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Graded Quiz 04

Graded Quiz # 4 : MCQ Part

6 points possible (graded, results hidden)

Please write below your BracU ID and Section number. After submission these may shows WRONG answers. Please IGNORE these messages. Your score will be based on the questions belwo these two inputs:

=====

Your BracU ID#:

19101239

Your theory class section#

- [ ] 1

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- [ ] 4
- [ ] 5
- [x] 6

MCQs start from below. Answer the questions correctly:

=====

Q#1: Let $\beta = 2\, m = 5\, e_{\min} = -1$ and $e_{\max} = 2$ Which of the following is the value of $|x|$ would cause the scale invariant error to maximize during the computation of Machine Epsilon?

- (•) Minimum
- ( ) Average
- ( ) Maximum
- ( ) Random value

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- ◯ Yes I agree completely since maximum value of e will result in maximum machine epsilon value
- ◯ No, since we need to take the minimum value
- ◉ No, since exponent does not matter while calculating the machine epsilon value
- ◯ Not enough information given

Q#3: It is given that $x = 3.0, 3.1, 3.2, 3.3$ and the corresponding value of $f(x) = 1.5, 2.6, 3.8, 4.6$ respectively. The value of the first derivative of $f(x)$ at $x = 3.1$ using Central Difference method will be

- ◯ 10
- ◯ 15.5
- ◯ 14.2
- ◉ 11.5

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- ○ 16
- ○ 1/16
- ◉ 1/64

Submit You have used 0 of 1 attempt

Your answers have been saved but not graded. Click 'Submit' to grade them.

1. [2 marks] Consider the function, $f(x) = x\ln(x) + (3x^2 - 2)^3$. Find the approximate value of the first derivative of the function up to 4 decimal places using backward difference at $x_0 = 2$ and step size = 0.01. [Show workings]

2. [2 marks] Find the actual value of the first derivative up to 4 decimal places at $x_0 = 2$ [Show workings]

3. [2 marks] Now compute the percentage error up to 4 decimal places using the answers obtained in the previous two parts.

SUBMISSION LINK: GRADED QUIZ PROBLEM SOLVING PART

Assignment submissions will close soon. To receive a grade, first provide a response to the prompt, then complete the steps below the **Your Response** field.

Your Response due Jul 29, 2021 21:00 +06 (in 1 hour, 25 minutes) IN PROGRESS

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Read the following instructions to submit your solution of the Problem Part of Graded Quiz #3:

- Prepare a title page indicating (i) your name, (ii) BracU ID #, Grade Quiz # and (iv) your theory section #.
- Rename your solution file in the format: ID_LastName_Section.pdf or ID_LastName_Section.jpg (As for example 12345678_Khan_4.pdf).
- Prepare a single .pdf ot a single.jpg file containing the title page and the solution pages, arranged on order.and when finished upload your work/solution below, and write the file name in the Description tab and then click the Upload File button.
- Finally click `Submit your Response and Move to the next step' to complete the submission.
- Click `End My Exam' at the top.
- If uploading fails, take a screen shot of your attempted uploading try. Email your file to our section teacher including the screen shot before the time runs out. No submission will be accepted without the screen shot and the email must be sent before the deadline.

Choose Files No file chosen

Upload files

You may continue to work on your response until you submit it.

Submit your response and move to the next step

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