

RESEARCH PROMOTION SCHEME

RPS

GUIDELINES AND FORMAT

2007-08



ALL INDIA COUNCIL FOR TECHNICAL EDUCATION
Indira Gandhi Sports Complex, I P Estate
New Delhi –110 002

INDEX

Sl.	Contents	Page No.
1	Introduction to Research Promotion Scheme	1
2	General Information	3
3.	Format for Summary Sheet	5
4.	Format for submission of proposals under RPS Scheme	6
5.	Format for Resume of the Principal Investigator (PI)	9
6.	Format for Resume of the Co-Principal Investigator (Co-PI)	10
7.	Format for Profile of the Department	11
8.	Endorsement from the Head of the Institution	13
9.	Distribution of Zones and States (Annexure-I)	14
10.	Group wise allocation of Departments/Subjects (Annexure-II)	15
11.	Type / Level of the Institution (Annexure-III & IV)	16
12.	Terms and Conditions (Annexure-V)	17
13.	Format for Annual Progress Report (Annexure-VI)	22
14.	Format for Utilization Certificate (Annexure-VII)	24
15.	Format for Project Completion Report (Annexure-VIII)	25
16.	Format for Audited Utilization Certificate (Annexure-IX)	27
17.	Format for Form GFR-19 (Annexure-X)	28
18.	Representative list of Thrust Areas (Annexure-XI)	29
19.	Discipline wise list of Thrust Areas (Annexure-XII)	31

INTRODUCTION

The All India Council for Technical Education (AICTE) was established by an Act of Parliament in the year 1987, with a view to promote proper planning and coordinated development of technical education system throughout the country. The AICTE promotes qualitative improvement in technical education in relation to the planned quantitative growth and regulates proper maintenance of norms and standards and matters connected therewith. The technical education covers programmes of education, research and training in Engineering & Technology, Architecture, Town Planning, Management, Pharmacy, Applied Arts and Crafts and other related areas.

As part of its functions, AICTE provides financial assistance under various schemes of Modernization and Removal of Obsolescence (MODROBS), and Research Promotion in the field of Technical Education Disciplines through the Bureau of Research and Institutional Development (RID). To ensure effective implementation of these schemes, the Council has setup a high-powered Board of Research and Institutional Development (BORID) comprising of eminent scientists, engineers, academicians, industrialists and technologists. Guidelines for applying under the Research Promotion Schemes (RPS) are given in this brochure.

RESEARCH PROMOTION SCHEME

These research promotion scheme aim to create research ambience in the institutes by promoting research in engineering sciences and innovations in established and newer technologies; and to generate Masters and Doctoral degree candidates to augment the supply of research experience faculty and research personnel in the country.

Research and development activities are considered as an essential component of higher education because of their role in creating new knowledge and insight and imparting excitement and dynamism to the educational process, as well as make them need based in view of the national requirements. The objective of this scheme is to create and update the general research capabilities of the faculty members of the various Technical Institutes. The proposal should include a specific project theme with a clear statement of the objectives, details of equipments and other research facilities proposed to be acquired and the expected deliverables from the project.

More specifically, the research ventures that may be accommodated within the Research Promotion Scheme include the following:

- a. One or more faculty members, who aim at development of an end product or some research infrastructure in a certain research area, that is subsequently expected to encourage further research activity. Funding for such projects would be limited to Rs. 5-10 lakhs.
- b. A young faculty member (age limited to thirty years at the time of submitting application) with a postgraduate degree, who would like to engage in doctoral work at his parent institute. The applicant should have obtained admission to a Ph. D. programme at his own or some other institute. In case meeting the requirement of the doctoral work requires leave-without-pay, the applicant may be allowed to draw a salary from his project (subject to approval by the Expert Committee). Funding in case of such projects would be limited to Rs. 10-12 lakhs.
- c. One or more faculty members who aim at developing new research facilities at the parent institute,

being motivated chiefly by high-end output such as patentable technologies. Funding to such projects would be limited to Rs. 20 lakhs.

In either category, ideas that are expected to lead to patents and industrial products will be given preference over others.

RPS (a). Aims at establishment of proof of concept of a Process / Idea/ Product / Software;- thereby is expected to lead a capability building.

RPS (b). Aims at enhancement of Theoretical / Practical knowledge in problem area selected for Research studies at Doctoral level :- thereby is expected to lead a capacity building.

RPS ©. Aims at Research in Frontier / Emerging areas by a group of Researcher having proven Merit / Record:- thereby is expected to lead a capability building.

Some *Thrust Areas* emphasized by AICTE are revised periodically and a representative list is given in Annexure XI. However, scope of the RPS scheme is in no way limited to the listed area, and applicants should feel free to work on other research problems that are precisely defined and involve a well-planned work schedule.

For implementation of clause 10 (e) of AICTE act relating to Disability Management, AICTE would give special preference to projects being taken up in the following areas:-

1. Educational Technology for the Handicapped.
2. Design of buildings for the Handicapped.
3. Computer based Voice/speech Interactive Hardware/software device.
4. Assistive devices for the Handicapped, Speech development devices, sensors, detection, devices, etc.
5. Design of Diagnostic/therapeutic equipment.
6. Surveys in the area of Disability Management.

AICTE invites project proposals for grant under the RPS scheme from the AICTE approved technical institutions/University Departments throughout the Country.

When preparing the project proposal, applicants should strictly follow the format provided on page 6 of this brochure very strictly. The format happens to be in two sections. Section A is common to all RPS applications. Section B includes specific details for projects of type “a”, “b”, or “c” as specified above. An applicant should complete the details in Section B depending on the type of project that he is opting for.

In all cases, both sections of the proposal should be formulated in sufficient detail and clarity to facilitate proper evaluation by the Subject Expert Committee.

GENERAL INFORMATION

1. Each institute should carefully limit the number of project proposals, which are forwarded to AICTE for support. For this purpose the Institute may carry out a rigorous in-house scrutiny of proposals at the Institutional level and forward only the very good proposals.
2. The Principal Investigator/Co-Investigator should be a **full time** faculty member of the Institute. Persons working in Professional Societies, Non-Government Organizations (NGOs), etc. are not eligible to apply under these programmes.
3. The Principal Investigators/Investigators already having ongoing projects from AICTE/other agencies are normally not considered unless the ongoing projects are nearing completion.
4. Proposals from the Departments of Self-Financing Institutions accredited by AICTE shall only be considered. However this condition does not apply to the five year old institutions located in the regions of J&K and North-Eastern States.
5. Centrally funded Institutes such as IIT's, IIM's, NIT's are not eligible for these schemes as they are directly funded by MHRD. Professional Bodies / Societies, Industrial Units / Houses, NGO's, Institutions / Departments not approved by AICTE and Non-accredited Departments (Not applicable to the five year old institutions located in the J&K State and North-Eastern States) of Self Financing Institutions are **NOT ELIGIBLE** to apply.
6. The Under Graduate departments not running relevant Post Graduate Programme and the Diploma level Institutions are not eligible for financial assistance under RPS Scheme.
7. Each project proposal should contain the Department Profile and the Institutional Profile as per formats given in this booklet. The proposals should also have an endorsement from the Head of the Institution as given in the format.
8. The Principal Investigator has the primary responsibility for the implementation of the project.
9. If the Principal Investigator of RPS programme joins another institution, AICTE will have no objection to transfer the project if No Objection Certificates are obtained from both the parent Institute and the Institute where the Principal Investigator intends to join.
10. In case the Principal Investigator leaves the Institution without transfer of the project along with him or goes on long leave, the Co-Investigator would be allowed to continue with the project, subject to the consent of the Principal Investigator and approval of AICTE. All such requests should be sent to AICTE in advance. Therefore, association of a Co-Investigator in the project is desirable.
11. In case the Principal Investigator leaves the Institute and there is no other associated Co-Investigator to carry out the project, the Head of the Department should take the responsibility for identifying a competent person in the Institution in the relevant subject area and submit his/her bio-data to the Council for further consideration.
12. AICTE would terminate the project in case the Principal Investigator remains absent for more than five months without any further communication to AICTE.

13. The Council does not provide project staff. However, in exceptional cases, technical project staff may be engaged only on contract after taking a formal approval from AICTE. The remuneration for such staff may be fixed as per their qualifications and should be met from recurring expenditure (not exceeding 15% of the total sanctioned amount) component of the projects.

14. No overhead expenses shall be permissible for these projects.

15. Summary sheet information which is critical for use by AICTE database needs to be ADDITIONALLY SENT by e-mail and through Floppy disk, as Excel attachment (default format) to: rid@aicte.ernet.in.

14. Applications should be addressed to:

The Adviser (RID)

All India Council for Technical Education
NBCC Place, East Tower, 4th Floor
Bhisham Pitamaha Marg, Pragati Vihar
New Delhi-110 003

15. Documents to be annexed with the application form:

- a. Attested copy of the Letter of AICTE approval for the year of establishment.
- b. Attested copy of the Letter of AICTE approval for the relevant **Undergraduate & Postgraduate department** for the academic year 2005-06 & 2006-07 along with the Specific Conditions, if any.
- c. Attested copy of the Letter of Accreditation of the relevant department (For Self-Financing Institutions).
- d. Attested copy of the Proof in support of grant in aid received from the Govt. Institutions (For Govt./Govt. Aided Institutions)

16. Each project proposal must contain an Index page, which should give page numbers of all the enclosures.

17. Please do not skip any item or section: if any item is not applicable, please record NOT APPLICABLE.

18. Only one copy of the proposal in bound form needs to be submitted.

19. A time activity chart indicating time schedule along with deliverables should be submitted along with the proposal.

20. As limited number of projects proposals can be considered under these schemes, Head of Institutes are requested to screen the proposals at their end and ensure that only quality proposals supported by preliminary quotations from equipment manufacturers to the extent possible are submitted to the AICTE. Principal Investigators are also requested to carry out Literature and Patent searches – PRIOR ART SEARCH - (may log on sites viz. www.wipo.org, www.indianpatents.org.in, www.jpo.go.jp, www.uspto.gov, www.espacenet.com, www.surfip.net, etc for such searches) or interact with industry to identify **REAL NEED-BASED** areas of research.

21. Proposals will be considered on the basis of justification of the project with respect to Departments / Institutions needs and relevance of the project with the academic and research activities.

22. Proposals that are not submitted in prescribed proforma or are incomplete shall not be considered.

23. Proposals will be received round the year. However, the proposals duly filled in the prescribed proforma received **on or before October 10, 2007** will be considered in first lot.

Summary Sheet for RPS (A/B/C) Strike out Not Applicable portion

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
REGION	STATE	NAME OF THE INSTITUTE	ADDRESS	CITY	PINCODE	NAME OF DEPARTMENT	YEAR OF ESTABLISHMENT	ACCREDITATION BY NBA, AICTE (YES/ NO)	NAME OF THE PRINCIPAL INVESTIGATOR	E-MAIL ADDRESS OF PRINCIPAL INVESTIGATOR	TITLE OF THE PROJECT	PROJECT COST	DURATION OF THE PROJECT	GROUP IN WHICH PRESENTATION TO BE MADE	TYPE OF INSTITUTE	LEVEL OF THE INSTITUTE	ONGOING PROJECT, IF ANY (YES / NO)
SEE ANNEXURE-I	SEE ANNEXURE-I						ENCLOSE THE ATTESTED COPY OF FIRST APPROVAL LETTER FROM AICTE.	IF YES THEN ENCLOSE THE ATTESTED COPY OF THE LETTER FROM NBA, AICTE						SEE ANNEXURE-II (PI. WRITE GROUP NO. ALONG WITH THE SUBJECT	SEE ANNEXURE-III	SEE ANNEXURE-IV	

Place :

Date :

Signature of the Principal Investigator

Head of the Institution
(Signature and Seal)

Note: Summary sheet information which is critical for use by AICTE database needs to be ADDITIONALLY SENT by e-mail and floppy disk, as excel attachment (default format) to:- rid@aicte.ernet.in.

Font Size:- 10
Font:- Arial
Column Width:- Default

(All applicants to the RPS must necessarily complete Section A of the proforma. Section B is different for project ventures of type “a”, “b”, or “c”, as specified on pages 1-2 of the brochure. *An applicant must complete only as per the proforma relevant to his project.* Proposals with either section missing or incomplete will be rejected without further consideration.)

- iii. Phone No: _____ Fax: _____ STD Code: _____
iv. Type of Institution: Govt / Govt.aided / Self-financing _____

1. Title of the Project :
 2. Major Area (refer list or state otherwise)
 3. Project Details
- Type of project venture: a / b / c
- (Refer pages 1-2 for the type. Please note that depending on the type that you choose, your **BUDGET ESTIMATE** below must be limited to the appropriate range as specified in pages 1-2.)
- Project Summary (in 50 words)
- Objectives of the Proposed Project (in 50 words)
- Justification of the Project with Respect to the Department/Institution Needs:
- Relevance of the Project with the Academic & Research Activities:
- International Development in the Area of Project
- Please Carry out a Literature and Patent search for Techno-commercial Status of Proposed Research.
- International Status (in 50 words)
- National Status (in 50 words)
- Significance of Undertaking the Project in the Context of Current Status (in 50 words)
- Does the Project have any Commercial Application or Patentability? (in 50 words)

4. Duration of Project		
Sl.No.	Activity Block	Time Required (in months)

	Total Time :-----months.	

Note:- A time activity chart may also be submitted indicating time scheduled along with deliverables .

BUDGET ESTIMATE

This must be limited to the appropriate range as specified in pages 1-2, depending on the type of project that you are proposing (“a”, “b”, or “c”).

(A) Non- Recurring Expenditure (Equipment)

Sl.No	Name of Equipment/ Facilities to be Procured	Make and Model of the Equipment	Total Proposed Cost in Lakhs	Justification for Procurement	Whether the Proposed Equipment Already Exists in the Department (Yes/ No)

Note:- Proposals supported by preliminary quotations from equipment manufacturers to the extent possible, are to be submitted to the AICTE.

(B) Recurring Expenditure

Sl. No	Total Proposed Cost in lakhs

Total Budget Estimate (A+B) =

Place:

Date:

Signature of the Principal Investigator

Head of the Institution
Signature & Seal

Recurring expenditure should not exceed 15% of the proposed project cost. AICTE support is only at a reasonable level to enable faculty members and research scholars in the project. AICTE expects that this support will result in a multiplier effects leading to major projects for support from other agencies. AICTE does not encourage hiring of secretarial manpower for the project.

Section B:

(Please use the relevant format for project ventures of type “a”, “b”, or “c”, as defined in pages 1-2. Sufficient details must be provided as and where relevant, for proper evaluation by the Expert Committee.)

Project venture of type “a”:

- i. Describe (in not more than fifty words), *the technical novelty* of the end product or infrastructure that you plan to develop at your institute.
- ii. List out the *possible avenues of future research* that you expect to be initiated at the end of the proposed project.
- iii. If the project is aimed at development of a product of industrial or commercial value, justify its importance by a one-page write-up.

Project venture of type “b”:

- i. Age of applicant at the time of submission of RPS proposal:
- ii. Level of postgraduate qualification:
- iii. Name of institute where admitted for doctoral work:
- iv. Academic year of admission (enclose copy of admission offer letter):
- v. Provide a brief two-page abstract of proposed doctoral thesis as planned at the time of submitting RPS proposal. This may undergo some degree of modification as your work progresses.
- vi. Does your doctoral work require you to be on leave-without-pay at any time?
- vii. If the answer to “vi” is “yes”, give details of the period during which you will be on leave-without-pay from your place of employment (salary from the project will be admissible only as per AICTE norms).

Project venture of type “c”:

- i. Discuss the importance of the technology to be developed by the proposed RPS, indicating its patentability as judged by your investigating team. Limit your discussion to a two-page write-up.
- ii. Provide a list of past publications by members of the investigating team that are relevant to the area of research being proposed, so as to establish their competence in carrying out the project.
- iii. Is the area of work of national importance in the Indian context? If yes, discuss in what way this is so. Limit your discussion to a page.

**Photograph of
the Principal
Investigator**

**(FORMAT)
for
RESUMÈ OF PRINCIPAL INVESTIGATOR**

1. Name and Designation :
2. Date of Birth :
3. Name of the Institution :
4. Department :
5. Field of Specialization :
6. Academic Qualifications :
7. R&D and Teaching Experience :
8. Industrial Experience, if any :
9. Awards / Prizes / Certificates etc. :
won by the Chief Coordinator
10. Publications :

Sl.No.	Title of Paper/Report/Book	Author(s)	Name, Volume, number of Journal, and Year of publication.	Page No.	
				From	To

11. No. of Projects Completed / Ongoing as Chief Coordinator/ Co-Investigator in the Following Format:

Sl. No.	Name of the funding agency (AICTE/ Others)	Name of the Scheme	Programme Title	Year of Funding	Duration	Amount Sanctioned	Status Completed/ Ongoing

Place:

Date:

Signature of the Chief Coordinator

Head of the Institution
(Signature and Seal)

(FORMAT)
for
RESUME OF CO - PRINCIPAL INVESTIGATOR

**Photograph of
the Co-Principal
Investigator**

1. Name and Designation :
2. Date of Birth :
3. Name of the Institution :
4. Department :
5. Field of Specialization :
6. Academic Qualifications :
7. R&D and Teaching Experience :
8. Industrial Experience, if any :
9. Awards / Prizes / Certificates etc. won by the Chief Coordinator :
10. Publications :

Sl. No.	Title of Paper/ Report/Book	Author(s)	Name, Volume and Number of Journal, and Year of Publication.	Page No.	
				From	To

11. No. of Projects completed / ongoing as Chief Coordinator/ Co-Investigator in the following format:

Sl. No.	Name of the Funding Agency (AICTE/ Others)	Name of the Scheme	Programme Title	Year of Funding	Duration	Amount Sanctioned	Status Completed/ Ongoing

Place:

Date:

Signature of the Chief Coordinator

Head of the Institution
(Signature and Seal)

(FORMAT)
For
PROFILE OF THE DEPARTMENT

1. Name of the Department:
2. Name of the Head of the Department:
3. Full Address:
(Please include STD Code, Phone No., Fax No., E-mail/Internet Address)
4. Whether the Institute is Approved by AICTE Yes ☐ No ☐
File No. and Date of Approval
5. Number of Specialized Subject Areas Available in the Department:
6. Information About Faculty Members in the Department with their Area of Specialization.

S. No.	Name	Designation	Highest Academic Degree	Specialization

7. List of Collaborative Programmes, if any
(National/International)
8. Has the department been accredited by AICTE (Yes/No) ☐
Year Grade
9. Major equipment costing more than Rs. 1.0 lakh available in the Department

S, No.	Name of the Equipment	Cost (Rs. in lakhs)	Model and Make

10 Courses available in the Department

Level	Course/ Programme	Whether the Programme is Approved by AICTE	File No. and Date of Approval	No. of Graduating Students in the Previous Year
Diploma UG PG Doctoral Post doctoral				

Place:

Date:

Head of the Institution
(Signature & Seal)

**ENDORSEMENT FROM
THE HEAD OF INSTITUTION**

1. It is certified that the Institution will assume full responsibility for fruitful completion of the project submitted by Professor _____ as Principal Investigator under RPS Programmes of AICTE.
2. The Institute will provide all the basic facilities available in the Institution to ensure completion of the project and will undertake the financial and management responsibilities of the project.
3. This is to certify that the information provided in the project proposal is true to the best of my knowledge and belief.
4. The Institute agrees to abide by the Terms and Conditions as laid down by AICTE as given in the scheme.

Head of the Institution
(Signature & Seal)

Place:

Date:

Note: Registrar For Universities; Director/Principal for Technical Institutions and Principal For Polytechnics should sign the endorsement.

Distribution of Zones and States

REGION	STATE/UNION TERRITORY
Central	Madhya Pradesh
	Gujarat
	Chhattisgarh
East	Mizoram
	Sikkim
	Orissa
	West Bengal
	Tripura
	Meghalaya
	Arunachal Pradesh
	Andaman and Nicobar
	Assam
	Manipur
	Nagaland
	Jharkhand
North	Bihar
	Uttar Pradesh
	Uttaranchal
North West	Chandigarh
	Haryana
	Jammu and Kashmir
	New Delhi
	Punjab
	Rajasthan
	Himachal Pradesh
South	Andhra Pradesh
	Pondichery
	Tamilnadu
South West	Karnataka
	Kerala
West	Maharashtra
	Goa
	Daman and Diu

GROUPS IN WHICH PRESENTATIONS CAN BE MADE

GROUP	Departments/Disciplines/Subjects
Group 1	Biotechnology, Chemical Engineering
Group 2	Architecture & Town Planning, Civil Engineering, Fine Arts & Crafts
Group 3	Electrical, Electronics, Electronics & Communication and related subjects
Group 4	Computer Science/Technology/Engineering
Group 5	Mechanical Engineering
Group 6	Pharmacy
Group 7	Management
Group 8	Materials and Metallurgy
Group 9	Hotel Management and Catering Technology, Textiles, and Others

ANNEXURE – III

TYPE OF THE INSTITUTION

1. UNIVERSITY DEPARTMENT
2. DEEMED UNIVERSITY
3. GOVT. ENGG. COLLEGE
4. GOVT AIDED ENGG. COLLEGE
5. GOVT. POLYTECHNIC
6. GOVT AIDED POLYTECHNIC
7. SELF-FINANCING ENGG. COLLEGE
8. SELF-FINANCING POLYTECHNIC
9. SELF-FINANCING NON-ACCREDITED 5 YEARS OLD INSTITUTIONS FROM J&K AND NORTH EASTERN STATES.

ANNEXURE – IV

LEVEL OF THE INSTITUTION

1. DIPLOMA LEVEL
2. UNDER GRADUATE LEVEL
3. POST GRADUATE LEVEL
4. Ph.D LEVEL

**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION
NEW DELHI**

TERMS AND CONDITIONS

**For Implementing the Project sanctioned under
Research Promotion Scheme (RPS)**

1. Each Project sanctioned by AICTE is assigned a specific file number All correspondence addressed to AICTE regarding the project must invariably quote this number along with the year in which the project was sanctioned and should be addressed to the concerned Bureau Officer.
2. The date of receipt of the Bank Draft of the first installment of the grant by the Institution shall be taken as the date of commencement of the project. This date should be intimated by the Institution's Coordinator to AICTE immediately. The approved duration of the project is reckoned from this date.
3. If the University/ Institution is unable to take up the project work within six months of the receipt of the grant, the approval shall *ipso facto* lapse.
4. Any expenditure incurred prior to the issuance of the approval letter is not allowed to be adjusted in the grant. The grant will be utilized strictly for the purpose as specified in the approval letter.
5. The grant will be utilized strictly for the purpose as specified in the sanction letter. Re-appropriation of funds from one head to another is strictly not permitted viz Recurring and Non-Recurring heads are 15% and 85% of the total grant, unless otherwise recommended by AICTE experts. The list of equipment decided by the experts is final and there can be no changes later on.
6. Once the project is sanctioned, the Council shall not consider any request for additional grant.
7. Separate institutional overhead expenses shall not be provided by AICTE.
8. The grant released under this programme cannot be spent for creating infrastructure facilities such as construction of building, purchase of vehicles, air-conditioning etc.
9. Out of the project grant, no funds can be used for going abroad to attend Conferences/

Seminars. However, for presenting a paper in a Seminar/Conference within the Country, the travel expenses may be met from the recurring component of the grant.

10. The assets acquired out of the grant shall be the property of the Institute. No assets acquired out of the grant shall be disposed off without the prior permission of the Council.
11. Interest earned on the project fund, if any, should be reported to AICTE. The interest so earned will be treated as a part of the grant.
12. Grant released under this programme is for the specific period and should be properly utilized within the time stipulated in the project proposal.
13. Any unspent balance from the amount sanctioned on the completion of the tenure of the project must be surrendered to AICTE within one month through a Demand Draft drawn in favour of the Member Secretary, All India Council for Technical Education.
14. AICTE reserves the right to terminate the project at any stage, if it is convinced that the grant has not been properly utilized or adequate progress has not been made achieved towards the purpose for which the grant was sanctioned.
15. The Comptroller and Auditor General of India/AICTE at their discretion shall have the right of access to the books of accounts of the Institute in respect of the grant received from AICTE. The Institute must, therefore, maintain separate record of expenditure and audited accounts for the project.
16. The Grantee Institution shall observe all financial norms and guidelines as prescribed by the AICTE/GOI from time to time.

17. Technical Manpower

The Council does not provide permanent project staff. However, technical project staff may be engaged only on contract basis after taking a formal approval from AICTE. The remuneration for such personnel may be fixed as per the prevailing rules of the Institution.

18. Constitution of Project Evaluation Committee (PEC)

At institution level Project Evaluation Committee (PEC) has to be constituted by the Institute for reviewing the progress of the project from time to time.

The composition of PEC should be as follows:

- i) Director/Principal/Dean of the Institute, College and University respectively (Chairman of the Committee).
- ii) Head of three Departments of the Institute/ Faculty of the Technical Disciplines.

- iii) One Subject Expert (to be nominated by the Principal Investigator).
- iv) Principal Investigator of the Project (Convener/Secretary).

The constitution of PEC may be sent to the Council for record. The general terms of the reference of PEC are as follows:

- i) PEC should meet from time to time as required but at least once a year. The minutes of the meeting should be submitted to the Council.
- ii) PEC shall advise on the proper utilization of the funds under the project and ensure proper implementation of the scheme as per the objectives of the project.
- iii) The expenditure of TA and DA for outside experts to attend the PEC meeting would be provided out of the contingency grant of the project.
- iv) Quorum shall be complete if 75% of the Members of the Committee are present in meeting.

19. Submission of Annual Progress Report.

The Institute must submit an Annual Progress Report duly endorsed by the PEC by April 15th every financial year as per format in Annexure – VI.

20. Submission of Provisional Utilization Certificate and Audited Utilization Certificate (UC).

Provisional Utilization Certificate (UC) as per format in Annexure-VII duly signed by the Finance Officer and countersigned by the Registrar/Principal/Director of the Institute and should be submitted to AICTE by April 15 of every financial year.

21. Midterm appraisal after 2 years.

The progress report of the project shall be evaluated by a committee of experts appointed by AICTE during monitoring workshops conducted at regional centers of AICTE every year. Suggestions and views of experts, if any, will be conveyed in writing to the Coordinator from time to time for effective implementation of the project. During such meetings Video CD should be brought along, giving photographic details of the equipment purchased / developed, etc.

AICTE may also constitute a Monitoring Committee to visit the Institute to review the progress of the project at any time during the tenure of the project.

22. Final Project Appraisal

After the completion of the project, the Coordinator should intimate the RID Bureau. A Project Completion Reports as per the Format given in Annexure- VIII should be submitted at the time of final appraisal alongwith audited utilization certificates, so that the financial closure and technical completion of the project is recorded. Without a closure certificate the PI shall not be eligible for further funding.

23. Final Settlement of Accounts

An audited Utilization Certificate (UC) as given in Annexure- IX duly certified by the statutory audit authority of the University/Institution should be sent along with the Project Completion Report on completion of the project.

24. Proper record for all non-consumable items should be maintained by the Institute.

25. Assets Acquired

As per Government of India's Decision (7) (b) under Rule 149 (3) assets created/procured out of the project grant should be submitted to the funding agency. The assets thus created/procured out of the grant should be maintained and submitted to AICTE, as per the format as given in Annexure X, along with the project completion report.

26. Transfer of project and change of Principal Investigator.

- i) If the Principal Investigator retires, then the Co-investigator becomes the Principal Investigator for the Project.
- ii) In case, the Principal Investigator of RPS programme joins another Institution, the project may be transferred to that Institution within mutual consent of the Institutions and approval of AICTE. In case the Principal Investigator joins another Institution after his retirement, the project is deemed to have been closed and the balance amount refunded to AICTE.
- iii) In case, the Principal Investigator leaves the Institution or goes on long leave, the Co-Investigator would be allowed to continue the project subject to the consent of the Principal Investigator and approval of AICTE. Therefore, association of a Co-Investigator in the project is normally desirable. All requests for such arrangements should be sent to AICTE well in advance.
- iv) In case, the Principal Investigator leaves the Institute and there is no other Investigator to carry out the project, the Head of the Department may identify a competent person in the relevant subject area and submit his/her bio-data to the Council for consideration and approval for appointment as the Principal Investigator. AICTE would terminate the project if the Principal Investigator remains absent for more than five months, unless an alternate arrangement duly

approved by AICTE is made.

- v) Whenever the Principal Investigator published paper(s) based on the project sanctioned by AICTE, he/she should acknowledge the assistance received from the Council, indicating the grant and file number.

FORMAT
for
Annual Progress Report for AICTE funded project under
Research Promotion Schemes (RPS)

(Please include sufficient details in sections 9-11 so as to facilitate proper evaluation of your project.)

File No. : _____
 (As mentioned in sanction letter)

Date of Sanction : _____

Subject Area : _____

1. Principal Investigator
 (Name & Address) :
3. Project Title :
4. Date of Commencement of the Project :
5. Amount Sanctioned by AICTE :
6. Amount Released by AICTE :
7. Details of Expenditure :

A. NON-RECURRING

S. No.	List of Equipment Procured	Cost
	Total	

B. Recurring (Consumables, TA, Books and Stationary, Manpower etc.)

S. No.	List of Equipment Procured	Cost
	Total	

Gross Total (A & B)

8. Objectives of the Project :

9. Salient Research Achievements :

Summary of Progress

New Findings/Achievements

Innovation Brought in

Potential for Application

(a) Long Term

(b) Immediate

Any Other

10. List of Publications Arising from the Project
(Please give Author(s). Title, Journal and Year)

11. Patent(s) Filed/to be Filed, if any

Dated:

Coordinator

Registrar/Director/Principal
(Signature & Seal)

Members of Project Evaluation Committee (PEC): (to sign below)

**FORMAT
for
UTILIZATION CERTIFICATE**

Sanction Letter No.

Date:

A. NON-RECURRING

Sl. No.	Name of the Equipment Procured	Amount Sanctioned	Amount Utilised (Itemwise)	Unspent Balance

Certified that the grant has been utilized for the purpose for which it was sanctioned in accordance with the “Terms and Conditions” attached to the grant. If, as a result of check or audit objection some irregularity is noticed at a later stage, action will be taken to refund, adjust or regularize the amount objected to.

Finance Officer
(Signature & Seal)

Registrar /Principal/ Director
(Signature & Seal)

Dated:

Name and Address of the
University/ Institution

Note: The Utilization Certificate (UC) will be signed by the Registrar/ Finance Officer in the case of Universities, Principals in the case of Colleges and Executive Heads of other Institutions. The Provisional UC may be countersigned by the internal auditors wherever the system of the internal audit exists. In case of the Self Financing/ Private Institutions, UC has to be signed by a Chartered Accountant.

* This is to be submitted every financial year.

**FORMAT
For
PROJECT COMPLETION REPORT FOR
RPS PROGRAMMES**

(Please include sufficient details in sections 8-10 so as to facilitate proper evaluation of your project.)

File No. : _____
(as mentioned in sanction letter)

Date of Sanction : _____

Subject Area : _____

1. Principal Investigator :
(Name & address)
2. Project Title :
3. Total Cost of the Project :
4. Date of Commencement of the Project :
5. Duration of the Project :
6. Date of Completion :
7. Objectives of the Project :
8. Salient Research Achievements :
 - 8.1 New Findings/Achievements/IPR Potential:
 - 8.2 Product/Process Developed :
 - 8.3 Patent(s) Applied for/Taken, if any :
 - 8.4 B. Tech. Project / M. Tech Thesis /
Ph.D., if any :

Consultancy

9. Conclusions Summarizing the Achievements Indicating the Scope for Future Work.

10. List of Publications Arising from the Project (please give Author (s), Title, Journal and Year) :

Dated: Principal Investigator

Registrar/Director/Principal
(Signature & Seal)

(Investigators may please note that sections 8-10 of the report will serve as essential inputs for experts to judge the success of the project. These must therefore be included in sufficient detail.)

ANNEXURE – IX

**FORMAT
For
AUDITED UTILISATION CERTIFICATE**

Certified that out of Rs. _____ of Grant- in – aid sanctioned during the year _____ Letter No. _____ Rs. _____ has been utilized For the purpose of _____ For which it was sanctioned and the balance of Rs. _____ remaining unutilized at the end of the year has been surrendered to All India Council For Technical Education (vide No. _____ dated _____)/ will be adjusted towards the Grants – in – aid payable during the next year i.e., _____ as per the details attached.

Certified that the grant has been utilized as per laid down terms and conditions for which it was sanctioned.

Finance Officer
(Signature and Seal)

Registrar/Principal/Director
(Signature and Seal)

Dated:

Chartered Accountant
(Signature and Seal)

FORMAT FOR GENERAL FINANCIAL RULES

(FORM GFR- 19)

Assets acquired wholly or substantially out of Government grants

Register maintained by grantee institution
Block Account maintained by sanctioning authorities
Name of Sanctioning Authority

1. Serial No. :
2. Name of grantee institution :
3. No. and date of sanction :
4. Amount of the sanctioned grant :
5. Brief purpose of the grant :
6. Whether any condition(s) regarding the right of ownership of Government in the property or other assets acquired out of the grant was incorporated in the grant-in-aid sanction :
7. Particulars of assets actually credited or acquired :
8. Value of the assets as on:
9. Purpose for which utilized at present:
10. Encumbered or not:
11. Reasons if encumbered:
12. Disposed of or not:
13. Reasons and authority, if any, for disposal :
14. Amount realized on disposal:
15. Remarks:

REPRESENTATIVE LIST OF THRUST AREAS

1. Advanced Electronics, Power Electronics, Sensors and Transducers
2. Alternate Automobile Fuels
3. Alternative Sources of Energy (Solar, Photo-voltaic/Photo-thermal, Wind, Bio,
4. Tidal, Geo-Thermal Systems)
5. Anti-Cancer Technology
6. Architecture, Urban and Regional Planning, Aspects of Environmental Degradation etc.
7. Automotive Electronics Systems
8. Bio-medical Engineering
9. Bio-technology, Genetic Engineering and Tissue Culture
10. Chemical Technology: Development of New Processes, Development/Improvement of Drugs/Pharmaceuticals, Chemicals, Petrochemicals, Fertilizers and Allied, Textile Processing
11. CNG Application
12. Coastal Zone Management
13. Computational Fluid Dynamics (CFD)
14. Computer Vision and Graphics; Multi-Media, Parallel Processing, CAD/CAM
15. Control System including Computerised Control in Industry
16. Corrosion in Structures – Cryogenics
17. Development of Fuzzy logic Technology – Disaster Mitigation
18. Education Technology
19. Environment, Atmospheric Engineering and Technology – Flexible Manufacturing Systems
20. Fluidized Bed Combustion/Pulverized Coal Combustion-Fly Ash Utilisation
21. Fuel Cells
22. Futuristic materials including Fibres and Composites, Plastics & Conducting Plastics, Glass Ceramics and Electro Ceramics Superconductors
23. Global Finance
24. Herbal Drug Technology
25. Immuno-modulatory Drugs (Anti-Aids Agent)-Industrial Engineering and start up ventures.
26. Information Technology
27. Integrated Operation of Large Scale Modern Power Systems, Information
28. System, Robotics-International Trade
29. Large Biogas Systems
30. Laser Technology
31. Low cost Construction Technology
32. Maintenance Engineering, Reliability and Terotechnology
33. Management Information System, Management of Urban and Rural
34. Development, Human Resource Management, etc.

35. Marine Biology (Sedimentology, Oceano Temperature Gradient), Ocean S&T including Natural Products
36. Material Processing
37. Natural and man made Hazards, Mitigation (Technological, Chemical, Nuclear, Radioactive, Environmental, Climatology) & Protection
38. Need based/Appropriate Technology for Rural and Urban Development
39. New Drug Discovery, Drug Delivery Systems, Computer Aided Drug Design,
40. Alternative Medicines, Toxicity studies
41. Non-traditional Machining Processes-NVH (Noise, Vibration & Harshness)
42. Optical Fibre Technology
43. Pavement Management and Road Safety
44. Precision Engineering, Computer Aided Engg. (CAE)
45. Quality Engineering System and Total Quality Management (TQM)
46. Remote Sensing and Satellite Image Processing
47. Radio Frequency Planning, Advanced Radio Engineering, and Satellite
48. Communication systems including Optical Communication and ISDN
49. Smart Sensors and Intelligent Processing
50. Telematics
51. Tribology
52. Vehicular Emissions (Petrol & Diesel) – Virtual Intelligence Applications
53. Virtual Reality and Advanced Simulation
54. Waste Management, Effluent Treatment and Recycling

Suggested List of Thrust Areas Specific to Each Discipline

(Applicants should treat the following only as a representative list. Please note that other useful research areas are equally admissible.)

1. Mechanical

- i. Vibration and noise control
- ii. System integrity and maintenance
- iii. Mechatronics
- iv. Precision Engineering
- v. Nanotribology
- vi. Concurrent engineering and design
- vii. Dynamic design using structural dynamic
- viii. Modification and model updating
- ix. Smart materials applications
- x. Mechanical systems signal processing
- xi. Condition monitoring and fault diagnosis

2. Computer

- i. Video Transport Protocols over IP network.
- ii. Multi-frequency Optical link.
- iii. Optimization of ATM network using Traffic models.
- iv. Scheduling of Tree networks.
- v. Genetic Algorithms for network traffic scheduling
- vi. Data Compression and code optimization.
- vii. Prot analysis and pocket prediction.
- viii. Data mining.
- ix. Routing algorithms for IPV6 networks
- x. Performance Analysis of IPV6 networks
- xi. E-Commerce and weblogic.
- xii. Web based Authoring tool development
- xiii. Designing an effective student model for web education.

3. Biotechnology

- i. Bio process engineering
- ii. Online measurement control system and development tools for current control.
- iii. Calorimetry
- iv. Bio informatics and software for data mining.
Development of hardware for touch speed computation system and communication set ups.
- vi. Domain software in hard core engineering subjects as civil engineering mechanical engineering etc. (this is framed in view of the than developing

- vii. our own national skills in hard core technology.
- viii. Development of instrumentation for biotechnology.
- ix. Nano chemistry and truck design.
- x. Development of micro air raise system for Gene Screening.

4. Architecture

- i. Sustainable urban growth and conservation of agricultural land.
- ii. Internet for participatory education in Urban & Regional Development
- iii. Planning.
- iv. Rural roads and socio-economic development
- v. Coastal ecosystem and settlement planning.
- vi. Peri-urban developments.
- vii. Globalisation and real estate market.
- viii. Energy conscious residential development.
- ix. GIS application in urban planning.
- x. Participatory approach in Planning at Panchayat level-A planning and technological model.
- xi. An IT model for District Development Plans under 73rd and 74th CAA.
- xii. Expert system-urban eco-system for metropolitan areas.
- xiii. Role of Temple tanks and other water courses in ground water recharge of cities and towns.

5. Civil

New Materials:

This would include development and evaluation of corrosion, fire and weather protective coating FRP Composites, HPC, waste based components wood substitutes.

Water Management:

Rain water harvesting, monsoon studies and problems of hill areas.

5.3 Natural Hazards:

This would include, earthquakes, landslides, cyclones, floods and droughts. Man-made Hazards: Fire & explosion in industrial plants, Transportation of Chemicals, Dam breaks, Probabilistic risks assessment.

5.4 Structural Engineering:

Cost effective components and construction technology. Health monitoring of structures, Durability & residual life estimation, CAD, Active control.

5.5 Architecture & Planning:

Energy efficient building, Heritage buildings and sites. Tourism Planning in hilly regions. Satellite technology in town planning, town planning in coastal regions.

5.6 Rural Technology:

Traditional materials for housing, clay materials, Animal power applications.

6. Chemical:

6.1 Separation Science and Engineering

Membrane Technology/Downstream processing/Reactive separations.

6.2 Interfacial Science and Engineering

Thin Films

6.3 Particle Science and Technology

Crystallization/Aerosols/Solids handling/Nano particles/Fluidised Beds.

Energy and Environment

Fuel cell/Nobel reactors/Combustion/Biofuels/Cleaner and Clean-up Technologies/Process integration and intensification.

6.5 Engineered materials with tailored properties

Particulates Polymers/Composites/Catalysts/Molecular theory for thermodynamic and transport properties.

6.6 Industrial Biotechnology

Bio-informatics/ Genomics/ Proteomics.

6.7 Mathematical modeling and simulation

Design/Optimization and control/Artificial intelligence and expert systems.

6.8 Mission-oriented projects

Effluent treatment, Defence materials, Fuels for space application.

6.9 Clean Coal Technology

6.10 Coal Bed Methane

6.11 Gas Hydrates

6.12 Fuel Cells

6.13 Solar Photo Voltaics

6.14 Eco-design

7. Pharmacy (herbal medicines):

- i. Development of drugs and formulation for primary health children and women welfare.
- ii. Microcomputerised identification of indigenous drugs and development of standards.
- iii. Development of herbal medicines for chronic diseases like asthma, diabetes, rheumatism, paralysis, hypertension, skin diseases.
- iv. Development of herbal medicines for viral diseases like TB, cancer, leprosy, Aids, herpes.
- v. Development of herbal medicines for circulatory diseases like leukemia, cardiotonica, hypertension.
- vi. Screening, identification, propagation and processing of potential medicinal plants.
- vii. Identification / investigation and formulation for personal care products.