11_Maths_MCQ's

Q1 How many elements are there in the complement of set A?

(a)	0	**(b)**	1	**(c)**	All the elements of A	**(d)**	None of these

Q2 Empty set is a _____.

(a)	Infinite set	**(b)**	Finite set	**(c)**	Unknown set	**(d)**	Universal set

Q3 The number of elements in the Power set P(S) of the set S = {1, 2, 3} is:

(a)	4	**(b)**	8	**(c)**	2	**(d)**	None of these

Q4 Order of the power set P(A) of a set A of order n is equal to:

(a)	n	**(b)**	2n	**(c)**	2^n	**(d)**	n^2

Q5 Which of the following two sets are equal?

(a)	A = {1, 2} and B = {1}	**(b)**	A = {1, 2} and B = {1, 2, 3}	**(c)**	A = {1, 2, 3} and B = {2, 1, 3}	**(d)**	A = {1, 2, 4} and B = {1, 2, 3}

Q6 If $f(x) = x^3 - (1/x^3)$, then f(x) + f(1/x) is equal to

(a)	$2x^3$	**(b)**	$2/x^3$	**(c)**	0	**(d)**	1

Q7 Let n (A) = m, and n (B) = n. Then the total number of non-empty relations that can be defined from A to B is

(a)	m^n	**(b)**	$n^m - 1$	**(c)**	$mn - 1$	**(d)**	$2^{mn} - 1$

Q8 If $f(x) = x^2 + 2$, $x \in R$, then the range of f(x) is

(a)	$[2, \infty)$	**(b)**	$(-\infty, 2]$	**(c)**	$(2, \infty)$	**(d)**	$(-\infty, 2) \cup (2, \infty)$

Q9 What will be the domain for which the functions $f(x) = 2x^2 - 1$ and $g(x) = 1 - 3x$ are equal?

(a)	{-2, 1}	**(b)**	{1/2, -2}	**(c)**	[2, 12]	**(d)**	(-1, 2)

Q10 If $[x]^2 - 5[x] + 6 = 0$, where [.] denotes the greatest integer function, then

(a)	$x \in [3, 4]$	**(b)**	$x \in (2, 3]$	**(c)**	$x \in [2, 3]$	**(d)**	$x \in [2, 4)$

Q11 If sin θ and cos θ are the roots of $ax^2 - bx + c = 0$, then the relation between a, b and c will be

(a)	$a^2 + b^2 + 2ac = 0$	**(b)**	$a^2 - b^2 + 2ac = 0$	**(c)**	$a^2 + c^2 + 2ab = 0$	**(d)**	$a^2 - b^2 - 2ac = 0$

Q12 If tan A = 1/2 and tan B = 1/3, then the value of A + B is

(a)	π/6	**(b)**	π	**(c)**	0	**(d)**	π/4

Q13 The value of cos 1° cos 2° cos 3° … cos 179° is

(a)	$1/\sqrt{2}$	**(b)**	0	**(c)**	1	**(d)**	–1

Q14 **The value of sin 50° – sin 70° + sin 10° is equal to**

(a)	1	**(b)**	0	**(c)**	1/2	**(d)**	2

Q15 **The value of sin (45° + θ) – cos (45° – θ) is**

(a)	2 cosθ	**(b)**	2 sinθ	**(c)**	1	**(d)**	0

Q16 **The value of $1 + i^2 + i^4 + i^6 + \ldots + i^{2n}$ is**

(a)	positive	**(b)**	negative	**(c)**	0	**(d)**	cannot be evaluated

Q17 **If a + ib = c + id, then**

(a)	$a^2 + c^2 = 0$	**(b)**	$b^2 + c^2 = 0$	**(c)**	$b^2 + d^2 = 0$	**(d)**	$a^2 + b^2 = c^2 + d^2$

Q18 **If a complex number z lies in the interior or on the boundary of a circle of radius 3 units and centre (– 4, 0), the greatest value of |z +1| is**

(a)	4	**(b)**	6	**(c)**	3	**(d)**	10

Q19 **The value of arg (x) when x < 0 is**

(a)	0	**(b)**	π/2	**(c)**	π	**(d)**	none of these

Q20 **If 1 – i, is a root of the equation $x^2 + ax + b = 0$, where a, b ∈ R, then the value of a – b is**

(a)	-4	**(b)**	0	**(c)**	2	**(d)**	1

Q21 **The length of a rectangle is three times the breadth. If the minimum perimeter of the rectangle is 160 cm, then**

(a)	breadth > 20 cm	**(b)**	length < 20 cm	**(c)**	breadth x ≥ 20 cm	**(d)**	length ≤ 20 cm

Q22 **If – 3x + 17 < – 13, then**

(a)	x ∈ (10, ∞)	**(b)**	x ∈ [10, ∞)	**(c)**	x ∈ (– ∞, 10]	**(d)**	x ∈ [– 10, 10)

Q23 **Given that x, y and b are real numbers and x < y, b < 0, then**

(a)	x/b < y/b	**(b)**	x/b ≤ y/b	**(c)**	x/b > y/b	**(d)**	x/b ≥ y/b

Q24 **If |x −1| > 5, then**

(a)	x ∈ (– 4,6)	**(b)**	x ∈ [– 4,6]	**(c)**	x ∈ (– ∞,– 4) U (6,∞)	**(d)**	x ∈ [– ∞, – 4) U [6, ∞)

Q25 **If |x – 7|/(x – 7) ≥ 0, then**

(a)	x ∈ [7, ∞)	**(b)**	x ∈ (7, ∞)	**(c)**	x ∈ (– ∞, 7)	**(d)**	x ∈ (– ∞, 7]

Q26 **The value of P(n, n-1) is**

(a)	n	**(b)**	n!	**(c)**	2n	**(d)**	2n!

Q27 **The number of ways in which 8 students can be seated in a line is**

(a)	5040	**(b)**	50400	**(c)**	40230s	**(d)**	40320

Q28 **If $^nP_5 = 60\,^{n-1}P_3$, the value of n is**

(a)	6	**(b)**	10	**(c)**	12	**(d)**	16

Q29 **The number of squares that can be formed on a chessboard is**

(a)	64	**(b)**	160	**(c)**	204	**(d)**	224

Q30 **The number of ways 4 boys and 3 girls can be seated in a row so that they are alternate is**

(a)	12	**(b)**	104	**(c)**	144	**(d)**	256

**********All The BEST**********

Q1 **A**

Q2 **B**

Q3 **B**

Q4 **C**
Q5 **C**
Q6 **C**
Q7 **D**
Q8 **A**
Q9 **B**
Q10 **D**
Q11 **B**
Q12 **D**
Q13 **B**
Q14 **B**
Q15 **D**
Q16 **D**
Q17 **D**
Q18 **B**
Q19 **C**
Q20 **A**
Q21 **C**
Q22 **A**
Q23 **A**
Q24 **C**
Q25 **B**
Q26 **B**
Q27 **D**
Q28 **B**
Q29 **C**
Q30 **C**