

**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]****Start Writing from here:**

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