

VITEEE 2021 Question Paper for May 30 Slot 2

Time Allowed :90 Minutes	Maximum Marks :80	Total Questions :80
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General Instructions

Read the following instructions very carefully and strictly follow them:

1. The question paper contains a total of 80 questions divided into four parts:
 - Part I: Physics (Questions 1 to 25)
 - Part II: Chemistry (Questions 26 to 50)
 - Part III: Mathematics (Questions 51 to 75)
 - Part IV: English & Logical Reasoning (Questions 76 to 80)
2. All questions are multiple-choice with four options, and only one of them is correct.
3. For each correct answer, the candidate will earn 1 mark.
4. There is no negative marking for incorrect answers.
5. The test duration is 12 hours.

1. Boolean Identity $(\overline{A} + \overline{B}) \cdot (A + B)$ is equal to

- (A) $A \oplus B$
- (B) $A \odot B$
- (C) 0
- (D) 1

2. Find the values of constants a and b such that the function $f(x) = \begin{cases} ax^2 + b, & x < -1 \\ bx^2 + ax + 4, & x \geq -1 \end{cases}$ is differentiable at $x = -1$.

- (A) $a = 2, b = 3$
- (B) $a = 3, b = 2$
- (C) $a = 1, b = 4$
- (D) $a = 4, b = 1$

3. Maximum value of $x + 3y$ subject to conditions $x + y \leq 4$, $0 \leq x \leq 3$ and $0 \leq y \leq 2$ is?

- (A) 6
 - (B) 7
 - (C) 8
 - (D) 9
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