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Shree Damodar College of Commerce & Economics, Margao-Goa
FY BBA, Term-III, End Term Assessment Repeat September 2023
BBCB030- Business Mathematics 2

Duration: 1hr 30 min   **Max Marks: 25**

Instructions:

    1) Start each question on fresh page.
    2) Figures to the right indicate maximum marks.

Q1. Answer the following :

1. Check whether the function f: R→R f(x)= $x^3 - 5$ is bijective.   **[2 Marks]**

2. Find the derivative of f(x)= $(x^3 + e^x + cosx)^5$ **[2 Marks]**

3. Find $\int xsinx\, dx$ **[1 Mark]**

Q2. Attempt the following: **[5x4=20 Marks]**

1. Check whether the following function is continuous at x=2. In case it is discontinuous, state the kind of discontinuity and if possible, redefine the function to make it continuous.

   f(x)= $\frac{x^2-4}{x-2} + \frac{x^2-4}{x+2}$ x≠2

        = 1   x=2

2. The demand function in terms of quantity demanded is p= 20-D+D². Find average revenue and marginal revenue when demand is 7 units.

3. Find maxima and minima of f(x)= $x^3 - 6x^2 + 9x + 15$

4. Marginal revenue function (in thousand rupees) for a particular commodity is 4x+5, where x denotes the number of units sold. Determine the total revenue from the sale of 10 units.

5. Find the inverse and range of y= $4 - x^2$