

King Fahd University of Petroleum & Minerals

Department of Mathematical Sciences

Math 102, Section: 18, 20, 23 (052)

Quiz-5(a)

Time: 15 Minutes

Marks:...../9

Name:

Serial #:

ID#:

Section #:

(i) Find sum of series: $\sum_{n=1}^{\infty} \left[\frac{-4}{n(n+1)} - \frac{3}{n^4} \right]$.

(ii) Test series for convergence or divergence: $\sum_{n=1}^{\infty} \frac{2^n}{n^3}$.

(i)

(ii)

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Quiz-5(b)

Time: 15 Minutes

Marks:...../9

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Section #:

Test series for convergence or divergence:

(a)
$$\sum_{n=0}^{\infty} \frac{2^n + n}{(n+1)!}$$

(b)
$$\sum_{k=1}^{\infty} k^3 \sin^3\left(\frac{1}{k}\right)$$

(a)

(b)

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Quiz-5(c)

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- (i) Determine whether series converges or diverges, if convergent, find the sum.

$$\sum_{k=2}^{\infty} \frac{1}{k^2 - 1}$$

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Quiz-5(d)

Time: 15 Minutes

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Name:

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Section #:

Test series for convergence or divergence:

(a) $\sum_{k=1}^{\infty} \frac{(2k+1)^3}{(k^3+1)^2}$ (b) $\sum_{k=1}^{\infty} \left(-\frac{3}{2}\right)^{k+1}$

(a)

(b)