Name: _____ Reg No: | | | | | | | | | |

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.

1. The determinant of the matrix $\begin{bmatrix} 1 & 4 \\ 2 & 3 \end{bmatrix}$ is _____.

   (a) 3 (b) -5 (c) 11 (d) 5

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

   (a) Inverse of A does not exists (b) Determinant of A is 1

   (c) Inverse of A^2 exists (d) None of these

3. For an infinite series $\sum_{n=1}^{\infty}(-1)^{n-1}u_n$ and $u_n \geq 0$ for all n, which of the following statement is true?

   (a) Comparison test can be used to test the convergence

   (b) Root test has to be used to test the convergence

   (c) Leibnitz's test can be used to test the convergence

   (d) Con not decide which test to be used

4. The series $\sum_{n=1}^{\infty}\frac{5}{n^p}$ is _____

   (a) Converges only if $p < 0$ (b) Diverges for $p = 40000$

   (c) Oscillates if $p \geq 10$ (d) None of these

5. Which can be an appropriate test to test the convergence of the series $\sum_{n=1}^{\infty}\left(1+\frac{1}{n}\right)^{n^2}$?

   (a) Comparison Test (b) Cauchy's Root Test (c) Leibnitz's Test (d) None of these

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1. (b) -5

2. (a) Inverse of A does not exists

3. (c) Leibnitz's test can be used to test the convergence

4. (d) None of these

5. (b) Cauchy's Root Test

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