MULTIPLE CHOICE QUESTIONS (MCQ'S)

1. _____ is the collection of well defined and distinct objects.
(a) Set (b) power (c) conjugate (d) Relation
2. Anything belongs to a Set is called an _____ of the Set.
(a) Subsets (b) elements (c) domain (d) power
3. A set can be written in _____.
(a) only one way (b) two ways
(c) three ways (d) several ways
4. The Null set is considered to be a _____ of every set
(a) Super Set (b) Proper Subset
(c) Subset (d) Improper Subset
5. The Set of all Subsets of a Set is called _____ Set.
(a) Power (b) Null (c) Super (d) Proper
6. According to de Morgan's law $A' \cap B' =$ _____.
(a) CUB′ (b) $(B \cap A)'$ (c) $(A \cap B)'$ (d) $(A \cup B)'$
7. The Set A = {x|x is past president of Pakistan who was a women} is an example of _____ Set.
(a) Super (b) Sub (c) Null (d) finite
8. for any Set A, $A \cap A' =$ _____.
(a) {a,b} (b) { } (c) {c, d} (d) { a}
9. A = {2, 4, 8} and B = $\{2^1, 2^2, 2^3\}$ are _____ Sets.
(a) Equivalent (b) Sub (c) Equal (d) Null
10. Generally (a, b) _____ (b, a)
(a) = (b) < (c) > (d) ≠
11. let A = {2, 3}, B = {3, 4}, C = {4, 5} then A × (B∩C) = _____.
(a) ϕ (b) { (2,4), (3,4)}
(c) { (3,4),(4,5) } (d) { (2,4), (2,5)}
12. If (x + 2 , 3y − 6) = (2x, y) then x = _____ and y = _____.
(a) x = 1, y = 4 (b) x = 3, y = 5
(c) x = 5, y = 6 (d) x = 2, y = 3
13. If the number of elements in a Set A is n the number of elements in P (A) = _____.
(a) 3^n (b) 2^n (c) 4^n (d) 5^n
14. A Set with no element is called the _____ Set
(a) Equal (b) Sub (c) Null (d) Power

15. $(A')' =$ _____
(a) B′ (b) U (c) U′ (d) A
16. In generally Cartesian product of Sets A and B; A × B _____ B × A.
(a) = (b) > (c) ≠ (d) <
17. If E = {2, 4, 6, ...} and O = {1,3,5,.....} are _____ Sets.
(a) Equal (b) Equivalent (c) Sub (d) Null
18. $AU\phi = \phi UA =$ _____
(a) A (b) A′ (c) ϕ (d) U
19. $AUA' =$ _____
(a) U (b) ∩ (c) U′ (d) B
20. $A \cap A =$ _____
(a) C′ (b) U (c) ϕ (d) A
21. The Cartesian Coordinate System is also Known as _____ Coordinate System.
(a) Denary (b) Binary
(c) Rectangular (d) Function
22. If (x − 2, 6) = (4, y + 2) then the value of x = _____ and y = _____.
(a) 6 & 4 (b) 3 & 2 (c) − 6 & − 4 (d) −3 & −2
23. A − B = _____.
(a) { x | x ∈ C; ^ x ∈ D} (b) {x | x ∈ A; ^ x ∉ B}
(c) { x | x ∈ A ; ^ x ∈ D} (d) { x | x ∈ A; ^ x ∈ C}
24. If $A \subseteq B$ then AUB = _____.
(a) A (b) C (c) D (d) B
25. If $A \subseteq B$ then $A \cap B =$ _____.
(a) B (b) C (c) A (d) D
26. Two Sets are Said to be equal if and only if they have the same _____.
(a) elements (b) equal
(c) power (d) None of these
27. The intersection of two overlapping Sets is _____.
(a) Empty (b) Non-Empty (c) Equal (d) Real
28. If U = {1,2,3,4}; A = {1,2} and B = {2,3} then find A′UB′ = _____
(a) A (b) U (c) {1,3,4} (d) B′

29. If A = {2,3}, B = {3,4}; C = {c, f} and U = {2,3,4,c,f} then find B′– A′ = _____.
(a) {2} (b) (AUB)′ (c) {4,c,f} (d) ϕ

30. A∩U = _____.
(a) A (b) A′ (c) U′ (d) U

31. AUU = _____.
(a) A′ (b) A (c) U (d) U′

32. U′ = U – U = _____.
(a) U (b) ϕ′ (c) –ϕ (d) ϕ

33. A and B are said to be _____ Sets if no elements is Common in them.
(a) Equal (b) Disjoint
(c) equivalent (d) Overlapping

34. Two Order pairs (a, b) and (c, d) are equal if and only if _____.
(a) a = b; b = c (b) a = b; c = d
(c) a = c; b = d (d) b = d; c = d

35. B ⊂ A means that B is _____ of A.
(a) Improper Subset (b) Proper Subset
(c) Power Set (d) Equal Set

36. The Set A ={ x | x is a letter before "a" in the English alphabet } is an example of _____ Set.
(a) Sub (b) Super (c) Equal (d) Null

37. If A, B and C are three Sets then A ~ B, and B ~ C ⇒ A ~ C this is called the _____ property of equivalence of Sets.
(a) Reflexive (b) Associative
(c) Transitive (d) Commutative

38. Every Set is a _____ of itself.
(a) Subset (b) Null Set
(c) Proper Subset (d) None of these

39. If A is a Subset of B and B is a Subset of C then A is a Subset of C. This is called the _____ property of Subsets.
(a) Transitive (b) Reflexive
(c) Commutative (d) Associative

40. If A is Subset of B and A = B then we say that A is an _____ Subset of B.
(a) Proper (b) Improper
(c) Super (d) None of these

41. A Set which contains all the Sets Under consideration is called a _____ Set.
(a) Finite (b) Infinite (c) Universal (d) Super

42. If two Sets are equal they are also _____.
(a) Commutative (b) Asscciative
(c) Equivalent (d) None of these

43. Two equivalent Sets may not be _____.
(a) Not equal (b) Equal
(c) Subset of each other (d) None of these

44. The Cartesian product of two Sets A and B denoted by A × B is defined follows.
(a) { (a, b) / a ∈ A and b ∈ B}
(b) { (a, b) / a ∈ A and b ∉ B}
(c) { (a, b) / a ∉ A and b ∈ B}
(d) None of these

45. Let A = {a, b, c} ; B = {3, 4, 5} then A ~ B because O (A) = O (B) = _____
(a) 3 (b) 4 (c) 0 (d) 2

46. If A = {a, b, c}; c = {0, 1, 2, 3} then A ≠ C because O(C) _____ O(A).
(a) > (b) < (c) = (d) ≠

47. If A and B be Subsets of a Set U Such that AUB = U then the Sets A and B are called _____ Sets.
(a) Cells (b) Exhaustive
(c) difference (d) None of these

48. let U = {0, 1, 2, 3} and A = {0, 1, 2} B = {1} and C = {2, 3} then AUBUC = _____.
(a) A′ (b) U (c) B′ (d) U′

49. If A and B be Subsets of a Set U Such that the Subsets A and B be non–empty and mutually disjoint, i – e If A ≠ ϕ, B ≠ ϕ; A ∩ B = ϕ and AUB = U then Sets A and B are called _____.
(a) Exhaustive (b) Equal
(c) Cells (d) None of these

50. ϕ′ = U – ϕ = _____.
(a) A′ (b) B′
(c) U (d) None of these

51. _____ Set is an identity with respect to the operation of Union of Sets.
(a) Null (b) Equal (c) Sub (d) Super

52. AUA = _____.
(a) B (b) A (c) A′ (d) ϕ

53. By Commutative property of Union of two Sets AUB = _____.
(a) A∩B (b) B∩A (c) AUC (d) BUA

54. By Commutative property of intersection of two Sets A∩B = _____.
(a) BUA (b) B∩A (c) AUB (d) AUC

55. By Associative property of Union AU(BUC) = _____.
(a) (AUB) UC (b) (AUB)∩C
(c) (A∩B)∩C (d) (A∩B)UC

56. By Associative property of intersection A ∩ (B∩C) = _____.
(a) (AUB)UC (b) (A∩B)∩C
(c) (A∩B)UC (d) (AUB)∩C

57. B = { x | x + 5 = 5 } is an example of _____ Sets.
(a) Sub (b) Singleton (c) Null (d) Super

58. C = { x | x is less than 7 and greater than 8 } is an example of _____ Sets.
(a) Null (b) Singleton (c) Sub (d) Super

59. The total number of proper Subsets of the given Set A = {a, b, c, d} are _____.
(a) 8 (b) 10 (c) 12 (d) 15

60. Distributive property of intersection over Union for three Sets A, B and C; A∩(BUC) = _____.
(a) (AUB) ∩ (AUC) (b) (A∩B) U (AUC)
(c) (A∩B) U (A∩C) (d) None of these

61. (BUC) ∩ A = _____.
(a) (B∩A) ∩ (C∩A) (b) (BUA)∩(CUA)
(c) (B∩A) U (C∩A) (d) None of these

62. A Set having only one element is called _____ Set.
(a) Equal (b) Null (c) Power (d) Singleton

63. For what value of x is (x − 3, 3) = (−5, 3)
(a) −5 (b) −7 (c) −2 (d) −8

64. by distributive property of Cartesian product over Union. A × (BUC) = _____.
(a) (A × A) ∩ (B × C) (b) (A × B) ∩ (A × C)
(c) (B × B) ∩ (A × A) (d) (A × B) U (A × C)

65. by distributive property of Cartesian product over intersection A × (B∩C) = _____.
(a) (A × B) ∩ (A × C) (b) (A × B) U (A × C)
(c) (A × A) ∩ (B × C) (d) (A × A) U (B × C)

66. by distributive property of the Cartesian product over Complement (A − B) × C = _____.
(a) (A × C) − (B × C) (b) (A × B) − (B × C)
(c) (A × C) − (A × B) (d) (B × A) − (A × C)

67. If O (A) = m, O (B) = n then the number of Ordered pairs in A × B is _____.
(a) mp (b) mm (c) nm (d) nn

68. Set {1} is _____ Set.
(a) Null (b) Super (c) Equal (d) Singleton

69. If B is a Subset of Set A. then A is called a _____ Set of B denoted by A ⊂ B.
(a) Super (b) Sub
(c) Equal (d) None of these

70. What is the relationship between the Sets F and G, If F∩G = FUG then _____
(a) F ⊂ G (b) F ⊆ G (c) F = G (d) F < G

71. $\{ x \mid x = \frac{P}{q} ; P, q \in Z; q \neq 0 \}$ is the Set _____ number.
(a) Integers (b) Real (c) Complex (d) Rational

72. If A = { x | x^2 = 16 and 2x = 4} then A is called _____ Set.
(a) Null (b) Equal (c) Super (d) Sub

73. The Complement of a Set A, denoted by A′ is the difference U − A is A′ = U − A = _____.
(a) { x | x ∈ U and x ∈ A } (b) { x | x ∈ U and x ∉ A }
(c) { x | x U and x ∈ B } (d) { x | x ∈ U and x ∉ B }

Answers

1.	(a)	2.	(b)	3.	(c)	4.	(c)	5.	(a)
6.	(d)	7.	(c)	8.	(b)	9.	(c)	10.	(d)
11.	(b)	12.	(d)	13.	(b)	14.	(c)	15.	(d)
16.	(c)	17.	(b)	18.	(a)	19.	(a)	20.	(d)
21.	(c)	22.	(a)	23.	(b)	24.	(d)	25.	(c)
26.	(a)	27.	(b)	28.	(c)	29.	(a)	30.	(a)
31.	(c)	32.	(d)	33.	(b)	34.	(c)	35.	(b)
36.	(d)	37.	(c)	38.	(a)	39.	(a)	40.	(b)
41.	(c)	42.	(c)	43.	(b)	44.	(a)	45.	(a)
46.	(d)	47.	(b)	48.	(b)	49.	(c)	50.	(c)
51.	(a)	52.	(b)	53.	(d)	54.	(b)	55.	(a)
56.	(b)	57.	(b)	58.	(a)	59.	(d)	60.	(c)
61.	(c)	62.	(d)	63.	(c)	64.	(d)	65.	(a)
66.	(a)	67.	(b)	68.	(d)	69.	(a)	70.	(c)
71.	(d)	72.	(a)	73.	(b)				