3) 8
4) 12

31. **Which of the following determined what percentage of the construction costs each member of the construction would pay?**
1) How much oil field land each company owned.
2) How long each company had owned land in the oil fields.
3) How many people worked for each company.
4) How many oil wells were located on the company"s land.

PASSAGE III

If religion and community are associated with giobal violence in the minds of many people, then so are global poverty and inequality. There has, in fact, been an increasing tendency in recent years to justify policies of poverty removal on the ground that this is the surest way to prevent political strife and turnoil. Basing public policy-international as well as domestic-on such an understanding has some evident attractions. Given the public anxiety about were and disorders

in the rich countries in the world, the indirect justification of poverty removal-not for its own sake but for the sake of peace and quiet in the world-provides an argument that appeals to self-interest for helping the needy.

It presents an argument for allocating more resources on poverty removal because of its presumed political, rather than moral relevance.

While the temptation to go in that direction is easy to understand, it is a perilous route to take even for a worthy cause. Part of the difficult lies in the possibility that if wrong, economic reductionism would not only impair our understanding of the world, but would also tend to undermine the declared rationale of the public commitment to remove poverty. This is a particularly serious concern, since poverty and massive inequality are terrible enough in themselves, and deserve priority even if there were no connection whatsoever with violence. Just as virtue is its own reward, poverty is at least its own penalty. This is not to deny that poverty and inequality can-an d do-have far reaching consequences with conflict and strife, but these connections have to be examined and investigated with appropriate care and empirical scrutiny, rather than being casually invoked with unreasoned rapidity in support of a „good cause".

Destitution can, of course, produce provocation for defying established laws and rules. But it need not give people the initiative, courage, and actual ability to do anything very violent. Destitution can be accompanied not only by economic debility, but also by political helplessness. A starving wretch can be too frail and too dejected to fight and battle, and even to protest and holler. It is thus not surprising that often enough intense and widespread suffering and misery have been accompanied by unusual peace and silence.

Indeed, many famines have occurred without there being much political rebellion or civil strife or intergroup warfare. For example, the famine years in the 1840s in Ireland were among the most peaceful, and there was-little attempt by the hungry masses to intervene even as ship after ship sailed down the river Shannon with rich food. Looking elsewhere, any own childhood memories in Calcutta during Berigal famine of 1943 include the sight of starving people dying in front of sweetshops with various layers luscious food displayed behind the glass windows, without a single glass being broken, or law or order being disrupted.

Questions:

32. **Select the statement that can be most plausibly inferred from the aforesaid passage.**
1) A society plagued by recurrent famines can never witness political revolution.
2) Religions discrimination inevitably leads to violence and strife.
3) Destitution of the masses leads to peace and social stability.
4) Famines and starvation do not necessarily result in political rebellion.

33. **The author believes that it may not be advisable to emphasize on the connection between poverty and violence as**
1) Emphasis on such connection appeals only to self-interest of persons.
2) Linking poverty and violence undermines the moral character of anti-poverty measures.
3) The absence of any essential connection between poverty and violence may then weaken the very rationale of anti-poverty policies.
4) There is no necessary link between poverty and inequality.

34. **Which of the following best captures the central argument of this passage?**
1) Religion is inextricably linked with violence.
2) Famines may not necessarily result in civil unrest.

3) Global poverty and inequality are one of the fundamental causes of global violence and strife.

4) Basing anti-poverty programmes on the need for avoidance of violence and strife is dotted with many pitfalls.

35. **The author refers to his own experience as a child during the Bengal famine of 1943 in order to**

1) Illustrate how religiosity may instill passive acceptance of even the worst forms of starvation among people.

2) Repudiate the argument that religious discrimination usually tends to inspire violent protests.

3) Substantiate his assertion that it is not unusual to have the most intense suffering and misery coexist with complete peace.

4) Demonstrate that people confronted with acute starvation are rendered too helpless to protest ever at all.

PASSAGE IV

Skyrocketing prices of crude oil in the international market are causing the petrol prices to fluctuate every other day, and these fluctuations in tum, are adversely affecting the economy as a whole. From a layman"s point of view, higher petrol prices means paying more at the refilling station or paying more for commuting from home to workplace. However, the effects of soaring petrol prices go well beyond the simple practice of paying more for fuelling your vehicle or commuting. In fact, the effects on the economy are much broader than what we can imagine.

Petrol prices and consumer"s propensity to spend are inversely related to each other, with a rise in the cost of petrol bringing down the consumer"s discretionary spending and a fall adding to the same. Simply put, when the petrol prices rise, we spend more on fuelling our vehicles and commuting – and to make up for this additional expenditure, we cut down on other expenditures.

Similarly, when petrol prices fall, we save a significant bit on the new prices-and the same is eventually channelized towards other expenditures. This in turn, means that people will not just drive less but also shop less when petrol prices rise and more when gas prices fall, as a result of which the demand-supply balance will be harnpered, thus bringing about a drastic change in the economic conditions of the country. One may assume that the consumer will resort to online shopping instead of going all to the store to save expenditure on fuel, but that doesn"t really hold ground if you take into consideration the fact that petrol price rise can also cause the price of other goods and services to rise, and that includes the cost of shipping goods as well.

If petrol prices continues to rise unabated, it can have ripple effect on other sectors of the economy-something which we got to see in 2011. The fact that soaring petrol prices are coming heavy on the transport sector are becoming obvious by the day, and that even though the automobile industry is trying its best to stabilize the condition by introducing fuel-efficient cars, hybrid car models, etc., Even businesses and educational institutes have had to bear the brunt of rising gas prices, with quite a few offices and educational institutes opting for a four-day week – instead of five-day week, to do their bit to limit the damage that is being caused to the economy. Experts are of the opinion that rising petrol prices-though indirectly, are also affecting various other sectors-including the employment and tourism sector, negatively in these times of economic recovery. However, petrol prices are quite volatile in nature, and therefore, it isn"t quite surprising to see them shoot up at one point of time, only to come down drastically within a week.

36. **Which of the following is the central theme of the above passage?**

1) Relationship between petrol price and our propensity to spend.

2) Impact of fuel price fluctuations on a country's economy.

3) Ripple effect of petrol price hike on overall budget of an individual.

4) Volatility of petrol prices in international market.

37. **Consider the following statements:**

a) The surge in the price of petrol is due to removal of subsidy given by the government.

b) The rise in the price of petrol will increase the cost of consumer goods.

c) A substantial portion of an individual's budged is spent on fuel cost.

d) It is important to control the price of petrol as it has impact on other sectors as well.

Which of the above is / are correct in the context of the passage?

1) (a), (b) and (c)   2) (b) and (d)

3) (c) and (d)   4) (a), (b) and (d)

38. **Which of the following statement is correct in the context of the above passage?**

1) The rise and fall in petrol prices affects the education and transport sector the most.

2) There is surge in the sale of cycles as travelling becomes extremely difficult.

3) The volatility in the price of petrol affects multiple-sectors of the economy.

4) Rise in the international price of petrol is solely responsible for the inflation in the country.

39. **Which of the following statement(s) is / are inferred from the passage?**

a) Increase in the price of petrol will promote online shopping.

b) Due to high cost of fuel, companies may want the employees to work from home.

c) The poor and the middle class are the worst sufferers of the rise in cost of fuel.

Codes:

1) (b) only   2) (a) and (b)

3) (c) only   4) (a) and (c)

40. **Which of the following is supported by the above passage?**

1) Decline in the price of petrol paves way for increase in the spending by the consumer.

2) Online shopping is the solution to rise in the price of petrol.

3) There will be a surge in the use of public transport as individuals will not use their personal vehicles.

4) There will be less vehicles on the road as individuals will not drive their own vehicles.

PART III

41. **The difference between 1000.01 and 99.987 is**

1) 901.023   2) 900.023

3) 0.14   4) 901.977

42. **Which of the following cannot be a digit in units place of a perfect square?**

1) 7   2) 1

3) 5   4) 0

43. **The least number by which 72 must be multiplied in order to produce a multiple of 112 is**

1) 14   2) 6

3) 12   4) 18

44. **The smallest number which when added to the sum of squares of 9 to 10 gives a perfect square.**

1) 0   2) 3

3) 8   4) 15

45. **A number when divided by 119 leaves remainder 19. If the same number is divided by 17, the remainder will be**

1) 19   2) 10

3) 7   4) 2

46. **The sum of two number is 60 and their difference is 5. The difference of their squares is**

1) 300   2) 60

3) 55   4) 5

47. **The number of 3-digit numbers exactly divisible by 6 is**

1) 166   2) 151
3) 150   4) 149

48. If x*y = (x+y)+(x-y), then the value of 3*2 is
1) 7   2) 6
3) 5   4) 4

49. The largest number which exactly divides the product of any three consecutive integer is
1) 2   2) 3
3) 6   4) 12

50. The fraction whose denominator is 30 and which lies between 5/8 and 7/11 is
1) 17/30   2) 19/30
3) 23/30   4) 13/30

51. 0.03 times 0.05 is
1) 15%   2) 1.5%
3) 0.15%   4) 0.015%

52. Which of the following numbers in closest to zero?
1) $(1-0.9)^2$ 2) $1-(0.9)^2$
3) (0.09) 4) $(0.09)^2$

53. If x+y = 4 and x-y = 3, then x+2y is
1) ½   2) 7/2
3) 9/2   4) 15/2

54. How much interest will Rs. 2000 earn an annual rate of 8% in one year if the interest is compounded every 6 months?
1) Rs. 160   2) Rs. 163.20
3) Rs. 249.73   4) Rs. 332.80

55. If 15 men work 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 of manufacture in 40 minutes?
1) 27   2) 35
3) 40   4) 54

56. If the price of a samosa is Re. 1 and the price triples every 6 months, how long will it be before the price of samosa touches Rs. 81?
1) 1 year   2) 2 years
3) 2.5 years   4) 13 years

57. If x/y = 2/3, then x^2/y^2 is
1) 4/9   2) 2/3

3) 3/2   4) 9/4

58. The entry following an in a sequence is determined by the rule $(a^n-1)^2$. If 1 is an entry in the sequence, the next three entries are
1) 0,-1,2   2) 0, -1,1
3) 0, 1,2   4) 0,1,0

59. What is the maximum, number of points of intersection of two circles which have unequal radii?
1) None   2) 1
3) 2   4) 3

60. If the area of a rectangle is equal to the area of a square, then the perimeter of the rectangle must be
1) ½ the perimeter of he square
2) Equal to the perimeter of the square
3) Equal to twice the perimeter of the square
4) None of the above

PART IV

Directions: Each question below is followed by two statements numbered as (a) and (b). You have to determine whether the data given in the statements is sufficient for answering the question. Use the data given, plus your knowledge of mathematics and every day facts, to mark your answer as.

1) If statement (a) ALONE is sufficient to answer the question, but statement (b) ALONE is not sufficient.

2) If statement (b) ALONE is sufficient to answer the question, but statement (a) ALONE is not sufficient.

3) If both statement TOGETHER are needed to answer the questions, but neither statement alone is sufficient.

4) If not enough facts are given to answer the question.

61. A piece of wood 7 feet long is cut into three pieces. What is the length of each of the pieces?
Statement:

a) The length of the longest piece is equal to the sum of the lengths of the other two pieces.

b) The length of the shortest piece is 6 inches.

62. In a certain code, "13" means stop smoking and „59" means „injurious habit". What do „9" and „5" mean respectively in that code?

Statement:

a) „157 means „stop bad habit".

b) „839" means „smoking is injurious"

63. Does Balu have more records in his record collection than Lakshmi has in here?

Statement:

a) Radha has more records in her collection than Lakshmi.

b) Balu has fewer records in his collection than Radha.

64. How much money is saved by buying a box of a dozen pencils instead of 12 pencils singly?

Statement:

a) When purchased in a box of 12, the cost of each pencil is Rs. 0.05 less than if purchased singly

b) The price of a box of a dozen pencils is Rs. 2.40.

65. Salim invested a total of Rs. 10,000 for a period of one year. Part of the money he put into an investment that earned 6 percent simple interest, and the rest of the money into an investment that earned 8 percent simple interest. How much money did he put into the investment that earned 6 percent?

Statement:

a) The total interest earned on, Rs. 10,000 for the year was Rs. 640.

b) The rupee value of the investment that earned 6 percent was only one-fourth the dollar value of the investment that earned 8 percent.

66. If a car is driven 150 miles, the fuel tank is filled to what percent of capacity at the end of the trip?

Statement:

a) The car averaged 15 miles per gallon for the trip.

b) The tank is filled to 75 percent of capacity at the start of the trip.

67. If the number of square units in the area of a circle is A and the number of linear units in the circumference is C, what is the radium of the circle?

Statement:

a) A>C+3   b) A/C = 3/2

68. When one place of fruit is taken at random from a fruit bowl, what is the chance that it is an apple?

Statement:

a) There are half as many apples as oranges in the fruit bowl.

b) A third of the fruit in the fruit bowl are orange.

69. A swimming pool is supplied water by two pipes, P and Q. If pipe P operating alone can fill the pool?

Statement:

a) Operating together, pipes P and Q can fill the pool in 4 hours.

b) Pipe P supplies water at the rate of 520 litres per hour, and 6240 gallons are required to fill the pool.

70. A company"s profit was Rs. 8,00,000 in 1990. What was its profit in 1991?

Statement:

a) There was a 20% increase in income in 1991.

b) There was a 25% increase in costs in 1991.

71. How many of the 60 applicants for a job passed neither the physical nor the written exam?

Statement:

a) Of the 60 applicants, exactly 10% passed both the physical and the written exams.

b) Of the 60 applicants, exactly 50% passed the physical exam, and exactly 20% passed the written exam.

72. What will be the total weight of 10 poles, each of the same weight?

Statement:

a) One-fourth of the weight of each pole is 5 kg.

b) The total weight of three poles is 20 kilograms more than the total weight of two poles.

73. How long is a bridge that crosses a river which is 250 metres wide?
Statement:
a) One bank of the river, holds 1/5 of the bridge.
b) The other bank holds 1/6 of the bridge.

74. Train T leaves town „A" for town „B" and travels at a constant speed. At the same time train „S" leaves town „B" for town „A" and also travels at a steady speed. Town „C" is between A and B which train is travelling faster? Statement:
Towns A, G and B lie on a straight „line
a) Train S arrives at town C before train T
b) C is closer to A than to B.

75. Did the XYZ Corporation have higher sales in 1998 than in 1999?
Statement:
a) In 1998 the sales were twice the average (arithmetic mean) of the sales in 1998, 1999 and 1970.
b) In 1970, the sales were three times those in 1999.

76. The last Sunday of March, 2006 fell on which date?
Statement:
a) The first Sunday of that month fell on 5th
b) The last day of that month was Friday.

77. Who is to the immediate right of P among five persons P,Q,R,S and T facing north?
Statement:
a) R is third to the left of Q and P is second to the right of R.
b) Q is to the immediate left of T who is second to the right of P.

78.
Among T,V,B,E and C who is the third from the top when arranged in the descending order of their weights?
Statement:
a) B is heavier than T and C and is less heavier than V who is not the heaviest.
b) C is heavier than only T.

79. Which word in the code language means „flower"?
Statement:
a) „de fu la pane" means „rose flower is beautiful"- and „la quiz" means „beautiful tree".
b) „de la chin" means „red rose flower" and „pa chin" means „red tea".

80. Who is C"s partner in a game of cards involving four players A, B, C and D?
Statement:
a) D is sitting opposite to A.
b) B is sitting right of A and left of D.

PART V
Directions: In this section you are required to spot errors in sentences. Choose and mark the part/sentence with the error.

81. 1) The scenery here is not good
2) I have lost my furniture"s
3) We have received no information
4) No error

82. 1) Please excuse the trouble
2) He took pains over his work
3) Scouts wear shorts
4) No error

83. 1) Rahul can now drive
2) He took off his shoes
3) Please look at my picture
4) No error

84. 1) She would not listen to me
2) He was wearing a cap
3) I cannot manage my work alone
4) No error

85. 1) The model stood
2) So stationary that
3) The passerby took her to be a mannequin
4) No error

86. 1) The teacher concluded the lecture
2) On a note of resignation
3) As it became evident

4) That the students had been listening
87. 1) He is giving me trouble
    2) He is treating me badly
    3) He is bullying me
    4) No error
88. 1) Environmentalists worry
    2) The disappearance of many species
    3) Of plants and animals
    4) From the face of the earth
89. 1) the voters were too dissatisfied
    2) with their representative in Parliament
    3) that they decided
    4) to vote against him this time
90. 1) Nehru distinguished himself
    2) As a freedom fighter
    3) Statesman and
    4) He wrote very well

II. Pick out the most effective word to make the sentence meaningfully complete.

91. Deepak will be able to speak English well a year from now---------he works hard.
1) if
2) had
3) provided
4) because

92. Even if it rains all day I will not be able to --------- my journey.
1) put away
2) put out
3) put off
4) put by

93. The master dispensed----------the services of his servant.
1) with
2) off
3) up
4) for

94. Can I------------some money from you?
1) borrow
2) loan
3) take
4) request

95. He is fond------------reading novels.
1) about
2) of
3) at
4) for

III. Choose the synonym for the word given:

96. Mirage
1) Water
2) Illusion
3) Mirror
4) Effect

97. Mentor
1) Reformist
2) Guide
3) Philosopher
4) Stylist

98. Mundane
1) Worldly
2) Spatial
3) Global
4) Elliptical

99. Gnome
1) Alien
2) Native
3) Drone
4) Dwarf

100. Glib
1) Antique
2) Anti climatic
3) Articulate
4) Slippery

MBA 2015 – ANSWERS

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

MBA 2015 – DETAILED SOLUTIONS
PART – III

41. (2)

Difference = 1000.01-99.987
= 900.023

42. (1)

$1^2 = 1$	$11^2 = 121$
$2^2 = 4$	$12^2 = 144$
$3^2 = 9$	$13^2 = 169$
$4^2 = 16$	$14^2 = 196$
$5^2 = 25$	$15^2 = 225$
$6^2 = 36$	$16^2 = 256$
$7^2 = 49$	$17^2 = 289$
$8^2 = 64$	$18^2 = 324$
$9^2 = 81$	$19^2 = 361$
$10^2 = 100$	$20^2 = 400$

Digits in unit place of a perfect square are 0,1,4,5,6 and 9. Therefore 7 cannot be in unit place of a perfect square.

43. (1)

Clearly $\frac{72*14}{112} = 9$

Therefore $72*14 = 9*112$

44. (4)

$9^2+10^2 = 81+100 = 181$

Now $181+15 = 196 = 14^2$

Therefore required smallest number = 15

45. (4)

Let the number be x. Then

$$x = 119k + 19$$
$$= (7*17)k+(17+2)$$
$$= 17(7k+1)+2$$

Therefore when x is divided by 17, the remainder is 2.

46. (1)

Let the two numbers be x and y

Then   x+y = 60

x-y = 5

Adding, 2x = 65

$$x = \frac{65}{2} = 32.5$$

Now,

x-y = 5

32.5-y´ = 5

∴ y = 32.5-5 = 27.5

$x^2-y^2 = (32.5)^2-(27.5)^2$
$= 1056.25-756.25 = 300$

47. (3)

There digit numbers exactly divisible by 6 are 102, 108, ….996

This is an A.P. with

a = 102; d = 6

Now

$$t_n = a+(n-1)d$$
$$\Rightarrow 996 = 102+(n-1)6$$
$$= 102+6n-6 = 6n+96$$
$$\Rightarrow 6n = 996-96 = 900$$

$$\therefore n = \frac{900}{6} 150$$

48. (2)

$$x*y = (x+y)+(x-y)$$
$$3*2 = (3+2)+(3-2)$$
$$= 5+1 = 6$$

49. (3)

6 is the largest number which exactly divided the product of any three consecutive integers.

50. (2)

$\frac{5}{8} = 0.625; \frac{7}{11} = 0.6364; \frac{17}{30} = 0.5667;$

$\frac{19}{30} = 0.6333; \frac{23}{30} = 0.7666; \frac{13}{30} = 0.43333$

Clearly, $0.625 < 0.6333 < 0.6363$

Therefore $\frac{5}{8} < \frac{19}{30} < \frac{7}{11}$

$\frac{19}{30}$ lies between $\frac{5}{8}$ and $\frac{7}{11}$

51. (3)

0.03*0.05 = 0.0015
= (0.0015*100)%
= 0.15%

52. (4)

$(1-0.9)^2 = (0.1)^2 = 0.01$
$1-(0.9)^2 = 1-0.81 = 0.19$
$(0.09)^2 = 0.0081$

Therefore $(0.09)^2$ is closest to zero

53. **(3)**

$$x+y = 4$$
$$x-y = 3$$

Adding $\quad 2x = 7$

$$x = \frac{7}{2}$$

Also $\quad x+y = 4$

$$\frac{7}{2} + y = 4$$

$$y = 4 - \frac{7}{2} = \frac{8-7}{2} = \frac{1}{2}$$

Now $\quad x+2y = \frac{7}{2} + 2 \cdot \frac{1}{2} = \frac{7}{2} + 1 = \frac{9}{2}$

54.

(2)

Formula : When interest is calculated Half-yearly then

$$\text{Amount } A = P \left(1 + \frac{\left(\frac{R}{2}\right)}{100}\right)^{2n}$$

In this problem

P = Rs. 2000; R = 8%; n = 1

$$\therefore \text{Amount } A = 2000 \left(1 + \frac{\left(\frac{8}{2}\right)}{100}\right)^{2 \times 1}$$

$$= 2000 \left(1 + \frac{4}{100}\right)^2$$

$$= 2000 \left(1 + \frac{1}{25}\right)^2$$

$$= 2000 \left(\frac{26}{25}\right)^2$$

$$= 2000*(1.04)^2$$

$$= 2000*1.0816 = 2163.2$$

$\therefore$ Compound interest = 2163.2-2000 = Rs.

55. 163.2

(4)

Formula:

$$M_1 T_1 W_2 = M_2 T_2 W_1$$

In this problem,

$M_1 = 15; T_1 = 60$ min, $W_1 = 27$

$M_2 = 45; T_2 = 40$ min, $W_2 = ?$

$15*60*W_2 = 45*40*27$

$$\therefore W_2 = \frac{45*40*27}{15*60} = 54$$

56. **(2)**

In 6 months price of Samosa = 1*3 = Rs.3
In 1 year price of a Samosa = 3*3 = Rs.9
In 1 year 6 months price of a Samosa = 3*9 = Rs.27
In 27 years price of a Samosa = 3*27 = Rs.81

57. **(1)**

$$\frac{\overline{x}}{y} = \frac{2}{3}$$

$$\frac{\overline{x}^2}{y^2} = \frac{\overline{x}}{y} * \frac{\overline{x}}{y} = \frac{2}{3} * \frac{2}{3} = \frac{4}{9}$$

58. **(4)**

Let $\quad a_1 = 1$

Then $\quad a_2 = (a_1-1)^2 = (1-1)^2 = 0$

$\quad a_3 = (a_2-1)^2 = (0-1)^2 = 1$

$\quad a_4 = (a_3-1)^2 = (1-1)^2 = 0$

Therefore next three terms are 0, 1, 0

59. **(3)**

Maximum number of points of intersections of two circles which has unequal radii = 2

60. **(4)**

None of the given options are correct.

PART – IV

61. (3)

7 feet = 7*12 = 84 inches

Let the length of the longest piece be x inches and shortest piece by y inches and the third piece be z inches.

Then x+y+z = 84 inches
From (a) x = y+z
From (b) y = 6 inches
$\Rightarrow$ x = 6+z
and x+(6+z) = 84
$\Rightarrow$ (6+z)+(6+z) = 84
$\quad 2z = 84-12 = 72$
$\therefore z = \frac{72}{2} = 36$ inches

x = 6+z   = 6 inches, 36 inches and 42 inches

Therefore both statements are needed to answer the question.

62. (*)

13 – stop smoking

59 – injurious habit

1 - stop/smoking

3 - smoking/stop

5 - injurious/habit

9 - habit/injurious

From statement (a)

1 5 7 - stop bad habit

     ↓   ↓   ↓

    1   7   5

5 – habit

Therefore 9 – injurious

Statement (a) alone is sufficient

Consider statement (b)

8 3 9 - Smoking is injurious

     ↓   ↓   ↓

    3   8   9

9 – injurious

Therefore   5 - habit

Statement (b) alone is sufficient.

63. (4)

From statement (a)

    Radha > Lakshmi

From statement (b)

    Radha > Balu

This isnot enough to answer the question.

64. (1)

From statement (a)

    Money saved = 0.05*12

            = Rs.0.6

Therefore statement (a) alone is sufficient.

65. (1)

Part of amount invested in 6% interest = Rs.x

Then part of amount invested in 8% interest = 10,000-x

From statement(a)

$$\frac{6x}{100} + \frac{8(10000 - x)}{100} = 640$$

6x+80000-8x   = 64000

80000 – 2x   = 64000

      2x   = 80000-64000 = 16000

∴ x   = $\frac{16000}{2}$ = Rs. 8000

Therefore statement (a) alone is sufficient. Since the rupee – dollar value is a variable and the dollar value is not given, statement (b) alone is not sufficient.

66. (4)

Let the capacity of the fuel tank be x gallon.

From statement (a)

Fuel spent = $\frac{150}{15}$= 10 gallon

From statement (b)

Tank capacity at the start of the trip

        = 75% of x = $\frac{75x}{100}$

        = 0.75x

At the end percent of capacity of the tan k.

$$= \frac{0.75x - 10}{x} * 100 \%$$

Since the value of x is not given we cannot derive the answer.

67. (2)

Let the radius of the circle be 4 units

    Then area πr² = A

  Circumference 2πr   = C

$$\Rightarrow \frac{A}{C} = \frac{\pi r^2}{2\pi r} = \frac{r}{2}$$

From statement (b)

$\frac{A}{C} = \frac{3}{2}$

$$\Rightarrow \frac{3}{2} = \frac{A}{C} = \frac{r}{2}$$
$$\Rightarrow r = 3 \text{ units}$$

Therefore (b) alone is sufficient

(a) alone is not sufficient.

68. (3)

Let the total number of fruits be T

From statement (b)

Number of oranges $= \dfrac{T}{3}$

From statement (a)

Number of apples $= \dfrac{1}{2} \dfrac{T}{3} = \dfrac{T}{6}$

$\therefore$ Required probability $= \dfrac{\frac{T}{6}}{T} = \dfrac{1}{6}$

$\therefore$ Both statements are necessary.

69. (2)

1 gallon = 3.785 litres

From statement (b), time taken by pipe o to fill the pool.

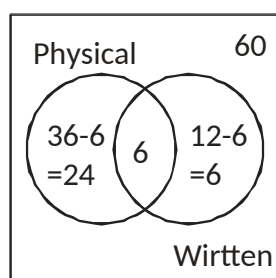$$= \dfrac{6240 * 3.785}{520} = 45.42 \text{ hrs.}$$

Therefore statement (b) alone is sufficient.

70. (4)

Since the values of income and costs are not given in statements (a) and (b), we cannot get the answer.

71. (3)

Total applicants = 60

From statements (a)
applicants passed both in physical and written exam

$$= 10\% \text{ of } 60 = \dfrac{10}{100} * 60 = 6$$

From statement (b)

Applicants passed in physical exam.

$$50\% \text{ of } 60 = \dfrac{50}{100} * 60 = 30$$

$$20\% \text{ of } 60 = \dfrac{20}{100} * 60 = 12$$

From the Diagram,
Applicants passed either physical or written or both

$$= 24 + 6 + 6 = 36$$

Number of Applicants passed neither physical nor written exam

$$= 60 - 36 = 24$$

72. (*)

Let the weight of each pole be x kg
From statement (a)

$$\dfrac{x}{4} = 5$$

$$\Rightarrow x = 5*4 = 20 \text{kg}$$

Total weight of 10 poles = 10x

$$= 10*20 = 200 \text{kg}$$

Statement (a) alone is sufficient.
From statement (b)

$$3x = 2x + 20$$
$$3x - 2x = 20$$
$$\therefore x = 20$$

Total weight of 10 poles = 10x

$$= 10*20 = 200 \text{ kg}$$

Statement (b) alone is sufficient.

73. (3)

Let length of the bridge be x meters
From statements (a) and (b)

$$\dfrac{x}{5} + \dfrac{x}{6} + 250 = x$$
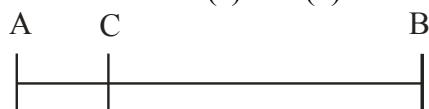
$$\dfrac{6x + 5x + 7500}{30} = x$$
$$11x + 7500 = 30x$$
$$\Rightarrow 19x = 7500$$
$$\therefore x = \dfrac{7500}{19} = 394.74 \text{ m}$$

74. (3)

From statements (a) and (b)

Applicants passed in written exam

$$\underset{T}{\overset{\longrightarrow}{\underset{\longleftarrow}{}}} \qquad\qquad S$$

C is closer to A and train

S arrives C before train T

This implies from S is faster than train T

75. (3)

Let the sales in 1998 be Rs. x

and the sales in 1999 be Rs. y

and the sales in 1970 be Rs. z

From statement (a)

$$2x = \frac{x+y+z-}{3}$$

$$\Rightarrow 6x = x+y+z$$

$$5x = y+z$$

From statement (b)

$$z = 3y$$

From both statements (a) and (b)

$$5x = y+z$$

$$z = 3y$$

$$5x = y+3y = 4y$$

$$x = \frac{4}{5}y$$

Clearly $\frac{4}{5}y < y$

$$\Rightarrow x < y$$

∴ Sales in 1998 is less than sales in 1999.

76. (*)

From statement (a)

First Sunday = 5th March 2006

Last Sunday of the month

$$= 5+7+7+7$$

$$= 26\text{th of March } 2006$$

∴ Statement (a) alone is sufficient.

From statement (b)

Last day of march = 31st Friday

Last Sunday = 31-5

$$= 26\text{th of March } 2006$$

∴Statement (a) alone is sufficient.

77. (*)

From statement

(a) R- P, Q

Q is to the immediate right of P.

Statement (a) alone is sufficient to answer the question.

From statement (b)

P, Q, T

Q is to the immediate right of P. Therefore statement (b) alone is sufficient to answer the question.

78. (1)

From statement (a)

B>T, B>C and V>B

Also V is not the heaviest.

⇒ E>V>B>C>T

(or)

E>V>BT>C

Clearly B is the third from the top.

79. (4)

Statements (a) and (b) are not sufficient to find the code language for „flower".

80. (4)

Statements (a) and (b) are not sufficient since the partner of C is not defined.

PART – V

81. (2)

I have lost my furniture. (not furnitures)

82. (1)

Should be changed as Please excuse me for the trouble.

83. (4)

No error

84. (4)

I alone cannot manage my work.

85. (3)

The passers by took her to be a mannequin. (mannequin means a model of a human body wearing clothes that are for sale, especially in the window of a shop)

86. (2)

with a note of resignation.

87. (4)

No error

88. (1)

Enviromentalists worry about.

89. (1)

The voters were dissatisfied.

90. (4)

He has written very well.

96. (2)

Mirage --- a strange effect in a desert or at sea in which you see something that is not really there

97. (2)

mentor – an experienced person who helps someone who has less experience, especially in their job

98. (1)

mundane – FORMAL relating to the world and practical matters instead of religious or spiritual ones. Ordinary and not interesting or exciting, especially because of happening too regularly

99. (4)

gnome – an imaginary little man in children"s stories who wears a pointed hat and can do magic.

100. (3)

glib – a glib person speaks easily and confidently.