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#### **IITians GATE CLASSES** BANGALORE

Q.No. 1 A couple has 2 children. The probability that both children are boys if the older one is a boy is

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### **GATE Aptitude Practice Questions Probability**

	(A) 1/4	(B) 1/3	(C) 1/2	(D) 1
Q.N		own simultaneously. The ne dice is a perfect square	probability that the product of	of the numbers appearing on
	(A) 1/9	(B) 2/9	(C) 1/3	(D) 4/9
Q.N	they are of the sa	The state of the s	3 blue socks. You choose 2	socks. The probability that
	(A) 1/5	(B) 7/30	(C) 1/4	(D) 4/15
Q.N	No. 4 The probability	y that a k-digit numbe	er does NOT contain the	digits 0, 5, or 9 is
	(A) $0.3^k$	(B) $0.6^{k}$	(C) $0.7^k$	(D) $0.9^k$
Q.I	throws out of		row shooter, meaning that he e. What is the probability	
	(A) 0.2508	(B) 0.2816	(C) 0.2934	(D) 0.6000
Q.		andomly selected from a		t two cards are kings, what is
	(A) 4/52	(B) 2/50	(C) (1/52)×(1/52)	(D) (1/52)×(1/51) ×(1/50

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Q.No. 7	Given Set $A = \{2,$	3, 4, 5) and Set B = {11, 12, 13,	, 14, 15}, two numbers are randomly selec	ted
	one from each set.	What is the probability that the	sum of the two numbers equals 16?	

- (A) 0.20
- (B) 0.25
- (C) 0.30
- (D) 0.33

Q.No. 8 The probabilities that a student passes in Mathematics, Physics and Chemistry are m, p, and c respectively. Of these subjects, the student has 75% chance of passing in at least one, a 50% chance of passing in at least two and a 40% chance of passing in exactly two. Following relations are drawn in m, p, c:

- (I) p + m + c = 27/20
- (II) p + m + c = 13/20
- (III)  $(p) \times (m) \times (c) = 1/10$
- (A) Only relation I is true.
- (B) Only relation II is true.
- (C) Relations II and III are true.
- (D) Relations I and III are true.



Q.No. 9 Ram and Ramesh appeared in an interview for two vacancies in the same department. The probability of Ram's selection is 1/6 and that of Ramesh is 1/8. What is the probability that only one of them will be selected?

- (A) 47/48
- (B) 1/4
- (C) 13/48
- (D) 35/48

Q.No. 10 10% of the population in a town is HIV<sup>+</sup>. A new diagnostic kit for HIV detection is available; this kit correctly identifies HIV<sup>+</sup> individuals 95% of the time, and HIV<sup>-</sup> individuals 89% of the time. A particular patient is tested using this kit and is found to be positive. The probability that the individual is actually positive is \_\_\_\_\_



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third has a head		the other. You choose	a coin at random and toss it, and it
(A) 1/4	(B) 1/3	(C) 1/2	(D) 2/3
rejected if ever	AND THE PROPERTY OF THE PROPER	fective. A batch typic	domly chosen bulbs. The batch is ally has five defective bulbs. The
Q.No.13 In a factory, tv	vo machines M1 and M	2 manufacture 60% a	and 40% of the autocomponents
respectively. Ou	t of the total production,	2% of M1 and 3% of 1	M2 are found to be defective. If a
randomly drawn	autocomponent from the	combined lot is found	defective, what is the probability
1603E1 WE 1011 16 \$140 FOR \$140 F	factured by M2?		
(A) 0.35	(B) 0.45	(C) 0.5	(D) 0.4
	2-digit integers between 1 bability that the selected n		mber has to be selected at random. by 7?
(A) 13/90	(B) 12/90	(C) 78/90	(D) 77/90
Q.No. 15 What is the	chance that a leap year,	selected at random,	will contain 53 Saturdays?
(A) 2/7	(B) 3/7	(C) 1/7	(D) 5/7
that A hits the		probability that B hits	escaping convict. The probability the convict. If the probability of the convict is
(A) 0.14	(B) 0.22	(C) 0.33	(D) 0.40



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Q.No. 17 An automobile plant contracted to buy shock absorbers from two suppliers X and Y. X supplies 60% and Y supplies 40% of the shock absorbers. All shock absorbers are subjected to a quality test. The ones that pass the quality test are considered reliable. Of X's shock absorbers, 96% are reliable. Of Y's shock absorbers, 72% are reliable.

The probability that a randomly chosen shock absorber, which is found to be reliable, is made by Y is

(A) 0.288

(B) 0.334

(C) 0.667

(D) 0.720

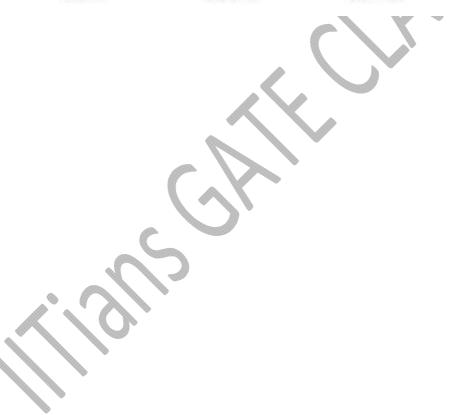
Q.No. 18 A and B are friends. They decide to meet between 1 PM and 2 PM on a given day. There is a condition that whoever arrives first will not wait for the other for more than 15 minutes. The probability that they will meet on that day is

(A) 1/4

(B) 1/16

(C) 7/16

(D) 9/16





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### **Answer Key**

Q. No.	Ans.
1	С
2	В
3	D
4	С
5	A
6	В
7	A
8	D
9	В
10	0.48-0.49
11	В
12	0.80-0.82
13	С
14	D
15	A
16	A
17	В
18	С



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