

GATE 2024 Question Paper Feb 3 (Data Science and Artificial Intelligence)

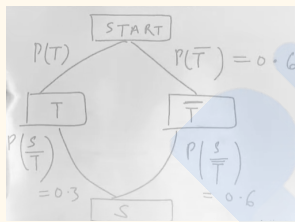
GATE General Aptitude Questions

Ques 1. $f(x) = \lambda e^{-\lambda x}$ $x \geq 0$, $\lambda > 0$, $E[x] = v(x)$, Find the value of λ .

Ans. 1/5

Ques 2. How many 4 digit numbers can be formed using digit 1, 3, 4, 6, 7 but it should be divisible by 3.

Ans. 48



Ques 3. . Find $P(T/S)$.

Ans. 0.25

Ques 4. A die is thrown repeatedly. Expected number of throws required until two consecutive throws shows an even number_____.

Ans. 6

Ques 5. If probability of having boy or girl 0.3 what is prob of getting 2 girls 1 boy

Ans. 0.189

Ques 6. Find $P(TIS)$ if $P(T') = 0.6$ $P(SIT)=0.3$ $P(S(T'))=0.3$

Ans. 0.4

Ques 7. when 3 coins are tossed what is the prob of getting 2 heads 1 tail intersection 2 tails one head

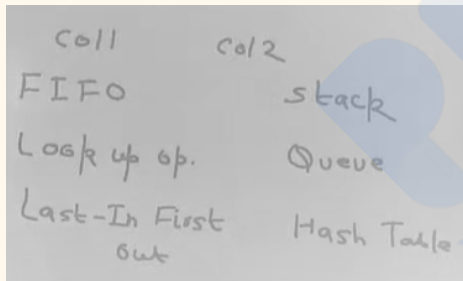
Ans. $\frac{3}{4}$

Ques 8. Find the sum of $2 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{8} + \frac{1}{9} + \frac{1}{16} + \frac{1}{27}$

Ans. 3.5

GATE Core Discipline Questions

Ques 1. Match the following



Ans. 1-b, 2-c, 3-a

Ques 2. Which algorithm sort the array in exactly using 2 swap
[4,3,2,1,5]

- A. Selection sort
- B. Insertion sort
- C. Bubble sort

Ans. C

Ques 3. minimum number of comparison in place quicksort of 60 70 80 90 100 pivot is the last element

Ans. 4

Ques 4. R(UVWXYZ)

A handwritten set of functional dependencies $F = \{ U \rightarrow V, U \rightarrow W, WX \rightarrow Y, WX \rightarrow Z, V \rightarrow X \}$ is shown on a piece of paper. The dependencies are listed vertically and enclosed in a large curly brace on the left side.

Which FD can be determined from above FD Set

- A. $VW \rightarrow Y$**
- B. $VW \rightarrow YZ$**
- C. $VW \rightarrow U$**
- D. $WX \rightarrow YZ$**

Ans. A,B,D

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Select *  
From Raider , Team  
Where Raider.id = Team.id  
AND  
City = Jaipur  
AND  
Raid points > 200
```

Ques 5.

Ans. 3