

# OPENMAT (XVI) ENTRANCE TEST FOR MANAGEMENT PROGRAMMES 2005

## TEST I General Awareness

1. The Constitution provides that no Vidhan Sabha can have less than 60 members. Which of the following State Assemblies is an exception to it ?  
(1) Tripura (2) Meghalaya  
(3) Sikkim (4) Mizoram
2. Who will discharge the functions of the President of India, if for any reason both the offices of the President and the Vice President of India fall vacant?  
(1) Prime Minister  
(2) Speaker of Lok Sabha  
(3) The senior-most Governor of states  
(4) Attorney General of India
3. India is *not* a member of  
(1) G-20 (3) G-15  
(2) G-8 (4) United Nations
4. The distance between the Earth and the Sun is the greatest during  
(1) Summer Solstice  
(2) Winter Solstice  
(3) Aphelion  
(4) Perihelion
5. CDMA in telephony stands for  
(1) Cyclic Divided Microwave Access  
(2) Code Division Multiple Access  
(3) Centrally Distinct Multiple Access  
(4) Coded Dots Mobile Access
6. Which one of the following books is *not* written by Munshi Premchand ?  
(1) *Rangbhoomi* (2) *Prem Pachisi*  
(3) *Vishkanya* (4) *Kayakalp*
7. Which Taal has sixteen matras ?  
(1) Jhaptal (2) Roopak Taal  
(3) Teen Taal (4) Aadi Taal
8. Which of the following countries won the World Youth Football Championship 2004 ?  
(1) Brazil (2) Spain  
(3) Argentina (4) Germany
9. "World Development Report" is an annual publication of  
(1) United Nations Development Programme  
(2) International Bank of Reconstruction and Development  
(3) World Trade Organisation  
(4) International Monetary Fund
10. India's first Neutron Reactor 'Kamini' was built at the nuclear research centre located at  
(1) Chennai (2) Kalpakkam  
(3) Kolkata (4) Trombay
11. Who among the following has written the controversial book '*Shivaji: Hindu King in Islamic India*' ?  
(1) Arundhati Roy (2) Sumit Sarkar  
(3) James W. Laine (4) Arthur Clarke
12. Which of the following countries does *not* border the Mediterranean Sea?  
(1) Malta (2) Libya  
(3) Italy (4) Bulgaria
13. The deepest oceanic trench 'Mariana' is located in  
(1) Atlantic Ocean (2) Arctic Ocean  
(3) Pacific Ocean (4) Indian Ocean
14. Which of the following pairs is *not* correctly matched?  
(1) 'Purna Swaraj' Resolution : 1929  
(2) Martyrdom of Bhagat Singh : 1931  
(3) Formation of Congress Socialist Party : 1938  
(4) Shimla Conference : 1945
15. Which of the following states has the lowest Sex Ratio as per CENSUS - 2001 of India?  
(1) Haryana (2) Punjab  
(3) Sikkim (4) Uttar Pradesh
16. Which of the following newspapers has won five Pulitzer Prizes for 2004 ?  
(1) The New York Times  
(2) Washington Post  
(3) The Los Angeles Times  
(4) The Wall Street Journal

17. In which of the following countries, have scientists recently created mice by using two genetic mothers and no fathers?  
 (2) Canada (2) Russia  
 (3) Japan (4) Germany
18. In April 2004, the President of which of the following countries was impeached by its Parliament?  
 (1) South Korea (2) Brazil  
 (3) Thailand (4) Lithuania
19. 'Straight from the Heart' is the autobiography of  
 (1) Imran Khan (2) Kapil Dev  
 (3) Richard Hadlee (4) Ian Botham
20. Which chemical is mainly responsible for depletion of ozone layer in the atmosphere?  
 (1) Sulphur dioxide  
 (2) Chlorofluoro-carbon  
 (3) Carbon dioxide  
 (4) Nitrous oxide
21. Which of the following statements is *incorrect*?  
 (1) 'Hertz' is used to measure frequency  
 (2) 'Kelvin' is used to measure temperature  
 (3) 'Bel' is used to measure atmospheric pressure  
 (4) 'Ohm' is used to measure electrical resistance
22. Which of the following statements is *incorrect*?  
 (1) Cosmic describes anything occurring or located in outer space  
 (2) Lithosphere is the top crust of the earth which includes the land surface and the ocean floors  
 (3) Silicon constitutes the second most important element in the composition of the earth  
 (4) A tributary is a river which leaves the main river and flows separately
23. The first Summit of the Non-Aligned Movement (NAM) was held in  
 (1) Algiers (2) Belgrade  
 (3) Jakarta (4) New Delhi
24. How many members can be nominated to the Lok Sabha by the President of India?  
 (1) 2 (2) 4  
 (3) 8 (4) 12
25. The shape of the earth is best described as  
 (1) Spherical (2) Spheroid  
 (3) Geoid (4) Oblate spheroid
26. Ginger is an example of  
 (1) Tuber (2) Rhizome  
 (3) Bulb (4) Corm
27. The critical temperature at which unsaturated air becomes saturated, is called  
 (1) Absolute Humidity (2) Condensation  
 (3) Dew Point (4) Frost
28. Water glass is chemically  
 (1) Aluminium silicate (2) Calcium silicate  
 (3) Potassium silicate (4) Sodium silicate
29. Who among the following is the India's first Woman Grandmaster in Chess?  
 (1) Koneru Humpy  
 (2) Aarthie Ramaswamy  
 (3) S. Meenakshi  
 (4) S. Vijaya Lakshmi
30. Which of the following projects envisages to connect all the police stations in the country in one network?  
 (1) POL. COM (2) IPOL. COM  
 (3) POLNET (4) IPOLNET

## TEST II

### English Language

*Directions for Q. Nos. 31 to 45 : These questions are based on the contents of the passages and II given below. Read the passages carefully and answer the questions that follow them on the basis of the contents of the passage in each case.*

#### Passage I

War has escaped the battlefield and now can, with modern guidance systems on missiles, touch virtually every square meter of the earth's surface. War has also lost most of its utility in achieving the traditional goals of conflict. Control of territory carries with it the obligation to provide subject peoples certain administrative, health, education, and other social services; such obligations far outweigh the benefits of control. If the ruled population is ethnically or racially different from the rulers, tensions and chronic unrest often exist which further reduce the benefits and increase the costs of domination. Large

populations no longer necessarily enhance state power and, in the absence of high levels of economic development, can impose severe burden on food supply, jobs, and broad range of services expected of modern governments. The non-economic security reasons for the control of territory have been progressively undermined by the advances of modern technology. The benefits of forcing another nation to surrender its wealth are vastly outweighed by the benefits of persuading the nation to produce and exchange goods and services. In brief, imperialism no longer pays.

Making war has been one of the most persistent of human activities in the 80 centuries since men and women settled and thereby became “civilized” but the modernisation of the past 80 years has fundamentally changed the role and function of war. In pre-modernized societies successful warfare brought significant material rewards, the most obvious of which were the stored wealth of the defeated. Equally important was human labour – control over people as slaves or levies for the victor’s army, and there was the productive capacity – agricultural lands and mines. Successful warfare also produced psychic benefits. The removal or destruction of a threat brought a sense of security, and power gained over others created pride and national self-esteem.

War was accepted in the pre-modernised society as a part of the human condition, a mechanism of change and an unavoidable, even noble, aspect of life. The excitement and drama of war made it a vital part of literature and legends.

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| <p>31. According to the passage, leaders of pre-modernised society considered war to be</p> <ul style="list-style-type: none"> <li>(1) a valid tool of national policy</li> <li>(2) an important act of aggression</li> <li>(3) economically wasteful and socially unfeasible</li> <li>(4) restricted in scope to military participants</li> </ul> <p>32. Which of the following <i>cannot</i> be cited as a psychic advantage of war in the pre-modernized society, according to the author?</p> <ul style="list-style-type: none"> <li>(1) The creation of a sense of security</li> <li>(2) The perception of war as a noble aspect of life</li> <li>(3) The enhancement of national self-esteem</li> <li>(4) The pride that followed as a result of power over others</li> </ul> <p>33. The author most likely places the word “civilized” in quotation marks in order to</p> <ul style="list-style-type: none"> <li>(1) show dissatisfaction at not having found a better word</li> <li>(2) acknowledge that the word was borrowed from another source</li> <li>(3) express irony that war should be a part of civilisation</li> <li>(4) impress upon the reader the tragedy of war</li> </ul> <p>34. The author mentions all of the following as possible reasons for going to war in a pre-modernised society, <i>except</i></p> <ul style="list-style-type: none"> <li>(1) possibility of material gain</li> <li>(2) total annihilation of the enemy and destruction of enemy territory</li> <li>(3) potential for increasing the security of the nation</li> <li>(4) desire to capture productive farming lands</li> </ul> <p>35. Which of the following best describes the tone of the passage?</p> <ul style="list-style-type: none"> <li>(1) Outraged and indignant</li> <li>(2) Humorous and wry</li> <li>(3) Concerned and optimistic</li> <li>(4) Scientific and detached</li> </ul> | <p>36. War in the pre-modern society was often the subject of legend because</p> <ul style="list-style-type: none"> <li>(1) it was a noble aspect of life</li> <li>(2) it was required to be recorded for history</li> <li>(3) it was an unavoidable part of existence</li> <li>(4) it was considered an exciting and dramatic phenomenon</li> </ul> <p>37. According to the passage, war in the modern time is no longer desirable because</p> <ul style="list-style-type: none"> <li>(1) people have realised the costs of going to war are enormous</li> <li>(2) there is far greater desire for peace and coexistence than for power</li> <li>(3) of the realisation that ruling over other countries is no longer economically advantageous</li> <li>(4) technological advances have obviated the need for war</li> </ul> <p>38. The words ‘war has escaped the battlefield’ have been used in the passage to indicate that</p> <ul style="list-style-type: none"> <li>(1) technological advances have made the field of war all pervasive</li> <li>(2) the area of war is now not definable</li> <li>(3) war has become uncontrollable</li> <li>(4) battlefields are now extinct</li> </ul> <p>39. The contents of the passage show that it has been written</p> <ul style="list-style-type: none"> <li>(1) very recently</li> <li>(2) about 5 years back</li> <li>(3) sometime in the 1980s</li> <li>(4) cannot be determined from the passage</li> </ul> |
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## Passage II

Putting “people first” is easy to say. And its currently politically correct. What Manager, in his or her mind, is going to admit publicly that employees take a back seat to cost cutting or profitability? It is important, however, not to confuse talk with action.

Putting people first is not necessarily consistent with long-term competitiveness. Managers must recognise this fact and are increasingly acting on it. Today’s organisations are more typically pursuing a “labour-cost minimization” strategy rather than a people-first strategy. When you look beyond what managers say, you find most business firms place profits over people. They re-engineer processes and cut the size of their permanent workforce. And they substitute temporary workers for full-time permanent staff. Organisations with problems typically look to staffing cuts as a first response. And organisations without problems are regularly reviewing their staffing needs to identify redundancies and overstaffing. Their goal is to keep themselves “lean and mean”. In today’s competitive environment, few organisations have the luxury to be able to provide workers with implied “permanent employment” or to offer anything more than minimal job security. For almost all organisations today, employees are a variable cost. Staffing levels are kept to a minimum and employees are continually added or deleted as needed. Interestingly, the labour-cost-minimisation strategy appears to be spreading worldwide. It began in Canada and the United States in the early 1990s. Now it has become the model for companies in countries such as Japan, South Korea and Thailand - places that historically protected their employees in good times and bad. Many firms in these countries have abandoned their permanent employment, people-first policies. Why ? Because such policies are inconsistent with aggressive, low-cost global competition.

The above debate is ongoing in most organisations where management must make decisions regarding efficiencies and effectiveness. Indeed, a bottomline focus must be balanced with the need to create an environment for employees that facilitates an acceptable bottomline !

40. Putting people first, according to the passage is
- (1) easier said than done
  - (2) profitable
  - (3) politically though not economically defensible
  - (4) good for the company’s public image
41. The term ‘lean and mean organisation’, as used in the passage, means
- (1) a meaningful organisation
  - (2) an organisation staffed with slim and well meaning people
  - (3) a competitive organisation with no overstaffing
  - (4) an organisation which means business
42. Some countries have abandoned their traditional policy of permanent employment because
- (1) employees have become a variable cost
  - (2) it is no longer viable in a globally competitive environment
  - (3) employees are no longer keen on life-long employment in the same organisation
  - (4) they would like to take the benefit of outsourcing
43. The term ‘a bottomline focus’ is used in the passage to indicate
- (1) the organisational focus on profitability
  - (2) a concern for the lowest possible costs
  - (3) the ground reality
  - (4) the attention to breakeven point
44. As per the passage, staff reduction is the first response of
- (1) organisations getting into the competitive mode
  - (2) organisations with problems
  - (3) organisations seeking to reengineer
  - (4) organisations without problems
45. The author’s tone in the passage is
- (1) ironical and critical
  - (2) scientific and incisive
  - (3) pragmatic and informed
  - (4) humorous and entertaining

**Directions for Q. Nos. 46 to 50. Each of these questions consists of a capitalized word followed by four alternatives. Select the alternative that is most similar in meaning to the capitalized word, in each case.**

46. ABERRATION  
 (1) deviation (2) abhorrence  
 (3) dislike (4) absence
47. COPIUS  
 (1) cheating (2) plentiful  
 (3) dishonourable (4) inspired
48. DECIMATE  
 (1) disgrace (2) kill  
 (3) search (4) collide
49. GERMANE  
 (1) middle European (2) prominent  
 (3) warlike (4) relevant
50. PIQUE  
 (1) pyramid (2) revolt  
 (3) resentment (4) inventory

**Directions for Q. Nos. 51 to 55. Each of these questions consists of a capitalized word followed by four alternatives. Select the alternative that is most nearly opposite in meaning to the capitalized word, in each case.**

51. VANGUARD  
 (1) regiment (2) rear  
 (3) protection (4) loyalty
52. RETROGRADE  
 (1) directing (2) evaluating  
 (3) inclining (4) progressing
53. EXTRINSIC  
 (1) reputable (3) swift  
 (2) inherent (4) ambitious
54. ODIOUS  
 (1) fragrant (2) redolent  
 (3) fetid (4) delightful
55. LACONIC  
 (1) milky (2) verbose  
 (3) wicked (4) flagrant

**Directions for Q. Nos. 56 to 65. Each of these questions consists of a sentence with four parts underlined. Select the part (1, 2, 3 or 4) which is incorrect as per standard written English.**

56. Although I was not invited to the party, I would very much have liked to have gone.  
 (1) (2) (3) (4)
57. Every man, woman and child in this community are now aware of the terrible consequences of the habit of smoking.  
 (1) (2) (3) (4)
58. The question arises as to who should go out in this heat and dust to collect mail from the letter box, you or me.  
 (1) (2) (3) (4)
59. I appreciate you helping me to tidy up the table, but I wish you would stack all the loose paper neatly.  
 (1) (2) (3) (4)
60. No one who has seen him work in the library can deny that Purab has an interest and aptitude for academic research.  
 (1) (2) (3) (4)
61. Everyone is expected to attend the official dinner except the field's supervisor, the sales manager and I.  
 (1) (2) (3) (4)

62. After I listened to the singer and enjoyed her performance, I hurried home to finish my homework.  
 (1) (2) (3) (4)
63. No sooner had he begun to speak when a disturbing noise arose from the audience.  
 (1) (2) (3) (4)
64. A great many educators firmly believe that Mathematics is one of the poorest taught subjects in the high school today.  
 (1) (2) (3) (4)
65. Any modern writer would be delighted to have his plays compared with Shakespeare.  
 (1) (2) (3) (4)

**Directions for Q. Nos. 66 to 70. Each of these questions consists of a sentence with one or more blank spaces, followed by four alternative words or set of words. Choose the word or set words which best fit the meaning of the sentence as a whole, in each case.**

66. The children marvelled at the strange foliage, it was their \_\_\_\_\_ to the tropics.  
 (1) voyage (2) introduction  
 (3) conduit (4) exposure
67. A wave of self- \_\_\_\_\_ convulsed her as she realised the \_\_\_\_\_ she had caused others.  
 (1) pity-suffering (3) doubt-happiness  
 (3) contempt-pain (4) esteem-service
68. The innovations of the \_\_\_\_\_ age have had \_\_\_\_\_ effects on people in all walks life.  
 (1) atomic - irrelevant (2) electronic - universal  
 (3) bronze - pre (4) computer - marked
69. We should have \_\_\_\_\_ trouble ahead when the road \_\_\_\_\_ into a gravel path.  
 (1) interrogated - shrank  
 (2) anticipated - dwindled  
 (3) expected - grew  
 (4) seen - collapsed
70. In the \_\_\_\_\_ downpour, the girls managed to \_\_\_\_\_ us and disappear.  
 (1) ensuing - evade (2) incessant - pervade  
 (3) torrential - provoke (4) insipid - avoid

**Directions for Q. Nos. 71 to 75. Each of the following questions consists of a related pair words in capitalised letters, followed by four pairs of words. Select the pair that expresses a relationship similar to that expressed in the capitalised pair in each case.**

71. LINEAGE: PERSON  
 (1) foliage: tree (2) deviation: word  
 (3) title: book (4) adolescence: child
72. PHYSIQUE: STURDY  
 (1) intellect: noble (2) punctuality: tardy  
 (3) investment: sound (4) fabric: worn
73. FRAYED: FABRIC  
 (1) thawed: ice (2) renovated: building  
 (3) frazzled: nerves (4) cultivated: manner
74. DRUDGERY: IRKSOME  
 (1) compliance: forced  
 (2) encumbrance: burdensome  
 (3) journey: tiresome  
 (4) dissonance: harmonious
75. SURPRISE: EXCLAMATION  
 (1) insolence: bow  
 (2) dismay: groan  
 (3) happiness: grimace  
 (4) difference: nod

**Directions for Q. Nos. 76 to 80 :** These questions consist of an idiom or a phrase, followed by four alternatives. Select the alternative which is the most appropriate meaning of the idiom or phrase as per standard usage, in each case.

76. Lose one's shirt  
 (1) misplace one's clothes  
 (2) forget to dress properly  
 (3) lose one's courage  
 (4) lose everything one has
77. Make a beeline for  
 (1) form a neat queue (2) go straight for  
 (3) gather around (4) dance around
78. Give someone a wide berth  
 (1) provide someone with ample space  
 (2) help and facilitate someone  
 (3) avoid someone completely  
 (4) disbelieve someone
79. Dutch courage  
 (1) exemplary courage  
 (2) the courage of one's convictions  
 (3) false sense of bravery brought about by drinking alcohol  
 (4) foolish display of bravado
80. Bury the hatchet  
 (1) dispose off  
 (2) agree to terminate  
 (3) become friendly again  
 (4) complete the task

### TEST III Quantitative Aptitude

81. The area of the four walls of a hall is 660 sq. m, the length is twice the breadth and the height is 11 m. Find the area of the ceiling.  
 (1) 200 sq. m (2) 300 sq. m  
 (3) 400 sq. m (4) 500 sq. m
82. How many cubes each of surface 4 sq. cm can be made from a 8 cm cube?  
 (1) 16 (2) 3  
 (3) 64 (4) 12
83.  $1 + 5\frac{1}{4}$  of  $3\frac{1}{2} \div 12\frac{1}{4}$  of  $1\frac{1}{2}$  is equal to  
 (1) 1 (2) 2  
 (3) 3 (4) 6
84. The distance between the tops of two trees 20 m and 28 m high is 17 m. The horizontal distance between the trees is  
 (1) 9m (2) 12 m  
 (3) 15 m (4) 31 m
85. The average of 3 prime numbers between 50 and 75 is  $\frac{191}{1}$ . Find the difference between the largest and the smallest prime numbers.  
 (1) No unique value (2) 12  
 (3) 17 (4) 19
86. In a zoo 65% of the animals were mammals. Now after one year, only 60% mammals are alive. How many mammals are alive now if only 60% of the original 1200 animals are alive and no new animal is added to the zoo?  
 (1) 270 (2) 450  
 (2) 720 (4) 468
87. The compound interest on a certain sum for 2 years is Rs. 1100 and the simple interest is Rs. 1000. If this sum is invested such that simple interest is Rs. 400 and the number of years is equal to rate percent per annum, find the new rate per cent.  
 (1) 2% (2) 4%  
 (3) 8% (4) 16%
88. A sphere of radius 3 cm is dropped into a cylindrical vessel partly filled with water. The radius of the vessel is 6 cm. If the sphere is submerged completely, by how much will the surface of water be raised?  
 (1) 1 cm (2) 2 cm  
 (3) 3cm (4) 6cm
89. A grocer bought 10 kg of apples for Rs. 81 out of which one kg were found rotten. If he wishes to make a profit of 10%, then he should sell it at — per kg.  
 (1) Rs. 10 (2) Rs. 10.10  
 (3) Rs. 9.90 (4) Rs. 11

90. If  $A : B = 2 : 3$ ,  $B : C = 5 : 9$ , then  $A : B : C$  is  
 (1)  $10 : 15 : 9$  (2)  $10 : 15 : 27$   
 (3)  $2 : 3 : 9$  (4)  $2 : 3 : 5$
91. The smallest square number which is exactly divisible by 12, 18 and 27 is  
 (1) 144 (2) 729  
 (3) 324 (4) 288
92. The value of  $\cos^2 13^\circ - \sin^2 77^\circ$  is  
 (1) 2 (2) 1  
 (3) 0 (4) 3
93. A single discount equivalent to a discount series of 40% and 20% is  
 (1) 50% (2) 52%  
 (3) 48% (4) 55%
94. If A's salary is 25% higher than B's salary, how much percent is B's salary lower than A's?  
 (1) 15% (2) 20%  
 (3) 29% (4)  $33\frac{1}{3}\%$
95. A number is increased by 10% and then reduced by 10%. After this operation, the number  
 (1) does not change (2) decreases by 1%  
 (3) increases by 1% (4) increases by 0.1%
96. Two equal sums of money were invested, one at 4% and the other at  $4\frac{1}{4}\%$ . At the end of 7 years, the simple interest received by the latter was Rs. 31.50 more than the former. Each sum was  
 (1) Rs. 1000 (2) Rs. 6300  
 (3) Rs. 900 (4) Rs. 700
97. If the cost of 12 pencils is equal to the selling price of 10 pencils, the profit percent in the transaction is  
 (1)  $16\frac{2}{3}\%$  (2) 18%  
 (3) 20% (4) 25%
98. Teas worth Rs. 126 / kg and Rs. 135 / kg are mixed with a third variety in the ratio 1 : 1 : 2. If the mixture is worth Rs. 153 / kg, the price of the third variety per kg will be  
 (1) Rs. 169.50 (2) Rs. 170  
 (3) Rs. 180 (4) Rs. 175.50
99. The curved surface of a right circular cone of height 15 cm and base diameter 16 cm is  
 (1)  $120\pi\text{ cm}^2$  (2)  $60\pi\text{ cm}^2$   
 (3)  $136\pi\text{ cm}^2$  (4)  $68\pi\text{ cm}^2$
100. If Ajit can do  $\frac{1}{4}$  of a work in 3 days and Siddharth can do  $\frac{1}{6}$  of the same work in 4 days, how much will Ajit get if both work together and are paid Rs. 180 in all ?  
 (1) Rs. 120 (2) Rs. 108  
 (3) Rs. 60 (4) Rs. 36
101. Two pipes can fill a tank in 10 hours and 12 hours respectively, while the third can empty it in 20 hours. If all the pipes are opened together, then the tank will be filled in  
 (1)  $7\frac{1}{2}$  hours (2) 10 hours  
 (3) 8 hours (4)  $9\frac{1}{10}$
102. A and B weave a carpet in 10 days and 15 days respectively. They begin to work together but B leaves after 2 days. In what time will A complete the work?  
 (1)  $6\frac{1}{3}$  days (2)  $6\frac{2}{3}$  days  
 (3) 7 days (4) 8 days
103. X and Y start from the same point and run around a circular stadium, whose circumference is 4200 m, at the rate of 500 m and 700 m per minute respectively in the opposite directions. They will meet each other in  
 (1) 3.5 minutes (2) 6.0 minutes  
 (3) 8.4 minutes (4) 21 minutes
104. A cassette recorder having a tag price of Rs. 900 is sold for Rs. 648 after two successive discounts. If the first discount was 10%, what was the second discount?  
 (1) 8% (2) 20%  
 (3) 12% (4) 13%
105. Iron and copper are melted together in a furnace of a die casting machine in the ratio of 9 : 11. What is the weight of the melted mixture, if 28.8 kg of iron has been consumed in it?  
 (1) 64 kg (2) 35.2 kg  
 (3) 32 kg (4) 36 kg
106. A frog tries to come out of a dried well 9 m deep with slippery walls. Every time the frog jumps 60 cm it slides back by 30 cm. How many jumps will the frog have to take to come out of the well?  
 (1) 20 (2) 29  
 (3) 28 (4) 30

107. The ratio of the area of a square to that of the square drawn on its diagonal is always  
 (1) 4: 5 (2) 3: 4  
 (3) 1: 2 (4) 2: 3
108. A newspaper seller starts from his residence on a scooter at a uniform speed of 30 km/hr and reaches the distribution point in 1 hr. 30 minutes. If he takes 1 hr. 40 minutes for the return journey, what was his speed for the return journey?  
 (1) 45 km/hr (2) 27 km/hr  
 (3) 36 km/hr (4) 33 km/hr
109. The denominator of a rational number is one more than its numerator. In case the numerator is increased by 2 and the denominator is decreased by 2, we obtain the value 2. What is the rational number?  
 (1) 5/6 (2) 4/5  
 (3) 3/4 (4) 2/3
110.  $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}} = ?$   
 (1) 2 (2) 3  
 (3) 4 (4) 6
111. The ages of Manu and Bharat are in the ratio of 6 : 5 and the sum of ages in 44 years. What will be the ratio of their ages after 8 years ?  
 (1) 1: 2 (2) 9: 7  
 (3) 8: 7 (4) 11: 10
112. The population of a town is 32000 and the annual increase is 50 per thousand. What will be the number of people after 3 years?  
 (1) 38004 (2) 37044  
 (3) 39014 (4) 38444
113. Which of the following fractions is the largest?  
 (1)  $\frac{47}{51}$  (2)  $\frac{49}{54}$   
 (3)  $\frac{53}{71}$  (4)  $\frac{94}{96}$
114. In a group of 500 people, 300 can speak Hindi only and 120 can speak English only. How many can speak both Hindi and English?  
 (1) 80 (2) 60  
 (3) 90 (4) 420
115. In an election between two candidates, the candidate who gets 30% of the votes polled was defeated by 15000 votes. The number of votes polled by the winning candidate is  
 (1) 12250 (2) 37500  
 (3) 26250 (4) 28000
116. In an office each employee deposits an equal amount to the number of employees work for a welfare scheme. An outsider deposits Rs. 15 to make the total amount to Rs. 415. H many employees are there in the office?  
 (1) 10 (2) 14  
 (3) 20 (4) 17
117. Find the least number by which 968 be multiplied so that it may be a perfect square.  
 (1) 4 (2) 2  
 (3) 11 (4) 12
118. If two horses are worth 3 camels, 9 camels are worth 10 cows and 100 cows are worth 3 elephants, what is the price of a horse if the elephant costs Rs. 36000 ?  
 (1) Rs. 1600 (2) Rs. 1800  
 (3) Rs. 700 (4) Rs. 2000
119. A number is multiplied by 9 and 9 is added to the product. If the resulting number divisible by 17, the smallest of such numbers is  
 (1) 12 (2) 15  
 (3) 13 (4) 16
120. A bag contains 8 red, 7 green and 5 blue balls. What is the maximum number of balls which should be drawn to ensure that atleast one ball of each colour is drawn?  
 (1) 9 (2) 11  
 (3) 14 (4) 16

**Directions for Q. Nos. 121 to 125 : Study the following information and answer the Q. nos. 121 to 125.**

Export of Gems in the year	Amount (in crores of Rs.)
2003	6100
2002	4399
2001	2140
2000	1200
1999	1530
1998	835

121. What is the total export in 1998 to 2002 ?  
 (1) 10100 crores (2) 10104 crores  
 (3) 9104 crores (4) 10304 crores
122. What is the average monthly export of gems in 2001 (in crores of rupees) ?  
 (1) 200 crores (2) 150 crores  
 (3) 178.33 crores (4) 180 crores

123. What is the average annual increase in export from 2001 to 2003 ?  
 (1) 198crores (2) 2030 crores  
 (3) 2400 crores (4) 1733 crores
124. What is the percentage decrease in export in 2000 over 1999 ?  
 (1) 22% (2) 25%  
 (3) 21.57% (4) 25.17%
125. The export in 2003 is nearly how many times of the exports in 1998 ?  
 (1) 6.9 (2) 7.1  
 (3) 7.3 (4) 7.7

**Directions for Q. Nos. 126 to 130. The following table shows the distribution of expenditure by a family in percentage. Answer the Q. nos. 126 to 130 based on this information.**

Food	37%
Cloth	24.1%
Accommodation	26.4%
Education	4.9%
Travel	7.6%

126. What percent of expenditure on food is spent on travel (approx.) ?  
 (1) 20.5 (2) 25.1  
 (3) 27.2 (4) 30.3
127. Expenditure on cloth is what percent of the expenditure on education (approx.) ?  
 (1) 20 (2) 500  
 (3) 150 (4) 400
128. Expenditure on education is how much per cent less than the expenditure on food (approx.) ?  
 (1) 87% (2) 47%  
 (3) 32.1% (4) 49%
129. Expenditure on accommodation is how much percent more than the expenditure on travel (approx.) ?  
 (1) 18.8% (2) 247%  
 (3) 40% (4) 140%
130. What fraction is the expenditure on travel to the whole expenditure (approx.) ?  
 (1)  $\frac{3}{40}$   
 (2)  $\frac{19}{231}$   
 (3)  $\frac{31}{40}$   
 (4)  $\frac{47}{40}$

## TEST IV Reasoning

**Directions for Q. Nos. 131 to 135. Find the number that comes next in the sequence.**

131. 8,12,18,27,\_\_\_\_\_
- (1) 36 (2)  $37\frac{1}{2}$   
 (3) 44 (4)  $40\frac{1}{2}$
132. 40,45,33,38,27,32,22,27,\_\_\_\_\_
- (1) 18 (2) 19  
 (3) 39 (4) 22
133. 41, 31, 23, 17, 11,\_\_\_\_\_
- (1) 6 (2) 5  
 (3) 8 (4) 10
134. 2, 9, 28, 65, 126,\_\_\_\_\_
- (1) 261 (2) 198  
 (3) 217 (4) 187
135. 1, 10, 101, 100, 1001, 1000,\_\_\_\_\_
- (1) 10001 (2) 10000  
 (3) 1111 (4) 1001

**Directions for Q. Nos. 136 to 142.**

For a panel of professors to assess the budget speech, the producer must choose two Republicans and two Democrats. At least one professor must be an economist and at least one a military expert. Available Republicans are A, B, C, D and E; available Democrats are F, G, H and I. C, F and G are economists, D and I are military experts. F will not sit in the same room with C, and will take part only if A is on the panel. D refuses to take part with G, and E refuses to take part with I.

136. Which of the following is *not* an acceptable panel?  
(1) F,H,A,D                      (2) F, I, A, D  
(3) G, H, A, C                      (4) G, I, A, C
137. If A and B are chosen as the Republicans, who can be chosen as the Democrats ?  
(1) F and I only  
(2) F and I or G and I only  
(3) F and G or G and H only  
(4) F and I, G and I, or H and I
138. If G is chosen, which of the following must be true ?  
I. Any acceptable panel must contain I.  
II. Any acceptable panel must contain A.  
III. There is no acceptable panel which contains B.  
(1) I only                      (2) II only  
(3) I and II only                      (4) I, II and III
139. How many acceptable panels can the producer put together?  
(1) 6                      (2) 7  
(3) 8                      (4) 9
140. Which of the following pairs *cannot* be part of an acceptable panel?  
I. F and G  
II. Band D  
III. C and D  
(1) I only                      (2) III only  
(3) I and II only                      (4) I, II and III
141. Which Republican belongs to the smallest number of different acceptable panels?  
(1) .B                      (2) C  
(3) D                      (4) E
142. Which professor belongs to the greatest number of different acceptable panels?  
(1) I                      (2) A  
(3) H                      (4) B

**Directions for Q. Nos. 143 to 146.**

Four sisters - S, T, U and V are playing a game such that the loser doubles the money of each of the other players from her share. They played four games and each sister lost one game, in alphabetical order. At the end of the fourth game, each sister had Rs. 32.

143. How many rupees did S start with ?  
(1) Rs. 66                      (2) Rs. 70  
(3) Rs. 10                      (4) Rs. 60
144. Who started with the lowest amount?  
(1) S                      (2) T  
(3) U                      (4) V
145. Who started with the highest amount?  
(1) S                      (2) T  
(3) U                      (4) V
146. What was the amount with U at the end of the second round?  
(1) Rs. 36                      (2) Rs. 72  
(3) Rs. 84                      (4) Rs. 54

**Directions for Q Nos. 147 to 153.**

Seven musical selections - H, I, J, K, M, O and P - must appear on a single two-sided long-playing record. For a given side, any choice of selections and any sequence of selections will be acceptable so long as the following conditions are met:

- (i) P must be first or last on a side.
- (ii) H must be placed on the same side as M, either immediately before M or immediately after M.
- (iii) I cannot be placed on the same side as K.
- (iv) O can be placed on the same side as H, but neither immediately before nor immediately after H.
- (v) Side 1 cannot begin with K.
- (vi) Each side must have at least two selections.
- (vii) Each selection must appear on the record exactly one time.

147. If side 2 begins with K, which of the following selections must appear on side 1 ?

- (1) H (2) I  
(3) J (4) M

148. If side 1 has exactly three selections and the first is O, which of the following could be the other two selections on side 1 ?

- (1) H followed by I (2) I followed by K  
(3) J followed by H (4) K followed by P

149. Which of the following is a possible arrangement, in order, of the seven musical selections?

Side 1                      Side 2

- |                |            |
|----------------|------------|
| (1) H, M, K, P | 1, O, J    |
| (2) P, O, H, M | K, I, J    |
| (3) 1, O, J    | M, H, P, K |
| (4) J, O, M    | H, I, P, K |

150. If I and J are the only selections on side 1, which of the following is a possible order of the selections for side 2 ?

- (1) H, M, O, P, K  
(2) K, H, O, M, P  
(3) M, H, O, K, P  
(4) P, H, M, O, K

151. If side 2 contains exactly four selections, beginning with M and ending with K, which of the following must be true?

- (1) H appears on side 1  
(2) I appears on side 2  
(3) J appears on side 2  
(4) O is the first selection on side 1

152. If O, H and P are among the selections on side 1, which of the following must be true?

- (1) Side 1 has exactly five selections  
(2) I appears on side 1  
(3) K appears on side 2  
(4) J is the first selection on side 2

153. If I, J and P are all of the selections that appear on side 1, and side 2 begins with M, which of the following must be true?

- (1) The second selection on side 2 is K  
(2) The third selection on side 2 is H  
(3) The last selection on side 2 is H  
(4) The last selection on side 2 is O

**Directions for Q. Nos. 154 to 156. Find the odd man out.**

154. (1) Dagger (2) Knife  
(3) Sword (4) Shield
155. (1) Nilgiri (2) Simla  
(3) Ooty (4) Nainital
156. (1) Roar (2) Shout  
(3) Trumpet (4) Grunt

**Directions for Q. Nos. 157 to 160.**

- (i) A, B, C, D, E, F and G are sitting in a row facing North. (ii) F is to the immediate right of E.  
(iii) E is 4th to the right of G.  
(iv) C is the neighbour of B and D.  
(v) Person who is third to the left of D is at one of the ends.

157. What is the position of A ?

- (1) Between E and D (2) Extreme right  
(3) Extreme left (4) Centre

158. Who are to the left of C ?

- (1) G and B (2) Only B  
(3) G, B and D (4) D, E, F and A

159. Who are neighbours of B ?

- (1) C and D (2) G and F  
(3) C and G (4) F and G

160. Which of the following statements is *not* true?

- (1) G is to the immediate left of B  
(2) F is 2nd to the right of D  
(3) A is at one of the ends  
(4) E is to the immediate left of D

**Directions for Q. Nos. 161 to 163. Find the missing letter.**

161. D F I M R

- (1) X (2) S  
(3) Y (4) T

162. L N M O N P O Q

- (1) O (2) P  
(3) R (4) S

163. A E I O

- (1) M (2) T  
(3) W (4) U

**Directions for Q. Nos. 164 and 165.**

A boy is asked to put in a basket one mango when ordered 1, one orange when ordered 2, one apple when ordered 3 and is asked to take out from the basket one mango and one orange when ordered 4. A sequence of orders is given as :  
12332142314223314113234

164. How many oranges were in the basket at the end of the above sequence?  
(1) 1 (2) 4  
(3) 3 (4) 2
165. How many total fruits were in the basket at the end of the above sequence?  
(1) 11 (2) 10  
(3) 9 (4) 8
166. Out of two-thirds of the total number of basketball matches, a team won 17 matches and lost 3 of them. What is the maximum number of matches that the team can lose and still win more than three-fourths of the total number of matches? (No match can end in a tie.)  
(1) 4 (2) 5  
(3) 3 (4) 6
167. A person bought five mangoes and ten oranges for forty rupees. Subsequently he returned one mango and got two oranges in exchange. The price of an orange is  
(1) Re.1 (2) Rs.3  
(3) Rs.2 (4) Rs.4
168. If  $72 + 45 = 18$   
 $86 + 14 = 19$   
 $56 + 42 = 17$   
 $69 + 31 = ?$   
(1) 16 (2) 18  
(3) 19 (4) 20

**Directions for Q. Nos. 169 to 174.**

Every week the owner of a produce store offers a special sale on either one or two vegetables, charging half-price for vegetables that are on special. During one four-week period, week 1 through week 4, the owner will offer a special on each of six vegetables L, O, P, R, S and T. Each vegetable will be on special for exactly one of the four weeks according to the following conditions:

- (i) A week in which two vegetables are on special cannot be immediately followed by another week in which two vegetables are on special.  
(ii) R must be on special in week 3.  
(iii) T must be on special in a week in which two vegetables are on special.  
(iv) P must be on special in a week sometime before the week in which L is on special.  
(v) S must be on special in a week sometime before the week in which O is on special.
169. If only one vegetable is on special in week 1, that vegetable could be  
(1) L (2) O  
(3) P (4) R
170. Which of the following could be on special together in week 2?  
(1) L and O (2) O and P  
(3) O and S (4) P and R
171. If P is on special in the same week as R, which of the following must be true?  
(1) L is on special in week 2  
(2) O is on special in week 1  
(3) O is on special in week 2  
(4) S is on special in week 4.
172. If L is on special in the same week as O, which of the following must be true?  
(1) P is on special in week 1  
(2) L is on special in week 4  
(3) T is on special in week 2  
(4) T is on special in week 3
173. If S is on special in week 3, which of the following must be on special in a week in which only one vegetable is on special?  
(1) L (2) P  
(3) R (4) S

174. If L is on special in the same week as S, which of the following must be true?
- (1) P is on special in week 2
  - (2) S is on special in week 1
  - (3) T is on special in week 3
  - (4) T is on special in week 4

**Directions for Q. Nos. 175 to 178. Unscramble the letters in the following words and find the odd man out.**

175. (1) UDSNYA (2) A YM  
(3) UNJE (4) UYJL
176. (1) OERS (2) OUSTL  
(3) LLIY (4) AGMNO
177. (1) IVEF (2) OWT  
(3) OFRU (4) DDA
178. (1) 1ST (2) KPSI  
(3) UPMJ (4) URN

**Directions for Q. Nos. 179 to 185.**

A five person team is to be sent to a nearby gathering of voters. The team must contain two persons to distribute leaflets, one speaker to address the voters, and a two-person defense squad. A, B and C are possible leafletters; C, D and E are possible speakers; F, G and H are possible members of the defense guard. A and C prefer to work with each other on the same team. E prefers to work only if F works.

179. Which is a possible team if all preferences are respected?
- (1) A, B, C, D, F
  - (2) A, C, D, E, F
  - (3) A, B, C, F, G
  - (4) A, C, E, G, H
180. If A is chosen as a member of the team and all preferences are respected, which must be true?
- (1) B must be a leafletter
  - (2) C must be a leafletter
  - (3) F must go
  - (4) Any of the three defense personnel may go
181. Which choice of personnel is impossible if all preferences are respected?
- (1) A and B as leafletters, C as speaker
  - (2) B and C as leafletters
  - (3) A and C as leafletters, F and H on defense
  - (4) G and H on defense

182. If A and B are leafletters and all preferences are respected, which is (are) true?

- I. C is the speaker.
- II. F is on defense.
- III. Either F or G is on defense.

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

183. How many different possible teams can the organizer assemble, if all preferences are respected?

- (1) 5
- (2) 8
- (3) 9
- (4) 13

184. Which person(s) must be chosen as part of any team, if all preferences are respected?

- I. A
- II. E
- III. F

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

185. Which person can be part of the smallest number of different possible teams, if everyone's preferences are respected?

- (1) A
- (2) B
- (3) D
- (4) E

**Directions for Q. Nos. 186 and 187.**

Eighty five children went to an amusement park where they could ride on the merry-go-round, roller coaster and giant wheel. It was known that 20 of them took all three rides, and 55 of them took at least two of the three rides. Each ride costs Re. 1 and the total receipts of the park were Rs. 145.

186. How many children did *not* try any of the rides?

- (1) 10
- (2) 15
- (3) 20
- (4) 25

187. How many children took exactly one ride?

- (1) 15
- (2) 20
- (3) 10
- (4) 12

**Directions for Q. Nos. 188 to 191.**

A training college has to conduct a refresher course for teachers of seven different subjects - Education, Psychology, Philosophy, Sociology, Economics, Science and Engineering from 22nd July to 29th July.

- (i) Course should start with Psychology and there should be a gap of 2 days between Sociology and Psychology.
- (ii) 23rd July, being Sunday, should be a holiday.
- (iii) Science should be on the previous day of Engineering.
- (iv) Course should end with Education.
- (v) Philosophy should be immediately after the holiday.
- (vi) There should be a gap of one day between Economics and Engineering.

188. Which subject will be on Tuesday?  
(1) Sociology (2) Economics  
(3) Education (4) Engineering
189. Which subject precedes Education?  
(1) Economics (2) Engineering  
(3) Philosophy (4) Psychology
190. How many days gap is in between Science and Philosophy?  
(1) 2 (2) 3  
(3) 4 (4) 5
191. Science follows which subject ?  
(1) Engineering (2) Psychology  
(3) Philosophy (4) Economics
192. Three of the following four are alike in a certain way and hence form a group. Which is the one that does *not* belong to the group ?  
(1) 51 (2) 144  
(3) 256 (4) 64

**Directions for Q. Nos. 193 to 197 : In each of these questions, five words, marked (a) to (e) are given. Arrange these words in alphabetic sequence as they appear in a dictionary. Select answers from the choices given under each set of words.**

193. (a) NEUTRALISE (1) d-a-c-e-b (2) a-d-c-e-b  
(b) NEUTRAL (3) d-c-a-e-b (4) a-c-d-e-b  
(c) NEUTRALITY  
(d) NEUTRON  
(e) NEUTRALISM  
(1) d-b-c-a-e (2) b-a-e-c-d  
(3) b-e-c-d-a (4) b-e-a-c-d
194. (a) ORGAN (1) c-a-d-b-e (2) c-a-e-b-d  
(b) ORIGIN (3) c-a-d-e-b (4) e-d-b-a-c  
(c) ORIENT  
(d) ORGANIC  
(e) ORGANISE
195. (a) HORRIBLE (1) a-e-c-d-b (2) b-c-d-a-e  
(b) HOSIERY (3) a-e-c-b-d (4) a-e-d-c-b  
(c) HORROR  
(d) HORRID  
(e) HORSE
196. (a) REFINE  
(b) REFRESH  
(c) REFILL  
(d) REFORM  
(e) REFRAIN
197. (a) FLOWER  
(b) FLUX  
(c) FLUID  
(d) FLUSH  
(e) FLUE

**Directions for Q. Nos. 198 to 200.**

A person who is drawing up a will has exactly five potential heirs - S, T, U, V and W. The estate will distribute exactly seven lots of land, which are numbered 1 through 7. All seven lots will be distributed, subject to the following restrictions:

- (i) No lot is to be shared, and no heir can inherit more than three lots.
- (ii) Whoever inherits lot 2 cannot inherit any other lot. (iii) No heir can inherit both lot 3 and lot 4.
- (iv) If S inherits one or more lots, then U cannot inherit any. (v) If S inherits lot 2, then T must inherit lot 4.
- (vi) W must inherit lot 6 but cannot inherit lot 3.

198. If S inherits lot 2, who must inherit lot 3 ?

- (1) T
- (2) U
- (3) V
- (4) W

200. If U and V inherit no lots, which of the following must inherit three lots? .

- (1) S only
- (2) W only
- (3) Both S and T
- (4) Both S and W

199. If S inherits lot 2 and three heirs inherit two lots each, no one can inherit both lots

- (1) 1 and 3
- (2) 1 and 7
- (3) 1 and 6
- (4) 4 and 5