UPSC NDA 1 Unofficial Answer Key 2024

A differentiable function f(x) has a local maximum at x=0. Let y = 2f(x) + ax-b.

1. Which of the following is/are correct?
   a. f'(0) = 0
   b. f''(0) < 0
   Select the correct answer using the code given below:
   a. 1 only
   b. 2 only
   c. Both 1 and 2
   d. Neither 1 nor 2

Answer: c

2. The function *y* has a relative maxima at x=0 for

   a. a>0, b=0
   b. For all *b* and *a* = 0
   c. For all *b* > 0 only
   d. For all *a* and *b* = 0

Answer: b

3. What is $\int_{-1}^{0} h(x)\, dx$ equal to?

   a. $-3/2$
   b. -1
   c. 0
   d. 1/2

Answer: d

Consider the following for the next 02 items that follow:

Let $\int \frac{dx}{\sqrt{x-1}-\sqrt{x-1}} = \alpha\,(x=1)^{\frac{3}{2}} + \beta\,(x=1)^{\frac{3}{2}} + c$

5. What is the value of α?

    a. $\frac{1}{3}$

    b. $\frac{2}{3}$

    c.   1

    d. $\frac{4}{3}$

Answer: a

6. What is the value of β?

    a. $-\frac{2}{3}$

    b. $-\frac{1}{3}$

    c. $\frac{1}{3}$

    d. $\frac{2}{3}$

Answer: c

More questions with answers to follow… Stay tuned