

# Critical Points MCQ Questions

Q1. “All critical points of a function are extrema”

- TRUE
- FALSE

Q2. Compute the number and value of critical point(s) of the function

$$f(x, y) = x^3 + x^2y - y^2 - 4y$$

- 2 critical points  $(-4,6)$  and  $(0, -2)$
- 3 critical points  $(1, \frac{3}{2})$ ,  $(0, -2)$  and  $(-4,6)$
- 3 critical points  $(-4, \frac{3}{2})$ ,  $(0, -2)$  and  $(1,6)$
- 2 critical points  $(-4,6)$  and  $(1, -2)$

Q3. If  $(x_0, y_0) \notin D_f$  (Domain of  $f$ ) then it is not a critical point.

- TRUE
- FALSE

Q4. Critical Points are useful in determining

- concavity of the function
- local extrema
- rate of change
- all the above

Q5. Leibniz published his paper on calculus called

- Nova Methodus pro Maximis et Minimis
- Traite des indivisible
- Nova Methodus Proxima

# ANSWER KEY

Q1. FALSE

Q2. 3 critical points  $(1, \frac{3}{2})$ ,  $(0, -2)$  and  $(-4, 6)$

Q3. TRUE

Q4. all the above

Q5. Nova Methodus pro Maximis et Minimis