**Quiz Chapter 11 (B1-SP2011)**

Top of Form

<div> <h2 class="main">JavaScript must be enabled to continue!</h2> </div>

Question 1

Marks: 1

Find the limit   
[\displaystyle\lim_{(x,y)\to (9,-5)} x^5+8x^3y-2xy^2](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?%5Cdisplaystyle%5Clim_%7B%28x%2Cy%29%5Cto+%289%2C-5%29%7D+x%5E5%2B8x%5E3y-2xy%5E2)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 26509 |  |
|  | b. 14550 |  |
|  | c. 47077 |  |
|  | d. 29439 |  |

Question 2

Marks: 1

At what point is the following function a local minimum?   
  
[f(x,y)=8x^2+8y^2+8x^2y+6](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?f%28x%2Cy%29%3D8x%5E2%2B8y%5E2%2B8x%5E2y%2B6)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. (1, 0) |  |
|  | b. (1, 3) |  |
|  | c. (0, 3) |  |
|  | d. (0, 0) |  |

Question 3

Marks: 1

Evaluate [\frac{\partial u}{\partial z}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?%5Cfrac%7B%5Cpartial+u%7D%7B%5Cpartial+z%7D)at (x, y, z) = (2, 2, 4) for the function u(p, q, r) = p2q2 - r; p = y - z, q = x+z, r = x+y

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. -96 |  |
|  | b. 96 |  |
|  | c. 384 |  |
|  | d. 192 |  |

Question 4

Marks: 1

Find the limit.

[\displaystyle\lim_{(x,y)\to (7, 6),\, y\ne 6}\,\,\,\frac{xy+8y-6x-48}{y-6}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?%5Cdisplaystyle%5Clim_%7B%28x%2Cy%29%5Cto+%287%2C+6%29%2C%5C%2C+y%5Cne+6%7D%5C%2C%5C%2C%5C%2C%5Cfrac%7Bxy%2B8y-6x-48%7D%7By-6%7D)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 0 |  |
|  | b. 1 |  |
|  | c. 15 |  |
|  | d. -1 |  |

Question 5

Marks: 1

Find the direction in which the function is increasing or decreasing most rapidly at the point Po.  
  
[f(x,y,z)=x\sqrt{y^2+z^2},\, P_0(-2, -1, -1)](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?f%28x%2Cy%2Cz%29%3Dx%5Csqrt%7By%5E2%2Bz%5E2%7D%2C%5C%2C+P_0%28-2%2C+-1%2C+-1%29)

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. [\sqrt{3}(i/3+j/3+k/3)](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?%5Csqrt%7B3%7D%28i%2F3%2Bj%2F3%2Bk%2F3%29) |  |
|  | b. [(1/\sqrt{3})(i/3+j/3-k/3)](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?%281%2F%5Csqrt%7B3%7D%29%28i%2F3%2Bj%2F3-k%2F3%29) |  |
|  | c. [\sqrt{3}(i/3+j/3-k/3)](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?%5Csqrt%7B3%7D%28i%2F3%2Bj%2F3-k%2F3%29) |  |
|  | d. [(1/\sqrt{3})(i/3+j/3+k/3)](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?%281%2F%5Csqrt%7B3%7D%29%28i%2F3%2Bj%2F3%2Bk%2F3%29) |  |

Question 6

Marks: 1

Find [f_{xxx}](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?f_%7Bxxx%7D).   
  
[f(x,y)=x^2y^4-3x^4y](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?f%28x%2Cy%29%3Dx%5E2y%5E4-3x%5E4y)  
  
Select the correct answer.

Choose one answer.

|  |  |  |
| --- | --- | --- |
|  | a. 72xy |  |
|  | b. -72xy |  |
|  | c. 36xy |  |
|  | d. [36xy^2](http://cms.fpt.edu.vn/elearning/filter/tex/displaytex.php?36xy%5E2) |  |
|  | e. -36xy |  |

Bottom of Form