Assignment 7

Due on 2019-09-18, 23:59:00 IST.

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1. Consider a function

\[ f(x) = \begin{cases} x & x \geq 0 \\ -x & x < 0 \end{cases} \]

The Fourier series of \( f(x) \) is given by

No. the answer is incorrect.

Correct Answer

2. The Fourier series of the function \( f(x) = x^2 \), \( -\pi < x < \pi \) is given by

No. the answer is incorrect.

Correct Answer

3. Solve the problem 2 and using the Fourier series, the value of the series \( \sum_{n=1}^{\infty} \frac{1}{n^2} \) is given by

No. the answer is incorrect.

Correct Answer

4. Let \( f(x) \) and \( f(x) \) be a periodic continuous function on the interval \([-\pi, \pi]\) then at the point of discontinuity \( x = a \in (-\pi, \pi) \), the Fourier series converges to

No. the answer is incorrect.

Correct Answer

5. The fundamental period of the function \( f(x) = |\sin x| \) is

No. the answer is incorrect.

Correct Answer

6. Let \( f(x) = \sin x \), \( 0 < x < \pi \) be a function then by using the Fourier series of \( f(x) \) the value of the series \( \sum_{n=1}^{\infty} \frac{1}{n^2} \) is

No. the answer is incorrect.

Correct Answer

7. The complete Fourier series of the function \( f(x) = x^2 \), \( -\pi < x < \pi \) is given by

No. the answer is incorrect.

Correct Answer

8. Consider a function \( f(x) = x^2 \), \( 0 < x < \pi \) then the Fourier series of the function \( f(x) \) is given by

No. the answer is incorrect.

Correct Answer

9. Solve the problem 2 and then by using the Parseval’s identity, the value of the infinite series \( \sum_{n=1}^{\infty} \frac{1}{n^2} \) is

No. the answer is incorrect.

Correct Answer

10. Solve the problem 2 and then by using the Parseval’s identity, the value of the infinite series \( \sum_{n=1}^{\infty} \frac{1}{n^2} \) is

No. the answer is incorrect.

Correct Answer