Science & Technology · GS - III

Examine the role of targeted scholarships and research fellowships in strengthening India's scientific research ecosystem. What measures are required to convert financial support for science students into sustained research and innovation outcomes?

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 11/11/2026	GS - III	Science & Technology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Scientific talent pipeline, INSPIRE programme, basic sciences, financial accessibility, research mentorship, laboratory infrastructure, industry-academia collaboration, brain drain, innovation ecosystem.

Model Answer

Introduction

A strong scientific research ecosystem is essential for technological advancement and national development. Targeted scholarships such as INSPIRE SHE help attract talented students towards basic sciences and research careers.

Role of Scholarships and Fellowships

- **Early talent identification:** Financial incentives encourage academically talented students to pursue scientific disciplines.
- **Equitable access:** Scholarships reduce financial barriers to higher education.

- **Research exposure:** Summer research projects provide practical experience and mentorship.
- **Human capital development:** Sustained support helps build a skilled scientific workforce.

Challenges and Required Measures

Financial assistance alone cannot ensure research excellence. Limited laboratory infrastructure, inadequate mentorship, fragmented funding and uncertain research careers can discourage students.

India should strengthen university laboratories, establish research mentorship networks, promote interdisciplinary learning and improve collaboration between academia and industry. Transparent scholarship delivery and predictable research funding are equally important.

Conclusion

Scholarships must form part of a broader research-development strategy. Combining financial support with quality institutions, mentorship and career opportunities can strengthen India's scientific capabilities and innovation ecosystem.

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