

**B. K. BIRLA COLLEGE OF ARTS, SCIENCE AND COMMERCE (AUTONOMOUS),
KALYAN**

CERTIFICATE COURSE



Multi variable Calculus

Week 1: Limits, continuity and partial derivatives of multivariable functions

Week 2: Differentiability and chain rule

Week 3: Change of variables, Euler's theorem, tangent planes, normal lines and extreme values

Week 4: Taylor's theorem, error approximation, polar curves and multiple integrals

Week 5: Change of order and change of variables in multiple integral

Week 6: Beta and gamma functions

Week 7: Normal vector and potential field

Week 8: vector identities and line integral

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, <https://nptel.ac.in/noc/>

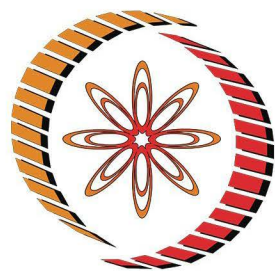
Roll No: NPTEL21MA10S11990170

To
SAAKSHI VIJAYCHAND RAI
LLOYDS METAL COLONY , BULD.2B ROOM NO 6
SONARPADA
MURBAD
MAHARASHTRA - 421401
PH. NO :7387942296

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate



No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to
SAAKSHI VIJAYCHAND RAI
for successfully completing the course

Multivariable Calculus

with a consolidated score of **56** %

Online Assignments	17.08/25	Proctored Exam	39/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **42**

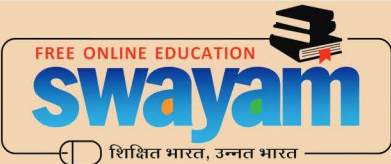
Prof. V. C. Srivastava
Coordinator, Continuing Education Centre
IIT Roorkee

Jan-Mar 2021
(8 week course)

Prof. Inderdeep Singh
NPTEL Coordinator
IIT Roorkee



Indian Institute of Technology Roorkee



This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, <https://nptel.ac.in/noc/>

Roll No: NPTEL21MA10S11990747

To
AKASH SANJAY JAMGHARE
AT.JAMGHAR, POST.SHIVALE
TEL.MURBAD , DIST.THANE
THANE
MAHARASHTRA - 421401
PH. NO :8010471583

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate



No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to
AKASH SANJAY JAMGHARE
for successfully completing the course

Multivariable Calculus

with a consolidated score of **55** %

Online Assignments	18.75/25	Proctored Exam	36/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: **42**

Prof. V. C. Srivastava
Coordinator, Continuing Education Centre
IIT Roorkee

Jan-Mar 2021
(8 week course)

Prof. Inderdeep Singh
NPTEL Coordinator
IIT Roorkee



Indian Institute of Technology Roorkee

