CLASS 11

MATHS

PERMUTATIONS AND COMBINATIONS INTRODUCTION & FUNDAMENTAL PRINCIPLE OF COUNTING EXERCISE

Q1	Consider sets A = { $x_1, x_2, x_3, x_4, x_5, x_6$ }, B = { $y_1, y_2, y_3, y_4, y_5, y_6$ }. The task is to fin the number one-to-one mapping from A to B such that $f(x_i) \neq y_v i = 1,2,3,4,5,6$ is			}. The task is to find $y_v i = 1,2,3,4,5,6$ is	
	(a) 720	(b) 265	(c) 360	(d) 145	
Q2.	A father with 8 chi frequently as possib once. The question a	father with 8 children takes them to the zoological gardens in groups of 3, requently as possible without having the same set of 3 children together more th nce. The question asks for the total number of times he will visit the garden.			
	(a) 336	(b) 112	(c) 56	(d) None of these	
Q3.	The total ways of coloring the faces of a cube with six distinct colors is:				
	(a) 30	(b) 1	(c)6	(d)None of these	
Q4.	The count of divisor (a) 70	s of the number 3880 (b) 72	8 (excluding 1 and th (c)71	e number itself) is: (d)None of these	
Q5.	The number of divisors in the form $(4n + 2)$, $n \ge 0$ for the integer 240 is:				
	(a) 4	(b)8	(c)10	(d)3	
Q6.	Determine the number of 5-letter words that can be formed from the word "PUL when repetition is permitted.				
	(a) 25	(b) 120	(c) 125	(d) 3125	
Q7.	How many 5-digit numbers can be formed without repeating digits?				
	(a) 27216	(b) 50400	(c) 100000	(d) 90000	

1

CLASS 11

Q.8 If an event can occur in 'm' different ways, followed by another event that can occur in 'n' different ways, then the total number of occurrences of the events in the given order is _____.

(a) m + n	(b)m-n	$(c)m \times n$	$(d)\frac{m}{n}$
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ANSWER KEY

- **1.** (b)
- **2.** (c)
- **3.** (a)
- **4.** (a)
- **5.** (a)
- **6.** (d)
- **7.** (a)
- **8.** (c)