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Quiz(Summer-2026)

Student ID: ..... Student Name: .....

Course Code: MAT 101 Course Title: Mathematics I Section: 24-A

Date: Full Marks: **15 Marks** Time: **30 min**

Answer all the following questions

Question 1: Compute the derivative $\left(\frac{dy}{dx}\right)$ of the following functions:

i) $y = 2\cos x - 3e^{4x} + 5$ **[1 mark]**

ii) $y = x^{\sin x}$ **[3 marks]**

iii) $y = \frac{\sec x}{1+x^2}$ **[3 marks]**

iv) $y = \sqrt{\ln\ln(\sin x^3)}$ **[3 marks]**

Question 2: Find the maxima and minima of the function $y = 2x^3 - 21x^2 + 36x - 20$ **[5 marks]**

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