Vinay Sanja was interviewing for a job at the State Bank of India. The bank requires all job applicants to take a competency test on basic money mathematics. Vinay has completed the interest calculations portion of the exam. Below are his questions and answers. Vinay must correctly answer in at least 3 cases to be eligible for the job. Evaluate and correct Vinay’s answers. Does he qualify for the job?

(a) Assume the bank holds a INR 400,000 note receivable dated June 1, 20X1. This note matures on August 31, 20X1. This note is written to assume a 360 day year and 30 day months. The annual interest rate is stated at 10%. What is the maturity value of the note, including interest?

Answer: \( 400,000 \times 10\% \times \frac{60}{360} = \) 6,666.67

\( 400,000 + 6,666.67 = 406,666.67 \)

(b) Assume the bank holds a INR 400,000 note receivable dated June 1, 20X1. This note matures on August 31, 20X1. This note is written to assume a 365 day year, and actual days outstanding are used in all calculations. The annual interest rate is stated at 10%. What is the maturity value of the note, including interest?

Answer: \( 400,000 \times 10\% \times \frac{92}{365} = \) 10,082.19

(c) Assume the bank holds a INR 1,000,000 note receivable dated October 1, 20X5. This note matures on September 30, 20X6. This note is written to assume a 360 day year and 30 day months. The annual interest rate is stated at 8%. How much interest income should the bank record for its accounting year ending December 31, 20X5?

Answer: Zero, the note is not due until 20X6

(d) Assume the bank holds a INR 1,000,000 note receivable dated October 1, 20X5. This note matures on September 30, 20X6. This note is written to assume a 360 day year and 30 day months. The annual interest rate is stated at 8%. How much interest income should the bank record for its accounting year ending December 31, 20X6?

Answer: \( 1,000,000 \times 8\% \times \frac{270}{360} = \) 600,000