

ICET - 2007 PAPER

(BASED ON STUDENTS MEMORY)

Time : 2 Hours]

[Max. Marks : 200

SECTION - A
ANALYTICAL ABILITY

Questions : 75]

[Marks : 75

I) DATA SUFFICIENCY

Note : In questions numbered 1 to 20, a question is followed by data in the form of two statements labelled as I and II. You must decide whether the data given in the statements are sufficient to answer the questions. Using the data make an appropriate choice from (1) to (4) as per the following guidelines :

- Mark choice (1) if the statement I alone is sufficient to answer the question;
- Mark choice (2) if the statement II alone is sufficient to answer the question ;
- Mark choice (3) if both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient;
- Mark choice (4) if both the statements I and II together are not sufficient to answer the questions and additional data is required.

1. What is the value of $x + y$? ()

- I) $x - y = x^2 - y^2$ II) $x - y = y - x$

2. Is the integer 'a' even ? ()

- I) $8a$ is even II) $7a$ is odd

3. What is the value of the integer a? ()

- I) $\frac{1}{7} < \frac{1}{2+a} < \frac{1}{2}$ II) $a^2 + 24 = 10a$

4. Will it be a Wednesday tomorrow ? ()

- I) Coming Wednesday is a holiday
II) It is not Tuesday today.

5. How old is the son? ()

- I) Mother was 22 years when the son was born
II) Son retired in his 58th year and by then the mother was no more.

6. In a class of 120 students, how many girls got distinction. ()

- I) 20 boys in the class got distinction.
II) 25% of the students in the class got distinction.

7. What is the value of x ? ()

- I) $2x - 3y = 4$ II) $y^2 + 2y = -1$

8. What is the present age of A ? ()

- I) A was married in his 25th year.
II) A was a central government employee and retired in 1998 after completing 60 years.

9. Who is the heavier among four friends A, B, C and D. ()

- I) B is heavier than A but lighter than D
II) C is lighter than B

10. Is $A = B = C = D$? ()

- I) $A = 2B = C$ II) $D = 3B = C$

11. What is the angle R in the Triangle PQR ? ()

- I) $\angle P + \angle Q = 120^\circ$ II) $2\angle Q + \angle R = 110^\circ$

12. Is $a > b$? ()

- I) $|a - b| = 25$ II) $2a + b = 9$

13. A and B are standing on a sunny day. A's shadow is 10 feet long. B's shadow is 9 feet long. How tall is B ? ()

- I) A is standing 2 feet away from B
II) A is 6 feet tall

14. What is the value of the integer a ? ()

- I) $|a - 1| < 3$ II) $|a + 3| < 3$

15. What is the value of the non-negative integer x ?

- I) 6^x is odd II) 7^x is odd ()

16. What is the value of $a + b$? ()

- I) $a - 2b = 25$ II) $a^2 - 25 = 4ab - 4b^2$

17. Are the two triangles congruent ? ()

- I) They are both equilateral triangles.
II) They have equal bases and equal heights.

18. What is the two-digit number? ()

- I) The sum of the two digits is 6
II) The difference between the two digits is 2

19. If x and y are integers, is $x > y$? ()

- I) $\frac{x}{3} = \frac{y}{3}$ II) x is a multiple of y .

20. What are the dimensions of a rectangle ? ()

- I) Its area is 12 sq.meters
II) Its diagonal is 5 meters

II) PROBLEM SOLVING

a) Sequence and Series :

Note : In each of the questions numbered 21 to 35 a sequence of numbers or letters that follow a definite pattern is given. Each question has a blank space. This has to be filled by the correct answer from the four given options to complete the sequence without breaking the pattern.

21. 2, 8, 18, 32,, 72, 98 ()
 1) 46 2) 52
 3) 48 4) 50
22. 4, 13, 28, 49,, 109, 148 ()
 1) 76 2) 70
 3) 72 4) 74
23. $0010_2, 0011_2, \dots, 0111_2, 1011_2$ ()
 1) 1010_2 2) 1000_2
 3) 0101_2 4) 0110_2
24. 0, 7, 26, 63,, 215, 343 ()
 1) 126 2) 124
 3) 125 4) 127
25. ACEG, IKMO,, YACE ()
 1) QSUW 2) PRTV
 3) QSUV 4) QSVX
26. 6, 15, 35,, 143, 221 ()
 1) 81 2) 93
 3) 79 4) 77
27. 5, 10, 26,, 122, 170 ()
 1) 48 2) 50
 3) 49 4) 53
28. ABC, DEF, UK,, YZA. ()
 1) MNO 2) LMN
 3) NOP 4) PQR
29. 6 : 35 :: 77 : ()
 1) 135 2) 221
 3) 225 4) 321
30. 8 : 16 :: 125 : ()
 1) 426 2) 138
 3) 625 4) 526
31. AEI, CGK,, GKO, IMQ ()
 1) EIM 2) FJN
 3) DHL 4) EJM
32. A, H, A, L,, H, E ()
 1) S 2) T
 3) V 4) U
33. 216, 343,, 729. ()
 1) 470 2) 512
 3) 570 4) 626

34. BDE, DHL, HPX,, FLR. ()

- 1) JFV 2) PGV
 3) PFV 4) PFU

35. 05-01-1996, 27-01-1996, 18-02-1996,, 02-04-1996. ()

- 1) 08-03-1996 2) 28-02-1996
 3) 12-03-1996 4) 11-03-1996

Note : In questions 36 to 45 pick the odd thing out.

36. 1) 2 2) 3
 3) 5 4) 7
37. 1) 46 2) 58
 3) 69 4) 74
38. 1) 35 2) 77
 3) 91 4) 63
39. 1) 180 2) 247
 3) 240 4) 147
40. 1) 29 2) 47
 3) 51 4) 67
41. 1) 95 2) 91
 3) 92 4) 97
42. 1) B 2) D
 3) I 4) P
43. 1) BAT 2) CAT
 3) DOT 4) PAT
44. 1) 5 2) 50
 3) 122 4) 169
45. 1) 961 2) 531
 3) 169 4) 841

b) Data Analysis :

Note : The following Pie chart shows how the municipal funds are spent under different heads in a year. Study the chart and answer the questions 46 to 50.

Performance of Students of a College

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|------|------|------|------|------|------|------|
| No. of students appeared | 750 | 780 | 840 | 960 | 1040 | 1200 | 1430 |
| No. of students passed with distinction | 150 | 130 | 142 | 127 | 308 | 246 | 397 |
| No. of students passed | 300 | 390 | 278 | 483 | 472 | 354 | 323 |

46. The percentage of students who have passed with distinction in the year 2006 is ()
 1) 26.76% 2) 28.64%
 3) 27.76% 4) 28%
47. In which year the failure percentage is least?
 1) 2003 2) 2001 ()
 3) 2000 4) 2004

48. In which year the distinction percentage is maximum ? ()
 1) 2004 2) 2006
 3) 2001 4) 2000

49. The percentage of students who have passed or passed with distinction in the year 2004.
 1) 74% 2) 75% ()
 3) 76% 4) 77%

50. If the policy of the college is to give Rs. 1,000 as prize to each of the students passed with distinction, then in which year the college has spent maximum on this account? ()
 1) 2003 2) 2004
 3) 2005 4) 2006

Note : An automobile company manufactures vehicles as given in the following Pie diagram. Study this carefully and answer questions 51 to 55.

51. The ratio of the 75 CC Two - Wheelers and 50 CC Two - Wheelers is ... ()
 1) 2 : 1 2) 1 : 2
 3) 3 : 2 4) 2 : 3

52. The percentage of 150 CC motor bikes in the total production by the company is ()
 1) 30% 2) 33 1/3 %
 3) 32 1/3 % 4) 32%

53. If the number of 75CC two-wheelers manufactured in a month is 2700, then the total number of vehicles manufactured by the company in that month is ()
 1) 32400 2) 30860
 3) 32600 4) 33800

54. In a period, if the total number of vehicles manufactured by the company is 7200, then the number of 1000 CC cars among them is ()
 1) 1200 2) 1400
 3) 1000 4) 1500

55. The ratio of the four-wheelers and two-wheelers produced by the company is ()
 1) 6 : 13 2) 5 : 12
 3) 4 : 13 4) 5 : 13

c) Coding and Decoding :
 Note : In a certain code the words HONEST, EXAMINATION, BOY, RIGHT and WRONG are respectively written as UBARFG, RKNZVA NGVBA, OBL, EYTUG and JEBAT. Find the process of coding answer the questions 56 to 65.

56. The code for FIGHT is ()
 1) TVTUG 2) SVTUH
 3) SWTUG 4) SVTUG

57. The code for ICET is ()
 1) UPRG 2) VPRG
 3) VQRG 4) VPSG

58. The code for ARMY is ()
 1) NEZM 2) MEZL
 3) NEZL 4) NFZL

59. The code for SOLDIER is ()
 1) FBYQVRE 2) FBZQVRE
 3) FBYQVSE 4) FBYQURE

60. The code for SEVEN is ()
 1) FRIRZ 2) FRJRA
 3) FRIRB 4) FRIRA

61. Which word is coded as MINISTER ? ()
 1) ZVAVFGRE 2) ZVAVFHRE
 3) ZVAVFGSE 4) ZVAVFGRF

62. Which word is coded as KING ? ()
 1) XVAS 2) XVAT
 3) XVAU 4) XUAT

63. Which word is coded as HISTORY ? ()
 1) UVFGBEM 2) UVFGBEL
 3) UVFGAEL 4) UVFGBEK

64. Which word is coded as PLAN ? ()
 1) CYNZ 2) CYNB
 3) CYNA 4) CYND

65. Which word is coded as QUESTION ? ()
 1) DHRFGVBA 2) DHRFGUBA
 3) DHRFGVCA 4) DHRFGVDA

(d) Date, Time & Arrangement Problems :

66. The time on the clock is 3.00 p.m. If the hours hand is pointing towards West, then the direction of the minutes hand is ()
 1) North 2) South
 3) South-West 4) East

67. If the first day of June is a Saturday, then the date on which the last Saturday of that month falls is ()
 1) 22 2) 28
 3) 29 4) 30

68. If 9th March of 1995 is a Saturday, then the 9th March of 1996 is a ()
 1) Wednesday 2) Tuesday
 3) Sunday 4) Monday