MTAIML_CLUS_Batch2_SEM 2_1-2023_EC2M_AIMLCZG511_Deep Neural Network_Online

GULAM SARWAR | 04 Feb 2024

Test Name::

MTAIML_CLUS_Batch2_SEM 2_1-2023_EC2M_AIMLCZG511_Deep Neural Network_Online

Overall Status: Completed Detailed Status: Time Over | Test Finish Time: February 04, 2024 06:55:02 PM IST

GS

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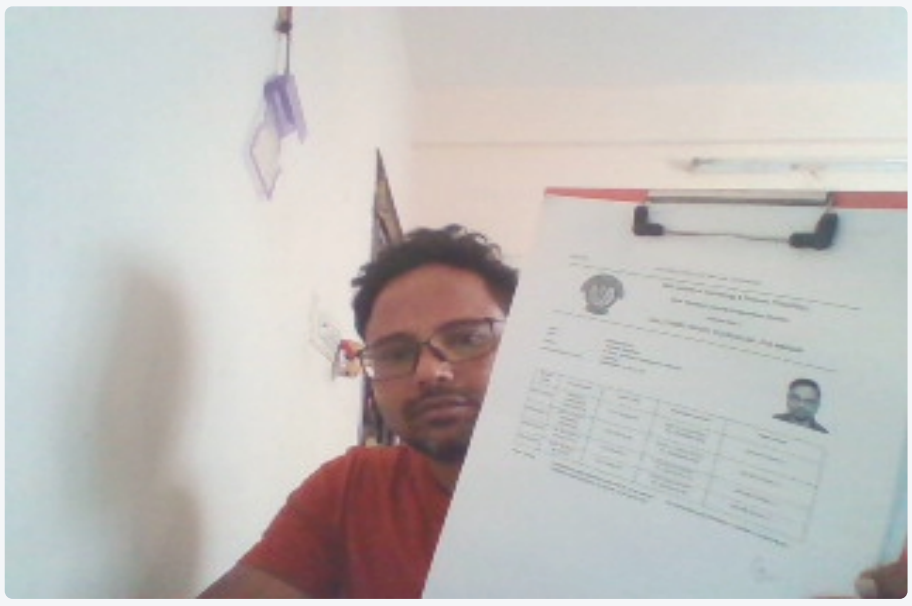
Campus ID: 2022AC05156

Test-Taker ID: - 128566202

Profile Picture Snapshot

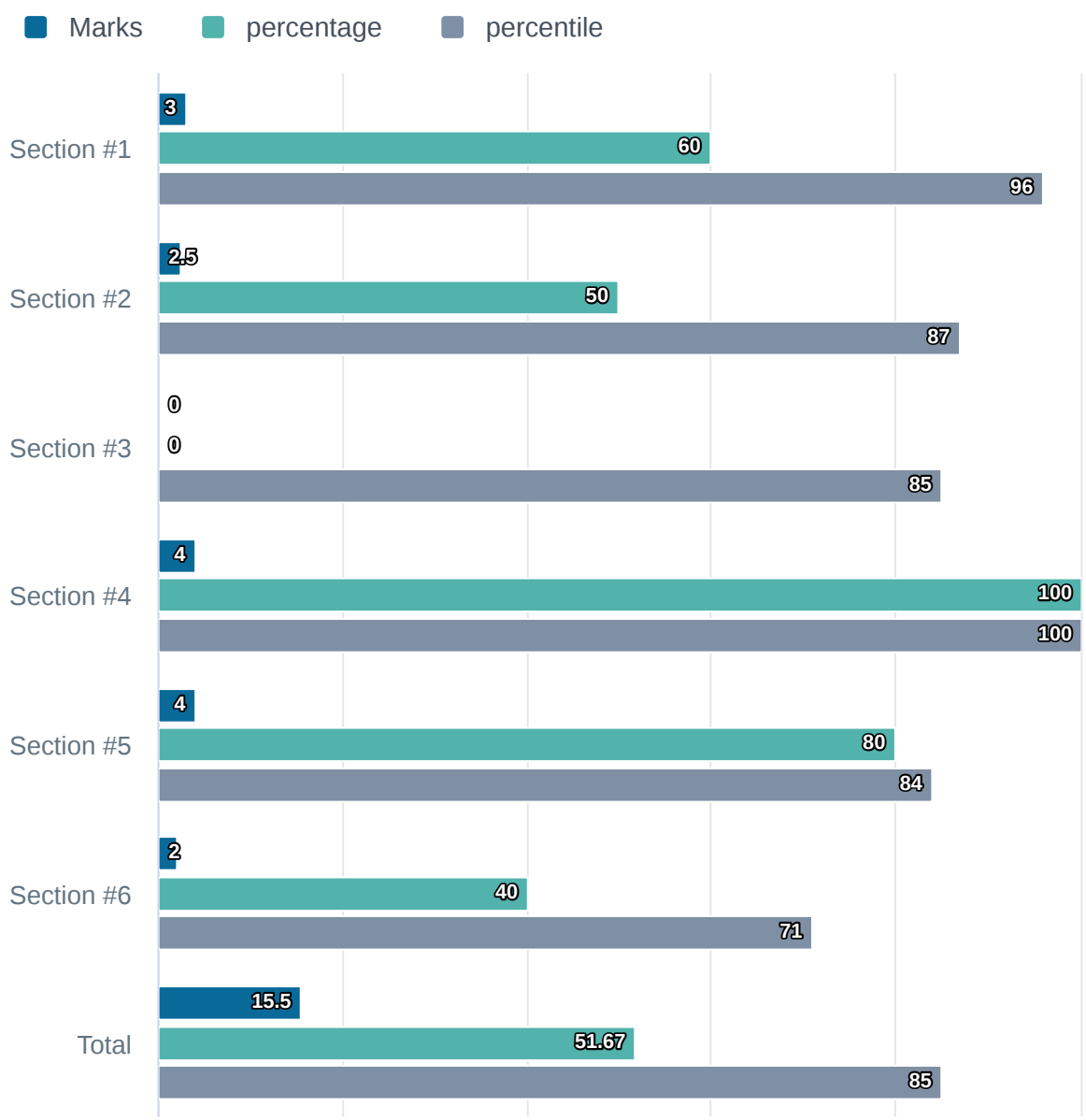
Identity Card Snapshot



Overall Summary

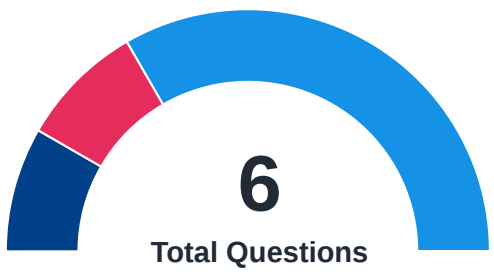
15.5 Marks Scored out of 30	51.67 % 85.14 percentile out of 222 Test Takers	2h 15m 14s Time taken of 2hr 25mins

Marks Scored



Attempt Summary

Distribution of questions attempted in a total of 6 question(s).



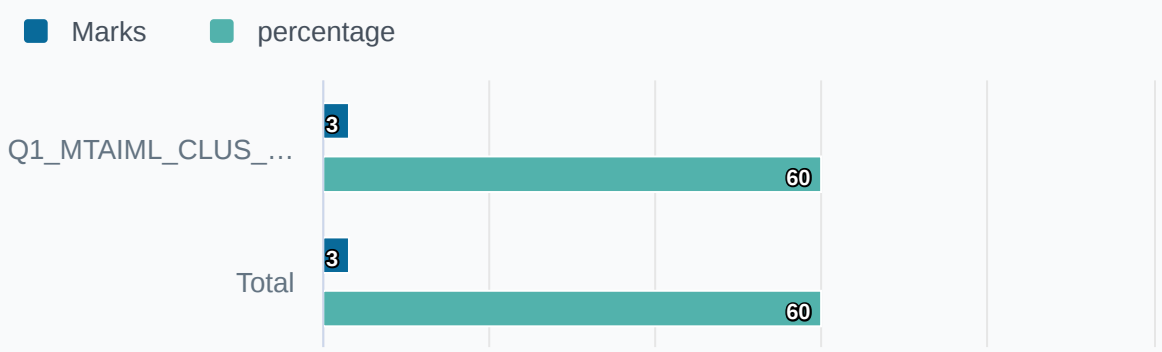
This shows the correctness of questions attempted by the test taker

Correct	1 Ques	4/4 Marks
Incorrect	1 Ques	0/6 Marks
Partially Correct	4 Ques	11.5/20 Marks
Not Attempted	0 Ques	0/0 Marks

Section-Wise Details

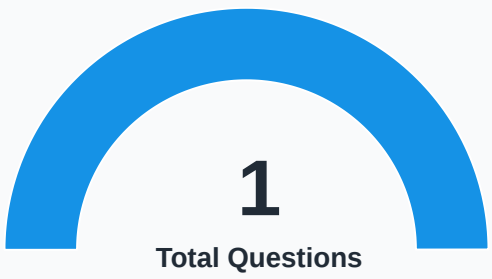
Section 1	question(s)	Time taken	Marks Scored
Section #1	1 Q.	58m 1s (Untimed)	3 / 5

Marks Scored



Attempt Summary

Distribution of questions attempted in a total of 1 question(s).



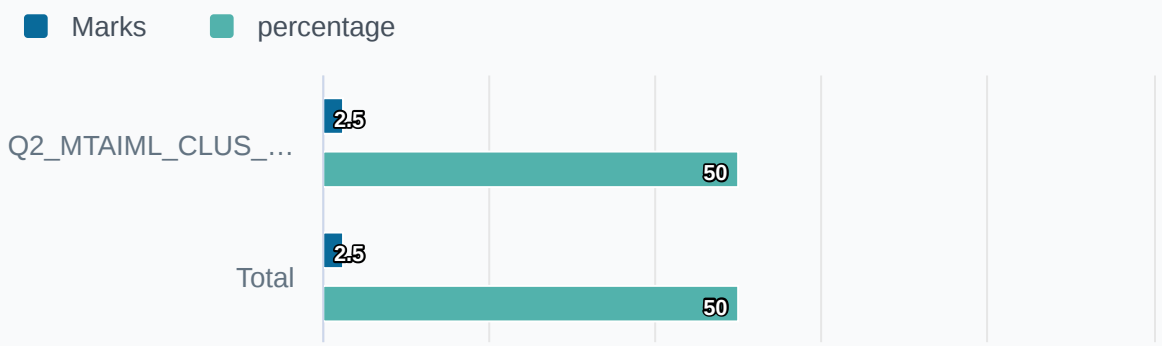
This shows the correctness of questions attempted by the test taker

Partially Correct	1 Ques	3/5 Marks

Section-Wise Details

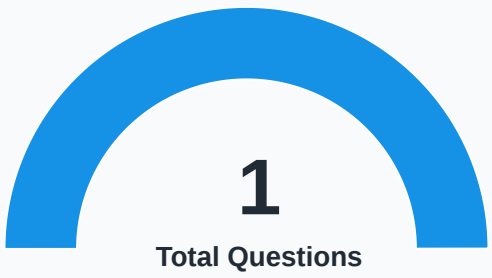
Section 2	question(s)	Time taken	Marks Scored
Section #2	1 Q.	17m 23s (Untimed)	2.5 / 5

Marks Scored



Attempt Summary

Distribution of questions attempted in a total of 1 question(s).



This shows the correctness of questions attempted by the test taker

Partially Correct	1 Ques	2.5/5 Marks

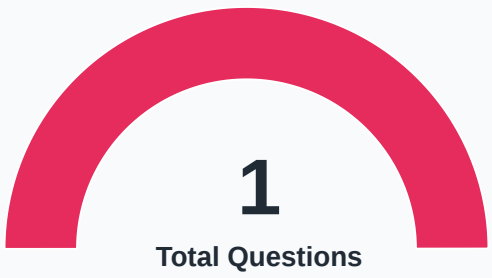
Section-Wise Details

Section	question(s)	Time taken	Marks Scored
Section #3	1 Q.	9m (Untimed)	0 / 6

Marks Scored

Attempt Summary

Distribution of questions attempted in a total of 1 question(s).



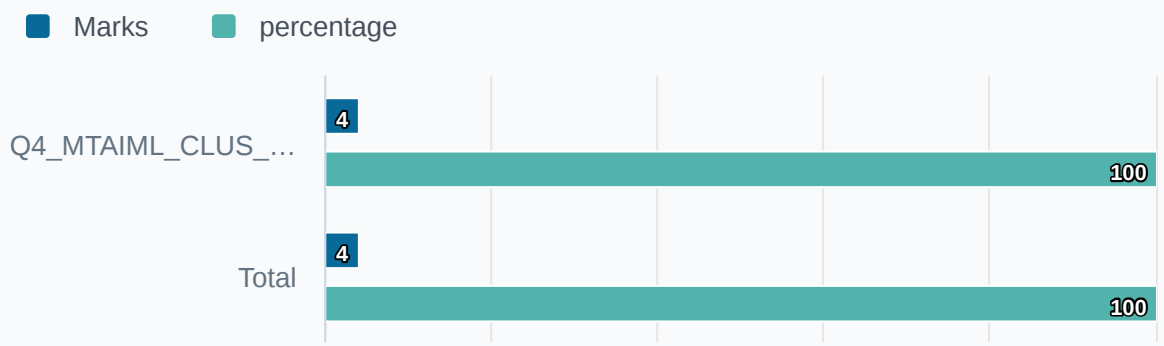
This shows the correctness of questions attempted by the test taker

Incorrect	1 Ques	0/6 Marks

Section-Wise Details

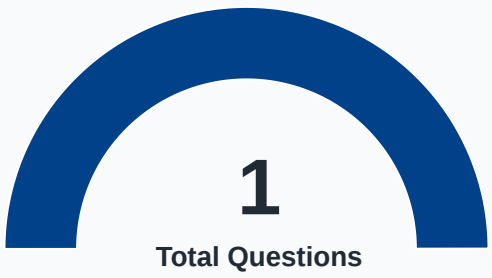
Section 4	question(s)	Time taken	Marks Scored
Section #4	1 Q.	11m 37s (Untimed)	4 / 4

Marks Scored



Attempt Summary

Distribution of questions attempted in a total of 1 question(s).



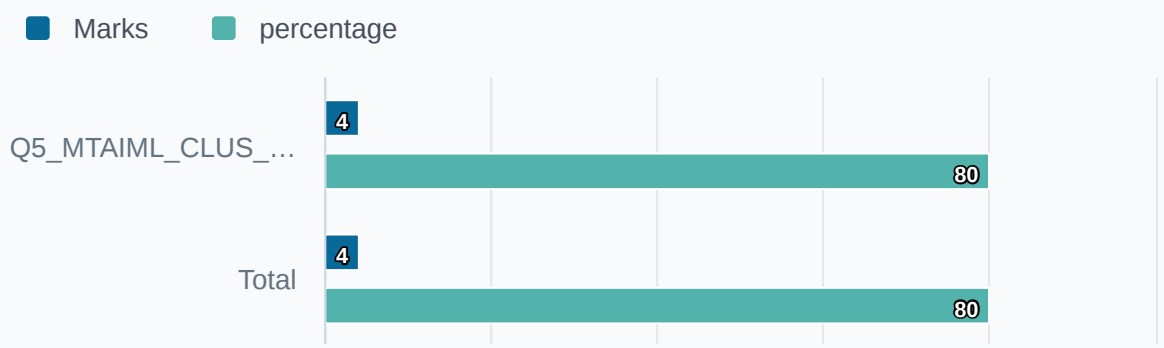
This shows the correctness of questions attempted by the test taker

Correct	1 Ques	4/4 Marks

Section-Wise Details

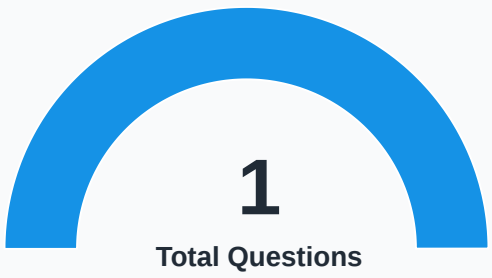
Section 5	question(s)	Time taken	Marks Scored
Section #5	1 Q.	23m 10s (Untimed)	4 / 5

Marks Scored



Attempt Summary

Distribution of questions attempted in a total of 1 question(s).



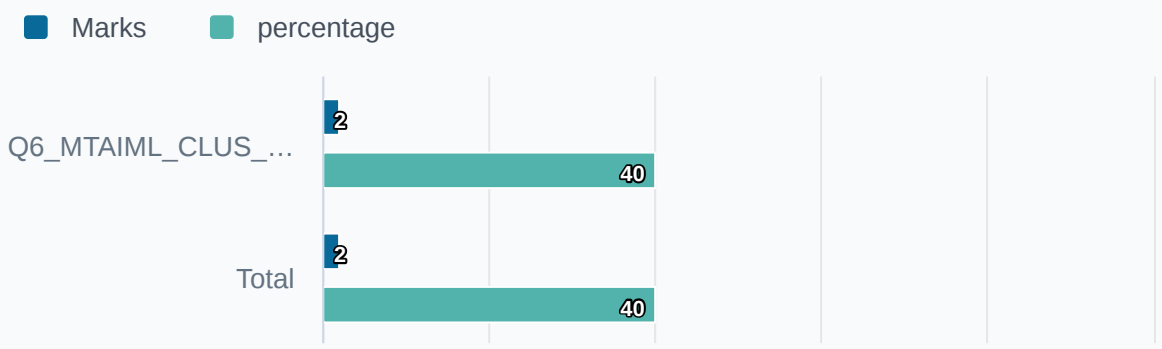
This shows the correctness of questions attempted by the test taker

Partially Correct	1 Ques	4/5 Marks

Section-Wise Details

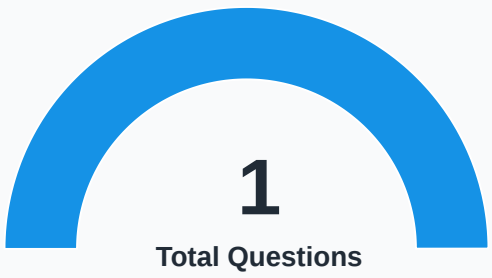
Section 6	question(s)	Time taken	Marks Scored
Section #6	1 Q.	16m 1s (Untimed)	2 / 5

Marks Scored



Attempt Summary

Distribution of questions attempted in a total of 1 question(s).



This shows the correctness of questions attempted by the test taker

Partially Correct	1 Ques	2/5 Marks

Question-Wise Details

Section 1
Section #1

1	58m 1s	3/5
question(s)	Time taken	Marks Scored

Q. 2

Question 1

Mark for Re-evaluation | Time taken: 58m 1s | Marks Scored: 3/5

Please write your answer on a piece of paper and scan and upload the handwritten answers using the QR Code available in the Scan and Upload Section of this exam

Consider a single layer perceptron having 2 inputs and 1 output. Let threshold be 0.5, learning rate be 0.6, bias be -2 and weight values w_1 = 0.3 and w_2 = 0.7. Given the input patterns in the table, compute the value of the output and train using perceptron learning rule for one epoch. **[5 Marks]**

E.g. #	X_1	x_2	y
1	1	1	+1
2	1	0	+1
3	0	1	-1
4	0	0	+1

Response:

Words : 0

Answer Image 1707051666916.png
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Answer Image 1707051706170.png
1.15 MB Click to Download

Answer Image 1707051747505.png
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File Upload Settings for this question:

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Maximum individual File Size Allowed	30 MB
File Types Allowed	All File Types Allowed by Mettl

Question-Wise Details

Section 2
Section #2

1	17m 23s	2.5/5
question(s)	Time taken	Marks Scored

Q. 2

Question 1

Mark for Re-evaluation | Time taken: 17m 23s | Marks Scored: 2.5/5

Please write your answer on a piece of paper and scan and upload the handwritten answers using the QR Code available in the Scan and Upload Section of this exam

Derive the equation for the derivative of categorical cross-entropy loss *L* with respect to the weighted sum *Z*, for a three-class classification problem. Assume single hidden layer and *d* input neurons. **[5 Marks]**

Response:

Words : 0

Answer Image 1707051818851.png
1.09 MB Click to Download

Answer Image 1707052407478.png
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Answer Image 1707052551172.png
880.61 KB Click to Download

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Maximum individual File Size Allowed	30 MB
File Types Allowed	All File Types Allowed by Mettl

Question-Wise Details

Section 3
Section #3

1	9m	0/6
question(s)	Time taken	Marks Scored

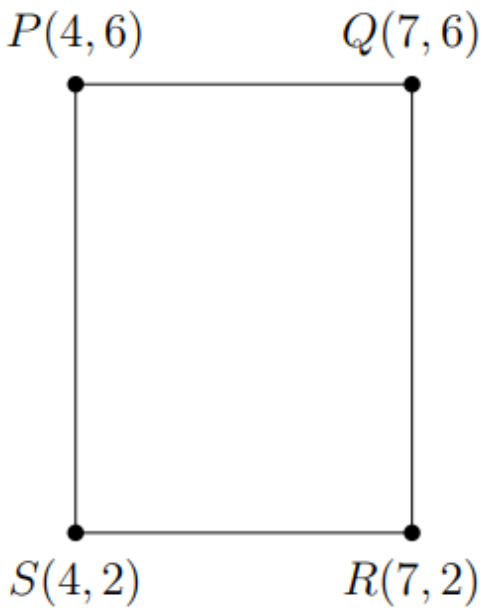
Q. 2

Question 1

Mark for Re-evaluation | Time taken: 9m | Marks Scored: 0/6

Please write your answer on a piece of paper and scan and upload the handwritten answers using the QR Code available in the Scan and Upload Section of this exam

Construct an MLP for the given complex decision boundary. **[6 Marks]**



Response:

Words : 0

Answer Image 1707051860666.png
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File Types Allowed	All File Types Allowed by Mettl

Question-Wise Details

Section 4
Section #4

1	11m 37s	4/4
question(s)	Time taken	Marks Scored

Q. 2

Question 1

Mark for Re-evaluation | Time taken: 11m 37s | Marks Scored: 4/4

Please write your answer on a piece of paper and scan and upload the handwritten answers using the QR Code available in the Scan and Upload Section of this exam

Find the minimum value of p for the equation $t = (2p + 3)^2$ using SGD. Assume the initial value of p as 6 and learning rate as 0.1. Do 3 iterations. **[4 Marks]**

Response:

Words : 0

Answer Image 1707051903888.png

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Question-Wise Details

Section 5
Section #5

1	23m 10s	4/5
question(s)	Time taken	Marks Scored

Q. 2

Question 1

Mark for Re-evaluation | Time taken: 23m 10s | Marks Scored: 4/5

Please write your answer on a piece of paper and scan and upload the handwritten answers using the QR Code available in the Scan and Upload Section of this exam

Draw the computational graph for the equation $f = 1/(1 + e^{(-z)})$. Show the computations of derivatives of f wrt z in the graph. Using the graph, compute the value of f and the derivatives if $z = 3$.

[5 Marks]

Response:

Words : 0

Answer Image 1707051944278.png
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Answer Image 1707052877951.png
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Answer Image 1707052900409.png
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Maximum individual File Size Allowed	30 MB
File Types Allowed	All File Types Allowed by Mettl

Question-Wise Details

Section 6
Section #6

1	16m 1s	2/5
question(s)	Time taken	Marks Scored

Q. 2

Question 1

Mark for Re-evaluation | Time taken: 16m 1s | Marks Scored: 2/5

Please write your answer on a piece of paper and scan and upload the handwritten answers using the QR Code available in the Scan and Upload Section of this exam

Given an error surface, compute the value that minimizes the error with respect to (w_1, w_2, w_3).Compute the minimum possible value of error. **[5 Marks]**

$$E(w_1, w_2, w_3) = (w_1 - w_2)^3 - 2(w_1^2 - w_2) + w_1^2 + w_2^2$$

Response:

Words : 0

Answer Image 1707051984364.png
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File Types Allowed	All File Types Allowed by Mettl

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