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1. A bus has exactly six stop on its route. The bus first stops at stop one and then at stops two, three, four, five and six respectively. After the bus leaves stop six, the bus turns and return to stop one and repeats the cycle. These stop are at six buildings that are in alphabetical order L, M, N, O, P and Q. Some other information about the stops are as follows-
P is the third stop.
M is the sixth stop.
O is the sixth stop.
N is the stop immediately before L.
In case N is the fourth stop, which among the following must be the stop immediately before P ?
(a) O (b) Q
(c) N (d) L
2. In a finite group Z is defined by $|Z - P| \geq 0$, where P is prime number then z will be in which group;
(a) z is cyclic group (b) z is non cyclic group
(c) z is not finite group (d) none of these
3. Mohan drives from Sushil's house at an average speed of 40 mph. If he can drive $\frac{2}{3}$ of the way in an hour, how far away is Sushil's house;
(a) 60 miles (b) 20 miles
(c) 80 miles (d) 50 miles
4. As lava is related to Volcano, which of the following relations stands valid ?
(a) Ice : glass (b) Cascade : precipice
(c) Stream : Geyser (d) Avalanche : Ice
5. A survey recently conducted revealed that marriage is fattening. The survey found that on an average, women gained 23 pounds and men gained 18 pounds during 13 years of marriage. The answer to which among the following questions would be the most appropriate in evaluating the reasoning presented in the survey?
(a) Why is the time period of the survey 13 years, rather than 12 or 14 ?
(b) Did any of the men surveyed gain less than 18 pounds during the period has was married ?
(c) How much weight is gained or lost in 13 years by a single people of comparable age to those studied.
(d) When the survey was conducted were the women as active as the men.
6. Which of the following words is most opposite in meaning to the word ABATE ?
(a) Attach (b) Alter
(c) Assist (d) Augment
7. Six scientists A, B, C, D, E and F are present a paper each at one day conference. three of them will present in the morning session before the lunch break whereas the other three will be presented in the afternoon session. The lectures have to be scheduled in such a way that they comply with the following restrictions.
B should present his paper immediately before C's presentation, their presentations cannot be separated by the lunch break. D must be either the first or the last scientist to present his paper. In case C is to be the fifth scientist to present his paper, then B must be the;
(a) first (b) second
(c) third (d) fourth
8. The parabola $y^2 = 4a(x - c_1)$ & $x^2 = 4a(y - c_2)$ touches each other then locus of the point;
(a) $xy = 4a^2$ (b) $xy = 2a^2$
(c) $xy = a^2$ (d) none
9. $\int \frac{\cos^2 x}{1+a^2} dx =$
(a) $\frac{\pi}{2}$ (b) $\frac{a^2 \pi}{2}$
(c) $\frac{a\pi}{2} - 1$ (d) ax
10. $\int \frac{d}{dx} (\tan^{-1} x) dx =$
(a) $\frac{1}{1+x^2} + c$ (b) $\tan^{-1} x - \frac{1}{2} \log(1+x^2)$
(c) $\tan^{-1} x$ (d) none of these
11. If $\begin{bmatrix} -3 & 0 \\ 0 & -2 \end{bmatrix}$ then A^{12}
(a) $\begin{bmatrix} 54113 & 0 \\ 0 & 3368 \end{bmatrix}$ (b) $\begin{bmatrix} 53114 & 0 \\ 0 & 4096 \end{bmatrix}$
(c) $\begin{bmatrix} 53411 & 0 \\ 0 & 4049 \end{bmatrix}$ (d) none
12. Solution of differential eq. $\frac{dy}{dx} = \frac{1}{1+y+1}$
(a) $y+1 \pm \log(x+y+2) = c$
(b) $y+1 = \log(x+y+2) + c$
(c) $y = \log(x+y+2) + c$

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- (d) none
13. If y belong to the set $A = \{1, 2, 3, 5, 6, 10, 15, 30\}$ and x_1, x_2, x_3 also belongs to the set A , then number of solution for $x_1 x_2 x_3 = y$
- (a) 64 (b) 84
(c) 27 (d) none of these
14. If $f(x) = \min\{x^2, x\}$ then which of the following is not true ?
- (a) F is continuous everywhere
(b) F is no where differential
(c) $F'(x) = 1$ when $x > 1$.
(d) all the above.
15. The coefficient of x in the expansion of $(+4x+x^2)^{62}$;
- (a) 1 (b) 0
(c) -1 (d) 2
16. The value of $1+22+32^2 + 1002^{99}$ will be;
- (a) $1002^{99} + 1$ (b) 1002^{99}
(c) $1002^{99} + 1$ (d) $992^{99} + 1$
17. The two vectors is said to be equal if they are:
- (i) same length (ii) same support
(iii) same sense
- (a) only I and II (b) only II and III
(c) only I and III (d) all of these
18. Solution of the equation $e^{\sin x} - e^{-\cos x} = 4$;
- (a) infinitely many solution
(b) exactly one solution
(c) more than 2 solution
(d) no solution
19. $\sum_{k=1}^n \sum_{l=1}^k \sum_{j=1}^l 1 = \text{How}$
- (a) $\frac{n(n+1)}{2}$ (b) $\frac{n(n+1)(2n+1)}{6}$
(c) $\frac{n(n+1)(n+1)}{6}$ (d) none of these
20. $\int_0^{100} x - [x] =$
- (a) 50 (b) 100
(c) 200 (d) none of these
21. If $\phi(x)$ be the inverse of $f(x)$ and $f'(x) = \frac{1}{1+x^2}$. $\phi'(x)$ is equal to;
- (a) $1 + [\phi(x)]^2$ (b) $1 + [f(x)]^2$
- (c) $1 + x^5$ (d) none
22. The foci of the ellipse $\frac{x^2}{16} + \frac{y^2}{b^2} = 1$ and the hyperbola $\frac{x^2}{144} - \frac{y^2}{81} = \frac{1}{25}$ coincide then the value of b^2 is;
- (a) 5 (b) 7
(c) 1 (d) none of these
23. $\int_{\sqrt{2a}}^{2a} \log |2x| dx$
- (a) $e^{-1} - 1$ (b) $1 - e^{-1}$
(c) $2(1+e)$ (d) none of these
24. Value of $\lim_{x \rightarrow 0} \frac{x}{|x|}$ =
- (a) 0 (b) 1
(c) -1 (d) none
25. Order and degree of the differential equation $1 + \left(\frac{d^2y}{dx^2}\right)^{3/2} = \frac{d^2y}{dx^2}$
- (a) 2, 3 (b) 3, 3
(c) 3, 2 (d) none
26. 2^{2000} is divided by 17 then remainder will be;
- (a) 1 (b) 2
(c) 6 (d) none
27. Greatest and minimum value of $|z+1|$ where $|z+4| = 3$;
- (a) (6, 0) (b) (3, 3)
(c) (4, 0) (d) none
28. Distance from the centre of circle $(x^2 + y^2 = 2x)$ from the line passes through the point of intersection of the circle;
- $x^2 + y^2 + 5x - 8y + 25 = 0$
 $x^2 + y^2 - 3x - y - 1 = 0$
- (a) 1/3 (b) 1
(c) 2 (d) 3
29. $1 + 2|2+3|3 + \dots + n|n$
- (a) $(n+1)! - 1$ (b) $(n+1) + 1$
(c) $n!$ (d) none of these
30. If three forces $3P$ and $2P$ and their resultant is R . If first force is double and then resultant is double then angled between the;
- (a) 60° (b) 30°

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- (c) 120° (d) none
31. If t_1 and t_2 are the flinght time of two particle having the same initial velocity u and range R on the horizontal then $t_1^2 + t_2^2$ is equal to;
- (a) $\frac{u^2}{g}$ (b) $\frac{4u^2}{g^2}$
 (c) $\frac{u^2}{2g}$ (d) 1
32. Find the value of 'x' when $(2t^2 + 2t + 2t^2 + t + 2)$ are satisfied in the equation $x+2y=1$
- (a) 4 (b) 8
 (c) $\frac{4+\sqrt{7}}{2}$ (d) none
33. A velocity $\frac{1}{4}$ m/s revolved into two components along OA and OB making angle 30° and 45° respectively with the given velocity. then the component along OB is;
- (a) $\frac{1}{8}$ m/s (b) $\frac{1}{4}(\sqrt{3}-1)$
 (c) $\frac{1}{4}$ m/s (d) $\frac{1}{8}(\sqrt{6}-\sqrt{2})$ m/s
34. If $y = (1+x)(1+x^2)(1+x^4)\dots(1+x^{2^n})$ then $\frac{dy}{dx}$ at $x=0$ is;
- (a) -1 (b) 1 (c) 0 (d) none
35. Consider the force $\vec{P}, \vec{Q}, \vec{R}$ acting along IA, IB, IC where I is the incentre of a ΔABC . If the forces one is equilibrium then $\vec{P}, \vec{Q}, \vec{R}$ is;
- (a) $\cos \frac{A}{2} \cos \frac{B}{2} \cos \frac{C}{2}$
 (b) $\sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}$
 (c) $\sec \frac{A}{2} \sec \frac{B}{2} \sec \frac{C}{2}$
 (d) $\operatorname{cosec} \frac{A}{2} \operatorname{cosec} \frac{B}{2} \operatorname{cosec} \frac{C}{2}$
36. the number of integral points exactly in the interior of the triangle with vertices (0, 0), (0, 21), (21, 0) is;
- (a) 133 (b) 190
 (c) 223 (d) 105
37. $\lim_{n \rightarrow \infty} \frac{(n!)^{1/n}}{n}$
- (a) 0 (b) ∞
 (c) $1/e$ (d) none
38. If \vec{a} and \vec{b} is a unit vector and θ is the angle between \vec{a} and \vec{b} then find $\sin \frac{\theta}{2} =$
- (a) $\frac{1}{2} |\vec{a} + \vec{b}|$ (b) $\frac{1}{2} |\vec{a} - \vec{b}|$
 (c) $|\vec{a} + \vec{b}|$ (d) $\sqrt{\frac{1}{2}(1 - ab)}$
39. Which of the following is odd function
- (a) $\sin x + \cos x$ (b) $1 + x + x^2$
 (c) $x + \sin x$ (d) none of these
40. $f(x) = x \max(x, 0)$
- (a) continuous nowhere
 (b) continuous everywhere
 (c) continuous somewhere
 (d) none of these
41. $\tan^{-1} \frac{1}{4} + \tan^{-1} \frac{2}{9}$
- (a) $\tan^{-1} \left(\frac{1}{2} \right)$ (b) $2 \tan^{-1} \left(\frac{2}{7} \right)$
 (c) $\sin^{-1} \left(\frac{4}{7} \right)$ (d) none
42. If $a=4, b=3$, and $\angle A = 60^\circ$ then C is a root of the equation;
- (a) $C^2 - 3C - 7$ (b) $C^2 + 3C + 7=0$
 (c) $C^2 - 3C + 7=0$ (d) none
43. In a party there are some people if every person shakes hand with every other person, total handshake is 66, then how many people were at the party;
- (a) 11 (b) 12
 (c) 13 (d) 14
44. The two vertical of a equilateral triangle lie on a integral point then the third vertices will be;
- (a) integral coordinate
 (b) ration coordinate
 (c) at least one co-ordinate irrational
 (d) none of these

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45. Find radius of circle touching of the circle $(x \pm 4)^2 + (y \pm 4)^2 = 4^2$
- (a) $8(\sqrt{2} - 1)$ (b) $2(\sqrt{2} - 1)$
 (c) $4(\sqrt{2} - 1)$ (d) $\sqrt{2} - 1$
46. If $f(x+y+z)=f(y)$ $f(z)$ and $f(2) = 4$ and $f'(0)=3$ then $f'(x)$
- (a) 12 (b) 6
 (c) 8 (d) none
47. Determinant of the matrix $\begin{bmatrix} -2 & 6 & 7 & -1 \\ 3 & -9 & 2 & -2 \\ 0 & 0 & 4 & -3 \\ 0 & 0 & -1 & -5 \end{bmatrix}$
- (a) 1 (b) 1
 (c) -1 (d) none
48. If $a, b, c \in \mathbb{R}$ and the equation $ax^2 + bx + c = 0$ have exactly two solution of $x^3 + 3x^2 + 3x + 2 = 0$ then;
- (a) $a = b = -c$ (b) $a = -b = c$
 (c) $a = b = c$ (d) none of these
49. If $f(x)$ is odd function then the $\int f(x) dx$ is;
- (a) even function (b) odd function
 (c) neither even nor odd (d) none of these
50. $\log_{1/2} a + \log_{1/4} a + \log_{1/8} a + \log_{1/16} a + \dots + 20$ times is 840 then a is;
- (a) 2 (b) 1
 (c) 4 (d) $\sqrt{2}$
51. Number of point of the discontinuous of $\frac{1}{\log |x|}$ is;
- (a) 1 (b) 3
 (c) 4 (d) none
52. $[x^2 + (x-1)^{1/2}]^5 + [x^2 - (x^5 - 1)^{1/2}]^5$ then degree of polynomial;
- (a) 10 (b) 12
 (c) 13 (d) none of these
53. If the function of polynomial of degree 2 then $f(x)$
- where $f(x) = \begin{vmatrix} f(x) & g(x) & h(x) \\ f'(x) & g'(x) & h'(x) \\ f''(x) & g''(x) & h''(x) \end{vmatrix}$
- (a) -1 (b) 1
 (c) 0 (d) none
54. If $(1+ax)^n = 1 + 8x + 16x^2 + \dots$ then the value of a and 2
- (a) 2, 4 (b) 4, 2
 (c) 3, 2 (d) none
55. If $A \cap (A \cup B)$ then which of the following true ?
- (a) A (b) B
 (c) $A \cup B$ (d) none
56. If $a+b+c=0$ then root of equation $(b+c-a)x^2 + (a+c-b)x + (a+b-c) = 0$ has;
- (a) distinct and real (b) real and imaginary
 (c) equal root (d) none of these
57. If a, b, c, d in GP then $(a^2 + b^2 + c^2)(b^2 + c^2 + d^2) =$
- (a) $(ab + bc + cd)^2$ (b) $(ad + bc + ca)^2$
 (c) $(ab + ac + ad)^2$ (d) none
58. If $a^2 + b^2 + c^2 = 1$ then $(ab + bc + ac)$
- (a) equal to 1 (b) less than 1
 (c) greater than 1 (d) none
59. $(3, 2)$ is reflected about y-axis and moved 5 meter in negative distance of y-axis then co-ordinate of new position;
- (a) $(-3, -3)$ (b) $(3, -3)$
 (c) $(-3, 3)$ (d) $(3, 3)$
60. In the permutations of the function, which is wrong;
- (a) $f \circ g = g \circ f$ (b) $f \circ (g \circ h) = (f \circ g) \circ h$
 (c) $f \circ f^{-1} = f^{-1} \circ f$ (d) none
61. Let F be the ellipse $\frac{x^2}{9} + \frac{y^2}{4} = 1$ and 'c' be the circle $x^2 + y^2 = 9$. Let $P(1, 2)$ and $Q(2, 1)$ be two point then;
- (a) Q lies inside C but outside E
 (b) Q lies outside both C and E
 (c) P lies inside both C and E
 (d) P lies inside C but outside E
62. Let a and b two unit vector. If the vector $a+2b$ and $5a - 4b$ are perpendicular to each other then angle between a and b is
- (a) $\pi/2$ (b) $\pi/3$
 (c) $\pi/4$ (d) $\pi/6$
63. If $|z|=1$ then $\left| \frac{z-1}{z+1} \right| = ?$

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- (a) purely imaginary
(b) purely real
(c) both real and imaginary
(d) none
64. If $y = e^x (A \cos x + B \sin x)$ then
(a) $y'' - 2y' + y = 0$ (b) $y'' + y' + y = 0$
(c) $y'' - (y')^2 + y = 0$ (d) none
65. If
-
- If input is either form A to the given logic circuit P is the probability of B with is closed and $1 - P$ is the probability of with not closed. Then find the probability that signal is transmitted
(a) $2P^2$ (b) $1 - (1 - P)^4$
(c) $1 - (1 - P^2)^2$ (d) $1 - 2P^2$
66. solution of $m \equiv 3 \pmod{13}$ & $m \equiv 2 \pmod{5}$
(a) 52 (b) 42
(c) 30 (d) none
67. The domain of definition of the function $f(x) = \sin^{-1} \left\{ \log_2 \left(\frac{x^2}{2} \right) \right\}$ is,
(a) $[-2, -1]$ (b) $[1, 2]$
(c) $[-2, -1] \cup [1, 2]$ (d) none
68. How many number between 1 and 100 which is not only exactly divisible by 4 by but have at least one 1 digit 4;
(a) 7 (b) 20
(c) 12 (d) 21
69. Let r is the inradius of regular polygon of side h and R is the circumcentre then $r + R =$
(a) $a \cot \frac{\pi}{2h}$ (b) $\frac{a}{2} \cot \frac{\pi}{2h}$
(c) $\frac{a}{2} \tan \frac{\pi}{2h}$ (d) $\frac{a}{2} \operatorname{cosec} \left(\frac{\pi}{2h} \right)$
70. Sum of the product each term of $[10, 11, 12, \dots, 20]$ with each term of $[21, 22, \dots, 30]$ equal to;
(a) 46075 (b) 56371
(c) 46750 (d) none
71. If a, b, c, d are four consecutive vector of sides of quadrilateral then what necessary condition for quadrilateral is parallelogram;
(a) $a+d=0$ (b) $a+c=0$
(c) $a=c$ (d) a, c both
72. $f(x) = \frac{h}{2} (y_0 + 2y_1 + 2y_2 + \dots + 2y_{n-1} + y_n)$ is represent which rule ?
(a) trapezoidal rule (b) simpson rule
(c) George rule (d) none
73. If $f(n) = \frac{n}{2} + \frac{1}{4} [1 - (-1)^n]$ then function is;
(a) one-one and onto
(b) onto but not one
(c) neither one-one nor onto
(d) none of these
74. Two friends decided to meet at a location independently. They both arrive at time uniformly distributed among 10 am to 11 am. then what is the probability that one who come first have to wait longer than 10 minute;
(a) 1/36 (b) 11/36
(c) 35/36 (d) 25/36
75. $f(x) = \begin{cases} 2(1-x) & 1 < x < 0 \\ 0 & \text{otherwise} \end{cases}$ the find $E[2x+1]^2$
(a) 5 (b) 3
(c) 1 (d) none
76. If ' x ' is binomial distribution with h and θ unbiased estimate of θ is;
(a) $E \left(\frac{x}{h} \right)$ (b) $E(hx)$
(c) median (d) none of these
77. If $A \oplus B$ denote the symmetric difference of A and B , then which of the following is false;
(a) $(A \oplus B) \oplus C = A \cap B$
(b) $A \oplus A = A$
(c) $A \oplus Q = A$
(d) $A \oplus C = B \oplus C$ if $A = B$
78. Let $y=f(x)$ be a function such that $(x_1, y_1) (0, 1)$ and $(x_2, y_2) (1, 1)$. Then the first order divided difference for which this satisfy
(a) 0 (b) 1
(c) $-\infty$ (d) none

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79. Given
 $A(1, 0, -1)$, $B(2, 0, -3)$, $C(-1, 2, 0)$ & $D(3, -2, 1)$.
 Find project of AB on CD is;
- (a) $\frac{6}{\sqrt{33}}$ (b) $\frac{6}{\sqrt{165}}$
 (c) $\frac{6}{\sqrt{169}}$ (d) none
80. $\sum_{j=1}^{21} a_j = 693$, a_1, a_2, a_3, \dots are in AP then find
 $\sum_{i=10}^{10} a_{2i-1}$ is;
- (a) 361 (b) 396
 (c) 363 (d) data incomplete
81. If the centroid of a triangle is given that (2, 3) and one of the vertex is (4, 3) then the other two vertex are;
- (a) $(1, 3 \pm \sqrt{3})$ (b) $(2, 3 \pm \sqrt{5})$
 (c) $(4, 3 \pm \sqrt{5})$ (d) none
82. If A be lower triangle matrix then A^{-1} will be;
- (a) upper triangular matrix
 (b) lower triangular matrix
 (c) diagonal matrix
 (d) none of these
83. What will be the value of k for which the function given by $f(x, y) = kxy$ for $n=1, 2, 3, \dots$, $y=1, 2, 3, \dots$ can serve as joint probability distribution;
- (a) 1/9 (b) 1/18
 (c) 1/36 (d) 1
84. If $A = \begin{bmatrix} 1 & 2 & 3 \\ 0 & -2 & -1 \\ 0 & 0 & -1 \end{bmatrix}$ then
- (a) Eigen value are equal
 (b) Eigen value are real and distinct
 (c) Two Eigen value are distinct
 (d) none
85. If A and B are square matrix then;
- (i) $\det(AB) = \det(BA)$
 (ii) $\det(AB) = 0$ if either $\det(A)=0$ or $\det(B) = 0$
 (iii) $\det(AB^{-1}) = \det(A)$ perpendicular B
 (a) only (i) statement is correct
 (b) only (ii) statement are correct.
 (c) all are correct.
 (d) none of these
86. A particle acted by constant forces $4i + j - 3k$ and $3i + j - k$ displaced from the point $(l + 2j + 3k)$ to point $(5i + 4j + k)$ where l, j and k are unit vector then work done by the force is;
- (a) 20 unit (b) 30 unit
 (c) 40 unit (d) none of these
87. Let $\sigma=681235947$ and $\tau=627184593$ be permutation on (1, 2, 3, 4, 5, 6, 7, 8, 9) in one line notation (based on the usual order integer). What of the following is correct gate rotation for $\tau.C$.
- (a) 12495368 (b) 142597368
 (c) 142953768 (d) 1425368
88. Find odd out;
- (a) guava (b) litchi
 (c) watermelon (d) papaya
89. Opposite word of ABATE
- (a) Augument (b) Attach
 (c) After (d) Astist
90. Rank of Navya is 9th from the top and 38th from the bottom. How many student are there;
- (a) 47 (b) 46
 (c) 48 (d) 45
91. A boy is search of his father travels 80 m/s in east before turning to right and 20 m before turning to right from there he travels his uncles house straight 30 m and then travels 90 m to north and there he meets his father then find he distance from the starting point where he meet the father;
- (a) 100 (b) 120
 (c) 80 (d) none
92. village PQRS are such that q lies south west of P and R lies east of Q and south east of P, P lies north of R on the line of PQ. What is the position of R in respect to P;
- (a) North east (b) South west
 (c) South (d) North
93. System is coded as SYSMET and NEARER is coded as AENRER the how is FRACTION coded;
- (a) CARFATINO (b) NOITCARF
 (c) FRACNOIT (d) CARFOIT
94. The 7th day of month is 3 day earlier than Friday then what will be the 19th day of the month ?
- (a) Sunday (b) Monday
 (c) Saturday (d) Friday

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95. As aeroplane is related to cockpit, then train is related to;
 (a) Engine (b) compartment
 (c) Each (d) Wagon
96. The english alphabet which comes 16th to the right of the 4th letter to the left letter is i;
 (a) U (b) V
 (c) S (d) None
97. A + B means, A is brother of B, A×B means A is daughter of B and A-B means A is father of B then P+QR what means;
 (a) P is uncle of R (b) P is son of R
 (c) P is brother of R (d) P is mother of R
98. Ravi and Kunal are good in hockey and volleyball section and Ravi are good in hockey and baseball. Gaurav and Kunal are good in cricket and volleyball. Sachin, Gaurav and Micheal are good football and baseball. So who is good in hockey, volyball and baseball ?
 (a) Ravi (b) Sachin
 (c) Kunal (d) Michel
99. If a swimmer swims in a still water at 5 m/h crosses a river, which is 24 meter apart and water flows with 4 kmh then in how many hour does swimmer crosses the river ?
 (a) 8 (b) 9
 (c) 19 (d) 20
100. LOWER is coded as WORLE then from the following which is alike;
 (a) AMONG : OMNAG (b) GLAZE : AGELZ
 (c) WORDS : ROSWD (d) ENTRY : RNYET
101. If G means add to J means multiplied by T means subtracted from K means divided by then the value of 30 K 2 G 3 J 6 T 5
 (a) 28 (b) 31
 (c) 39 (d) 103
102. Find the variance the probability of head is 2/5 of a coin. If there are 150 coin are tossed;
 (a) 96 (b) 56
 (c) 46 (d) 45
103. In a MCA group there is 3 subject that is CS1, CS2, CS3, if 20 student learn CS1, 25 student learn CS2, 30 learn CS3, if 10 student learn CS1 and CS2, 20 CS2 and CS3 and 15 learn CS1 and CS3 and 7 student all three subject then find the number of student;
 (a) 37 (b) 35
- (c) 38 (d) none
104. In normal distribution density function in defined as with variance 16 and mean 45 also given $\int_{-\infty}^{0.25} e^{-t^2/2} dt = 0.5892$ then find $|z| < 3$;
 (a) 0.5892 (b) 0.4827
 (c) 0.7285 (d) none
105. If two vertices of triangle are (6, 4) and (4, 5). Third vertices lie on the equation $9x+7y=28$. Then find the locus of centroid is;
 (a) $9x + 7y - 58 = 0$ (b) $9x + 7y + 58 = 0$
 (c) $9x + 7y + 28 = 0$ (d) $9x + 7y - 28 = 0$
106. If probability distribution is defined as $F(x)=(x-\eta)^4$, $0 \leq x \leq 1$. Then find the distribution of function;
 (a) $P(x) = \frac{x^4}{4}$ (b) $P(x) = \frac{x^4}{8}$
 (c) $P(x) = \frac{x^3}{2}$ (d) $P(x) = \frac{x^4}{2}$
107. Solve the equation $\frac{dy}{dx} = x + y$, with initial condition $y(0)=1$ by ruge kutta rule, from $x=0$ to $x=0.4$ with $h=0.1$
 (a) 0.7732 (b) 1.5835
 (c) 2.5836 (d) none
108. a particle moves 1 unit from origin to up, $\frac{1}{2}$ unit right $\frac{1}{4}$ unit below $\frac{1}{8}$ left, $\frac{1}{16}$ up and so on then what is end point of the particle;
 (a) $(\frac{2}{5}, \frac{4}{5})$ (b) (0, 0)
 (c) $(\frac{3}{5}, \frac{1}{5})$ (d) none
109. There are 7 friends which accommodate in 3 in 1 flate and two in 2 flate. Then the number of ways;
 (a) 210 (b) 3000
 (c) 5040 (d) none
110. There are 2 brothers and 6 are more person are other. They sit in a row then find the number of ways these two brother are not sit together;
 (a) 5040 (b) 14400
 (c) 620 (d) none