

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2012.

M.C.A. (MASTER OF COMPUTER APPLICATIONS)

COURSE CODE : 352

Register Number :

Signature of the Invigilator
(with date)

COURSE CODE : 352

Time : 2 Hours

Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each of the question carefully and shade the relevant answer (A) or (B) or (C) or (D) or (E) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.

1. The sum of numerator and denominator of a fraction is 11. If 1 is added to the numerator and 2 is subtracted from the denominator, it becomes $\frac{2}{3}$. The fraction is

(A) $\frac{5}{6}$	(B) $\frac{6}{5}$
(C) $\frac{3}{8}$	(D) $\frac{8}{3}$
(E) None of the above	

2. If the selling price of an article is $\frac{4}{3}$ of its cost price, the profit in the transaction is

(A) $16 \times \frac{2}{3}\%$	(B) $20 \times \frac{1}{2}\%$
(C) $25 \times \frac{1}{2}\%$	(D) $33 \times \frac{1}{3}\%$
(E) None of the above	

3. Two Pipes A and B can fill a tank in 6 hours and 4 hours respectively. If they are opened on alternate hours and if pipe A is opened first, in how many hours, the tank shall be full?

(A) 4	(B) $4 \times \frac{1}{2}$
(C) 5	(D) $5 \times \frac{1}{2}$
(E) None of the above	

4. The area of a circle inscribed in an equilateral triangle is 154 cm^2 . Find the perimeter of the triangle

(A) 71.5 cm	(B) 71.7 cm
(C) 72.3 cm	(D) 72.7 cm
(E) None of the above	

5. If the area of three adjacent faces of a rectangular block are in the ratio of 2:3:4 and its volume is 9000 cu.cm , then the length of the shortest side is

(A) 10 cm	(B) 15 cm
(C) 20 cm	(D) 30 cm
(E) None of the above	

6. The egg vendor calls on his first customer and sells half his eggs and half an egg. To the second customer he sells half of what he had left and half an egg, and to the third customer he sells half of what he had then left and half an egg. By the way he did not break any eggs. In the end three eggs were remaining. How many did he start out with?

(A) 29	(B) 31
(C) 33	(D) 35
(E) None of the above	

7. Today was Lakshmi's birthday. She turned 24. Lakshmi is twice as old as Ramu was when Lakshmi was as old as Ramu now. How old is Ramu now?

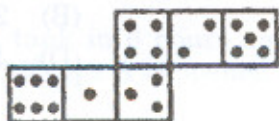
(A) 19	(B) 18
(C) 17	(D) 16
(E) None of the above	

8. There is a number, the second digit of which is smaller than its first digit by 4, and if the number was divided by the digit's sum, the quotient would be 7. Can you find the number?
- (A) 84 (B) 73
(C) 62 (D) 95
(E) None of the above
9. On a sports day, if 30 children were made to stand in a column, then 16 columns could be formed. If 24 children were to stand in a column, then how many columns could be formed?
- (A) 20 (B) 22
(C) 29 (D) 452
(E) None of the above
10. Rs. 20 is the true discount on Rs. 260 due after a certain time. What will be the true discount on the same sum due after half of the former time, the rate of interest being the same?
- (A) Rs. 10 (B) Rs. 10.40
(C) Rs. 15.20 (D) Rs. 13
(E) None of the above
11. The ratio between the present ages of P and Q is 5 : 7 respectively. If the difference between Q's present age and P's age after 6 years is 2, what is the total of P's and Q's present ages ?
- (A) 46 years (B) 48 years
(C) 52 years (D) 56 years
(E) None of the above
12. Find the odd man out: 385, 462, 572, 427, 671 and 264
- (A) 385 (B) 671
(C) 427 (D) 264
(E) None of the above
13. Find out the wrong number in the sequence: 3, 5, 12, 39, 154, 772, 4634
- (A) 39 (B) 154
(C) 5 (D) 3
(E) None of the above
14. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through
- (A) 145° (B) 150°
(C) 155° (D) 160°
(E) None of the above

15. In how many different ways can the letters of the word 'JUDGE' be arranged in such a way that the vowels always come together?

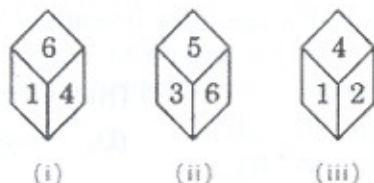
- (A) 48 (B) 120
 (C) 124 (D) 160
 (E) None of the above

16. How many dots lie opposite to the face having three dots, when the given figure is folded to form a cube?



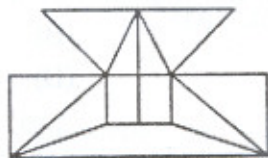
- (A) 2 (B) 4
 (C) 5 (D) 6
 (E) None of the above

17. Three positions of a dice are given. Find out which number is found opposite to the number 2 in the given cube.



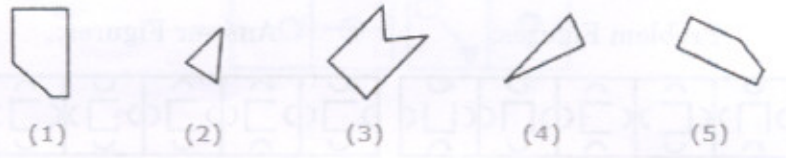
- (A) 6 (B) 5
 (C) 3 (D) 1
 (E) None of the above

18. Find the minimum number of straight lines required to make the given figure.



- (A) 16 (B) 17
 (C) 18 (D) 19
 (E) None of the above

19. Select the alternative which represents three out of the five alternative figures which when fitted into each other would form a complete square.



- (A) 124 (B) 125
 (C) 234 (D) 245
 (E) None of the above
20. Choose the alternative which is closely resembles the mirror image of the given combination.

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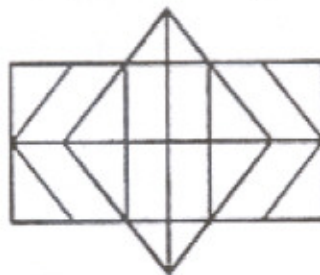
(1) ИuǝθqγuЯ

(2) ЯnγqθǝИИ

(3) ЯuγqθǝИИ

(4) ЯuγdθǝИИ

- (A) 1 (B) 2
 (C) 3 (D) 4
 (E) None of the above
21. Determine the number of rectangles and hexagons in the given figure.



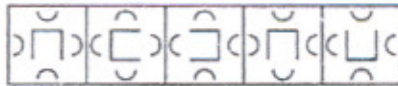
- (A) 30, 5 (B) 32, 3
 (C) 28, 5 (D) 30, 3
 (E) None of the above
22. Find out the alternative figure which contains figure (X) as its part.



- (X) (1) (2) (3) (4)
- (A) 1 (B) 2
 (C) 3 (D) 4
 (E) None of the above

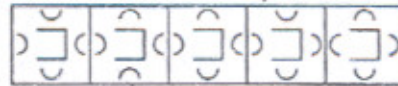
23. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

Problem Figures:



(A) (B) (C) (D) (E)

Answer Figures:



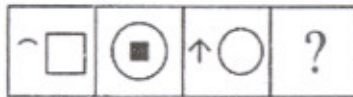
(1) (2) (3) (4) (5)

- (A) 1
(C) 3
(E) None of the above

- (B) 2
(D) 4

24. Select a suitable figure from the Answer Figures that would replace the question mark (?).

Problem Figures:



(A) (B) (C) (D)

Answer Figures:

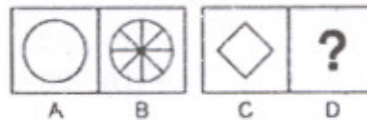


(1) (2) (3) (4) (5)

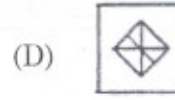
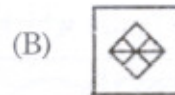
- (A) 1
(C) 3
(E) None of the above

- (B) 2
(D) 4

25. Select the figure from the set of answer figures which would replace the sign of question mark (?).

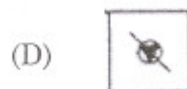
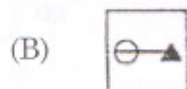
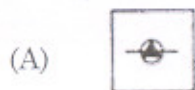
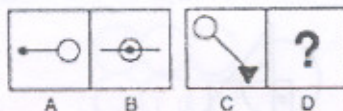


A B C D



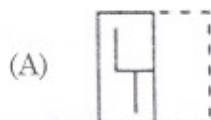
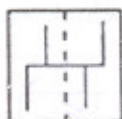
- (E) None of the above

26. Select the figure from the set of answer figures which would replace the sign of question mark (?).



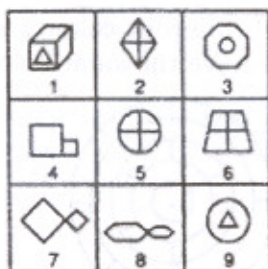
(E) None of the above

27. One out of these four options resembles the figure which is obtained by folding transparent sheet along the dotted line.



(E) None of the above

28. Group the given figures into three classes using each figure only once.



- (A) 1,3,9; 2,5,6; 4,7,8
(C) 1, 2, 4; 3,5,7; 6,8,9
(E) None of the above

- (B) 1, 3, 9; 2,7,8; 4,5, 6
(D) 1, 3, 6; 2,4,8; 5,7,9

29. Select the one which satisfies the same condition of placement of the dot as in the figure.

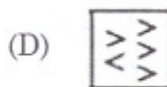
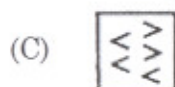
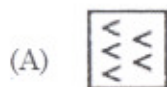
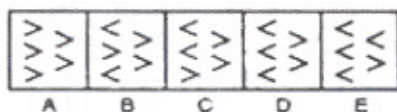


(X)



(E) None of the above

30. Select one figure from the Answer figures which will continue the same series as given in the Problem figures.



(E) None of the above

31. What is the minimum number of different colours required to paint the given figure such that no two adjacent regions have the same colour?



(A) 3

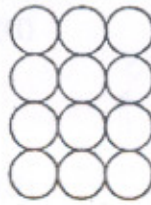
(B) 4

(C) 5

(D) 6

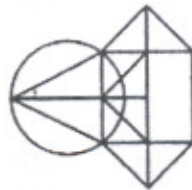
(E) None of the above

32. In the adjoining figure, if the centres of all the circles are joined by horizontal and vertical lines, then find the number of squares that can be formed.



- (A) 6 (B) 7
(C) 8 (D) 1
(E) None of the above

33. Find the number of triangles in the given figure.



- (A) 10 (B) 12
(C) 14 (D) 16
(E) None of the above

34. Find the minimum number of straight lines required to make the given figure.



- (A) 9 (B) 11
(C) 15 (D) 16
(E) None of the above

35. Find the number of triangles in the given figure.



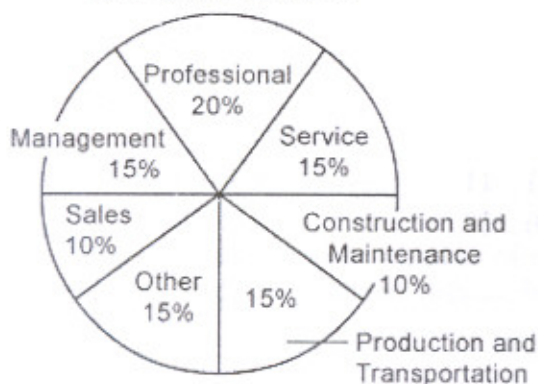
- (A) 5 (B) 6
(C) 8 (D) 10
(E) None of the above

36. Synonyms: RESTIVE
 (A) Restful (B) Restless
 (C) Crucial (D) Pause
 (E) None of the above
37. Synonyms: CRAVEN
 (A) Cowardly (B) Laziness
 (C) Politely (D) Arrogant
 (E) None of the above
38. Antonyms: PERFIDY
 (A) To impure (B) Thoroughness
 (C) Purification (D) Loyalty
 (E) None of the above
39. Antonyms: EFFICACY
 (A) Strange (B) Well-known
 (C) Inefficiency (D) Effectiveness
 (E) None of the above

[For Questions 40 – 42]

WORKFORCE OF COUNTRY X

Percent Distribution of Workforce by Employment Sector



Total Workforce: 140 million people

Workforce in the Service Sector by Area and Gender



40. Approximately how many people are in the production and transportation sector of the workforce?
 (A) 9 million (B) 12 million
 (C) 15 million (D) 21 million
 (E) None of the above

41. Approximately what fraction of the workforce in the food service area of the service sector is male?
- (A) $\frac{1}{4}$ (B) $\frac{1}{3}$
(C) $\frac{3}{7}$ (D) $\frac{4}{7}$
(E) None of the above
42. In the workforce, the ratio of the number of males to the number of females is the same for the sales sector as it is for the protective service area of the service sector. Which of the following is closest to the number of females in the sales sector?
- (A) 2.9 million (B) 3.6 million
(C) 10.4 million (D) 11.1 million
(E) None of the above

[For Questions 43 – 47]

Seven persons live in a street, having houses in line. Consider the following:

1. A lives in the corner's house
2. C is between E and G
3. There is 1 house between D and F
4. F is neighbor of G
5. There are two houses between A and G

43. Who lives in the second corner?
- (A) B (B) C
(C) D (D) E
(E) None of the above
44. Who lives in the middle?
- (A) C (B) D
(C) G (D) F
(E) None of the above
45. Who lives between B and G?
- (A) C (B) D
(C) E (D) F
(E) None of the above
46. _____ is neighbor of A?
- (A) B (B) G
(C) E (D) F
(E) None of the above

47. There are _____ houses between B and E?
- (A) 0 (B) 1
(C) 2 (D) 3
(E) None of the above

[For Questions 48 – 52]

Statement: In a group of five persons A,B,C,D, and E

- (a) A and C are intelligent in English and Reasoning.
(b) B and C are intelligent in English and General Awareness.
(c) E and D are intelligent in Arithmetic and Interview.
(d) E is intelligent in Interview, reasoning and Arithmetic.
(e) B and D are intelligent in Arithmetic and General Awareness.
48. Who is intelligent in English, arithmetic, and general awareness?
- (A) A (B) B
(C) C (D) D
(E) None of the above
49. Who is intelligent in English and reasoning but not in general awareness?
- (A) A (B) B
(C) C (D) D
(E) None of the above
50. Who is intelligent in Arithmetic, General Awareness and Interview?
- (A) A (B) B
(C) C (D) D
(E) None of the above
51. Who is intelligent in English General Awareness and Reasoning?
- (A) A (B) B
(C) C (D) D
(E) None of the above
52. Who is intelligent in Arithmetic, Reasoning and Interview?
- (A) C (B) B
(C) E (D) D
(E) None of the above

[For Questions 53 – 56]

Statement: Five persons A, B, C, D and E were traveling in a car. They were two ladies in the group. Of them who knew the car driving one was a lady. A is brother of D. B wife of D, drove at the beginning. E driven at the end.

53. Which of the following is a pair of brothers?
(A) AD (B) DE
(C) CA (D) CD
(E) None of the above
54. Who was the other lady in the group?
(A) AE (B) B
(C) C (D) D
(E) None of the above
55. In the case of which the following pairs, no relationship can be established with one else in the group?
(A) CE (B) DE
(C) CA (D) CD
(E) None of the above
56. How was E related to A?
(A) Brother (B) Sister
(C) Wife (D) Father
(E) None of the above

[For Questions 57 – 58]

Statement: Zulus always speak truth and Hutus always speak lies. There are three persons A, B & C. A met B and says "I am a Zulu or I am Hutu". We don't know what exactly he said then B meets C and says to C that "A is a Zulu". Then C replied "No, A is a Hutu".

57. How many Zulus are there?
(A) 1 (B) 2
(C) 3 (D) 4
(E) None of the above
58. Who must be a Zulu ?
(A) A (B) B
(C) C (D) D
(E) None of the above

59. In a total of 36 vehicles after one car there is one scooter. After 2nd car there will be two scooters and after 3rd car there will be 3 scooters so on . then find the number of scooters in the right half of arrangement.
- (A) 11 (B) 12
(C) 13 (D) 14
(E) None of the above
60. Statement: Sachin wrote to his brother at Bangalore to collect personally the application form from the University for the Post-graduation Course in Mathematics.
Assumptions:
- I. The University may issue application forms to a person other than the prospective student.
II. Sachin's brother may receive the letter well before the last date of collecting application forms.
- (A) Only assumption I is implicit
(B) Only assumption II is implicit
(C) Either I or II is implicit
(D) Both I and II are implicit
(E) None of the above
61. Statement: There is an unprecedented increase in the production of wheat this kharif season in most parts of the country.
Courses of Action:
- I. The government should immediately lower down the procurement price of wheat.
II. The farmers should be asked to store the excess produces with themselves to be used for future.
III. The government should make its best efforts to export wheat to augment its presence in international market.
- (A) Only I and II follow (B) Only II and III follow
(C) Only I and III follow (D) All follow
(E) None of the above
62. Statements: In a recent survey report, it has been stated that those who undertake physical exercise for at least half an hour a day are less prone to have any heart ailments.
Conclusions:
- I. Moderate level of physical exercise is necessary for leading a healthy life.
II. All people who do desk-bound jobs definitely suffer from heart ailments.
- (A) Only conclusion I follows (B) Only conclusion II follows
(C) Either I or II follows (D) Neither I nor II follows
(E) None of the above

63. Statement: Should India become a permanent member of UN's Security Council?
Arguments:
I. Yes. India has emerged as a country which loves peace and amity.
II. No. Let us first solve problems of our own people like poverty, malnutrition.
(A) Only argument I is strong (B) Only argument II is strong
(C) Either I or II is strong (D) Neither I nor II is strong
(E) None of the above
64. Statement: Should India encourage exports, when most things are insufficient for internal use itself?
Arguments:
I. Yes. We have to earn foreign exchange to pay for our imports.
II. No. Even selective encouragement would lead to shortages.
(A) Only argument I is strong (B) Only argument II is strong
(C) Either I or II is strong (D) Neither I nor II is strong
(E) None of the above
65. If $x=10^{-1}$, what is the value of $\{x+1/x\}\{1/x\}$?
(A) 91 (B) 101
(C) 121 (D) 131
(E) None of the above
66. A university admitted 100 students who transferred from other institutions. Of these students, 34 transferred from two-year community colleges, 25 transferred from private four-year institutions, and the rest transferred from public four-year institutions. If two different students are to be selected at random from the 100 students, what is the probability that both students selected will be students who transferred from two-year community colleges?
Give your answer as a fraction.
(A) 15/150 (B) 16/150
(C) 17/150 (D) 18/150
(E) None of the above

Directions (For questions 67 to 69) : In each of the following questions there is a certain relationship between two given words on one side of :: and one word is given on another side of :: while another word is to be found from the given alternatives, having the same relation with this word as the words of given pair bear. Choose the correct alternative.

67. House : Garbage :: Ore : ?
(A) Rubbish (B) Gangue
(C) Sand (D) Dregs
(E) None of the above

68. Taxonomy : Classification :: Pedology : ?
 (A) Nature (B) Farming
 (C) Soil (D) Mountain
 (E) None of the above
69. Archipelago : Islands :: Massif : ?
 (A) Mountains (B) Caves
 (C) Forests (D) Hillocks
 (E) None of the above
70. A man pointing to a photograph says "The lady in the photograph is my nephew's maternal grandmother". How is the lady in the photograph related to the man's sister who has no other sister?
 (A) Cousin (B) Sister-in-law
 (C) Mother (D) Mother-in-law
 (E) None of the above
71. The door of Shankar's house faces the East. From the backside of his house, he walks straight 50 metres, then turns to the right and walks 50 meters again. Finally, he turns towards left and stops after walking 25 meters. Now, Shankar is in which direction from the starting point?
 (A) South - East (B) North - East
 (C) South - West (D) North - West
 (E) None of the above

Directions (For 72 - 74) In these questions a statement is given followed by four inferences A, B, C, D and E. Which of those definitely follows from the given statement?

72. Soldiers serve their country
 (A) Those who serve their country are soldiers.
 (B) Women do not serve their country because they are not soldiers
 (C) Men generally serve their country
 (D) Some men who are soldiers serve their country
 (E) None of the above
73. Many smokers get cancer.
 (A) Cancer patients are smokers
 (B) Smoking may lead to cancer
 (C) Most smokers gets cancer
 (D) Smoking is injurious to health
 (E) None of the above

74. 'Most of the pens in the shop are expensive'
- (A) There are no cheap pens in the shop
 (B) All of the pens in that shop are expensive
 (C) There are cheap pens also in that shop
 (D) All the pens in that shop belongs to brand P
 (E) None of the above
75. A car starts from station A at the rate of 60 kmph and reaches the station B in 45 minutes. If the speed of the train is reduced by 6 kmph, how much more time will the train take to return from station B to station A?
- (A) 5 min (B) 6 min
 (C) 8 min (D) 9 min
 (E) None of the above
76. The day on 5th March of a year is the same day on what date of the same year?
- (A) 5th August (B) 5th November
 (C) 5th January (D) 5th February
 (E) None of the above
77. At what time between 5 and 6 O' clock are the hands of a clock coincident?
- (A) 20 minutes past 5 (B) 23 minutes past 5
 (C) $27 \frac{3}{11}$ minutes past 5 (D) 21 minutes past 5
 (E) 30 minutes past 5
78. Each edge of a cube is increased by 50%. Find out the percentage increase in the surface area
- (A) 250 % (B) 240 %
 (C) 125 % (D) 160 %
 (E) None of the above

Directions (For questions 79 – 80): Find out the missing number by analyzing the relationship between the existing numbers.

79. Find out the missing number in the box.

7	4	2
36	?	1
13	7	3

- (A) 16 (B) 9
 (C) 25 (D) 36
 (E) None of the above

80. Find out the missing number in the box.

5	69	84
7	59	90
4	?	50

- (A) 34 (B) 38
(C) 12 (D) 90
(E) None of the above
81. What least value should be assigned to \$ so that 683\$32 is divisible by 8?
(A) 0 (B) 1
(C) 2 (D) 3
(E) None of the above
82. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 respectively. In 30 minutes how many times do they toll together?
(A) 17 (B) 16
(C) 21 (D) 18
(E) None of the above
83. COSE is nothing but
(A) Common Operating System Environment
(B) Cost Of Software Enrichment
(C) Calculation Of Single Equation
(D) All of the above
(E) None of the above
84. The first Network Access System was developed by
(A) Xerox (B) Microsoft
(C) IBM (D) HP
(E) None of the above
85. Find out the odd item
(A) FireFox (B) Opera
(C) Internet Explorer (D) Apache
(E) None of the above
86. The study of interaction between people and machines is
(A) Mechinology (B) InterSys
(C) Ergonomics (D) Electrology
(E) None of the above

87. Which of following is a/are search engine(s) developed in India?
(A) Kirfi (B) Guruji
(C) Indus (D) All of the above
(E) None of the above
88. Which of the following is/are used to map URL address with IP?
(A) IP Finder (B) DNS
(C) IP+ (D) All of the above
(E) None of the above
89. SATA bus supports
(A) Hot Swapping (B) Soft Swapping
(C) Synchronous Swapping (D) All of the above
(E) None of the above
90. Which of the following is/ are online document manipulation service?
(A) ScribD (B) Documentor
(C) E-docs (D) All of the above
(E) None of the above
91. Rollyo is a /an
(A) Image editing tool (B) Web mailing tool
(C) Web Search Engine (D) All of the above
(E) None of the above
92. By default the port that FTP uses is
(A) 21 (B) 80
(C) 44 (D) All of the above
(E) None of the above
93. Which of the following program is not an utility?
(A) Debugger (B) Editor
(C) Spooler (D) All of the above
(E) None of the above
94. The highest decimal number that can be represented with 10 binary digits is
(A) 1023 (B) 1024
(C) 512 (D) All of the above
(E) None of the above

95. PARAM is a
(A) DBMS package
(B) Parallel computer
(C) Programming Language
(D) Parallel Random Access Memory
(E) None of the above
96. Which is an American data communication network?
(A) LAN
(B) Telenet
(C) BBS
(D) ARCnet
(E) None of the above
97. In C Language, the string HELLO WORLD needs
(A) 11 bytes
(B) 12 bytes
(C) 10 bytes
(D) 8 bytes
(E) None of the above
98. The first Mechanical Calculator built by
(A) Joseph Marie Jacquard
(B) John Mauchly
(C) Blaise Pascal
(D) Harward Ailken
(E) None of the above
99. Which is the first process that will be executed immediately after PC is switched on?
(A) POST
(B) INIT
(C) CMOS
(D) All of the above
(E) None of the above
100. MODEM is a
(A) DCE
(B) DTE
(C) DCE for first few minutes
(D) DTE for the first few minutes
(E) None of the above