Gaining Apex Coaching Centre

(Where Toppers make...... Toppers)



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10.	Which of the following is an equivalence relation?				
	a) Is father of	b) Is less than	c) Is congruent to	d) Is an uncle of	
11.	From 50 students takin	ng examinations in Math	ematics, Physics and Ch	emistry, 37 passed	
Mathematics, 24 Physics and 43 Chemistry. At most 19 passed Mathematics and Physics, at most 29					
passed Mathematics and Chemistry and at most 20 passed Physics and Chemistry. The largest					
possible number that could have passed all three examinations is					
	a) 11	b)12	c) 13	d) 14	
12.	2. Let <i>A</i> be the non-void set of the children in a family. The relation 'x is a brother of y' on <i>A</i>				
	a) Reflexive	b) Symmetric	c) Transitive	d) None of these	
13. In a class of 30 pupils 12 take needls work, 16 take physics and 18 take history. If all the 30					
students take at least one subject and no one takes all three, then the number of pupils taking 2					
sub	jects is				
	a) 16	b)6	c) 8	d) 20	
14.	A. If <i>R</i> is a relation on a finite set having <i>n</i> elements, then the number of relations on <i>A</i> is				
	a) 2 ⁿ	b) 2^{n^2}	c) <i>n</i> ²	d) <i>nⁿ</i>	
15.	5. The void relation on a set <i>A</i> is				
	a) Reflexive				
	b) Symmetric and transitive				
	c) Reflexive and symmetry	etric			
	d) Reflexive and transitive				
16. Suppose A_1, A_2, \dots, A_{30} are thirty sets, each having 5 elements and B_1, B_2, \dots, B_n are <i>n</i> sets each					
with 3 elements, let					
$\bigcup_{i=1}^{30} A_i = \bigcup_{j=1}^n B_j = S$ and each element of S belongs to exactly 10 of the A_i 's and exactly 9 of the					
B_j 's. Then, <i>n</i> is equal to					
	a) 115	b)83	c) 45	d) None of these	
117. If A is a finite set having n elements, then $P(A)$ has					
	a) 2 <i>n</i> elements	b) 2^n elements	c) <i>n</i> elements	d) None of these	
18. Let <i>A</i> and <i>B</i> have 3 and 6 elements respectively. What can be the minimum number of elements					
in $A \cup B$?					
	a) 3	b) 6	c) 9	d) 18	
19.	19. Let <i>R</i> be a reflexive relation on a set <i>A</i> and <i>I</i> be the identity relation on <i>A</i> . Then,				
	a) $R \subset I$	b) $I \subset R$	c) $R = I$	d) None of these	
20. If $A_1, A_2,, A_{100}$ are sets such that $n(A_i) = i + 2, A_1 \subset A_2 \subset A_3 \subset A_{100}$ and $\bigcap_{i=3}^{100} A_i = A$, then					
n(A) =					
	a) 3	b)4	c) 5	d)6	