**Quiz Chapter 8 (B1-SP2011)**

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Question 1

Điểm : 1

A car is moving with speed 16 m/s and acceleration 6m/s2 at a given instant. Using a second-degree Taylor polynomial, estimate how far the car moves in the next second.  
  
Select the correct answer.

Chọn một câu trả lời

|  |  |  |
| --- | --- | --- |
|  | a. 19.5 m |  |
|  | b. 19 m |  |
|  | c. 30 m |  |
|  | d.   25.5 m |  |
|  | e. 20 m |  |

Question 2

Điểm : 1

Determine whether the sequence converges or diverges. If it converges, find the limit.  
  
[a_n=\sqrt[n]{3^{2n+1}}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?a_n=\sqrt%5bn%5d%7b3%5e%7b2n+1%7d%7d)

Chọn một câu trả lời

|  |  |  |
| --- | --- | --- |
|  | a. Converges, 27 |  |
|  | b. Converges,  9 |  |
|  | c. Converges, 81 |  |
|  | d. Diverges |  |

Question 3

Điểm : 1

Use the binomial series to expand the function as a power series. Find the radius of convergence.   
  
[\frac{1}{(2+x)^2}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\frac%7b1%7d%7b(2+x)%5e2%7d)

Chọn một câu trả lời

|  |  |  |
| --- | --- | --- |
|  | a. [|x|\leq 1](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?|x|\leq+1) |  |
|  | b. |x| < 1 |  |
|  | c. [|x|\leq 2](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?|x|\leq+2) |  |
|  | d. |x| < 2 |  |

Question 4

Điểm : 1

Find the interval of convergence of the series.   
  
[\sum_{n=1}^\infty\frac{(-1)^nx^n}{n+4}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\sum_%7bn=1%7d%5e\infty\frac%7b(-1)%5enx%5en%7d%7bn+4%7d)  
  
Select the correct answer.

Chọn một câu trả lời

|  |  |  |
| --- | --- | --- |
|  | a. diverges everywhere |  |
|  | b. (-1, 1) |  |
|  | c. (-1, 1] |  |
|  | d. [-1, 1] |  |
|  | e. [-1, 1) |  |

Question 5

Điểm : 1

Test the series for convergence or divergence.   
  
[\sum_{n=2}^\infty (-1)^n \frac{n}{5\ln n}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\sum_%7bn=2%7d%5e\infty+(-1)%5en+\frac%7bn%7d%7b5\ln+n%7d)

Chọn một câu trả lời

|  |  |  |
| --- | --- | --- |
|  | a. Convergent |  |
|  | b. Divergent |  |

Question 6

Điểm : 1

Test the series for convergence or divergence.   
  
[\sum_{k=5}^\infty\frac{5}{k(\ln k)^6}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?\sum_%7bk=5%7d%5e\infty\frac%7b5%7d%7bk(\ln+k)%5e6%7d)

Chọn một câu trả lời

|  |  |  |
| --- | --- | --- |
|  | a. Convergent |  |
|  | b. Divergent |  |





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