6

PREVIOUS JMET QUESTION PAPER

JMET 2010

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Time: 10:00 to 13:00 Hours

Question Paper Code A
Maximum Marks: 120

GENERAL INSTRUCTIONS

1. Take out the Answer Sheet from this Test Booklet without breaking the seal. If you find that the Question Paper Code does not match with the Paper Code on the Answer Sheet, exchange the booklet immediately with a new sealed Test Booklet.

2. Do not open the seal of the Test Booklet until you are asked to do so by the Invigilator.

3. Carefully read and follow all the instructions given in the Answer Sheet.

4. The question paper contains four sections and 120 questions. Four possible answers **(1, 2, 3 and 4)** are given and there is only one correct answer for each question. Choose the correct answer and darken the appropriate bubble in the Answer Sheet with HB pencil. In case you wish to change an answer, erase the old answer completely using a good soft eraser.

5. Each correct answer carries **one mark** and each wrong answer carries **negative 0.25 mark**.

6. For a candidate to qualify, he/she should not only secure certain minimum marks in the test paper, but also necessarily obtain certain minimum marks in each of the four sections.

7. Tampering with the Bar Code or making any distinctive mark on the Answer Sheet will lead to disqualification of the candidate.

8. All the rough work should be done only on blank pages provided for this purpose at the end of this Test Booklet. No extra page will be provided.

9. No candidate will be allowed to leave the examination hall for any reason during the test. Candidates are allowed to leave the hall only after the Answer Sheets from all have been collected and accounted for.

10. Calculator, electronic diary, cellular phone, pager and any such electronic gadget will not be allowed in the examination hall.

11. Candidates found violating the instructions of the Test/Invigilator will be disqualified. A candidate giving assistance to any other candidate or seeking/receiving help from any source in answering questions or copying in any manner in the test will forfeit his/her chance of being considered for admission.

12. This question paper contains **24** printed pages including pages for rough work. Please check all pages and report, if there is any discrepancy.

Name:…………………………..   **Registration No.:**……………..

Section I

Instructions for questions 1 – 4:
Answer the following questions based on the information given below.

In the evolution of philosophic thought the following question has played a major role: is there any knowledge that arises solely out of pure thought, without any of sense perception? An almost boundless chaos of philosophical opinions corresponds to these questions. Nevertheless there is visible in this process of relatively fruitless but heroic endeavours a systematic trend of development, namely an increasing scepticism concerning every attempt by means of pure thought to learn something about the "objective world. Be it said parenthetically that quotation marks here to introduce an illegitimate concept which the reader is asked to permit for the moment, although the concept is suspect in the eyes of the philosophical police.

During philosophy's childhood it was rather generally believed that it is possible to find everything which can be known by means of mere reflection. It was an illusion which anyone can easily understand if he discusses what he has learned from later philosophy and from natural science. He will not be surprised to find that Plato ascribed a higher reality to "ideas" than to empirically experience able things. This more aristocratic illusion concerning the unlimited penetrative power of thought has as its counterpart the more plebeian illusion of naive realism. This is also the point of departure in all of the sciences, especially of the natural sciences.

Russell has characterized this process in a concise fashion ... "we all start naive realism, i. e., the doctrine that things are what they seem. We think that grass is green and stones are hard and that snow is cold. But physics assures us that the greenness of grass, the hardness of stones, and the coldness of snow are not the greenness, hardness, and coldness that we know in our experience, but something very different. Observing a stone, is really, if physics is to be believed, observing the effects of the stone upon himself. Thus science seems to be at war with itself. When it most wants to be objective, it finds itself plunged into subjectivity against its will. Naive realism leads to physics, and physics, if true, shows that naive realism is false. Therefore, naive realism, if true, is false: therefore it is false".

1. Which of the following options BEST captures the essence of the passage?

   (1) Early philosophy and its evolution
   (2) Theory of knowledge and philosophy
   (3) Evolution of philosophical thought
   (4) An enquiry into the nature and meaning of knowledge

2. Which of the following statements CANNOT be deduced from the given passage?

   (1) Several philosophical opinions exist on the relationship between knowledge and sense impression.
   (2) The belief in the power of knowledge separates philosophy from the physical and nature sciences.
   (3) Plato, being a philosopher gave more importance to ideas than to things that can be experienced.
   (4) Subjectivity is part of science.

3. The word "parenthetically" in the given passage means:

   (1) With special reference
   (2) Stated within brackets
   (3) As parents would say
   (4) Within quotation marks

4. The last sentence of the passage implies that

   (1) To believe in naive realism is to acknowledge the existence of green grass and cold snow.
   (2) Naive realism leads to observations that are true in their form but are false perception of existence.
   (3) Illusion and knowledge have a strong relationship.
   (4) Observation of stone and grass is possible through naive realism.

5. In the options given below, identify the one sentence which has an INCORRECT spelling:

   (1) Mental idiosyncrasies may sometimes act as quirky guides to solutions.
   (2) The human mind is a wonderfully obtuse and circuitous instrument.
   (3) Until the time of Galileo, astronomers believe that everything in the heavens is unchanging and incorruptable.
   (4) Whole groups have suffered this fate as a consequence of prejudice rather than excoriation.

Instructions for questions 5 and 6:
Choose the option that is CLOSEST in meaning to the capitalized words:

6. ERUCT

   (1) build   (2) belch
   (3) blasé   (4) blink

7. COMETARY

   (1) coming late   (2) being comatose
   (3) of comets   (4) being complacent

Instructions for questions 8 – 10:
Answer the following questions based on the information given below.

Neither misery nor folly seems to be any part of the inevitable lot of man. And I am convinced that intelligence, patience and eloquence can, sooner or later, lead the human race out of its self imports tortures provide it does not exterminate itself meanwhile.

On the basis of this belief, I have always had the certain degree of optimism, although, as i have grown older, the optimism has grown more sober and the happy issues more distant. But I remain completely incapable of agreeing with those who accept fatalistically the view that man has born to trouble. The causes of unhappiness in the past and in the present are not difficult to ascertain. They have been poverty, pestilence, and famine, which were due to man's inadequate mastery of nature. They have been wars, oppressions and tortures which have been due to men's hostility to their fellow men. And they have been morbid miseries fostered by gloomy creeds, which have led men into profound inner discords that made all outward prosperity of no avail. All this are unnecessary. In regard to all of them, means are known by which they can be overcome. In the modern world if communities are unhappy, it is because they choose to be so. Or to speak more precisely, because they have ignorance, habits, beliefs, and passions which are dearer to them then happiness or even life. I find many men in our dangerous age who seem to in love with misery and death and grow angry when hopes are suggested to them.

At first I imagine that the task of awaking people to the dangers of the Nuclear Peril should not be very difficult. I shared the general belief that the motive of self preservation is a very powerful one which, when it comes into operation, generally overrides all others. I thought that people would not like the prospect of being fried with their families and their neighbours and every living person that they had heard of. I thought that it would be necessary to make the danger known and that, when this had been done, men of all parties will unite to restore previous safety. I found that this is a mistake. There is a motive which is stronger than self preservation; it is the desire to get the better of the other fellow.

8. Which of the following option BEST describes the gist of the passage?

    (1) Unhappiness is the matter of personal choice and is not external to oneself.
    (2) Happiness lies in acknowledging future possibilities of gloom.
    (3) Unhappiness lies in the discovery of self-belief and assessment.
    (4) Happiness comes from facing unpleasant possibilities.

9. In the passage, the word 'fatalistically' refers to:

    (1) pre-assessed   (2) pre-viewed
    (3) pre-ordained   (4) pre-fixed

10. From the line "*And they have been morbid miseries fostered by gloomy creeds, which have led men into profound inner discords that made all outward prosperity of no avail.*", it can be deduced that:

    (1) Prosperity has vanished due to people's greed and desire for destruction.
    (2) Man-made unhappiness makes people view wealth and material comforts as worthless.
    (3) Sadness has led to severe miseries.
    (4) Hostility towards one's own kind can destroy inner peace.

Instructions for questions 11 and 12:
Choose the option that BEST completes the relationship indicated in capitalized pair:

11. BIOLOGY: CELLS : : ? : CROP

    (1) Agriculture   (2) Farm
    (3) Seed   (4) Harvest

12. ANGULAR : GEOMETRY : : ? : WINTER

    (1) Wither   (2) Weather
    (3) Hibernal   (4) Holiday

Instructions for question 13:
Select the pair of words from the given options that best expresses a relationship SIMILAR to the pair in capital letters:

13. POWER : POLITICS

    (1) Heat: Physics
    (2) Earth surface: Geography
    (3) Equations: Mathematics
    (4) Wars: History

Instructions for question 14:
Choose the option which is CLOSEST in meaning to the sentence given below:

14. From that memorable night, I dismissed forever my charnel apprehensions, and with them vanished the cataleptic disorders, of which, perhaps, they had been less the consequence than the cause.

    (1) My cataleptic disorders which caused the charnel apprehensions disappeared from that memorable night
    (2) My cataleptic disorders were dismissed from my charnel apprehensions forever on that memorable night.
    (3) My charnel apprehensions dismissed the cataleptic disorders from my memorable night forever.
    (4) My charnel apprehensions and consequent cataleptic disorders disappeared from that night onwards.

Instructions for questions 15 – 17:

Answer the following questions based on the information given below.

Evolutionary relationships are also genealogical, not primarily functional. We all understand that whales are mammals by history of common descent, not fishes because they swim in the ocean. In genealogical terms, closeness is defined by position in a sequence of branchings - what Darwin called "propinquity", or relative nearness. I may look and act more like my cousin Bob than my brother Bill, but Bill is still closer to me by genealogy. Function and appearance need not correlate strongly with genealogical propinquity. Evolutionists have described the genealogical relationships among trout, lungfishes and cows in the following manner. Terrestrial vertebrates branched off the line of early fishes at a point near the ancestry - of modern lungfishes; trout evolved much later from a persisting earlier lines of fishes. Therefore, if we chose to classify purely by genealogy, lung fishes and cows must be placed together in a group separate from trout. Many of us rebel against such an idea because our conventional classifications mix functional and strictly genealogical relationship. We may say, "A lungfish looks like a fish, swims like a fish, acts like a fish, and tastes like a fish. Therefore it is a fish." Perhaps so; but by propinquity, lungfishes are closer to cows.

This issue now pervades the science of systematics as the great debate about "cladism". Cladists advocate classification by pure genealogy (branching order), with no attention what so ever to traditional concepts of similarity in function or biological role. However, we need only carry away the lesson that genealogical and functional similarity are different concepts, and that we can be terribly fooled when we make a mistaken equation - particularly when we assume a closeness in branching (propinquity) from evidence of common appearance or behaviour.

If we call a whale a fish, we make a simple error by misunderstanding the evolutionary phenomenon of "convergence". The fish like characters of whales evolved separately and independently in a line derived from fully terrestrial vertebrates. But the fishy similarities of trout and lungfishes are genuine evolutionary marks of common ancestry. These similarities do not forge a closer genealogical bond between lungfish and trout than between lungfish and cow because such shared features are common characters of *all* early vertebrates; propinquity is marked by shared characters of later derivation. For example, the character "five fingers" cannot be used to unite humans and dogs while placing seals in another group for dogs and seals are genealogically close as members of the order Carnivore. The position of five fingers is a shared character of all ancestral mammals; such traits cannot help us make divisions *within* later mammalian evolution.

15. Which of the following option is NOT TRUE as per the above passage?

(1) Evolutionary relationships have their basis in functional similarities.
(2) Lungfishes and trouts belong to the same common ancestry.
(3) Genealogical branching gives rise to propinquity.
(4) Dogs and seals are genealogically closer compared to lungfish and trout.

16. As per the given passage, a "Cladist" is one who:

(1) Acknowledges the distinction between genealogical and functional similarities.
(2) Debates at length on the science of systematics.
(3) Groups animals by propinquity.
(4) Describes genealogical relationships between mammals and fish.

17. Which of the following options can be BEST deduced from the passage?

(1) There is no such thing as functional similarity.
(2) Behavioral similarities in the animal kingdom point to a common ancestry.
(3) The phenomenon of "convergence" can best explain the basis of all evolutionary.
(4) Genealogical propinquity need not follow from functional similarity.

Instructions for question 18:

Question consists of four groups of jumbled phrases, of which only one is grammatically correct. Identify the CORRECT option:

18.
(1) when I am beginning a new habit / both summoning and manipulating at will / processions of images that I can / my hypnagogic visions are intricate
(2) at his or her offspring who at seven or ten years of age / how many times recently have we / is busily programming a computer / heard a parent or grandparent marvel
(3) account for the error I have / committed in my measurements / but my soul took a wildly interested / trifles and I busied in endeavors
(4) leading a regular life / the doctors assured him it is not dangerous / and talked as little as possible and / merely advising him not to get excited

Instructions for questions 19 and 20:

Choose the option that is OPPOSITE in meaning to the capitalized words:

19. NESCIENCE

(1) awareness   (2) ignorance
(3) generosity   (4) miserliness

20. PRECONIZE

(1) announce   (2) predict
(3) conceal   (4) negate

Instructions for questions 21 – 24:
Answer the following questions based on the information given below.

Let us take a look at the pressures building up. To start off, there is the long term rise in the cost of energy. Every time the cost of transportation goes up, employers are compelled to increase wages accordingly. They may resist for a time, but if they want their workers to show up, they eventually have to provide a transportation subsidy. It is built right into the wage structure.

Next, the entire system of commuting implies hidden costs. Companies that bring employees to a central location wind up paying more for real estate; they pay higher taxes, maintenance costs and salaries. They often have to provide cafeterias, locker rooms, and in suburban locations, parking facilities- there is a whole infrastructure that supports the commuting process. All of these costs have been skyrocketing.

By contrast, as we all know, the cost of telecommunications and computing and video equipment, and other tools for "telecommuting" are plummeting. So you have two powerful economic curves about to intersect. But even more importantly, we all worry about productivity. Without doubt, the single most *anti productive* thing that we do is to shift millions of people back and forth across the landscape everyday. A waste of time, of human creativity, of millions of barrels of non-renewable fuel, a cause of pollution, crowding and god knows what else.

We worry about the human effects of home-work. But how human is commuting itself? For most workers commuting is the unpaid part of the job, being isolated for hours at a time. Commuting was important when most workers had to handle physical goods in factories. Today, as the Third Wave industries expand, many workers travel to work to handle information, ideas, numbers, programs, formulas, designs and symbols and it is a lot cheaper to move the information to the workers than the workers to the information.

There are all kinds of parallel cultural and value shifts as well that support the idea. The new emphasis on revived family life. The decentralist push - nothing is more decentralized than working at home. The resistance to forced mobility - you do not have to move your family when you change your job. Environmental conceal- nothing pollutes more than centralized production.

Add all these pressures together, and you understand why this transfer of certain jobs into the home seems so likely. Moreover, you have to see this development not by itself, but as linked to the de-massification of production and distribution; decentralization towards the regions: rising importance of information; the appearance of wholly new, unprecedented industries; the breakdown of national tools for economic regulation or management, and the rising importance of co-production and non-market production.

We are restructuring the economy on all these fronts at once. No wonder our economic vocabulary is outdated. No wonder our economic maps no longer reflect the terrain. A new Third Wave economy is taking shape.

21. The above passage DOES NOT talk about:

(1) The essential nature of commuting.
(2) Additive costs of commuting.
(3) Changing nature of social values.
(4) Rise of the knowledge economy.

22. Which of the following can be the MOST APPROPRIATE title for the passage?

(1) To Commute or to Produce?
(2) The future of work
(3) The "Third Wave Economy"
(4) In support of "home-work"

23. Which of the following statements can be deduced from the given passage'?

(1) Rise in transportation costs leads to loss in productivity.
(2) Commuting is the least productive aspect of today's economy.
(3) Renewed emphasis on family life is pushing down telecommuting costs.
(4) Physical production in factories has been replaced by information, design and symbols.

24. As per the passage, which of the following is NOT a reason for working from home?

(1) increasing energy costs
(2) decreasing telecommuting costs
(3) increasing levels of social diversity
(4) regional decentralization

Instructions for question 25:
The direct speech in question is rewritten as reported speech (indirect form) in the given options. Identify the grammatically CORRECT option:

25. "Who is visiting the house?", he asked. "I saw the groom rubbing down four black horses."

(1) He asked who was visiting the house as he had seen the groom rubbing down four black horses.
(2) He asked who is visiting the house and whether the groom is rubbing down four black horses.
(3) He asked who visited the house since the groom rubbed down four black horses.
(4) He asked as to who was visiting the house as because he saw the groom rubbing down four black horses.

Instructions for question 26:
Choose the correct option for the phrase "as Russell saw it", to make a grammatically CORRECT sequel to the phrase given below:

26. There is a close relationship between competitive recreation and the society that endorsees it.

(1) As Russell saw it, this relationship is reciprocal.
(2) This is reciprocal relationship, as Russell saw it.
(3) This relationship is reciprocal, as Russell saw it.
(4) This relationship, as Russell saw it, is reciprocal.

27. Identify the grammatically CORRECT option:

(1) You must not kill your neighbour, whom perhaps you genuinely hate.
(2) You must not kill your neighbour, even if you are genuinely hating him.
(3) You may genuinely be hating your neighbour, but do not kill him.
(4) You hate your neighbour but you must not kill him perhaps.

Instructions for question 28:
Choose the correct option for the word "indeed", to make a grammatically CORRECT sequel to the phrase given below:

28. Satisfaction of self-esteem leads to a feeling of self confidence.

(1) As one social psychologist concluded, indeed, "....few psychologists would disagree that self-esteem is essential to emotional well-being".
(2) As one social psychologist concluded, "....few psychologists would disagree that self-esteem is essential to emotional well-being", indeed.
(3) As one social psychologist, indeed, concluded, "....few psychologists would disagree that self-esteem is essential to emotional well-being".
(4) Indeed, as one social psychologist concluded, "....few psychologists would disagree that self-esteem is essential to emotional well-being".

29. "It followed my footsteps with a pertinacity which the reader will find difficult to comprehend".

Pertinacity in the above sentence refers to:

(1) Devotion   (2) Strength
(3) Importance   (4) Stubbornness

Instructions for question 30:
Fill in the blanks with the option that has the MOST APPROPRIATE set of words:

30. The _____ displayed on the pages which follow is not intended, however, to be _____ for its own sake.

(1) anger, good   (2) anxiety, funny
(3) humour, amusing   (4) anguish, droll

Section II

Instructions for questions 31 and 32:
Each question has two statements. You have to take the statements to be facts even if they seem to be at variance with commonly known facts. Which of the given three conclusions can then be logically concluded from the given facts?

31. Statements:
- o Some medical doctors are professors.
- o Some professors perform surgery.

Conclusions:
I. All medical doctors perform surgery.
II. Some medical doctors perform surgery.
III. All surgeons are medical doctors.

(1) I and III   (2) II only
(3) I, II, and III   (4) None of the above conclusions

32. Statements:
- o A group of four has at least two female members.
- o Three of the group members are college students.

Conclusions:
I. Two female group members are college students.
II. There are at most two male members.
III. There is at least one female college student.

(1) II only   (2) II and III
(3) I only   (4) I and II

33. "He is a student of this university. Hence he should be familiar with the university campus."

This conclusion is valid only if it is true that:

(1) The university campus is familiar to only the students of the university.
(2) A student of the university may be familiar with the campus.
(3) Some students of the university will be familiar with the campus.
(4) The university campus will be familiar to all its students.

34. Four persons – Ahmed, Burman, Chhaya, and Deepak, in that order, occupy the four corners of a square of side "a" in clockwise order. Ahmed and Burman start walking simultaneously towards Burman and Chhaya respectively along the edges of the square. Both stop walking when Burman reaches Chhaya. Now, if the distance between Ahmed and Burman is "$a/2$", which of the following statements must be false?

(5) Ahmed has walked a distance of only "3a/2".
(6) Ahmed walks faster than Burman.
(7) Ahmed might have walked for a distance of more than "2a".
(8) Ahmed might have to travel a distance of "3a/2" more to get back to his original position.

Instructions for questions 35 to 37:
The sentences given below when properly sequenced from a coherent paragraph. Each sentence is numbered. Select the most LOGICAL order of the sentences in each case:

35.
(i) It is subject to reasonable restrictions on the principle of distinction between free speech and hate speech.
(ii) Given the state of the present media debate over Taslima, we need to remind ourselves that neither in international human rights law, nor under the constitutional law the right to freedom of expression is absolute.
(iii) Article 19(3) and Article 20(1) of ICCPR subject the exercise of the right to freedom of speech to the restrictions necessary for rights and reputation of others, and prohibit among others, advocacy of religious hatred.
(iv) Article 19(1)(2) of the constitution subjects the right to freedom of speech and expression to restrictions imposed on grounds, among others, of "defamation", "public order, decay or morality" and "friendly relations with foreign state".

(1) (ii)-(i)-(iii)-(iv)   (2) (iii)-(iv)-(ii)-(i)
(3) (i)-(ii)-(iv)-(iii)   (4) (ii)-(iii)-(i)-(iv)

36.
(i) The then railway minister, Lalu Prasad Yadav, had, for the fourth time in a row, showed a huge cash surplus with the figure touching Rs. 25,000 crore in 2007-08(revised estimates) and the operating ratio improving from 84% in 2005-06 to 76% in 2007-08;almost 20% more than last year's figures.
(ii) Another significant development in the annual plan outlay for the railways, which indicates the magnitude of capital investment outlays, was now less dependent on support of the central exchequer.
(iii) Even after meeting all the revenue charges including payment of dividend, current and deferred, to general revenue, the surplus was expected to touch Rs. 13500 crore, which was about Rs. 2300 crore higher than the actual for 2006-07.
(iv) In 2008-09 the exchequer's contribution was expected to be only about 20 percent.

(1) (iv)-(ii)-(i)-(iii)   (2) (iv)-(i)-(iii)-(ii)
(3) (i)-(iii)-(iv)-(ii)   (4) (i)-(iii)-(ii)-(iv)

37.
  (i) Marya looked at her and started sobbing, and Ivan's sister followed suit.
  (ii) At the word 'until', Olga broke down and wept.
  (iii) But he could not find anything and finally gave it up as a bad job.
  (iv) Then the old man had a bit of coughing and fussed around trying to find a present for his little granddaughter.

(1) (i)-(ii)-(iii)-(iv)   (2) (iv)-(ii)-(i)-(iii)
(3) (ii)-(i)-(iv)-(iii)   (4) (iv)-(ii)-(iii)-(i)

38. Statements:
  (i) Arising from poor policy and corruption and destroying the environmental commons, "illegal" production and marketing of coal is a significant aspect of everyday life in eastern India.
  (ii) Representation of illegality hides unpleasant social realities of the coal mining tract; poor environmental performance of the state-owned mining sector, social disruption and displacement of communities, and general decay in the traditional subsistence base.
  (iii) Complex lawyers of mining laws protect the interests of the disadvantaged.

For the above three statements to be consistent,

(1) Only statements (i) and (ii) must be true.
(2) Statement (iii) must be true.
(3) Statement (iii) might be true.
(4) Statement (i) and (ii) must be false and true respectively.

39. "Raja will go for lunch if Ravi agrees to stay back".

Based on the above information, which of the following might be true?

  (i) If Ravi did not agree to stay back then Raja will not go for lunch.
  (ii) If Raja has had his lunch then Ravi must have stayed back.
  (iii) Since Ravi stayed back Raja might have had his lunch.
  (iv) Ravi will stay back for Raja to have lunch.

(1) All   (2) i and iii
(3) ii and iii   (4) None

Instructions for question 40:
Choose the option which most WEAKENS the argument given below:

40. Nations do not compete with each other in the way corporations do.
  (1) Trade deficit is a sign of national strength, profits are a sign of corporate strength.
  (2) Increase in human development index improves national standing, increase in market share improves corporate standing.
  (3) Climate change negotiations lead to global improvement; CSR initiatives lead to image improvement.
  (4) Nations go to war to capture territory, corporates contend against each other to capture market share.

Instructions for question 41:
Choose the option which most STRENGTHENS the argument given below:

41. Civilization has taught us to be friendlier towards one another.
  (1) Cats are loyal to their children, whereas men are loyal to their communities.
  (2) Elephants move in a herd, whereas men live in nuclear families.
  (3) Lions protect their own territories, whereas men capture other men's territories.
  (4) Nilgai and Cheetal stay together, whereas men of one race dominate another.

Instructions for questions 42 to 46:
Answer the questions based on the information given below.

Chandramohan and his wife Kamini have a family of three generations comprising thirteen members of whom six are female members. Some of Chandramohan's children are married, but none of his grandchildren are married.

- Kamini has a daughter-in-law named Fullara and two sons-in-law, one being Eeshwaran.
- Harihar's brother is Devesh, who has two nephews and two nieces - one being Leela.
- Bandana, Devesh's sister has two children.
- Fullara, who is sister-in-law to Devesh has four nephews and nieces.
- Manohar, who is married to Rita in the family, has a daughter Indira and a son.
- Joy has a sister and two cousins, Akash and Indira.

42. Akash is the son of
(1) Geeta   (2) Harihar
(3) Devesh   (4) Bandana

43. Leela is the niece of
(1) Bandana   (2) Eeshwaran
(3) Harihar   (4) Kamini

44. Which of the following pairs is a brother and a sister?
(1) Manohar and Fullara
(2) Devesh and Geeta
(3) Joy and Indira
(4) Eeshwaran and Bandana

45. Amongst the following, which one is false?

(1) Bandana is Kamini's child.
(2) Joy is Geeta's child.
(3) Akash is Harihar's nephew.
(4) Geeta has less than two nephews.

46. Statements:

(i) Fullara is Harihar's wife.
(ii) Harihar's son's name is Akash.
(iii) Bandana is Leela's mother.

Based on the above facts, which of the following is true?

(1) (i) and (ii) only, but not (iii)
(2) (i) and (iii) only, but not (ii)
(3) (ii) and (iii) only, but not (i)
(4) All of (i), (ii) and (iii)

Instructions for questions 47 to 51:
Answer the questions based on the information given below.

Six friends Abhishek, Deepak, Mridul, Pritam, Ranjan and Salil married within a year in the months of February, April, July, September, November and December and in the cities of Ahmedabad, Bengaluru, Chennai, Delhi, Mumbai and Kolkata, but not necessarily following the above order.
The brides' names were Geetika, Jasmine, Hema, Brinda, Ipsita, and Veena, once again not following any order. The following are some facts about their weddings.

- Mridul's wedding took place in Chennai; however he was not married to Geetika or Veena.
- Abhishek's wedding took place in Ahmedabad and Ranjan's in Delhi; however neither of them was married to Jasmine or Brinda.
- The wedding in Kolkata took place in February.
- Hema's wedding took place in April, but not in Ahmedabad.
- Geetika and Ipsita got married in February and November and in Chennai and Kolkata, but not following the above order.
- Pritam visited Bengaluru and Kolkata **only** after his marriage in December.
- Salil was married to Jasmine in September.

47. Deepak's wedding took place in

(1) Bengaluru   (2) Mumbai
(3) Kolkata   (4) Delhi

48. In Mumbai, the wedding of one of the friends took place in the month of

(1) April   (2) September
(3) November   (4) December

49. Ipsita's wedding took place in

(1) Ahmedabad   (2) Bengaluru
(3) Mumbai   (4) Chennai

50. Hema's husband is

(1) Abhishek   (2) Deepak
(3) Ranjan   (4) Pritam

51. Salil's wedding was held in

(1) Bengaluru   (2) Chennai
(3) Kolkata   (4) Delhi

52. If all the three statements, marked (i), (ii) and (iii) are true, then which one of the following deductions, marked (1), (2), (3) and (4) is logically most weakly supported.

(i) Some rich people are philanthropists.
(ii) No thief is a philanthropist.
(iii) No good person is a thief.

(1) No good people who are philanthropists are thieves.
(2) No rich person who is good is a thief.
(3) All rich people are good and philanthropists
(4) No rich people who are thieves are philanthropists.

Instructions for questions 53 to 55:
If all the three statements, marked (i), (ii) and (iii) are true, then which one of the following deductions, marked (1), (2), (3) and (4) can be MOST LOGICALLY deduced:

53. (i) Whenever milk is kept in front of a child, he/she starts crying.
(ii) Children cry if they are hungry.
(iii) Unhappy children are hungry.

(1) When hungry, a child likes milk.
(2) A child crying means he/she is unhappy.
(3) A happy child does not cry.
(4) An unhappy child usually cries.

54. (i) Whenever there is a fire, the fire alarm goes off
(ii) If the sprinklers do not start, the fire alarm does not go off.
(iii) If the sprinklers start, an automatic alarm is set off at the fire department.

(1) If an automatic alarm is set off at the fire department, that means there must be a fire.
(2) If the sprinklers do not start, the automatic alarm at the fire department is not set off.
(3) Whenever there is a fire, an automatic alarm is set off in the fire department.
(4) If there is no fire, no automatic alarm is set off in the fire department.

55. (i) Doing well in CAT implies doing well in JMET.
(ii) Good JMET results ensure that you get into one of the IITs or IISc.
(iii) Poor CAT results do not get you an admission into any of the IIMs.

(1) Doing poorly in CAT always implies doing poorly in JMET.
(2) Good CAT result ensures that one gets an admission into the IIMs.
(3) Admissions to the IITs or IISc may mean that one has done well in CAT.
(4) Anyone getting admission in one of the IIMs is guaranteed to get admission in one of the IITs or IISc.

56. For a problem in an MBA entrance examination, there are four questions 1, 2, 3 and 4. For each of these questions there are four separate alternatives marked A, B, C and D, amongst which only one alternative is correct. Four different students' answers to the four questions 1, 2, 3 and 4 are BCBA, DBBA, BCDA and DCCB respectively. All of these four students got exactly two correct answers. If now another student's answers to questions 1, 2, 3 and 4 are BCAA, then the number of correct answers obtained by this student is:

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

57. In an MBA program, any student who is taking a course in Marketing as well as Strategy is also enrolled in Statistics course. Then which of the following must be true?

(1) Any student either not taking Marketing or not taking Strategy must also not be taking Statistics.
(2) Any student who is taking neither Marketing nor Strategy is also not taking Statistics.
(3) Any student who is not taking Statistics is either not taking Marketing or not taking Strategy.
(4) Any student who is not taking Statistics is taking neither Marketing nor Strategy.

Instructions for question 58:
The statement given below is followed by three conclusions numbered I, II and III. You have to take the given statements to be true, even if they seem to be at variance with commonly known facts and then decide which of the given conclusion LOGICALLY follows from the given statements:

58. Statements:
(i) Local self government brings effective governance.
(ii) Therefore villages have better roads when they have local self government.

This conclusion is valid only when:

I. Effective governance means better roads.
II. Villages without local self government do not have better roads.
III. Only local self government can improve infrastructure.

(1) I and III   (2) I only
(3) II only   (4) II and III

59. If CLOSE is coded as DNRWJ, then APART will be coded as:

(1) BRDVY   (2) BRBVY
(3) BSKYV   (4) BTDYV

Instructions for question 60:
A statement followed by four assumptions numbered I, II, III and IV are given. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement, then decide which of the answers (1), (2), (3) or (4) is CORRECT:

60. Statement: The companies that showed relatively high import orientation in India were not the ones that benefited the most from government interventions during the heydays of import substitution.

Assumptions:
I. High import companies do not need government support.
II. Low import companies received more government support.
III. Import oriented companies are affected by government policies.
IV. Exporting of goods get affected by government policies.

(1) I only   (2) III only
(3) II and IV   (4) All four

Section III

Instructions for questions 61 to 63:
Answer the questions based on the information given below.

Consider a circular running track of radius "r". Two runners Anand and Ben are on the running track at a distance of "πr" from each other. They always run in a clockwise direction. The running track is such that the runners lose energy on one contiguous half of the track and gain energy in the other contiguous half of the track. Let both Anand and Ben have initial energy levels of "E".

61. Let the runners consume or gain unit energy per unit distance traveled. Also, let the energy consumed or gained be independent of the distance traveled thus far when the energy levels are greater than zero. The runners come to a stop when all their energy is expended. Assuming that both runners run at the same constant speed "s". After traveling a distance of "$2\pi nr$" where n is a non-negative integer, what is the difference in energy levels of Anand and Ben?

(1) 0   (2) πr (3) πnr (4) πnrs

62. Assume that the position of Anand on the track is chosen randomly and Ben is at a distance of "πr" from Anand. What could have been the maximum possible difference in the energy levels between them during the process of completing one full circle?

(1) 0   (2) πr (3) $2\pi r$ (4) $\dfrac{\pi r}{2}$

63. Anand is at the start of the half circle that boosts energy and Ben at the start of the half circle that dissipates energy. Now, if the energy lost or gained per unit distance is proportional to the distance traveled thus far, with "k" being the energy lost or gained per unit distance travelled, what is the difference in the energy levels when Anand reaches the position of Ben and vice-versa?

(1) $2k\pi r$ (2) $k\pi^2 r^2$
(3) $k\pi^2 r^2/2$ (4) $k\pi r/2$

64. Consider the internal angle between any two contiguous sides of the largest regular polygon of N sides drawn inside a circle. Which of the following graphs represents the internal angle between two contiguous sides as a function of N?

(1)   **(2)**

(3)   **(4)**
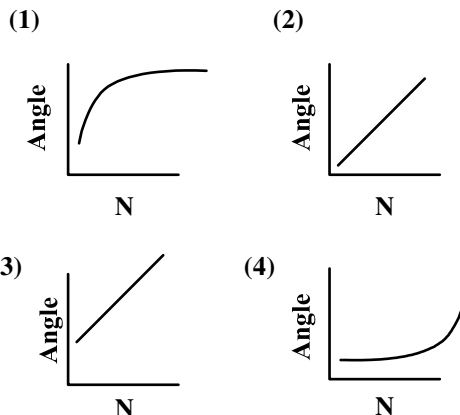
65. It took 15 hours and 40 minutes for Rakesh to paint four walls and the ceiling of a room of size 900 cu. ft. The ceiling height of the room is 10 ft. If Rakesh painted at a constant rate of 0.5 sq. ft per minute, how long will it take for him to paint the walls?

(1) 12 hrs. 40 min   (2) 11 hrs.
(3) 13 hrs.   (4) 11 hrs. 10 min.

66. Let x denote the greatest 4-digit number which when divided by 6, 7, 8, 9 and 10 leaves a remainder of 4, 5, 6, 7 and 8 respectively. Then, the sum of the four digits of x is:

(1) 25   (2) 18
(3) 20   (4) 22

67. If the roots of the equation $2ax^2 + 2ax + 1 = 0$ are real and distinct, then the number of possible integer value(s) a can take between 1 and 4 (inclusive) is:

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

68. A firm produces x units of tyres ($x > 0$) at a total cost of Rs $\left(100x - 30x^2 + \dfrac{1}{3}x^3\right)$. Then the average cost per tyre is minimized for x equal to:

(1) 40   (2) $60 - 40\sqrt{2}$
(3) $60 + 40\sqrt{2}$ (4) 45

69. The total number of possible proper three-digit integers that can be formed using 0, 1, 3, 4 and 5 without repetition such that they are divisible by 5 are:

(1) 20   (2) 21
(3) 22   (4) 24

70. A father runs after his son, who is 1000 meters ahead. The father runs at a speed of 1 kilometer every 8 minutes, and the son runs at a speed of 1 kilometer every 12 minutes. How much distance has the son covered at the point when the father overtakes him?

(1) 2500 meters   (2) 2000 meters
(3) 1500 meters   (4) 1000 meters

Instructions for questions 71 to 72:
Answer the questions based on the information given below.

Manufacturing of two automotive gear products, A and B, requires processing in both machines 1 and 2. The time required to manufacture one unit of Product A, on machine 1 and machine 2 are 2 hours and 4 hours respectively. Whereas, the time required for manufacturing one unit of Product B on machine 1 and machine 2, are 3 hours and 1 hour respectively. The total time available for machine 1 and machine 2 on a given working day are 6 hours and 8 hours respectively. There is also a constraint that at least 8 units of A and B together should be produced in a given day. Per unit profit of A and B are Rs. 5 and Rs. 7 respectively. The objective is to maximize the total amount of profit by manufacturing the two products on any given day.

71. If X and Y represent the number of A and B to be produced on a given day respectively, then the mathematical formulation for the daily profit maximization problem is given by:

(1) Max profit $= 5X + 7Y$
     $2X + 3Y \leq 6$
     $4X + Y \leq 8$
     $X + Y \geq 8$
     $X, Y \geq 0$ and integers

(2) Max profit $= 5X + 7Y$
     $6X + 8Y \leq 2$
     $4X + Y \leq 3$
     $X + Y \geq 8$
     $X, Y \geq 0$ and integers

(3) Max profit $= 5X + 7Y$
     $2X + 4Y \leq 6$
     $3X + Y \geq 8$
     $X + Y \geq 8$
     $X, Y \geq 0$ and integers

(4) Max profit $= 5X + 7Y$
     $2X + 3Y \leq 6$
     $4X + Y \leq 8$
     $X + Y \leq 8$
     $X, Y \geq 0$ and integers

72. The values of (X, Y) at which optimality is reached is:

(1) (0, 8)   (2) (8, 0)
(3) Infeasible   (4) Infinite

73. A man jogging inside a railway tunnel at a constant speed hears a train approaching the tunnel from behind at a speed of 30 km per hour, when he is one third of the way inside the tunnel. Whether he keeps running forward or turns back, he will reach the end of the tunnel at the same time the train reaches that end. The speed at which the man is running is:

(1) 6 km per hour   (2) 8 km per hour
(3) 12 km per hour   (4) 10 km per hour

74. After purchasing four mangoes, a man commented: "well, if the price of a mango was Rs. 4 less, I would have got two more mangoes for the same amount of money I have now paid". What is the price of one mango?

(1) Rs. 8   (2) Rs. 10
(3) Rs. 15   (4) Rs. 12

75. If a, b and c are roots of $x^3 - 6x^2 + 11x - 6 = 0$ and the roots of the equation $x^3 - px^2 + qx - r = 0$ are $a + b$, $b + c$ and $c + a$, then r equals:

(1) 40   (2) 50
(3) 60   (4) 70

76. Consider a square S which is inside a circle A such that the four corner points of the square touch the circumference of the circle. A second circle B is inside the square S so that its four sides touches the circumference of B. Then, the ratio of the areas of the circles $A : B$ equals:

(1) $\sqrt{2} : 1$ (2) $2 : 1$
(3) $\sqrt{3} : 1$ (4) $\pi : 1$

77. If there are six distinct points on a plane, what is the maximum number of straight lines joining the points?

(1) 9   (2) 12
(3) 18   (4) 15

78. The amount of heat flow across a metal wall is proportional to the surface area of that wall and inversely proportional to the thickness of the same wall. The heat flow is also proportional to the difference of temperatures maintained across the two sides of the wall. In a certain situation a square wall was replaced by another having sides 1½ times the previous wall and the thickness increased by 80%. To what extent should the temperature difference be changed so as to have the same heat flow?

(1) 25% decrease   (2) 20% decrease
(3) 20% increase   (4) 25% increase

Instructions for questions 79 and 80:
Using two vertical and two horizontal grid lines, a square is divided into nine equal smaller squares of the same size, and marked by numbers 1 to 9. Nine different coins weighing 0.2 gm, 0.4 gm, 0.6 gm, 0.8 gm, 1.0 gm, 1.2 gm, 1.4 gm, 1.6 gm and 1.8 gm are to be placed, one in each square:

79. If the sum of the weights along the three rows, the three columns and the two diagonals are the same, how many different arrangements are possible?

(1) 2   (2) 4   (3) 8   (4) 10

80. If sum of the weights along the rows and columns are the same, but the sum of the weights along one diagonal is double the other, how many different arrangements are possible'?

(1) 6   (2) 8   (3) 9   (4) 10

81. A child consumed an ice cream of inverted right-circular conical shape from the top and left only 12.5% of the cone for her mother. If the height of the ice cream-cone was 8 cm, what was the height of the remaining ice cream-cone?

(1) 2.5 cm (2) 3.0 cm
(3) 3.5 cm (4) 4.0 cm

82. A semi-circle of diameter 14 cm has three chords of equal length connecting the two end points of the diameter so as to form a trapezoid inscribed within the semi-circle. What is the value of the area enclosed by the trapezoid?

(1) $\left(\dfrac{157 \times \sqrt{3}}{4}\right)$ cm^2 (2) $\left(49 \times \sqrt{3}\right)$ cm^2

(3) $\left(\dfrac{147 \times \sqrt{3}}{4}\right)$ cm^2 (4) $\left(\dfrac{108}{\sqrt{3}}\right)$ cm^2

83. Mr. Haque's total annual gross salary, which was Rs. 10 lakhs per year in 2007, has been reduced by 10% in 2008. In 2007 his family expenditure for food items was 40% of the total annual gross salary. The prices of average food items have increased by 5% between 2007 and 2008. Assuming that the family consumed the same amount of food in 2008, the percentage expenditure on food items, calculated on total annual gross salary in 2008, is approximately:

(1) 43% (2) 45%
(3) 47% (4) 49%

84. Two cities A and B, at a distance of 50 km, are connected by two separate roads. The speed of any vehicle travelling between the two cities on road 1 is 50 km per hr, while the speed on road 2 is $\left(\dfrac{80}{n}\right)$ km per hr, where n is the number of vehicles (including the concerned vehicle). If you travel in a vehicle from A to B on road 1 and come back from B to A on road 2 (where there are already three vehicles plying), your approximate average speed is:

(1) 26 km per hr (2) 29 km per hr
(3) 32 km per hr (4) 35 km per hr

85. There are three similar boxes, containing (i) 6 black & 4 white balls; (ii) 3 black & 7 white balls and (iii) 5 black & 5 white balls, respectively. If you choose one of the three boxes at random and from that particular box pick up a ball at random, and find that to be black, what is the probability that the ball was picked up from the second box?

(1) $\dfrac{3}{14}$ (2) $\dfrac{14}{30}$ (3) $\dfrac{7}{30}$ (4) $\dfrac{7}{14}$

86. In practical inventory problems, the total cost (TC) of ordering and carrying the inventory, is expressed as, $TC = \left[\left(\dfrac{C \times D}{Q}\right) + \left(\dfrac{Q \times k}{2}\right)\right]$, where C is the cost incurred for each order, D in the annual demand for the item, k is the per unit inventory holding cost of the item, and Q is the number of items procured per order. Assuming that C, D and k are constant, the minimum value of TC is

(1) $\sqrt{C \times k \times D}$ (2) $\sqrt{\dfrac{C \times k \times D}{2}}$

(3) $\sqrt{2 \times C \times k \times D}$ (4) $C \times k \times D$

87. A right circular hollow cylinder, kept vertically on its circular base has a height of 20 cm and radius of 10 cm. A sugar grain is kept inside this cylinder on its circular base at the periphery. If an ant is at the top rim of the same cylinder and diagonally opposite the sugar grain, the minimum distance the ant should travel to reach the sugar grain is approximately:

(1) 82.86 cm (2) 51.43 cm
(3) 37.25 cm (4) 65.96 cm

88. A regular pyramid has a square base with side 10 cm and a vertical height of 20 cm. If the height increases by 10% of its original value and the volume is constant, the percentage change in the side of the square base with respect to its original value is approximately:

(1) + 5% (2) + 10%
(3) – 5% (4) – 10%

89. A goat is tethered to one end of a rope of length 20 meters, while the other end is fixed at the centre of a large circular field. There is a square elevated platform with sides of 10 meters on the field such that one corner of the elevated square platform coincides with the centre of the circular field. If the goat is unable to mount the square elevated platform, what is the total area that the goat will be able to graze'?

(1) 3 × 100π (2) 3.5 × 100π
(3) 4 × 100π (4) 100(3π + 1)

90. Let $f(.)$ be a function defined on the set of positive integers, such that $f(n) = n + f(n - 1)$ and $f(1) = 1$, then $f(100)$ equals:

(1) 4900 (2) 4950
(3) 5000 (4) 5050

Section IV

Instructions for questions 91 to 94:
Answer the questions based on the information given below.

The following diagram depicts the annual production, exports and profits (all in Million Rupees) of MDR Ltd. from 1999 to 2007. This firm is into manufacturing and selling of refrigerators. Every year, some part of the total production is exported and the rest is sold in the domestic market. In the diagram below, the production and exports are measured on the primary Y-axis whereas profits are measured on the secondary Y-axis.
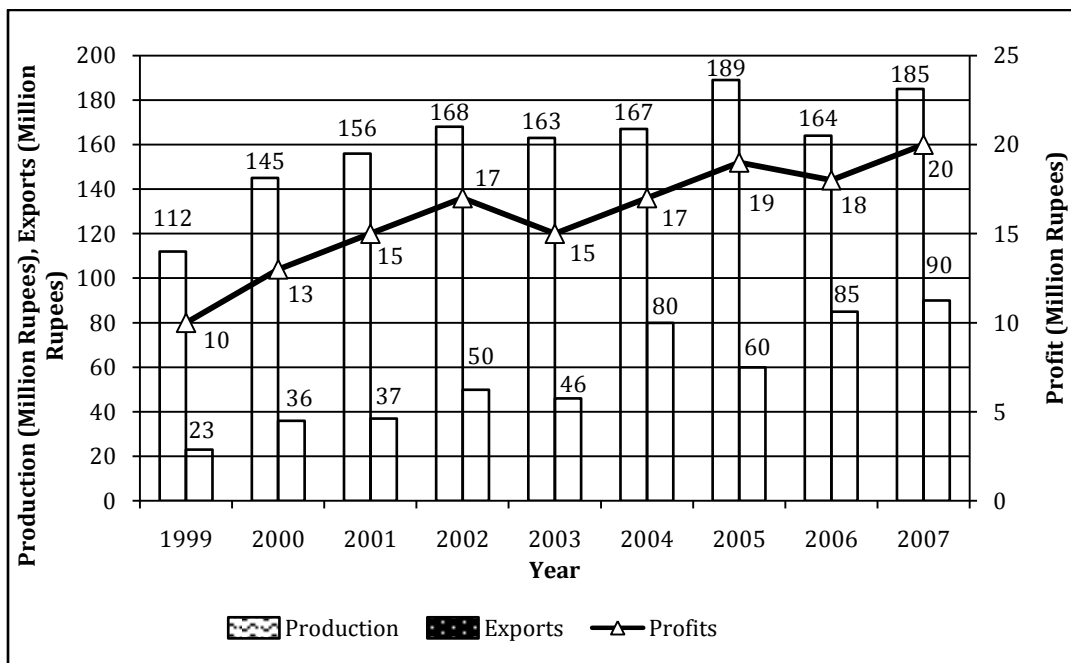
91. For the given time-period, how many times do all the variables show similar trend (increasing or decreasing) in year-on-year movement?

    (1) 2   (2) 4   (3) 6   (4) 8

92. In which of the following years have the profits of MDR Ltd. Registered maximum year-on-year percentage of growth?

    (1) 2000   (2) 2002   (3) 2004   (4) 2005

**93.** In which of the following time-periods do the profits and exports of MDR Ltd. show similar patterns?

    (1) 2005 to 2007   (2) 2003 to 2005   (3) 2002 to 2004   (4) 2004 to 2006

94. In which of the following years have the domestic sales of MDR Ltd. exhibited minimum positive change (in terms of million of rupees)?

    (1) 2000   (2) 2001   (3) 2005   (4) 2007

Instructions for questions 95 to 97:
Answer the questions based on the information given below.

A chain of stores having 20 showrooms all over the country specialize in men's garments and accessories. For each of these stores the percentage of revenue that is generated from the sales of accessories is plotted against the average price (in Rs.) of the accessories in the following scatter plot:
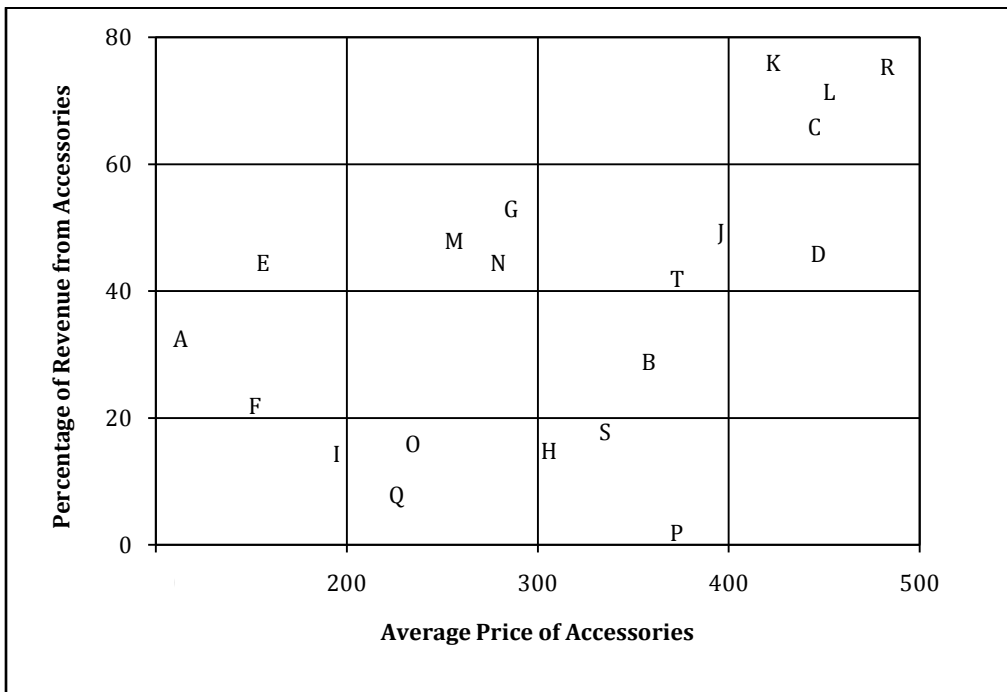
95. If the volume (in terms of quantity) of sale of garments and accessories are same for store H, then the average price of garments in that store is:

(1) Rs. 33   (2) Rs. 53   (3) Rs. 1133   (4) Rs. 1700

96. If the volume (in terms of quantity) of sale of accessories are same for store B and F, then the ratio of revenues earned from garments sale of B to F is approximately:

(1) 0.30   (2) 0.60   (3) 1.67   (4) 3.33

97. If the total revenues are same for stores E and L, then the ratio of volume (in terms of quantity) of sales of accessories of L to E is approximately:

(1) 0.22   (2) 0.57   (3) 1.75   (4) 4.60

Instructions for questions 98 to 101:
Answer the questions based on the information given below.

The following table presents data on monthly per capita consumption of different food items in rural as well as urban India for 1988 and 2002.

Food Items	Urban		Rural	
	1988	2002	1988	2002
Rice	5.65	4.85	7.35	6.79
Wheat	4.57	4.03	4.8	4.05
Other Cereals	0.83	0.56	2.59	1.38
Total Cereals	11.05	9.44	14.74	12.22
Pulses	1.06	0.86	0.97	0.77
Dairy	4.52	5.25	3.34	3.94
Edible Oils	0.56	0.69	0.35	0.51
Meat/fish/eggs	2.01	2.49	0.91	1.5
Vegetables/fruit	11.46	13.44	6.99	9.48
Sugar/spices	1.63	1.46	1.53	1.34

98. In rural India, which food item has shown maximum percentage increase in per capita consumption from 1988 to 2002?

(1) Edible Oils   (2) Meat/fish/eggs   (3) Vegetables/fruit   (4) Dairy

99. In the year 1988, which food item has maximum share in the per capita consumption for the whole of India?

(1) Vegetables/fruit   (2) Total Cereals   (3) Rice   (4) Wheat

100. Which food item has shown maximum percentage decline in per capita consumption from 1988 to 2002 for the whole of India?

(1) Rice   (2) Wheat   (3) Pulses   (4) Other Cereals

101. How many products show an increase in their per capita consumption from 1998 to 2002 for the whole of India?

(1) 3   (2) 4   (3) 5   (4) 6

Instructions for questions 102 to 105:
Answer the questions based on the information given below.

A business school is offering three MBA programs: Regular Day Time Program (RDTP), Regular Evening Program (REP) and the Distance Learning Program (DLP). The following table provides information about the students enrolled in these programs in a particular year.

Work experience in years	RDTP		REP		DLP		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
0	10	20	0	0	10	5	20	25
1 to 5	20	15	30	12	30	25	80	52
Above 5	8	7	20	8	20	10	48	25
Total	38	42	50	20	60	40	148	102

102. What percentage of non-DLP students have work experience of 1 to 5 years?

(1) 32.5%   (2) 45.6%   (3) 51.3%   (4) 65.2%

103. What proportion of the on-campus (doing a regular program) male students have work experience of more than 5 years?

(1) 9/37   (2) 6/29   (3) 7/22   (4) 8/25

104. What fraction of all inexperienced students is made up of female students doing the day time or evening MBA program?

    (1) 11/13   (2) 10/21   (3) 17/23   (4) 4/9

105. What is the difference between the percentage of experienced male students in the regular program and the percentage of experienced male students in the DLP program?

    (1) 11.2   (2) 14.2   (3) 16.5   (4) 12.8

Instructions for questions 106 to 110:
Questions are based on the following bar chart which provides data of exports (million $) for 6 products from 7 different regions in the world for the year 2007:
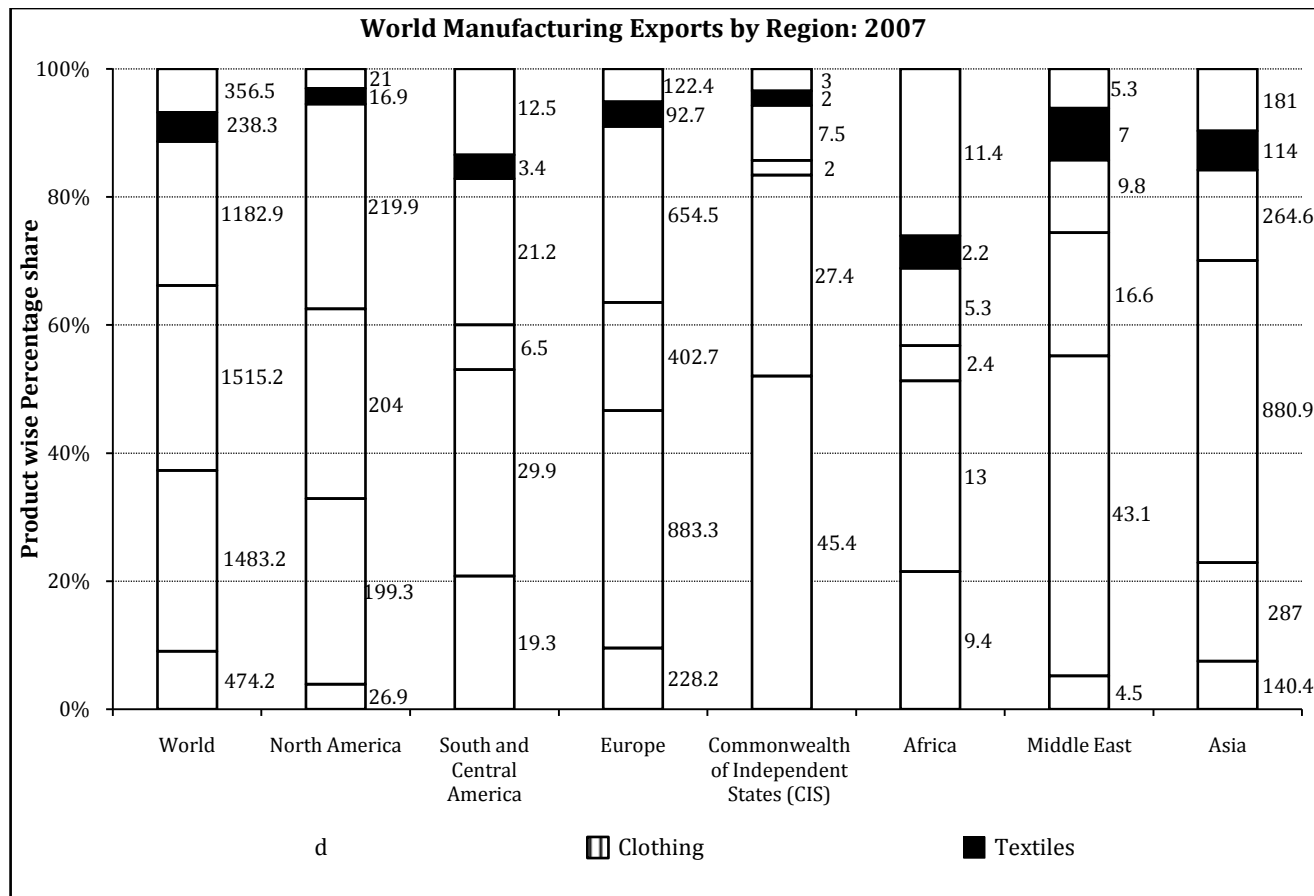
106. Which product has maximum market share in total world manufacturing exports?

    (1) Chemicals   (2) Office and telecom equipments
    (3) Textile and Clothing   (4) Automotive products

107. Which of the following regions has the maximum share of exports of Iron and steel and Automotive products?

    (1) Europe   (2) Asia   (3) South and Central America   (4) North America

108. What percentage of total world exports of Textile and Clothing comes from Asia?

    (1) 49.6%   (2) 35.3%   (3) 56.7%   (4) 60.2%

109. In which region is the ratio of Chemicals to Textiles the maximum?

    (1) South and Central America   (2) Europe
    (3) North America   (4) Commonwealth of Independent States
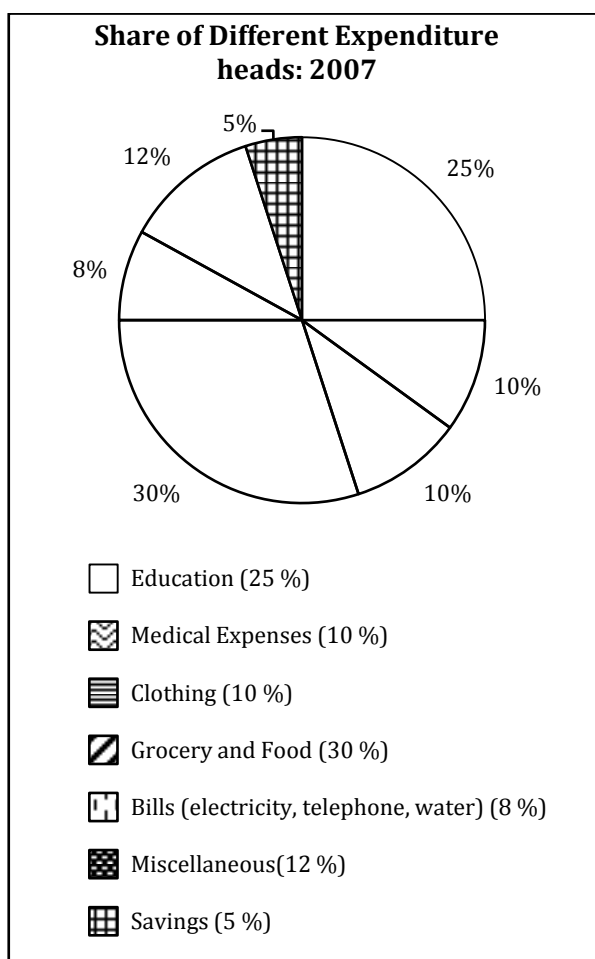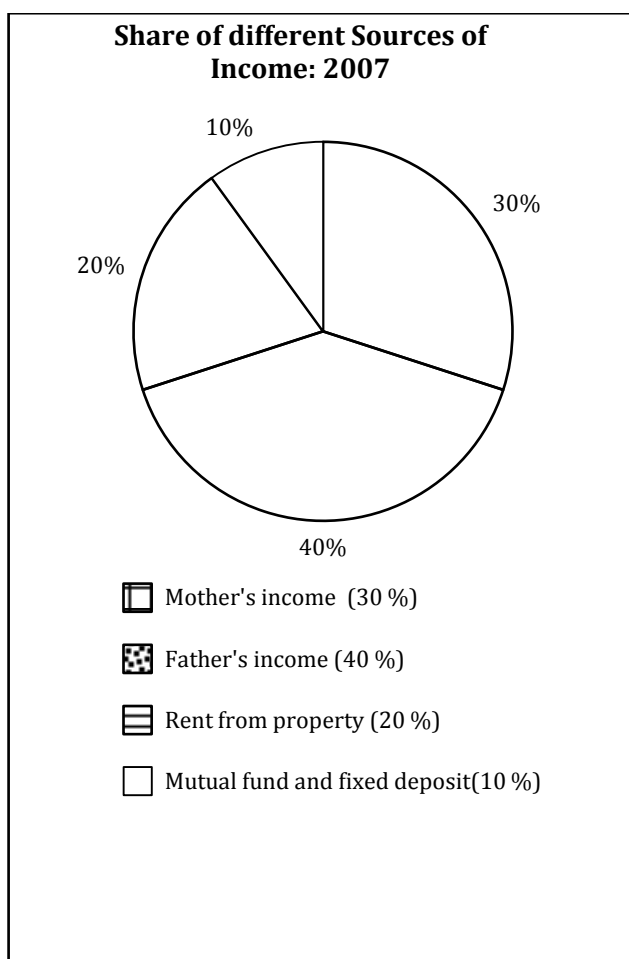
110. By what percentage are the total exports of the largest exporter higher than that of the second largest in the total world exports?

    (1) 21.7%   (2) 23.5%   (3) 27.6%   (4) 29.6%

Instructions for questions 111 to 115:
Answer the questions based on the information given below.

The following pie charts present the relative break-up of the sources of income and the heads of expenditure for a family for the year 2007. The total annual income of the family is Rs. 8,00,000. Due to the revised pay scales, the incomes of the father and the mother have increased by 40% and 30% respectively in 2008. Education cost doubled in 2008 whereas, all other expenses (in Rs.) remain same in 2008.

Share of different Sources of Income: 2007

- Mother's income (30 %)
- Father's income (40 %)
- Rent from property (20 %)
- Mutual fund and fixed deposit(10 %)

Share of Different Expenditure heads: 2007

- Education (25 %)
- Medical Expenses (10 %)
- Clothing (10 %)
- Grocery and Food (30 %)
- Bills (electricity, telephone, water) (8 %)
- Miscellaneous(12 %)
- Savings (5 %)

111. Assuming that the relative contribution of different sources of income remains the same across all heads of expenditure, how much of the father's income is spent on medical expenses for the year 2007?

    (1) Rs. 32, 000   (2) Rs. 25, 000   (3) Rs. 54, 000   (4) Rs. 80, 000

112. What percentage of the total income is spent on education in 2008?

    (1) 20%   (2) 30%   (3) 50%   (4) 40%

113. In 2008, what is the amount saved by the family?

(1) Rs. 50, 000   (2) Rs. 40, 000   (3) Rs. 10, 000   (4) Rs. 15, 000

114. What is the total amount spent on clothing and medical expenses during 2007 and 2008?
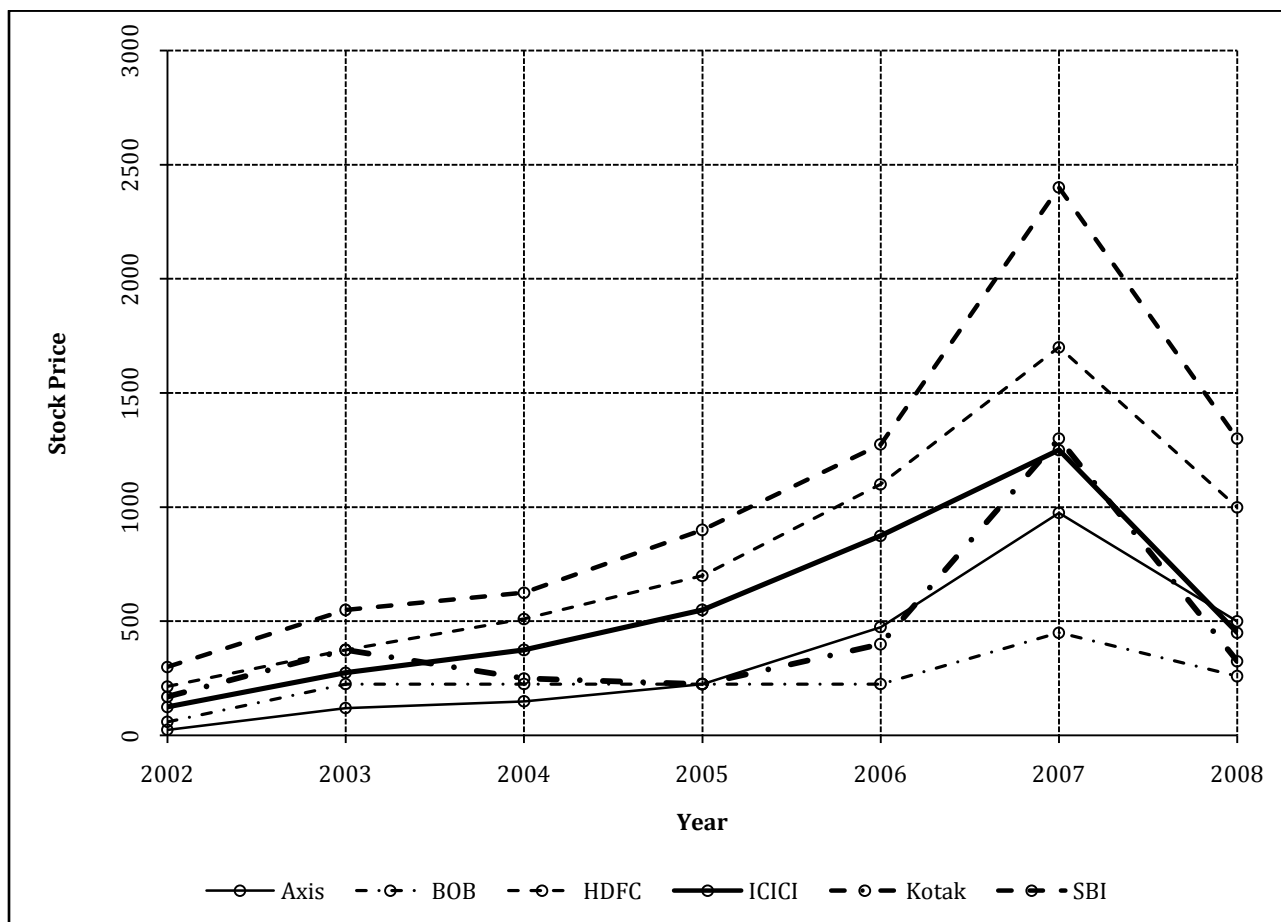
(1) Rs. 3, 20, 000   (2) Rs. 2, 40, 000   (3) Rs. 4, 40, 000   (4) Rs. 5, 20, 000

115. In 2008, what percentage of income is spent on bills and miscellaneous expenses?

(1) 5%   (2) 12%   (3) 16%   (4) 25%

Instructions for questions 116 to 120:
Questions are based on the following line-graph which depicts the yearly closing price of stocks of six banks from 2002 to 2008 traded in BSE:

116. For which of the following banks has the absolute amounts of change in yearly closing stock price from 2004 to 2005 and then again from 2005 to 2006 been most similar?

(1) Axis   (2) HDFC   (3) Kotak   (4) SBI

117. Stock prices of all the banks have boomed by the end of 2007 compared to that of 2006. Stock price of which bank has almost trebled at the end of 2007 compared to its closing price of 2006?

(1) Axis   (2) BOB   (3) SBI   (4) Kotak

118. Consider the following statements, with the abbreviation PIICSP standing for "Percentage Increase In Closing Stock Price"?

   I. PIICSP of HDFC from 2003 to 2004 is approximately same as its PIICSP from 2004 to 2005
   II. PIICSP of HDFC from 2003 to 2005 is approximately three times the PIICSP of ICICI from 2004 to 2005
   III. PIICSP of ICICI from 2004 to 2007 is approximately same as the PIICSP of Kotak from 2006 to 2007

Which of the following is true?

(1) II and III only   (2) I and III only
(3) I and II only   (4) I, II and III

119. Consider a portfolio of Rs. 2750 investing Rs. 750 each in the stocks of HDFC and Kotak and remaining in the stocks of Axis in the end of 2003, which remain invested till the end of 2005. Then the simple average (not compounded) annual percentage return obtained from the portfolio is:

(1) less than 10%   (2) more than 50%
(3) between 25% and 50%   (4) between 10% and 25%

120. During which of the following two year time-periods did one of the banks exhibit a near-zero rate of change in its closing stock price?

(1) 2002 to 2004   (2) 2006 to 2008
(3) 2005 to 2007   (4) 2004 to 2006

ANSWER KEY

Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
1	3	31	4	61	1	91	3
2	2	32	2	62	3	92	1
3	3	33	4	63	1	93	3
4	2	34	1	64	1	94	2
5	3	35	1	65	1	95	4
6	2	36	4	66	1	96	4
7	3	37	3	67	4	97	2
8	1	38	1	68	4	98	2
9	3	39	1	69	3	99	2
10	2	40	4	70	2	100	4
11	1	41	1	71	1	101	2
12	3	42	1	72	3	102	3
13		43	3	73	4	103	3
14	4	44	2	74	4	104	4
15	1	45	2	75	3	105	1
16	3	46	2	76	2	106	2
17	4	47	3	77	4	107	3
18	2	48	4	78	2	108	1
19	1	49	4	79	3	109	4
20	3	50	3	80	2	110	3
21	1	51	1	81	4	111	1
22	3	52	3	82	3	112	4
23	2	53	4	83	3	113	2
24	3	54	3	84	2	114	1
25	1	55	4	85	1	115	3
26	4	56	3	86	3	116	4
27	1	57	3	87	3	117	4
28	4	58	2	88	3	118	
29	4	59	1	89	2	119	3
30	3	60	2	90	4	120	4