



ASPIRE STUDY KANPUR

MCA Entrance Classes By Shivam Gupta

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NIMCET MOCK PAPER - 02

- The value of $\int_0^1 \frac{dx}{e^x + e^{-x}}$ is
 (a) $\tan^{-1} \left(\frac{1-e}{1+e} \right)$ (b) $\tan^{-1} \frac{e-1}{e+1}$
 (c) $\frac{\pi}{4}$ (d) $\tan^{-1} e - \frac{\pi}{4}$
- The area bounded by the curves $x^2 + y^2 = 4$; $x^2 = -\sqrt{2}y$ and $x = y$ is
 (a) $2\pi + \frac{1}{3}$ (b) $\pi - \frac{1}{3}$
 (c) $\pi + \frac{1}{3}$ (d) None of these
- The order of the differential equation whose general solution is given by $y = (c_1 + c_2) \sin(x + c_3) - c_4 e^x + c_5$ is:
 (a) 5 (b) 4 (c) 2 (d) 3
- The values of b and c for which the identity $f(x + 1) - f(x) = 8x + 3$ is satisfied, where $f(x) = bx^2 + cx + d$, are:
 (a) $b = 2, c = 1$ (b) $b = 4, c = -1$
 (c) $b = -1, c = 4$ (d) None of these
- If $f(x) = \sin^2 x + \sin^2 \left(x + \frac{\pi}{3} \right) + \cos x \cdot \cos \left(x + \frac{\pi}{3} \right)$ and $g\left(\frac{5}{4}\right) = 1$, then $(g \circ f)(x) =$
 (a) 1 (b) 2 (c) 3 (d) 4
- Let f be an injective map with domain $\{x, y, z\}$ and range $\{1, 2, 3\}$ such that exactly one of the following statements is correct and the remaining are false: $f(x) = 1, f(y) \neq 1, f(z) \neq 2$. The value of $f^{-1}(1)$ is:
 (a) y (b) x (c) z (d) none of these
- If x is real, then the expression $\frac{x^2 + 34x - 71}{x^2 + 2x - 7}$:
 (a) cannot lie between 5 and 9
 (b) always lies between 5 and 9
 (c) is not real
 (d) none of these
- Let $f: [4, \infty) \rightarrow [4, \infty)$ be a function defined by $f(x) = 5^{x(x-4)}$, then $f^{-1}(x)$ is:
 (a) $2 - \sqrt{4 + \log_5 x}$ (b) $2 + \sqrt{4 + \log_5 x}$
 (c) $\left(\frac{1}{5}\right)^{x(x-4)}$ (d) none of these
- $\lim_{x \rightarrow 0} \frac{1 - \cos^3 x}{x \sin x \cos x}$ is equal to:
 (a) $\frac{2}{5}$ (b) $\frac{3}{5}$
 (c) $\frac{3}{2}$ (d) $\frac{3}{4}$
- Let $L = \lim_{x \rightarrow 0} \frac{a - \sqrt{a^2 - x^2} - \frac{x^2}{4}}{x^4}$, $a > 0$. If L is finite, then
 (a) $a = 2$ (b) $a = 1$
 (c) $L = \frac{1}{64}$ (d) $L = \frac{1}{32}$
- Let $f(x) = \begin{cases} x^p \sin \frac{1}{x}, & x \neq 0 \\ 0, & x = 0 \end{cases}$, then $f(x)$ is continuous but not differentiable at $x = 0$, if:
 (a) $0 < p < 1$ (b) $1 \leq p < \infty$
 (c) $-\infty < p < 0$ (d) $p = 0$
- Let $f(x) = \frac{\sin 4\pi[x]}{1 + [x]^2}$, where $[x]$ is the greatest integer less than or equal to x , then:
 $f(x)$ is not differentiable at some points
 $f'(x)$ exists but is different from zero
 $f'(x) = 0$ for all x
 $f'(x) = 0$ but f is not constant function
- $x = a \sin \theta$ and $y = b \cos \theta$, then $\frac{d^2y}{dx^2} =$
 (a) $\frac{a}{b^2} \sec^2 \theta$ (b) $-\frac{b}{a} \sec^2 \theta$
 (c) $-\frac{b}{a^2} \sec^3 \theta$ (d) $\frac{b}{a^2} \sec^2 \theta$
- If $y = f(x)$ is an odd differentiable function defined on $(-\infty, \infty)$ such that $f'(3) = -2$, then $f'(-3)$ equals
 (a) 4 (b) 2 (c) -2 (d) 0



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15. The adjacent sides of a rectangle with given perimeter as 100cm and enclosing maximum area are:
(a) 10cm and 40cm (b) 20cm and 30cm
(c) 25cm and 25cm (d) 15cm and 35cm
16. If a, b, c be non-zero real numbers such that $\int_0^1 (1 + \cos^8 x)(ax^2 + bx + c)dx = \int_0^2 (1 + \cos^8 x)(ax^2 + bx + c)dx = 0$, then the equation $ax^2 + bx + c$ will have:
(a) one root between 0 and 1 and another root between 1 and 2
(b) both the roots between 0 and 1
(c) both the roots between 1 and 2
(d) none of these
17. If the normal to the curve $y = f(x)$ at the point (3,4) makes an angle $\frac{3\pi}{4}$ with positive x -axis, then $f'(3) =$
(a) -1 (b) $-\frac{3}{4}$ (c) $\frac{4}{3}$ (d) 1
18. The slopes of the common tangent to the hyperbolas $\frac{x^2}{9} - \frac{y^2}{16} = 1$ and $\frac{y^2}{9} - \frac{x^2}{16} = 1$ are:
(a) 1 (b) -1 (c) 2 (d) -2
19. If $\log_{0.3}(x-1) < \log_{0.9}(x-1)$, then the interval in which x lies, is:
(a) (0,2) (b) (2, ∞) (c) (1, ∞) (d) None
20. If roots of $x^2 - (a-3)x + a = 0$ are such that at least one of the roots is greater than 2, then
(a) $a \in [7, 9]$ (b) $a \in [7, \infty)$
(c) $a \in [9, \infty)$ (d) $a \in [7, 9]$
21. If $a, b, c \in \mathbb{R}^+$ such that $a + b + c = 18$, the maximum value of $a^2 b^2 c^4$ is equal to
(a) $2^{19} \cdot 3^3$ (b) $2^{18} \cdot 3^3$
(c) $2^{18} \cdot 3^2$ (d) $2^{19} \cdot 3^2$
22. The expression $\tan\left(i \log\left(\frac{a-ib}{a+ib}\right)\right)$ reduces to
(a) $\frac{ab}{a^2+b^2}$ (b) $\frac{2ab}{a^2-b^2}$
(c) $\frac{ab}{a^2-b^2}$ (d) None
23. If the roots of $z^3 + iz^2 + 2i = 0$ represents the vertices of a ΔABC in the Argand Plane, then the area of the triangle is
(a) 4 (b) 3 (c) 2 (d) 1
24. The value of $\sum_{r=0}^n (2r+1)({}^nC_r)^2$ is equal to
(a) $(2n+2) {}^{2n}C_n$ (b) $(n+1) {}^{2n}C_n$
(c) $(2n+1) {}^{2n}C_n$ (d) $n \cdot {}^{2n}C_n$
25. The number of integral terms in the expansion of $\left(7^{\frac{1}{3}} + 11^{\frac{1}{9}}\right)^{6561}$ is
(a) 721 (b) 730 (c) 745 (d) None
26. $2\left[1 + \frac{a^2}{2!} + \frac{a^4}{4!} + \dots\right]$, $a = \log_e n$ is equal to
(a) $\frac{n-1}{n}$ (b) $\frac{n^2-1}{n}$
(c) $\frac{n+1}{n}$ (d) $\frac{n^2+1}{n}$
27. The number of ways in which 12 books can be put in 3 shells, 4 on each, is:
(a) $\frac{12!}{(4!)^3}$ (b) $\frac{12!}{3!(4!)^3}$
(c) $\frac{12!}{(3!)^3 4!}$ (d) None
28. Total number of 9 digit numbers that are divisible by 5, is equal to
(a) $2 \cdot 10^8$ (b) $9 \cdot 10^7$
(c) $9 \cdot 10^8$ (d) $18 \cdot 10^7$
29. Given that n is odd, the number of ways in which three numbers in AP, can be selected from 1, 2, 3, 4, ..., n is:
(a) $\frac{(n-1)^2}{2}$ (b) $\frac{(n+1)^2}{2}$
(c) $\frac{(n+1)^2}{4}$ (d) $\frac{(n-1)^2}{4}$
30. A natural number x is chosen at random from the first 100 natural numbers, Then the probability for the equation $x + \frac{100}{x} > 50$, is
(a) $\frac{1}{20}$ (b) $\frac{11}{20}$ (c) $\frac{1}{3}$ (d) None
31. For any two possible events A and B the expression $P\left(\frac{A}{A \cup B}\right)$ is always equal to
(a) $\frac{P(A \cup B) - P(B)}{P(A \cup B)}$ (b) $\frac{P(A \cup B) - P(A)}{P(A \cup B)}$
(c) $\frac{P(A)}{P(A \cup B)}$ (d) none



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32. In a box containing 100 bulbs, 10 are defective. The probability that out of a sample of 5 bulbs, none is defective is:
(a) $\frac{1}{10^5}$ (b) $\left(\frac{9}{10}\right)^5$ (c) ${}^{90}C_5/{}^{100}C_5$ (d) None
33. The number of solutions of $\log_2(x-1) = 2\log_2(x-3)$ is
(a) 2 (b) 1 (c) 6 (d) 7
34. The number of points in $(-\infty, \infty)$ for which $x^2 - \sin x - \cos x = 0$, is
(a) 6 (b) 4 (c) 2 (d) 0
35. Let $P = \{\theta: \sin \theta - \cos \theta = \sqrt{2} \cos \theta\}$ and $Q = \{\theta: \sin \theta + \cos \theta = \sqrt{2} \sin \theta\}$ be two sets. Then,
(a) $P \subset Q$ and $Q - P = \phi$ (b) $Q \neq P$
(c) $P \cap Q = \phi$ (d) $P = Q$
36. If $A = \{p \in N: p \text{ is a prime and } p = \frac{7n^2+3n+3}{n} \text{ for some } n \in N\}$, then the number of elements in the set A is
(a) 1 (b) 2 (c) 3 (d) 4
37. If R is a relation on a finite set having n elements, then the number of relations on A is
(a) 2^n (b) 2^{n^2} (c) n^2 (d) n^n
38. Let the function $f: R \rightarrow R$ be defined by $f(x) = 2x + \sin x$. Then, f is
(a) one to one and onto
(b) one to one but not onto
(c) onto but not one-to-one
(d) neither one-to-one nor onto
39. The contra positive of the statement $\sim P \Rightarrow (P \wedge \sim Q)$ is
(a) $P \Rightarrow (\sim P \vee Q)$ (b) $P \Rightarrow (P \wedge Q)$
(c) $P \Rightarrow (\sim P \wedge Q)$ (d) $\sim P \vee Q \Rightarrow P$
40. The value of $\frac{1}{2^4} \cdot \frac{1}{4^8} \cdot \frac{1}{8^{16}} \cdot \frac{1}{16^{32}} \dots$, is
(a) 1 (b) 2 (c) $3/2$ (d) $5/2$
41. Let S_1, S_2, \dots be squares such that for each $n \geq 1$, the length of a side of S_n equals the length of a diagonal of S_{n+1} . If the length of a side of S_1 is 10cm, then for which of the following values of n is the area of S_n less than 1 sq. cm?
(a) 7 (b) 8 (c) 5 (d) 6
42. The number of terms common between the sequences 1, 2, 4, 8, ... 100 terms and 1 + 4 + 7 + 10 + ... 100 terms is
(a) 6 (b) 4 (c) 5 (d) none
43. If $\log 2, \log(2^x - 1)$ and $\log(2^x + 3)$ are in A.P., then $2, 2^x - 1, 2^x + 3$ are in
(a) AP (b) HP (c) GP (d) none
44. If a, b, c are in A.P.; b, c, d are in GP and c, d, e are in HP, then a, c, e are in
(a) AP (b) GP (c) HP (d) none
45. If ${}^{n-1}C_r = (k^2 - 3) {}^nC_{r+1}$, then $k \in$
(a) $(-\infty, -2]$ (b) $[2, \infty)$
(c) $[-\sqrt{3}, \sqrt{3}]$ (d) $(\sqrt{3}, 2]$
46. The number of zeros at the end of $70!$ is
(a) 16 (b) 5 (c) 7 (d) 70
47. There are three piles of identical red, blue and green balls and each pile contains at least 10 balls. The number of ways of selecting 10 balls if twice as many red balls as green balls are to be selected is
(a) 3 (b) 4 (c) 6 (d) 8
48. How many numbers lying between 999 and 10000 can be formed with the help of digits 0, 2, 3, 6, 7, 8 when the digits are not repeated?
(a) 100 (b) 200 (c) 300 (d) 400
49. A lady gives a dinner party to 5 guests to be selected from nine friends. The number of ways of forming the party of 5, given that two of the friends will not attend the party together is
(a) 56 (b) 126 (c) 91 (d) None
50. In the expansion of $(1+x)^m(1-x)^n$, the coefficient of x and x^2 are 3 and -6 respectively, then values of m and n is
(a) 12,9 (b) 9,12 (c) 12,8 (d) 8,12



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Logical Ability & Reasoning

51. In a certain code language, "CARPET" is written as "TCEAPR". How is "NATIONAL" written in that same code?
 (a) NLATNOIA (b) LANOITAN
 (c) LNAANTOI (d) LNOINTAA
52. In a certain code language, "NEUROTIC" is written as "TICRONEU". How is "PSYCHOTIC" written in that same code?
 (a) TICOCHPSY (b) TICCHOPSY
 (c) TICCOHPSY (d) TICHCOPSY
53. Pointing to a lady, a man said. "The son of her only brother is the brother of my wife." How is the lady related to that man?
 (a) Mother's sister (b) Grandmother
 (c) sister of father-in-law (d) Mother-in-law
54. If B says that his mother is the only daughter of A's mother, how is A related to B?
 (a) Son (b) Father
 (c) Brother (d) Grandfather
55. On 8th March, 2005, Wednesday falls. What day of the week was it on 8th March, 2004?
 (a) Sunday (b) Monday
 (c) Tuesday (d) Wednesday

Directions (Q. 56-60): Read the following information and answer the questions based on it.

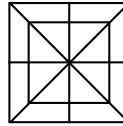
- I. The length, breadth and height of a rectangular piece of wood are $10\text{ cm} \times 8\text{ cm} \times 6\text{ cm}$ respectively.
 II. Sides of $10\text{ cm} \times 8\text{ cm}$ piece are coloured in red.
 III. Sides of $8\text{ cm} \times 6\text{ cm}$ are coloured in blue.
 IV. The remaining sides are coloured in green.
 V. Now the piece will be cut in such a way that cubes of $2\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$ will be made.

56. How many cubes shall have at least two colours red and green on their two sides?
 (a) 16 (b) 12 (c) 20 (d) 18
57. How many cubes shall have at least one side coloured red?
 (a) 40 (b) 32 (c) 12 (d) 24
58. How many cubes shall have at least one side coloured green?
 (a) 40 (b) 32 (c) 12 (d) None of these
59. How many cubes shall have at least one side coloured blue?
 (a) 40 (b) 32 (c) 12 (d) 24
60. How many cubes shall have only two colours green and blue on their sides?
 (a) 40 (b) 32 (c) 12 (d) None of these
61. Count the number of straight lines and triangles in the following figure ?



- (a) 10 straight lines and 34 triangles
 (b) 9 straight lines and 34 triangles
 (c) 9 straight lines and 36 triangles
 (d) 10 straight lines and 36 triangles

62. Count the number of triangles and squares in the following figure ?



- (a) 28 triangles, 10 squares
 (b) 28 triangles, 8 squares
 (c) 32 triangles, 10 squares
 (d) 32 triangles, 8 squares
63. How many such digits are there in the number 284371 each of which is as far away from the beginning of the number as when they are arranged in descending order ?
 (a) None (b) One (c) Two (d) Three
64. How many meaningful English words can be made with the letters AREN using each letter only once in each word ?
 (a) None (b) One (c) Two (d) Three
65. Four of the following are alike in a certain way and so form a group. Which is the one that does not belong to the group?
 (a) 12 (b) 14 (c) 18 (d) 22
66. Four of the following five are alike in a certain way and so form a group. Which is the one that does not belong to that group?
 (a) 91 (b) 46 (c) 37 (d) 62
67. A water tank is two-fifth full. Pipe A can fill a tank in 10 minutes and pipe B can empty it in 6 minute. If both the pipes are open, how long will it take to empty or fill the tank completely?
 (a) 6 min. to empty (b) 6 min. to fill
 (c) 9 min. to empty (d) 9 min. to fill
68. Pipe A can fill a tank in 5 hours, pipe B in 10 hours and pipe C in 30 hours. If all the pipes are open, in how many hours will the tank be filled?
 (a) 2 (b) 2.5 (c) 3 (d) 3.5
69. 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) 48 years (b) 52 years
 (c) 56 years (d) Cannot be determined

Directions (Q70-74) : Read the following information carefully and answer the questions that follow :

- I. Five friends P, Q, R, S and T travelled to five different cities of Chennai, Calcutta, Delhi, Bangalore and Hyderabad by five different



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- modes of transport of Bus, Train, Aeroplane, Car and Boat from Mumbai.
- II. The person who travelled to Delhi did not travel by boat.
- III. R went to Bangalore by car and Q went to Calcutta by aeroplane.
- IV. S travelled by boat whereas T travelled by train.
- V. Mumbai is not connected by bus to Delhi and Chennai.
70. Which of the following combinations of person and mode is not correct ?
 (a) P — Bus (b) Q — Aeroplane
 (c) R — Car (d) T — Aeroplane
71. Which of the following combinations is true for S?
 (a) Delhi — Bus (b) Chennai — Bus
 (c) Chennai — Boat (d) Data inadequate
72. Which of the following combinations of place and mode is not correct?
 (a) Delhi — Bus (b) Calcutta — Aeroplane
 (c) Bangalore — Car (d) Chennai — Boat
73. The person travelling to Delhi went by which of the following modes ?
 (a) Bus (b) Train
 (c) Aeroplane (d) Car
74. Who among the following travelled to Delhi ?
 (a) R (b) S
 (c) T (d) Data inadequate
- Directions (Q.75-79) Read the following information and answer the questions based on it :**
 In a school, there were five teachers. A and B were teaching Hindi and English. C and B were teaching English and Geography. D and A were teaching Mathematics and Hindi. E and B were teaching History and French.
75. Who among the teachers was teaching maximum number of subjects ?
 (a) A (b) B (c) C (d) D
76. Which of the following pairs was teaching both Geography and Hindi ?
 (a) A and B (b) B and C
 (c) C and A (d) None of these
77. More than two teachers were teaching which subject ?
 (a) History (b) Hindi
 (c) French (d) Geography
78. D, B and A were teaching which of the following subjects ?
 (a) English only (b) Hindi and English
 (c) Hindi only (d) English and Geography
79. Who among the teachers was teaching less than two subjects ?
 (a) A (b) B
 (c) D (d) None of these
80. Five children were administered psychological tests to know their intellectual levels. In the report, psychologists pointed out that the child A is less intelligent than the child B. The child C is less intelligent than the child D. The child B is less intelligent than the child C and child A is more intelligent than the child E. Which child is the most intelligent ?
 (a) A (b) B (c) D (d) E
81. Among five boys, Vineet is taller than Manick, but not as tall as Ravi. Jacob is taller than Dilip but shorter than Manick. Who is the tallest in their group ?
 (a) Ravi (b) Manick
 (c) Vineet (d) Cannot be determined
82. The current of a stream runs at the rate of 4 km/hr. A boat goes 6 km and back to the starting point in 2 hours. The speed of the boat in still water is :
 (a) 8 km / hr (b) 6 km / hr
 (c) 7.5 km / hr (d) 6.8 km / hr
83. 1, 2, 3, 4, 5, 8,
 (a) 9 (b) 11 (c) 13 (d) 15
84. mnonopqopqrs _ _ _ _ _
 (a) mnopq (b) oqrst
 (c) pqrst (d) qrstu
85. 4, 8, 12, 24, 36, 72, ____
 (a) 108 (b) 98 (c) 92 (d) 96
86. A tyre has two punctures. The first puncture alone would have made the tyre flat in 9 minutes and the second alone would have done it in 6 minutes. If air leaks out at a constant rate, how long does it take both the punctures together to make it flat ?
 (a) $1\frac{1}{2}$ minutes (b) $3\frac{1}{2}$ minutes
 (c) $3\frac{3}{5}$ minutes (d) $4\frac{1}{4}$ minutes
- Directions (Q. 87-90) : Study the following information carefully to answer the questions given below.**
 A, B, C, D, E, F and G are 7 friends left for 7 different cities – Delhi, Chennai, Hyderabad, Bangalore, Kolkata, Chandigarh and Jaipur, each one on a different day of the week. C left for Jaipur on



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Monday. On the last day of the week, the person left for Bangalore. E left the next day of A who left for Chandigarh and on the previous day of G. D left for Kolkata on Friday. B didn't leave for either Hyderabad or Bangalore and G left for Delhi.

87. On which day of the week did B leave ?
(a) Sunday (b) Saturday
(c) Monday (d) Tuesday
88. Who left for Bangalore ?
(a) E (b) B (c) G (d) F
89. Who left on Tuesday ?
(a) A (b) C (c) G (d) F
90. On which day of the week did E leave ?
(a) Friday (b) Sunday
(c) Wednesday (d) Thursday

General English

Read each sentence to find out whether there is any grammatical error in it. The error, if any will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is 'D'. (Ignore the errors of punctuation, if any).

91.
(a) We discussed about the problem so thoroughly
(b) on the eve of the examination
(c) that I found it very easy to work it out.
(d) No error.
92.
(a) An Indian ship
(b) laden with merchandise
(c) got drowned in the Pacific Ocean.
(d) No error.

In the following questions choose the word which is the exact OPPOSITE of the given words.

93. RELINQUISH
(a) Abdicate
(b) Renounce
(c) Possess
(d) Deny
94. QUIESCENT
(a) ACTIVE
(b) Dormant
(c) Weak
(d) Unconcerned

95. INDISCREET
(a) Reliable
(b) Honest
(c) Prudent
(d) Stupid
Find the correctly spelt words.

96.
(a) Ommineous
(b) Omineous
(c) Ominous
(d) Omenous

97.
(a) Benefitted
(b) Benifited
(c) Benefited
(d) Benefeted

In each question below, there is a sentence of which some parts have been jumbled up. Rearrange these parts which are labelled P, Q, R and S to produce the correct sentence. Choose the proper sequence

98. It has been established that
P : Einstein was
Q : although a great scientist
R : weak in arithmetic
S : right from his school days
The Proper sequence should be:
(a) SRPQ
(b) QPRS
(c) QPSR
(d) RQPS

99. Since the beginning of history
P : have managed to catch
Q : the Eskimos and Red Indians
R : by a very difficult method
S : a few specimens of this aquatic animal
The Proper sequence should be:
A. QRPS
B. SQPR
C. SQRP
D. QPSR

In questions given below, a part of the sentence is italicised and underlined. Below are given alternatives to the italicised part which may improve the sentence. Choose the correct alternative. In case no improvement is needed, option 'D' is the answer.

100. The workers are hell bent at getting what is due to them.
A. hell bent on getting
B. hell bent for getting



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- C. hell bent upon getting
D. No improvement
101. When it was feared that the serfs might go too far and gain their freedom from serfdom, the protestant leaders joined the princes at crushing them.
- A. into crushing
B. in crushing
C. without crushing
D. No improvement

In questions given below out of four alternatives, choose the one which can be substituted for the given word/sentence.

102. Extreme old age when a man behaves like a fool
- A. Imbecility
B. Senility
C. Dotage
D. Superannuation
103. That which cannot be corrected
- A. Unintelligible
B. Indelible
C. Illegible
D. Incurable

In the questions below the sentences have been given in Active/Passive voice. From the given alternatives, choose the one which best expresses the given sentence in Passive/Active voice.

104. After driving professor Kumar to the museum she dropped him at his hotel.
- A. After being driven to the museum, Professor Kumar was dropped at his hotel.
B. Professor Kumar was being driven dropped at his hotel.
C. After she had driven Professor Kumar to the museum she had dropped him at his hotel.
D. After she was driven Professor Kumar to the museum she had dropped him at his hotel.
105. I remember my sister taking me to the museum.
- A. I remember I was taken to the museum by my sister.
B. I remember being taken to the museum by my sister.
C. I remember myself being taken to the museum by my sister.
D. I remember taken to the museum by my sister.

Each question consist of two words which have a certain relationship to each other followed by four pairs of related words, Select the pair which has the same relationship.

106. DIVA:OPERA
- A. producer:theatre
B. director:drama
C. conductor:bus
D. thespian:play

107. GRAIN:SALT
- A. shard:pottery
B. shred:wood
C. blades:grass
D. chip:glass

In the following the questions choose the word which best expresses the meaning of the given word.

108. CORPULENT
- A. Lean
B. Gaunt
C. Emaciated
D. Obese

109. BRIEF
- A. Limited
B. Small
C. Little
D. Short

110. EMBEZZLE
- A. Misappropriate
B. Balance
C. Remunerate
D. Clear

Computer Awareness

111. number of bytes required to represent the decimal number 1856357 in packed BCD (Binary Coded Decimal) form is
- (a) 4 (b) 5 (c) 6 (d) 3
112. Find the value of r , if $\sqrt{(41)_r} = (7)_{10}$
- (a) 6 (b) 12 (c) 10 (d) 8
113. The number of 1's in an unsigned binary representation of a given number
- $$16^3 \times 9 + 16^2 \times 7 + 16 \times 5 + 3$$
- (a) 8 (b) 9 (c) 10 (d) 11
114. The number of 1's in an unsigned binary representation of a given number
- $$3 \times 4096 + 15 \times 256 + 2 \times 16 + 3$$
- (a) 8 (b) 9 (c) 10 (d) 11



ASPIRE STUDY KANPUR

MCA Entrance Classes By Shivam Gupta

115. The value of r , if $\sqrt{(224)_r} = (13)_r$
(a) 5 (b) 7 (c) 9 (d) 8
116. The value of x , $110.001_{(2)} = x_{(10)}$
(a) 6.375 (b) 5.375
(c) 4.375 (d) None of these
117. The value of Y is $1118_{(10)} = Y_{(H)}$
(a) 54E (b) 45E (c) 53E (d) 35E
118. What is the distance of the following code?
If the code contains 000000, 010101, 000111, 011001 and 111111.
(a) 1 (b) 2 (c) 3 (d) 4
119. The octal representation of an integer is $(342)_8$. If this were to be treated as an 8 bit integer in an 8085 based computer, its decimal representation is
(a) 226 (b) -98 (c) 76 (d) -30
120. Zero has two representations
(a) Sign Magnitude (b) 1's complement
(c) 2's complement (d) Both a and b

Answers

1.B	2.C	3.D	4.B	5.A	6.B	7.A	8.B	9.C	10.D
11.A	12.C	13.C	14.C	15.C	16.A	17.D	18.A,B	19.B	20.C
21.A	22.B	23.C	24.B	25.B	26.D	27.A	28.D	29.D	30.B
31.D	32.C	33.B	34.C	35.D	36.A	37.B	38.A	39.D	40.B
41.D	42.C	43.C	44.B	45.D	46.A	47.B	48.C	49.C	50.A
51.C	52.C	53.C	54.C	55.B	56.C	57.A	58.D	59.D	60.D
61.C	62.C	63.D	64.C	65.D	66.D	67.A	68.C	69.A	70.D
71.C	72.A	73.B	74.C	75.B	76.E	77.B	78.C0	79.D	80.C
81.A	82.A	83.C	84.C	85.A	86.C	87.B	88.D	89.A	90.C
91.A	92.C	93.C	94.A	95.C	96.C	97.C	98.B	99.D	100.C
101.B	102.C	103.D	104.A	105.B	106.D	107.D	108.D	109.D	110.A
111.A	112.B	113.B	114.C	115.A	116.A	117.B	118.B	119.A	120.D