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Quiz II

Sikkim Manipal Institute of Technology

Department of Mathematics

BCA (II Sem)

Subject: Mathematics II (MA 1204)

Quiz II

Dur: 15 mins

29.03.2019

Max: 5 marks

Instructions

- (i) Answer all the questions.
 - (ii) Each questions carry **ONE** mark (No partial marking)
 - (iii) Use only the back side of this question paper for rough work.
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1. The determinant of the matrix $\begin{bmatrix} 1 & 0 \\ 9 & 3 \end{bmatrix}$ is _____.

- (a) 1 (b) 2 (c) 3 (d) 4

2. Which one of the following is true about the matrix $A = \begin{bmatrix} 2 & 1 \\ 0 & 1 \end{bmatrix}$?

- (a) Inverse of A exists (b) Determinant of A is 1
(c) Inverse of A^2 does not exists (d) None of these

3. For an infinite series $\sum_{n=1}^{\infty} u_n$, which of the following statement is true?

- (a) $\sum_{n=1}^{\infty} u_n$ converges implies that $\lim_{n \rightarrow \infty} u_n = 0$
(b) Always Ratio test works to check the convergence
(c) Always root test can be used to check the convergence
(d) None of these

4. The series $\sum_{n=1}^{\infty} \frac{2}{n}$ is _____

- (a) Diverges (b) Converges (c) Oscilates (d) None of these

5. Which can be an appropriate test for the series $1 - \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{3}} - \frac{1}{\sqrt{4}} + \dots$ in the following?

- (a) Comparison Test (b) Cauchy's Root Test
(c) Leibnitz's Test (d) D'Alembert's Ratio Test

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1. (c) 3
2. (a) Inverse of A exists
3. (a) $\sum_{n=1}^{\infty} u_n$ converges implies that $\lim_{n \rightarrow \infty} u_n = 0$
4. (a) Diverges
5. (c) Leibnitz's Test

