

**GOVT. HOLKAR (MODEL AUTONOMOUS)  
SCIENCE COLLEGE, INDORE**



(An ISO 9001:2015 & ISO 14001:2015 Certified Institution)



# SSR DOCUMENT

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## CRITERION – 6

**Governance, Leadership and Management**

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**Document Title:  
Case Study**

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## Case Study:1

# Procurement of X-Ray Diffraction Instrument by the Department of Physics through RUSA Grant

### Introduction:

**Institution:** Govt Holkar (Model Autonomous) Science College

**Department:** Department of Physics

**Funding Source:** RUSA (Rashtriya Uchchatar Shiksha Abhiyan) Grant

### Context:

The Department of Physics at Govt Holkar (Model Autonomous) Science College recognized the critical need for an advanced X-Ray Diffraction (XRD) instrument to enhance its research capabilities in materials science and nanotechnology. To address this requirement, the department initiated a project to procure a state-of-the-art XRD instrument through the financial support of a RUSA grant.

### Project Objective:

The primary objective of this project was to acquire a high-quality X-Ray Diffraction instrument that would facilitate cutting-edge research in materials characterization, crystallography, and nanomaterial analysis. The new instrument was expected to contribute significantly to the department's research output and elevate its reputation in the academic community.

### Implementation:

#### 1. Needs Assessment:

The Department of Physics conducted a thorough needs assessment to identify the specific requirements of researchers and scholars. The assessment highlighted the demand for a versatile XRD instrument capable of analyzing a wide range of materials, including crystalline and amorphous substances.

#### 2. RUSA Grant Application:

Leveraging the government's Rashtriya Uchchatar Shiksha Abhiyan (RUSA) initiative, the department applied for a grant to fund the procurement of the XRD instrument. The proposal outlined the instrument's technical specifications, expected impact on research outcomes, and the institution's commitment to leveraging the new equipment for academic advancement.

#### 3. Grant Approval and Budget Allocation:





Upon the successful approval of the grant application, the department received a budget allocation to cover the costs of purchasing the XRD instrument. The budget covered the instrument's purchase price, transportation, installation, and any necessary training for users.

#### **4. Vendor Selection and Procurement:**

The department initiated a rigorous vendor selection process, considering factors such as technical expertise, instrument specifications, maintenance support, and cost-effectiveness. The selected vendor was renowned for its expertise in XRD technology and its commitment to providing comprehensive user training.

#### **5. Installation and Training:**

After the procurement, the XRD instrument was delivered, installed, and calibrated by the vendor's technical team. The department organized specialized training sessions for faculty members, researchers, and students to ensure effective utilization of the instrument's capabilities.

#### **6. Research Impact:**


With the new XRD instrument in place, the Department of Physics expanded its research endeavors in various domains, including crystallography, material structure analysis, and nanotechnology. Faculty members and students leveraged the advanced capabilities of the instrument to publish high-impact research papers, collaborate with industry partners, and attract research funding.

#### **Outcome:**

The procurement of the XRD instrument through the RUSA grant proved to be a transformative step for the Department of Physics at Govt Holkar (Model Autonomous) Science College. The advanced technology empowered researchers to explore complex material properties, contributing to scientific advancement and fostering collaboration within the academic and industrial sectors.

#### **Conclusion:**

The successful acquisition of the X-Ray Diffraction instrument through the RUSA grant exemplifies the potential of government-funded initiatives to catalyze academic research and innovation. The Department of Physics at Govt Holkar (Model Autonomous) Science College demonstrated effective project management, strategic planning, and resource utilization to bring cutting-edge technology to its research community, enriching the institution's academic landscape.

  
Principal  
Government Holkar (Model Autonomous)  
Science College, Indore



### **Case Study**

(Purchase of advanced-level equipment for research work.)

The college believes in decentralization and participative management in academics, finance and administration. The following case study indicates the decentralization in management.

**Objective: -**

To provide a good quality research and facilities in college.

**Strategy: -**

Since it was a need-based activity for research scholars, the supervisor's following strategy was unanimously decided.

**Budgetary Provision: -**

- ❖ An external agency RUSA.
  - ❖ And the internal agency is Jan Bhagidari Committee,
- A budgetary provision was submitted to the parent body for approval.

**Action Plan: -**

Action Plan was prepared by the Research Committee. The distribution of work. Is done as in the following basic

- ❖ Preparation of the list of equipment.
- ❖ Shortlisting of equipment on a priority basis.
- ❖ Call for quotation.
- ❖ Preparation of competitive chart for quoted values.

**Placement of order: -**

Following equipment were purchased;

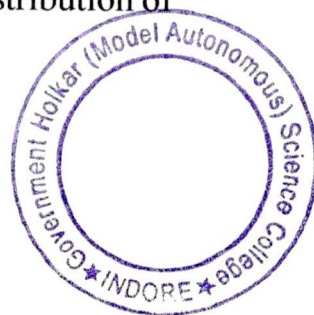
- ❖ HPLC (Janbhagidari Samiti).
- ❖ Atomic Absorption Spectrometer, Rotary evaporation, and Double Beam UV Visible Spectrometer was purchased from Funding Agency RUSA.

**The Payment: -**

The payment is released after the delivery and installation of the equipment. The installation has been done in presence of subject experts/technicians.

**Outcome: -**

- ❖ It includes the top (Principal) to class three employees.
- ❖ It facilitated a better academic research environment in the college.
- ❖ It serves as an inspiration to other nearby colleges.



*Deep*  
Principal

Government Holkar (Model Autonomous)  
Science College, Indore