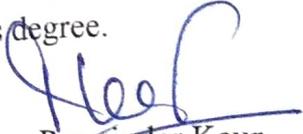


# CERTIFICATE

This is to certify that the project entitled "SYNTHESIS AND U.V. ANALYSIS OF ZINC OXIDE NANOPARTICLES" bodies the original work done by Gagandeep Kaur in partial fulfilment of degree of M.Sc. (Physics) for the session 2022-23 submitted to "KANYA MAHA VIDYALAYA (KMV) JALANDHAR". The work has been carried out under the guidance of Dr. Sonik Bhatia . To the best of our knowledge the work is the result of her original investigation and study. No part of assignment has ever been submitted to any other institution and university. The quality of work fulfills the necessary requirements related to this degree.

*for*  
  
Mrs. Parminder Kaur  
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Jalandhar

  
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Dr. Sonik Bhatia  
Supervisor  
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## CERTIFICATE

This is to certify that the dissertation entitled '**POLYANILINE-rGO COMPOSITES FOR SUPERCAPACITOR APPLICATIONS**' bodies the original work done by Anshuman Saluja in partial fulfillment of the degree of Masters in Physics for the session 2022-23 submitted to '**KANYA MAHAVIDYALAYA (KMV) JALANDHAR**'.

The work has been carried out under the guidance of Dr. Sangeeta Prasher. To the best of our knowledge, the work results from her original investigation and study. No part of the assignment has ever been submitted, in whole or in part, to any other institution or university. The quality of work fulfills the requirements related to this degree.

  
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## CERTIFICATE

This is to certify that the dissertation entitled '**POLYANILINE-rGO COMPOSITES FOR SUPERCAPACITOR APPLICATIONS**' bodies the original work done by Vibhuti Salaria in partial fulfillment of the degree of Masters in Physics for the session 2022-23 submitted to '**KANYA MAHAVIDYALAYA (KMV) JALANDHAR**'.

The work has been carried out under the guidance of Dr. Sangeeta Prasher. To the best of our knowledge, the work is the result of her original investigation and study. No part of the assignment has ever been submitted, in whole or in part, to any other institution or university. The quality of work fulfills the necessary requirements related to this degree.



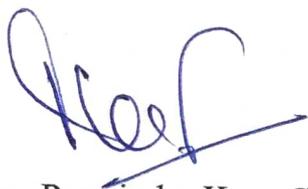
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## CERTIFICATE

This is to certify that the Dissertation entitled "Shielding, Optical and Physical characterization on bismuth borate glasses" bodies the original work done by Anchal Pathania in partial fulfillment of degree of M.Sc. (Physics) for the session 2022-23 submitted to " **KANYA MAHA VIDYALAYA, JALANDHAR** ". The work has been carried out under the guidance of Dr. Sandeep Kaur. . This is an original piece of work and has not been submitted to any other institute. The quality of work fulfills the necessary requirements related to this degree.



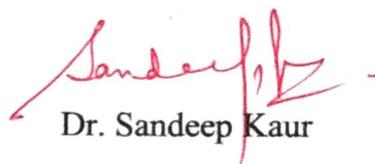
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## CERTIFICATE

This is to certify that the Dissertation entitled "TO STUDY THE OPTICAL, PHYSICAL AND SHIELDING PROPERTIES OF BORATE GLASSES" bodies the original work done by Vishali in partial fulfilment of degree of M.Sc. (Physics) for the session 2022-23 submitted to "KANYA MAHA VIDYALAYA (KMV) JALANDHAR". The work has been carried out under the guidance of Dr. Gopi Sharma. To the best of our knowledge the work is the result of her original investigation and study. No part of assignment has ever been submitted to any other institution and university. The quality of work fulfills the necessary requirements related to this degree.



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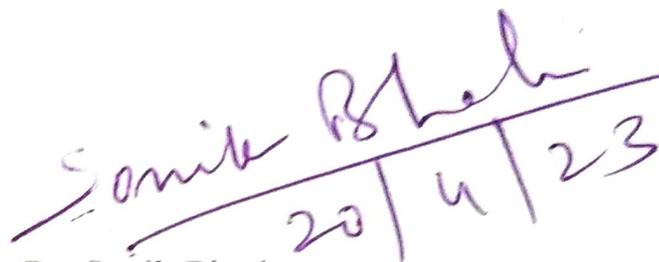
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# CERTIFICATE

This is to certify that the Dissertation entitled "SYNTHESIS AND FTIR STUDY OF ZnO NANOPARTICLES" bodies the original work done by Nandita Pathania in partial fulfillment of degree of M.Sc. (Physics) for the session 2022-23 submitted to "KANYA MAHA VIDYALAYA (KMV) JALANDHAR". The work has been carried out under the guidance of Dr. Sonik Bhatia. To the best of our knowledge the work is the result of her original investigation and study. No part of assignment has ever been submitted to any other institution and university. The quality of work fulfills the necessary requirements related to this degree.

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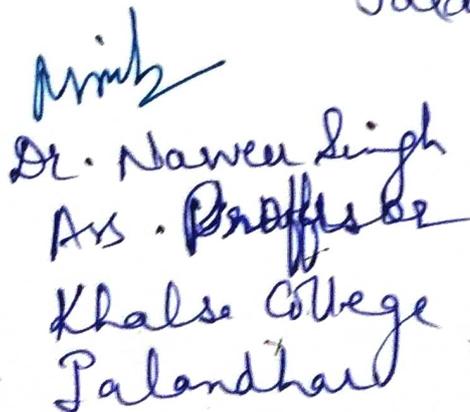
  
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## CERTIFICATE

This is to certify that an assignment entitled to study the “Optical and photon shielding studies on bismuth borate glasses” the original work done by VINDU SOUNKHLA in the fulfillment of the degree of M.Sc. Physics session 2022-23 submitted to GURU NANAK DEV UNIVERSITY, was carried out under our guidance and supervision. This is original piece of work and has not submitted to any other institute. The quality of work fulfills the entire necessary requirement related to this degree.



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