1 point

Course outline

course work?

and Limits

functions

Integration

How does an NPTEL online

Week 1: Real number system

Week 2: Continuity and Differentiation of functions

Week 3: Plotting graph of

Week 4: L'Hospital Rule and

Lecture 16: Optimization and

L'Hospital Rule

value theorem

Riemann Integration

Lecture 20: Riemann's criterion for Integrability

Quiz: Assignment 4

Feedback For Week 4

Assignment 4 Solution

Week 8: Series and its

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convergence

Week 5: Integration and its

NPTEL » Basic Calculus 1 and 2

## $1cm^2$ $2cm^2$ $3cm^2$ $4cm^2$ No, the answer is incorrect. Score: 0 Accepted Answers: $4cm^2$ 2) The point on the parabola $x^2 = 2y$ closest to the point (4,1) is

**Assignment 4** The due date for submitting this assignment has passed.

Due on 2021-02-17, 23:59 IST. As per our records you have not submitted this assignment.

1) A rectangle is to be inscribed in a semicircle of radius 2cm. What is the largest area the rectangle can have?

Lecture 17: L'Hospital Rule continued and Cauchy Mean

 Lecture 18: Approximation of Roots Lecture 19: Antiderivative and

(2, 2)

 $(\sqrt{2}, 1)$ (-2, 2) $(2\sqrt{2}, 4)$ 

No, the answer is incorrect. Score: 0 Accepted Answers: (2, 2)

numerical methods 3) The value of  $\lim_{x\to 0} \frac{(x^3-2x^2+6)(x-\sin x)}{x^3}$  is Week 6: Applications of Integration 0 Week 7: Improper Integrals, Sequences and Series

 $\infty$ No, the answer is incorrect. Score: 0

4) The value of  $\lim_{x\to\infty} (x - \sqrt{x^2 - x})$  is 1 point

0  $\frac{1}{2}$ No, the answer is incorrect. Score: 0

Accepted Answers:

Accepted Answers:

5) The value of  $\lim_{x\to\infty} \left(1 + \frac{1}{x^2} - \frac{1}{x^3}\right)^{x^2}$  is

0

No, the answer is incorrect.

6) Let (a, b) be the point where the curve  $y = x^3 - x$  crosses the line y = 1. Applying Newton-Raphson method, find the second approximate **0 points** of a upto four decimal places.

1.2312 1.3269 1.3478 1.4001

Accepted Answers:

No, the answer is incorrect.

1.3478

Accepted Answers:

 $\frac{1}{4}\ln|\csc x^4 - \cot x^4| + C$ 

Score: 0

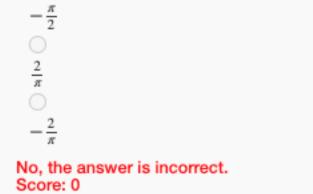
Accepted Answers:

7) The indefinite integral  $\int \frac{x^3 dx}{\sin(x^4)}$  is

 $\frac{1}{4}cosec \ x + C$  $\tfrac{1}{4} \ln |cosec \; x^4 - \cot x^4| + C$  $\frac{1}{4}\ln|cosec \ x - \cot x| + C$  $\frac{1}{4} \ln |(\cos ec \ x)^4 - (\cot x)^4| + C$ No, the answer is incorrect. Score: 0

8) The value of  $\lim_{||P|| \to 0} c_k (c_k^2 - 1)^{\frac{1}{3}} \Delta x_k$ , where  $P = \{0 = x_0 < x_1 < \dots < x_n = 1\}$  is a partition of [0, 1] with  $\Delta x_k = x_k - x_{k-1}$  and  $c_k \in (x_{k-1}, x_k)$  is

No, the answer is incorrect. Score: 0 Accepted Answers: 9) The value of  $\lim_{n\to\infty}\sum_{k=1}^n\frac{1}{n}\cos(\frac{\pi k}{2n})$  is



Accepted Answers:

10) The value of  $\int_0^3 (x-[x])dx$ , where [x] is the greatest integer function less than or equal to x, is

0

