OPENMAT (XXV) Entrance Test for
Management Programmes 2009
FEBRUARY, 2009

23915

Total No. of Questions = 200   **Time : 180 Minutes**

- All questions are **Compulsory**.

- Use of calculator is **not** allowed. Rough work may be done in the space provided at the back of the Test Booklet.

- The Test Booklet has the following 4 tests :

  Test - I   General Awareness   No. of Questions 30

  Test - II   English Language   No. of Questions 50

  Test - III Quantitative Aptitude   No. of Questions 50

  Test - IV Reasoning   No. of Questions 70

Read the instructions given on the OMR Response Sheet carefully before you start.

How to fill up the information on the OMR Response Sheet

(Examination Answer Sheet)

1. Write your complete enrolment no. in 9 digits. This should correspond to the enrolment number indicated by you on the OMR Response Sheet. Also write your correct name, address with pin code in the space provided. Put your signatures on the OMR Response Sheet with date. Ensure that the Invigilator in your examination hall also puts his signatures with date on the OMR Response Sheet at the space provided.

2. On the OMR Response Sheet student's particulars are to be filled in by pen. However use HB pencil for writing the Enrolment No. and Examination Centre Code as well as for blackening the circle bearing the correct answer number against the serial number of the question.

3. Do not make any stray remarks on this sheet.

4. Write correct information in numerical digit in Enrolment No. and Examination Centre Code columns. The corresponding circle should be dark enough and should be filled in completely.

5. Each question is followed by four probable answers which are numbered 1, 2, 3 and 4. You should select and show only one answer to each question considered by you as the most appropriate or the correct answer. Select the most appropriate answer. Then by using HB pencil, blacken the circle bearing the correct answer number against the serial number of the question. If you find that answer to any question is none of the four alternatives given under the question you should darken the circle '0'.

6. If you wish to change your answer, ERASE completely the already darkened circle by using a good quality eraser and then blacken the circle bearing your revised answer number. If incorrect answer is not erased completely, smudges will be left on the erased circle and the question will be read as having two answers and will be ignored for giving any credit.

7. No credit will be given if more than one answer is given for one question. Therefore, you should select the most appropriate answer.

8. You should not spend too much time on any one question. If you find any particular question difficult, leave it and go to the next. If you have time left after answering all the questions, you may go back to the unanswered ones. There is no negative marking for wrong answers.

GENERAL INSTRUCTIONS

1. No cell phones, calculators, books, slide-rules, note-books or written notes, etc. will be allowed inside the examination hall.

2. You should follow the instructions given by the Centre Superintendent and by the Invigilator at the examination venue. If you violate the instructions you will be disqualified.

3. Any candidate found copying or receiving or giving assistance in the examination will be disqualified.

4. The Test Booklet and the OMR Response Sheet (Answer Sheet) would be supplied to you by the Invigilators. After the examination is over, you should hand over the OMR Response Sheet to the Invigilator before leaving the examination hall. Any candidate who does not return the OMR Response Sheet will be disqualified and the University may take further action against him/her.

5. All rough work is to be done on the test booklet itself and not on any other paper. Scrap paper is not permitted. For arriving at answers you may work in the margins, make some markings or underline in the test booklet itself.

6. The University reserves the right to cancel scores of any candidate who impersonates or uses/adopts other malpractices or uses any unfair means. The examination is conducted under uniform conditions. The University would also follow a procedure to verify the validity of scores of all examinees uniformly. If there is substantial indication that your performance is not genuine, the University may cancel your score.

7. In the event of your qualifying the Entrance Test, the hall ticket should be enclosed with your admission form while submitting it to the University for seeking admission in Management Programme along with your testimonials and programme fee. Admission forms received without hall ticket in original will be summarily rejected.

TEST - I
GENERAL AWARENESS

1. According to the World Bank estimates, worldwide demand for water is doubling every :
   (1) 22 years (2) 15 years (3) 21 years (4) 25 years

2. "The eye sees all, but the mind shows us what we want to see". This famous quotation was given by :
   (1) Shankaracharya   (2) Shakespeare
   (3) Sir William Hamilton (4) John Keats

3. Which of the following mountains is considered a natural boundary between Europe and Asia ?
   (1) Mountain Etna   (2) Caucasus Mountains
   (3) Corcovado Mountains   (4) Chimney Rock

4. How many countries took part in 28th Olympic Games ?
   (1) 199 (2) 200 (3) 201 (4) 202

5. The record for longest stay in space for a woman was set by :
   (1) Sunita Williams (2) Kalpana Chawla
   (3) Helen Sharman   (4) Sally Ride

6. Which country is the second largest producer of cement in the world ?
   (1) China (2) UK (3) India (4) Italy

7. "The Story of My Life" is the autobiography of :
   (1) Kapil Dev (2) Helen Keller (3) Dalai Lama (4) Mark Twain

8. Which of the following is *not* an official language of the U.N. ?
   (1) Arabic (2) Japanese (3) Russian (4) Spanish

9. In which city 'Suvarnabhumi International Airport' is located ?
   (1) Singapore (2) Bengaluru (3) Bangkok (4) Penang

10. Who among the following is known as the "Father of the Modern Olympics" ?
    (1) Spiridon Louis   (2) Phlidippides
    (3) Pierre de Coubertin   (4) Hjalmar Anderson

11. Which phrase means 'likely' ?
    (1) under the sun   (2) on the table   (3) on the cards   (4) in camera

12. In the vote of confidence of UPA government held on 22nd July 2008, how many votes were polled in favour and against ?
    (1) 277 and 258   (2) 276 and 259   (3) 275 and 256   (4) 274 and 255

13. The industrialist who co-piloted an F 16 fighter aircraft at the age of 69 is :
    (1) M.K. Birla   (2) Adi Godrej
    (3) Vijaypat Singhania   (4) Ratan Tata

14. The IUCN (International Union for the Conservation of Nature and Natural Resources) maintains an international list of species facing extinction. This data is published as a book, popularly known as :
    (1) Black Data Book   (2) Green Data Book
    (3) Red Data Book   (4) Yellow Data Book

15. Which Indian fruit began to be exported to the U.S.A. in April 2007 after a gap of 18 years ?
    (1) Mangoes   (2) Sapotas   (3) Apples   (4) Oranges

16. Who created the well known painting 'Girls in Conversation' ?
    (1) M.F. Hussain   (2) Anjolie Ela Menon
    (3) Amrita Sher-Gil   (4) Chinmoy Das

17. The Honda motor company gets its name Honda from :
    (1) a city   (2) an engineer
    (3) a river   (4) a mountain peak

18. The great Indian Revolt of 1857 was first described as 'First War of India's Independence' by :
    (1) Swami Vivekananda   (2) Karl Marx
    (3) Veer Savarkar   (4) B.G. Tilak

19. The first Indian to win a Nobel Prize was :
    (1) Sir. C.V. Raman   (2) Rabindranath Tagore
    (3) S. Chandrashekhar   (4) J.C. Bose

20. UNIDO set up its first global centre for south-south Industrial Cooperation in which Asian City ?
    (1) Lahore   (2) Shanghai   (3) New Delhi   (4) Kathmandu

21. The founder of the first socialist state was :
    (1)   V.I. Lenin   (2)   J.V. Stalin   (3)   Mao   (4)   Karl Marx

22. The foreign country where India's Reva Electric Car has sold most cars ?
    (1)   UK   (2)   France   (3)   Italy   (4)   Germany

23. Which of the following countries does not have a sea coast ?
    (1)   Ethiopia   (2)   Somalia   (3)   South Africa   (4)   Nigeria

24. The author of 'Theory of Relativity' was :
    (1)   Isaac Newton   (2)   Neil Bohr
    (3)   Max Planck   (4)   Albert Einstein

25. The country which tops in banana production is :
    (1)   India   (2)   USA   (3)   Malaysia   (4)   China

26. The tennis great who retired in 2002 after winning the US Open Final against Andre Agassi is :
    (1)   Boris Becker   (2)   Pete Sampras
    (3)   Carlos Moya   (4)   Goran Ivansevic

27. Who is known as the Father of the Green Revolution in India ?
    (1)   Prof. Yashpal   (2)   M.S. Swaminathan
    (3)   M.G.K. Menon   (4)   V. Kurien

28. The meaning of an 'Oracle' is :
    (1)   An interpreter of dreams   (2)   An infallible guide to future action
    (3)   A greek goddess of truth   (4)   An astrologer

29. Which of the following authors rejected a Nobel Prize ?
    (1)   Hemmingway   (2)   George Bernard Shaw
    (3)   Albert Camus   (4)   Jean Paul Satre

30. Tushar A. Gandhi who wrote 'Let's Kill Gandhi' is Mahatma Gandhi's :
    (1)   son   (2)   great grandson
    (3)   greatson   (4)   nephew

TEST - II
ENGLISH LANGUAGE

Directions for question numbers 31 to 40 :
There are two passages followed by questions based on the contents of the passages. Answer all the questions following each passage on the basis of what is stated or implied in the passage.

PASSAGE - I

In the Film Institute Hostels, I am the only overseas student. There are students from various states of India and it is a fair medley of faces and figures because India is such a multicultural country. However, I face a peculiar problem. I am used to it now but the early mornings are particularly stressful. When I make my way early in the morning to the bathrooms, no student would look me in the face. In fact, they turn their heads away as soon as they see me and quickly retreat to their rooms. The reason ? I am a black person with a dark face and they consider that it would be a bad beginning to their day if they see me first thing in the morning. I know it is a superstition but it hurts. I thought in India a guest is an honoured person !

What answer could I give to Patrick, a young person in his twenties ? Could I say that one of the Sanskrit lines we in India are fond of repeating is, *Aatithi devobhava*, 'a guest is akin to god' ?

Patrick, who hailed from Accra, the capital of Ghana, was doing a two-years course in film editing at the famed Film Institute of India (FII). His father was a mechanic and Patrick worked with the Ghana Film Industrial Corporation as an assistant film editor. He came to India on an official Government of India scholarship of Rs. 375 per month.

'Living in India came as a shock,' Patrick said. The food supplied by the FII cafeteria was a particular problem. Even Indian students complained about the food offered at the cafeteria and to Patrick it was especially disagreeable, because it was so different from what he was used to eating in Ghana. As if food was not enough of a problem, he became a social outcast. No one came forward to make friends with him. Though he had been in Pune for a year and a half, he had never visited a single Indian home, nor had he been invited to any social occasion. When he visited shopping areas like the Deccan Gymkhana, considered to be the abode of the progressive residents of Pune, he received strange looks and the shopkeepers' assistants mocked him. It was the memory of those hostile looks that was most painful to Patrick. If he went on a bus, people would refuse to share a seat with him. Did Indians dislike black people to that extent ? His colleagues on the course were disciplined and hardworking but their knowledge of Africa was appalling. Most thought that people in Africa lived in Tarzan's jungles. He became homesick and lonely. Even his studies suffered. He found it difficult to follow class lectures because the teachers' accent was unfamiliar. He thought that they spoke too quickly without bothering to allow students to interact.

Was that the purpose of the Indian Government scholarship ? Surely the main purpose of such scholarships was to develop friendship and goodwill with African countries. Did the government think that a mere transfer of Rs. 375 to a student's account would achieve that ? The intentions must have been good but Patrick's case, and that of others I subsequently interviewed, was a classic example of such ill-conceived initiatives, which cost the country not only in terms of money but also generated ill will rather than goodwill.

I asked him how any system could provide a diverse group of students with the food they liked. He was quick to clarify that the problem was not so much the food itself - foreigners know that they cannot get the same food they eat at home when they travel abroad - but the overall atmosphere. If people were friendly and understanding, issues such as food would quickly be resolved. He narrated an experience he had in Nashik, where he had gone to attend a Christian fellowship camp. The food served there was no different from what was served at the FII. However, the friendly and caring atmosphere made all the difference and the food ceased to be an issue.

Only six months of his stay remained when I met him and he couldn't wait for those days to be over. Patrick spoke a language called *Ga*. I asked him what was the *Ga* word for *Happy New Year*. 'Afi shafa', he said. And how did they thank people ? 'Oiwala dong', he responded.

It was Christmas when I last met Patrick and the time had come for me to say goodbye to him. 'Oiwala dong. Afi shafa', I said and took his leave.

PASSAGE - II

When Chesterton wrote his Introductions to the Everyman Edition of Dickens's works, it seemed quite natural to him to credit Dickens with his own highly individual brand of medievalism, and more recently a Marxist writer, Mr. T.A. Jackson, has made spirited efforts to turn Dickens into a bloodthirsty revolutionary. The Marxist claims him as "almost" a Marxist, the Catholic claims him as "almost" a Catholic, and both claim him as a champion of the proletariat (or "the poor", as Chesterton would have put it). On the other hand, Nadezhda Krupskaya in her little book on Lenin, relates that towards the end of his life Lenin went to see a dramatised version of *The cricket on the Hearth*, and found Dickens's "middle-class sentimentality" so intolerable that he walked out in the middle of a scene.

Taking "middle-class" to mean what Krupskaya might be expected to mean by it, this was probably a truer judgement than that of Chesterton and Jackson. But it is worth noticing that the dislike of Dickens implied in this remark is something unusual. Plenty of people have found him unreadable, but very few seem to have felt any hostility towards the general spirit of his work.....

In Oliver Twist, Hard Times, Bleak House, Little Dorrit Dickens attacked English institutions with a ferocity that has never since been approached. Yet he managed to do it without making himself hated, and more than this, the very people he attacked have swallowed him so completely that he has become a national institution himself. In their attitude towards Dickens the English public has always been a little like the elephant which feels a blow with a walking stick as a delightful tickle. Before I was ten years old I had Dickens ladled down my throat by schoolmasters in whom even at that age I could see a strong resemblance to Mr. Creakle, and one knows without needing to be told that lawyers delight in Serjeant Buzfuz and that *Little Dorrit* is a favourite in the Home Office. Dickens seems to have succeeded in attacking everybody and antagonising nobody. Naturally this makes one wonder whether after all there was something unreal in his attack upon society. Where exactly does he stand, socially, morally and politically ? As usual, one can define his position more easily if one starts by deciding what he was *not*.

PASSAGE - I

31. Which one is the *correct* statement ?

    (1)   The person who narrates his experiences is from East Asia.

    (2)   The problems faced by Patrick are not true of other cities of India.

    (3)   Indians are not helpful to any foreigner.

    (4)   Racial discrimination prevails in India in subtle ways.

32. The narrator in the passage is a citizen of :

    (1)   Pune   (2)   Tanzania   (3)   Ghana   (4)   Ethiopia

33. Patrick often longed for :

    (1)   good Indian food.   (2)   friendly treatment from Indians.

    (3)   visiting historical places.   (4)   sports and entertainment.

34. The traditional Indian concept of a guest is to :

    (1)   treat the guest with minimum comforts.

    (2)   provide the guest good food, even if you are poor.

    (3)   treat the guest as equal to God.

    (4)   send the guest after three days.

35. The author of the passage speaks for :

    (1)   students from Africa.   (2)   students from Ghana.

    (3)   foreigners in general.   (4)   foreign students staying in India.

PASSAGE - II

36. The passage is about :

    (1)   G.K. Chesterton   (2)   T.A. Jackson

    (3)   Charles Dickens   (4)   Krupskaya

37. Dickens was claimed to be their own by :

    (1)   Protestants   (2)   Marxists   (3)   Methodists   (4)   Democrats

38. The author accepts the judgement of who as *"truer"* ?

    (1)   Chesterton's   (2)   Jackson's   (3)   Lenin's   (4)   Creakle's

39. Which work of Dickens was dramatised as per this passage ?

    (1)   Oliver Twist   (2)   Hard Times

    (3)   Bleak House   (4)   The Cricket on the Hearth

40. The author of the passage says that Dickens :

    (1)   did not attack the British institutions seriously.

    (2)   hated all the British policies.

    (3)   was not hated by the institutions which he attacked.

    (4)   did not have a moral and political stand.

Directions for question numbers 41 to 45 :

Each of these questions consists of a word in capital letters, followed by four words or phrases. Choose the alternative that is nearly similar in meaning to the word in capital letters in each case.

41. AVUNCULAR :

    (1)   crooked   (2)   kind and friendly

    (3)   keeping away   (4)   equal

42. BIGOT :

    (1)   an obstinate fanatic   (2)   an important person

    (3)   a bully   (4)   a cheat

43. ENDORSE :

    (1)   agree with   (2)   inspire love or affection

    (3)   repeat   (4)   expose to risk

44. DISMAY :

    (1)   affection   (2)   surprise   (3)   anxiety   (4)   dishonesty

45. HIGHFALUTIN :

    (1)   absurdly pompous and pretentious   (2)   a position of strength

    (3)   vague and contemptuous   (4)   highly moralistic

Directions for question numbers 46 to 50 :

Each of these questions consists of a word in capital letters, followed by four words or phrases. Choose the alternative that is most nearly opposite in meaning to the word in capital letters in each case.

46. DICHOTOMY :

(1) colouring   (2) division into two parts

(3) undecided   (4) monolithic

47. FECUND :

(1) grow fast   (2) barren   (3) fertile   (4) healthy

48. HARASS :

(1) attack   (2) negotiate   (3) help   (4) deny

49. MOIST :

(1) watery   (2) dry   (3) sleazy   (4) hot

50. POSH :

(1) urbane   (2) unfashionable   (3) crude   (4) comfortable

Directions for question numbers 51 to 60 :

Each of these questions consists of a sentence with four parts underlined. Select the part which is not appropriate as per standard written english.

51. For the past five days <u>I am suffering from</u> a headache <u>because of bad weather</u> and
                            (1)   (2)
      <u>the treatment</u> that <u>I have been undergoing</u> has not helped.
          (3)   (4)

52. In 1996 <u>she wrote</u> to me asking for money which I <u>gave but</u> <u>since then she is not returning</u> it
                (1)   (2)   (3)
      <u>inspite of</u> several reminders.
        (4)

53. The <u>prices are raising,</u> the production <u>is falling,</u> the monsoon is <u>eluding</u> but the politicians
       (1)   (2)   (3)

   <u>are assuring</u> us of our progress.
       (4)

54. If the <u>government falls</u> and the <u>elections are held</u> within <u>three months</u> the only
           (1)   (2)   (3)
   <u>gainers were the</u> small parties.
       (4)

55. He <u>was too poor</u> to <u>buy a</u> luxury car but <u>he is going for</u> one as his <u>friends say that he cannot</u>
        (1)   (2)   (3)   (4)
   buy even a bicycle.

56. <u>It was surprise</u> that those <u>who worked hard</u> for the organisation <u>never got rewards or rose in</u>
        (1)   (2)   (3)
   their careers but the <u>psychophants always get the best</u> of every situation.
                             (4)

57. <u>Whenever there is a riot</u> the anti-social elements <u>get the chance</u> to <u>take advantage</u> and
        (1)   (2)   (3)

   <u>they destroyed the public property.</u>
                  (4)

58. Some people <u>are good</u> at planning but <u>do not have</u> the ability to execute their plans and
                   (1)   (2)

   <u>there were others</u> <u>who execute them</u> without understanding.
        (3)   (4)

59. Why <u>India suffers</u> when <u>it has all</u> the resources and talents <u>was the question</u> that
           (1)   (2)   (3)

   <u>never gets answered.</u>
          (4)

60. <u>The funny part</u> of the <u>story was that</u> the <u>hero refuses to</u> laugh and the <u>heroine refuses to cry</u>
        (1)   (2)   (3)   (4)
   and plead.

Directions for question numbers 61 to 65 :

In each of these questions a related pair of words in capital letters is followed by four alternative pairs of words. Select the pair that best expresses a relationship <u>similar</u> to that expressed by the pair in capital letters.

61. LOVE : AFFECTION

    (1) bold : cunning   (2) determined : insistent

    (3) cruel : kind   (4) poor : rich

62. EFFORT : REWARD

    (1) laziness : success   (2) friendship : kinship

    (3) madness : treatment   (4) cleverness : delay

63. WAR : PEACE

    (1) thin : weak   (2) wet : dry

    (3) some : a few   (4) win : gain

64. DIAMOND : RUBY

    (1) tree : plant   (2) lion : fish

    (3) circle : stock   (4) lazy : smile

65. CURRICULUM : SYLLABUS

    (1) test : hit   (2) tree : leaf

    (3) mango : banana   (4) monkey : bison

Directions for question numbers 66 to 70 :

Each of these questions consists of a sentence followed by four alternatives. Select the alternative that conveys the same meaning as the sentence in the question.

66. Nelson Mandela refused to be the President of South Africa, unlike Robert Mugabe in Zimbabwe.

    (1) Nelson Mandela is too soft to remain in power.

    (2) Mugabe is a better leader than Mandela.

    (3) South Africa does not want to have a President for life.

    (4) Nelson Mandela wanted to set a good democratic tradition.

67. When Titans clash, pygmies perish without being noticed.
  (1) Big people want small people to die.
  (2) When important leaders fight among themselves, no one cares what happens to ordinary people.
  (3) When great personalities fall apart, their followers run away.
  (4) If you want to be safe, do not support any important person.

68. It was not the loss that hurt him as the persons who caused that loss.
  (1) When he incurred loss, he became sad.
  (2) He wanted his friends to compensate the loss.
  (3) He was hurt that his friends betrayed him more than the actual loss he suffered.
  (4) He never believed his friends and so he suffered a loss.

69. Heard melodies are sweet, and unheard melodies are sweeter.
  (1) Melodies are sweet, if they are not sung.
  (2) If we have imagination, we can create beautiful music in our minds.
  (3) Music is spoiled when it is sung.
  (4) Unsung melodies are not for ordinary people.

70. Navin has the books but Praveen has the knowledge.
  (1) Navin is fond of books.
  (2) Praveen is poor and so cannot buy the books.
  (3) Navin and Praveen share the books.
  (4) Navin has books but does not acquire the knowledge through them.

Directions for question numbers 71 to 75 :

Each of these questions consists of a sentence with one or more blanks followed by four alternatives. Select the word or set of words that best fit the meaning of the sentence as a whole.

71. The journey was _____ to _____ .
  (1) hard, rest   (2) too tiresome, enjoy
  (3) long, difficult   (4) humid, unhealthy

72. As soon as the debate _____, the matter was _____ .
  (1) continued, hot   (2) closed, started
  (3) was over, put to vote   (4) shelved, flared up

73. When the going gets _____ , only the tough _____ .
    (1) difficult, give up
    (2) tough, get going
    (3) weakened, boosted
    (4) monitored, conceded

74. Successive governments _____ the deal, but so far there is _____ any progress.
    (1) evaded, significant
    (2) failed, much
    (3) talked about, hardly
    (4) pursued, little

75. She was forthright but _____ therefore she _____ the enmity of many of her friends.
    (1) weak, got
    (2) quick, lost
    (3) harsh, earned
    (4) deceptive, gained

Directions for question numbers 76 to 80 :
Each of these questions consists of a phrase which is a definition followed by four alternatives. Select the one which best fits the definition in each case.

76. Inflation is associated with :
    (1) fall of governments.
    (2) growing more food.
    (3) price rise.
    (4) slump in the oil market.

77. *'Paranoia'* is a kind of :
    (1) gum extracted from trees.
    (2) medicine made of mushrooms.
    (3) loss of memory.
    (4) a kind of mental disorder.

78. Vandalism means :
    (1) soil erosion
    (2) wilful damage to property
    (3) attack on the enemy who is strong
    (4) bombardment from air

79. Innuendo means :
    (1) making a remark with double meaning
    (2) persuading someone to see the point
    (3) making a point forcefully
    (4) joking at others

80. Procrastination means :
    (1) acting on impulse
    (2) taking a decision carefully
    (3) postponing action
    (4) acting with vengeance

81. Which digits should come in place of * and $ if the no. 62684*$ is divisible by both 8 and 5 ?

    (1) 4, 0   (2) 0, 4   (3) 2, 4   (4) 8, 9

82. $100 \div 16\frac{2}{3} = ?$

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

83. Find 8% of Rs. 625.

    (1) 100   (2) 75   (3) 50   (4) 25

84. Find the value of x if $\sqrt{2+\sqrt{2+\sqrt{2+......}}} = x$:

    (1) 4   (2) 2   (3) 3   (4) 0

85. Three fifth of the square of a certain no. is 126.15. What is the number ?

    (1) 14.5   (2) 78.69   (3) 145   (4) 210.25

86. In the first 10 overs of a cricket game the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs ?

    (1) 6.25   (2) 6.5   (3) 6.75   (4) 7

87. The difference between a two digit number and the no. obtained by interchanging the digit is 36. What is the difference between the sum and the difference of the digits of the no. if the ratio between the digits of the number is 1 : 2 ?

    (1) 4   (2) 8   (3) 16   (4) 32

88. A person was asked to state his age in years. His reply was "Take my age three year hence multiply it by 3 and then substract three times my age three years ago and you will know how old I am". What was the age of the person ?

    (1) 24 years   (2) 20 years   (3) 18 years   (4) 32 years

89. $\left(\dfrac{x^a}{x^b}\right)^{1/ab} \cdot \left(\dfrac{x^b}{x^c}\right)^{1/bc} \cdot \left(\dfrac{x^c}{x^a}\right)^{1/ca} = ?$

    (1) 1   (2) $x^{1/abc}$ (3) 2   (4) 0

90. If $x\%$ of y is 100 and $y\%$ of z is 200, then find the relation between x and z.

(1) $z = 2x$ (2) $z = x/2$ (3) $z = x/4$ (4) $z = 4x$

91. The marked price of a watch was Rs. 720. A man bought the same for Rs. 550.80 after getting two successive discounts, the first being 10%. What was the second rate ?

(1) 12%   (2) 14%   (3) 15%   (4) 18%

92. A sum of Rs. 53 is divided among A, B and C in such a way that A gets Rs. 7 more than what B gets and B gets Rs. 8 more than what C gets. The ratio of their shares is :

(1) 16 : 9 : 18   (2) 25 : 18 : 10   (3) 18 : 25 : 10   (4) 15 : 8 : 30

93. The time in a clock is 20 minutes past 4 O' clock. Find the angle between hands of the clock.

(1) 0°   (2) 10°   (3) 5°   (4) 3°

94. The product of two fractions is $\dfrac{14}{15}$ and their quotient is $\dfrac{35}{24}$. The greater fraction is :

(1) $\dfrac{4}{5}$ (2) $\dfrac{7}{6}$ (3) $\dfrac{7}{4}$ (4) $\dfrac{7}{3}$

95. The total of the ages of Jayant, Prem and Saransh is 93 years. Ten years ago the ratio of their ages was 2 : 3 : 4. What is the present age of Saransh ?

(1) 24 years   (2) 32 years   (3) 34 years   (4) 38 years

96. Some persons can do a piece of work in 12 days. Two times the no. of such persons will do half of that work in :

(1) 6 days   (2) 4 days   (3) 3 days   (4) 12 days

97. Divide : $-9\,a^2\,b^3\,c^4$ by $3\,a\,b^2\,c^3$

(1) $-3\,a\,b\,c^2$ (2) $-3\,a^2\,b\,c$ (3) $3\,a\,b\,c$ (4) $-3\,a\,b\,c$

98. One pipe can fill a tank three times as fast as another pipe. If together the two pipes can fill the tank in 36 minutes, then the slower pipe alone will be able to fill the tank in :

(1) 81 min.   (2) 108 min.   (3) 144 min.   (4) 192 min.

99. Two trains starting at the same time from two stations 200 km apart and going in opposite directions cross each other at a distance of 110 km from one of the stations. What is the ratio of their speeds ?

(1) 9 : 20   (2) 11 : 9   (3) 11 : 20   (4) 11 : 21

100. In what proportion must a grocer mix two teas, one priced Rs. 1.25/kg and the other Rs. 1.50/kg so that the mixture may be worth Rs. 1.30/kg ?

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

101. The speed of a boat in still water is 15 km/hr. and the rate of current is 3 km/hr. The distance travelled downstream in 12 minutes is :

(1) 1.2 km   (2) 1.8 km   (3) 2.4 km   (4) 3.6 km

102. A dishonest milkman professes to sell his milk at cost price but he mixes it with water and thereby gains 25%. The percentage of water in the mixture is :

(1) 4%   (2) $6\frac{1}{4}\%$ (3) 20%   (4) 25%

103. At what rate percent per annum will the simple interest on a sum of money be 2/5 of the amount in 10 years ?

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

104. If $\log x + \log y = \log (x + y)$ then :

(1) $x = y$ (2) $xy = 1$ (3) $y = \frac{x-1}{x}$ (4) $y = \frac{x}{x-1}$

105. If the radius of a circle is increased by 75%, then its circumference will increase by :

(1) 25%   (2) 50%   (3) 75%   (4) 100%

106. Shyam was 12 years old y years ago. Represent his age b years from now :

(1) $b + y$ (2) $12y + b$ (3) $12 + y + b$ (4) $12y - b$

107. $\sqrt{1.69} - \sqrt{0.01} = ?$

(1) 1.10   (2) 1.20   (3) 1.30   (4) 1.40

108. Find the value of $\dfrac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}}$, Given $\sqrt{6} = 2.449$:

(1) 9.3   (2) 9.8   (3) 9.9   (4) 9.7

109. How many times do the hands of a clock coincide in a day ?

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

110. If $x = \sqrt{3018 + \sqrt{36 + \sqrt{169}}}$, the value of x is :

(1) 43   (2) 55   (3) 44   (4) 69

111. How many arrangements can be made out of the letter of the word ENGINEERING ?

(1) 277200   (2) 92400   (3) 69300   (4) 23100

112. The average of 11 numbers is 109. If the average of first six numbers is 105 and that of the last six numbers is 114, what is the middle number ?

(1) 125   (2) 110   (3) 120   (4) 115

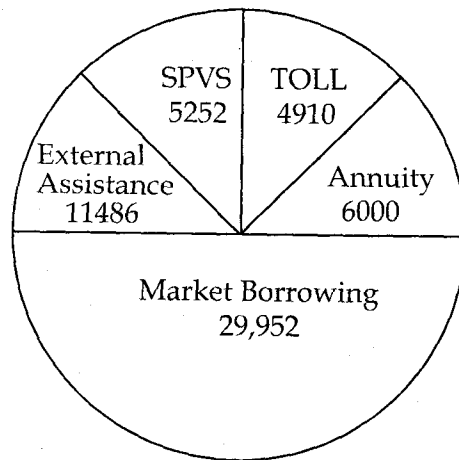**113.** The angle of elevation of the top of a tower from a certain point is 30°. If the observer moves 20 m towards the tower the angle of elevation of the top of the tower increases by 15°. The height of the tower is :

(1) 17.3 m   (2) 21.9 m   (3) 27.3 m   (4) 30 m

114. Find the wrong number in the series, 15, 16, 34, 105, 424, 2124, 12576 :

(1) 15   (2) 34   (3) 105   (4) 2124

The following pie chart shows the sources of funds to be collected by the NHAI for its phase II project. Study the pie-chart and answer Question No. 115 to 119.

Total funds to be arranged for project (phase II) = Rs. 57600 crores.

115. Near about 20% of the funds are to be arranged through :
    (1) SPVS
    (2) External Assistance
    (3) Annuity
    (4) Market Borrowing

116. The centre angle corresponding to Market Borrowing is :
    (1) 52°
    (2) 137.8°
    (3) 187.2°
    (4) 192.4°

117. The approximate ratio of the funds to be arranged through Toll and that through Market Borrowing is :
    (1) 2 : 9
    (2) 1 : 6
    (3) 3 : 1
    (4) 2 : 5

118. If NHAI could receive a total of Rs. 9695 crores as External Assistance by what percent should it increase the market borrowing to arrange for the shortage of funds :
    (1) 4.5%
    (2) 7.5%
    (3) 6%
    (4) 8%

119. If the toll to be collected through an outsourced agency by allowing a maximum 10% commission how much amount should be permitted to be collected by the outsourced agency so that the project is supported with Rs. 4910 crores.
    (1) Rs. 6213 crores
    (2) Rs. 5827 crores
    (3) Rs. 5455 crores
    (4) Rs. 5216 crores

120. $\dfrac{(0.5)^3 + (0.6)^3}{(0.5)^2 - 0.03 + (0.6)^2}$ is equal to :
    (1) 0.11
    (2) 0.33
    (3) 1.1
    (4) 3.3

121. At what percent above the cost price must an article be marked so as to gain 33% after allowing a customer a discount of 5% ?
   (1) 48%   (2) 43%   (3) 40%   (4) 38%

122. If a, b, c, d, e are five consecutive odd integers, what is their average ?

   (1) $\dfrac{a\,b\,c\,d\,e}{5}$ (2) $a+4$

   (3) $5(a+b+c+d+e)$ (4) $a+\dfrac{5}{2}$

123. A football team won 40% of the total no. of matches it played during a year. If it lost 50% of the matches played and 20 matches were drawn the total number of matches played by the team during the year was :
   (1) 40   (2) 50   (3) 100   (4) 200

124. The average of 6 numbers is 10. If the average of four of the numbers is 12, then the average of remaining numbers is :
   (1) 4   (2) 6   (3) 8   (4) 10

125. The LCM of two numbers is 63, and their HCF is 9. If one of the number is 27 the other number will be :
   (1) 9   (2) 21   (3) 17   (4) 189

126. Each interior angle of a regular polygon is approximately 157°. The number of sides of the polygon :
   (1) 8   (2) 10   (3) 12   (4) 14

127. In a group of 26 persons, 8 take tea but no coffee and 16 take tea. Then the persons who take coffee but do not take tea are :
   (1) 5   (2) 10   (3) 15   (4) 20

128. A solid cylinder has four times height then its radius. It is melted and cast into a cone of the same base. The ratio of their height is :
   (1) 3 : 1   (2) 1 : 2   (3) 1 : 3   (4) 3 : 5

129. A tank is full of milk from which 10 litres were taken out of 100 litres and then the tank is filled with water. This is done twice. The quantity of milk now left over in tank is :
   (1) 80 litres   (2) 81 litres   (3) 85 litres   (4) 89 litres

130. What should be added to 13533 to make it exactly divisible by 31 ?
   (1) 14   (2) 17   (3) 41   (4) 71

TEST - IV
REASONING

Based on the following statement, answer questions (131 - 135) :

There are 125 cubes of similar size arranged in the form of a bigger cube (5 cubes on each side, that is, $5 \times 5 \times 5$). From one corner of the top layer of this cube, four smaller cubes $(2 \times 2 \times 1)$ are removed. From the column on the opposite side, two cubes $(1 \times 1 \times 2)$ are removed. From the third corner too, three cubes $(1 \times 1 \times 3)$ are removed, and from the fourth column four cubes $(1 \times 1 \times 4)$ are removed. All exposed faces of the block thus formed are coloured red.

131. How many small cubes are left in the block ?
(1) 112
(2) 110
(3) 109
(4) 114

132. How many cubes do not have any coloured face ?
(1) 25
(2) 35
(3) 38
(4) 44

133. How many cubes have only one red face each ?
(1) 42
(2) 27
(3) 41
(4) 62

134. How many cubes have two coloured faces each ?
(1) 18
(2) 24
(3) 32
(4) 36

135. How many cubes in the top layer have three red faces each ?
(1) 3
(2) 4
(3) 6
(4) 8

136. A cube is painted green on all sides. It is then cut into 64 cubes of equal size. How many of these smaller cubes are painted on one side only ?
(1) 4
(2) 8
(3) 16
(4) 24

Study the following information and answer the questions (137 - 140) given below :
(i)   There are six people in a family (A, B, C, D, E, F)
(ii) C is the wife of B and the mother of F.
(iii) F is the granddaughter of E.
(iv) D is the grandmother of A and mother of B.
(v)   There are two married couples in the family.

137. What is C to A ?
(1) Mother
(2) Grandmother
(3) Daughter
(4) None of these

138. How many male members are there in the family ?
(1) 2
(2) 3
(3) 4
(4) Cannot be determined

139. Which of the following is true ?

    (1)   A is the sister of F
          (2)   A is the brother of F

    (3)   B has two daughters
          (4)   None of these

140. Who among the following is one of the couples ?

    (1)   C and D
    (2)   E and B
    (3)   D and E
    (4)   None of these

141. A couple has a son and a daughter. The age of the father is three times that of his daughter. The age of the son is half of his mother. The wife is nine years younger to her husband and the brother is seven years older than his sister. What is the age of the mother ?

    (1)   40 years
    (2)   45 years
    (3)   50 years
    (4)   60 years

142. The ratio of Asha's and her brother's age is 4 : 3. If there are still 12 months for her to complete 25 years, how old is her brother ?

    (1)   14
    (2)   15
    (3)   16
    (4)   18

143. The sum of the squares of two consecutive even numbers is 1252. The sum of the numbers is :

    (1)   48
    (2)   50
    (3)   52
    (4)   54

144. Introducing Rajesh, Neha said, His brother's father is the only son of my grandfather. How is Neha related to Rajesh ?

    (1)   Sister
    (2)   Daughter
    (3)   Mother
    (4)   Niece

145. The quantity of water in a cistern doubles every minute. It gets filled in 60 minutes. In how many minutes will it be half - filled ?

    (1)   20
    (2)   30
    (3)   40
    (4)   59

146. What is the minimum number of ducks which can swim in the following manner : two ducks are in front of one ; two ducks are behind one duck and one duck is between two ducks ?

    (1)   11
    (2)   9
    (3)   7
    (4)   3

147. In the following number series, how many 8s are immediately preceded by a number which does not divide it but followed by a number which divides it ?

2 8 2 8 3 8 5 8 8 8 5 3 2 8 2 3 8 4 7 1 5 8 3 8

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

Study the following information for answering the questions (148 - 150) :

(a)   Six books are kept one on top of the other.

(b)   The History book is just above Accounting. The Maths book is between Punjabi and Urdu.

(c)   English is between History and Punjabi.

148. Which book is between Maths and English books ?

(1)   History   (2)   Accounting   (3)   Urdu   (4)   Punjabi

149. Which book is at the bottom ?

(1)   Punjabi   (2)   Accounting   (3) Urdu   (4)   English

150. Which book is at the top ?

(1)   Urdu   (2)   Punjabi   (3)   Accounting   (4)   History

Read the following information and answer the questions numbered (151 - 155) :

An ironsmith has five iron articles P, Q, R, S and T.

(i)   P weighs double that of Q.

(ii)   Q weighs four and half times of R.

(iii) R weighs half that of T.

(iv)   T weighs less than P but more than R ; S is heavier than R.

151. Which one is lightest of them all ?

(1)   P   (2)   Q   (3)   R   (4)   S

152. T is lighter than which pair of objects ?

(1)   P, Q   (2)   S, R   (3)   P, R   (4)   S, Q

153. T is heavier than which other pair of objects ?

(1)   S, Q   (2)   S, R   (3)   P, R   (4)   P, Q

154. Which one of the following is heaviest ?

(1)   P   (2)   Q   (3)   R   (4)   S

155. What is the descending order of their weights ?

(1)   PQTSR   (2)   QSTPR   (3)   RPSQT   (4)   PQSTR

Answer the following questions (156 - 159) based on the information given below.

(i)   A, B, C or W may cause D

(ii)   B, C or W may cause E

(iii)   W and X may cause F

(iv)   D or E may cause G or H only if D and E are caused by B or C ; D or E may cause I only if D and E are caused by C.

(v)   Only E and F together may cause M or N.

(vi)   F may cause H only if it is caused by W or X.

156. Which can result from the largest number of immediately preceding events ?
   (1)   D   (2)   E   (3)   F   (4)   M

157. Which can result in the smallest number of subsequent events, counting both those that follow immediately and those that follow after another event ?
   (1)   A   (2)   B   (3)   C   (4)   W

158. How many different events or combinations of events may cause H ?
   (1)   5   (2)   6   (3)   7   (4)   8

159. Which may be a result of the smallest number of different combinations of events ?
   (1)   G   (2)   H   (3)   I   (4)   M

160. A directional post is erected on a crossing. In an accident, it was turned in such a way that the arrow which was first showing east is now showing south. A passerby went in a wrong direction thinking it is west. In which direction is he actually travelling now ?
   (1)   South   (2)   North   (3)   East   (4)   West

In questions (161 - 165), the relationship is to be deciphered, utilising the given relationship :

161. Dilatory is to Expeditious as Direct is to :
   (1)   Straight   (2)   Tortuous
   (3)   Curved   (4)   Circumlocutory

162. Fatigue is to Exertion as Wear is to :
   (1)   Use   (2)   Age   (3)   Wastage   (4)   Clothes

163. Museum is to Curator as Prison is to :
   (1)   Warden   (2)   Monitor   (3)   Manager   (4)   Jailor

164. Fire is to Ashes as Explosion is to :
   (1)   Sound   (2)   Debris   (3)   Fury   (4)   Flame

165. Amber is related to yellow colour, while Carmine is related to :
   (1)   Red colour   (2)   Green colour   (3)   Blue colour   (4)   Orange colour

In each of the following questions (166 - 170) some relationship is expressed among two groups of letter. Find out an appropriate replacement for the question mark (?) position from the given alternatives.

166. TALK : YFHG : : MIND : ?
(1)   RNJZ   (2)   RMNQ   (3)   QMRH   (4)   QMHR

167. HHUV : HJQP : : LLQQ : ?
(1)   LKOP   (2)   LKJI   (3)   LMNO   (4)   LNMK

168. FILM : ADGH : : MILK : ?
(1)   ADGF   (2)   HDGE   (3)   HDGF   (4)   HEGF

169. ACEG : ZXVT : : HJLN : ?
(1)   TRPN   (2)   SQOM   (3)   OQSU   (4)   RPNL

170. FIT : HKV : : JOB : ?
(1)   OSH   (2)   QRN   (3)   LQD   (4)   LCD

Find the odd man out in questions 171 - 173 :

171. (1)   Diamond   (2)   Gold
     (3)   Silver   (4)   Copper

172. (1)   Calf   (2)   Cub
     (3)   Pup   (4)   Cat

173. (1)   Walk   (2)   Jump
     (3)   Run   (4)   Sleep

In questions (174 - 176), find which one pair is different from the rest three :

174. (1)   8, 20   (2)   18, 45   (3)   16, 40   (4)   14, 28

175. (1)   32, 13   (2)   46, 20   (3)   51, 24   (4)   72, 45

176. (1)   25, 17   (2)   58, 50   (3)   49, 42   (4)   83, 75

177. Which one is like Grafting, Budding and Layering ?
(1)   Egg   (2)   Seed   (3)   Weeding   (4)   Digging

178. Which one is unlike Cone, Prism and Cube ?
(1)   Cylinder   (2)   Cuboid
(3)   Sphere   (4)   Rectangle

In question no. (179 - 180), which one pair of related words is different from the other three :

179. (1) Society - Member (2) Office - Employee
(3) Government - People (4) Team - Players

180. (1) Permission - Prevention (2) Transparent - Opaque
(3) Convergent - Divergent (4) Plenty - Executive

In the following questions (181 - 185), a number series is given. One term is wrong in that series. Find out that wrong from the given alternatives.

181. 3, 6, 5, 20, 7, 42, 9, 74.
(1) 3 (2) 42 (3) 74 (4) 20

182. 29, 34, 32, 37, 35, 41.
(1) 39 (2) 36 (3) 34 (4) 41

183. 6, 18, 36, 108, 216, 648, 1290, 3888.
(1) 36 (2) 108 (3) 1290 (4) 648

184. 0, 3, 8, 15, 27, 35, 48.
(1) 15 (2) 27 (3) 35 (4) 48

185. 529, 361, 289, 171, 121, 49.
(1) 361 (2) 289 (3) 171 (4) 121

186. Rajesh walked 25 metres towards south. Then he turned to his left and walked 20 metres. He then turned to his left and walked 25 metres. He then turned to his right and walked 15 metres. At what distance is he from the starting point and in which direction ?
(1) 60 metres East (2) 35 metres East
(3) 40 metres East (4) 35 metres North

187. Sonu starts from his house which faces south and after 100 metres of walking straight turns left. Again he walks 100 metres and turns right. Again he walks 55 metres and turns right. Which direction is Sonu facing now ?
(1) North (2) South (3) West (4) East

188. A police inspector drove 30 kms towards west and then 40 kms towards south. From this place, he drove 60 kms towards east and then 40 kms towards north. At what distance is he from the starting point ?
(1) 30 kms (2) 50 kms (3) 60 kms (4) 130 kms

189. A man walks 10 kms towards north from there he walks 6 kms towards south. Then he walks 3 kms towards east. How far and in which direction is he with reference to his starting point ?

(1)　7 kms east　　　　　　　　　　　(2)　5 kms west

(3)　5 kms north-east　　　　　　　　(4)　7 kms west

190. Lata moves towards south-east a distance of 7 m, then she moves towards west and travelled a distance of 14 m. From here she moves towards north-west a distance of 7 m and finally she moves a distance of 4 m towards east and stood at that point. How far is the starting point from where she stood ?

(1)　3 m　　　　　(2)　4 m　　　　　(3)　10 m　　　　　(4)　9 m

In question no. (191 - 195) complete the matrix by choosing the correct alternative for the place of question mark (?).

191.

1	4	9	?
1	2	3	4
2	4	6	?

(1)　16 and 8　　　(2)　25 and 5　　　(3)　36 and 4　　　(4)　49 and 7

192.

7	9	21	27
4	2	36	18
9	4	54	?

(1)　18　　　　　(2)　24　　　　　(3)　36　　　　　(4)　58

193.

H	K	Q
C	G	O
E	J	?

(1)　L　　　　　(2)　N　　　　　(3)　P　　　　　(4)　T

194.

K_7	L_4	M_{10}
L_8	M_5	L_{12}
M_9	L_6	?

(1)　L_{14}　　　(2)　K_{24}　　　(3)　K_{14}　　　(4)　M_{14}

195.

3 C	2 B	4 A
27 A	?	64 B
9 C	4 A	16 B

(1) 8 C   (2) 12 C   (3) 16 C   (4) 18 C

196. After a get together every person present, shakes the hand of every other person. If there were 105 hands shakes in all, how many persons were present in the party ?

(1) 13   (2) 14   (3) 15   (4) 16

197. A is taller than B and C is taller than D. If D is taller than B, then who is the shortest among them ?

(1) A   (2) B

(3) C   (4) Cannot be found out

198. Bablu ranked 16th from the top and 29th from the bottom among those who passed an examination. Six boys did not participate in the competition and five failed in the examination. How many boys were there in the class ?

(1) 44   (2) 50   (3) 55   (4) 40

199. A, B, C and D play a game of cards. A says to B, 'If I give you 8 cards, you will have as many as C has and I shall have 3 less than what C has. Also if I take 6 cards from C, I shall have twice as many as D has. If B and D together have 50 cards, how many cards has A got ?

(1) 23   (2) 27   (3) 37   (4) 40

200. Which is the following groups of letters will replace the question mark (?) in the following series ?

prt, ?, bdf, hjl, npr

(1) vya   (2) uwz   (3) vxz   (4) uxw

- o O o -

SPACE FOR ROUGH WORK