NARAYANI INSTITUTE OF ENGINEERING & TECHNOLOGY, ANGUL

2nd Internal Exam-2020 **Sub: Engg. Math-II** **Branch: All Branch**

Time: 1 Hour **Full Mark: 20**

Name: …… Bcode/Regd No: ……

Answer All the questions (Each question carries 2 marks)

Q1. Evaluate the $\lim_{x\to 0} \frac{1-cosx}{x^2}$

a. 1/2 b. -1/2 c. 1 d. 2

Q2. Find the value of a if $\lim_{x\to 0} \frac{tanax}{sin2x}$ =1

a. 2 b. 3 c. 1 d. none of these

Q3. Find the order and degree of the differential education, $\frac{d^3y}{dx^3} = \sqrt[1]{1 + dy/dx}$

a. order=1, degree=2, b.. order=2, degree=2, c.. order=1, degree=1, d.. none of these

Q4. Find $\frac{dy}{dx}$, it x=. a cos³t and y=a sin³t at t=$\frac{\pi}{4}$

a. 0 b. 1 c. -1 d. 2

Q5. Differentiate log^x w.r.t. $\frac{1}{x}$

a. $1/x^2$ b. x^2 c. -x d. none of these

Q6. Evaluate $\int tan-1\{\frac{1-cos2x}{1+cos2x}\}$dx

a. $\frac{1}{x}$ b. $\frac{x}{2}$ c. x d. $x^2/2$

Q7. Integrate $\int \frac{\pi}{2}^{sinx} \sqrt{1 + cosx}$ dx

a. 2 b. $\sqrt{2}$+1 c. -2 d. 2($\sqrt{2}$-1)

Q8. Determine the arid within the ellipse $x^2/a^2 + y^2/b^2$ =1

a. $a^2/2$ b. ab c. πab d. none of these

Q9. Evaluate $\int e^x(1/x-1/x^2)$ dx

a. $1/x$ b. e^x c. ex/x d. none of these

Q10. Hereticate $cos^{-1}\{ cosx + sinx\}/\sqrt{2}$

a. 1 b. -1 c. 2 d. 0

(if any doubts contact Jyoshna Madam: 8658023111)