Summary Report

About Department/Center/School:

RDC was established in 1980 with an aim to act as extension centre for the transfer the technologies developed by other departments and centers for the benefit of rural people.

1. **Academic Programs (Range of Degrees and Disciplines):** RDC has no regular academic program only two breadth subjects are offered

2. **Major 4-5 Thrust Areas of Research:**
    1. Agricultural Sciences - Soil, Crop and Water Management
    2. Action Research in Tribal and Social Welfare
    3. Development and Transfer of Appropriate Technology

3. Curriculum and Courses & Teaching Environment

Items	**Ratio/ Number**	**Items**	**Number/%**
Teacher-student Ratio	N A	Average No. of students motivated (%) to opt of careers Eng/ Tech. Sectors UG/PG/PhD	00/00/00
No. of Faculty members as on today	02	Average No. of students motivated (%) to opt of careers in Science sectors UG/PG/PhD	00/00/00
Average No. of Tutorial Assistants	0	No. of teaching labs	02
No. of UG/DD students	00/00	Average No. of students per experiments in core courses	00
No. of PG students/PhD students	00/02	No. of Students' workshops/``Tinkering'' Labs	00
Average no. of tutors with more than 100 students	-	No. of new courses introduced	00
Average Students placements (%) (UG/DD/PG)	NA	No. of New program introduced	00
No of major curriculum review in both UG & PG level	00	Undergraduate Vs PhD strength expressed as Percentage	00
No of UG lab (teaching labs) developed/set-ups	00	No of PG/research labs developed/new set up	00/00
No of E class rooms	00	No. of lab classes per week	00
Average No. of Course done per student for B. Tech/DD/M. Tech/Ph.D	00/00/00	No. of core/elective/seminar/projects subjects taken for B. Tech, DD, and M. Tech respectively	00/00/00

4. Research and Development & its Environment

Items	Number	Items	Number	Items	No.
Total No. of Publications in Journals (2008-13)	9	Average no. of citation per paper	2	No of large interdisciplinary research projects	0
Total No. of Publications in Conference & Symposium	5	Average Journal publication per year	01	Number of Int. conf./workshops attended by students	0/0
Total No of Books & e-books published	3	h-Index of the department since 2008/overall h-index in Scopus	2	No. of PDF hired in the Institute	00
Total No of Edited Conference Proceedings/book chapters	0/2	Number of papers with citation more that the average no. of citation of the Journals	10	No. of international Students as PhDs/PDFs	00/00
Total No. of Technology Developed/transferred	8/6	No. of recognitions & Awards, fellows etc to faculty/students (provide break up if necessary)	0	No. of International visiting researchers/adjunct faculty stayed here for at least a week	0/0
Total No. of Patents Filed/Obtained	6/1	Average Retention (%) of Young faculty for at least 10 years	0 Shifted to allied Dept	No. of short courses/workshops /conf. organized with international participations	0/0
Total No. of Copyright Filed/Obtained	0/4	No. of Sponsored research Project /fund(lakh) generated from non-internal source	6/150	Average No. of Ph D granted per year	0.4
No. of Publications per Faculty/Masters/PhD students	7/0/2	No. of Consultancy /fund (lakh) generated from non-internal source	0/0	Average No. of PhD Granted per year per faculty	0.12
No. of Publications per Faculty/Masters/PhD students in Top Ten Journals as Identified by the department		No of Internal and external Collaborations research papers/research projects/PhD students	0/0/0	Patent granted per faculty	00
Average No. of Citation per faculty per year	4.4	No of M. Tech students motivated into pursuing PhD/PhD graduates	NA	Number of articles in collaborations with Ten countries*	0/0

		motivated to pursue career in Academics (abroad or IIT etc)			
Ranking of the department in terms of average citations per paper within the Institute	14	Ranking of the department in terms of total number of Journal publications within the Institute/publications per faculty	37/30	No of articles of the dept. contributing towards h-index of the Institute since 2008	0

5. External Stakeholder Engagement and others

Items	**Number**	**Amount Lakh**
No. of PhD/Master students' thesis funded by Industries	00	00
Total number of Industry sponsored projects and its income (Lakh)	00	00
No. of Curriculum Development Initiative for Industries	00	00
No of Technology transfer/adopted by Industry/Labs	04	150
No. of Nationally relevant research projects	00	00
No of Policy inputs/consultancies provided	00	00
No. of Research grant and seed money from internal savings of the Institute per young faculty of the department and its total fund	00	00
No. of Community Relevant projects	00	00

6. Vision for the Future (in brief):

(a) Departments/centers/schools should spell out its Mission and Vision Statements, (b) Plans for future to achieve the projected goals and (c) measures adopted towards above.

1. Actual rural area development programme in Eastern India.
2. Technology identification, development, transfer and evaluation.

3 A certificate / short duration course may be introduced with flavor for rural innovation and entrepreneurship.

4. **External peer review of the Dept./centre/schools (in brief):**

1. It is felt that the performance of the Centre is disjointed and not in focus and therefore may not remain sustainable.

2. The alternative may be redesign and update the courses both for academic and extension values and job market;

3. Or join a larger Department of the Institute and develop activities for better functioning.

(a) Date of the peer review: 02/12/2013

(b) Name of the Experts involved and their affiliations in short:

(i) Prof. M.K. Jana (Ex Head, AGFE)
(ii) Prof. C.R. Pathak (Ex Head, ARP)
(iii) Prof. R.N. Chattopadhya (Ex Head RDC)

(d) Measures adopted/action taken at the department level to address the recommendations of the peer review report:

Not action initiated

8. **Strengths, Weaknesses, Opportunities & Threats (SWOT) Analysis of the Department**

STRENGTHS • Connectivity with a large number NGOs to reach out to rural population. • A number of technologies relevant to rural population have already been developed.	**OPPORTUNITIES** • The right kind of manpower with a determination to contribute in societal development can substantially enhance our capability to bring about visible change in the status of rural poor. .
WEAKNESSES • Lack of innovative young manpower and competent faculty. • Lack of competent faculty members who can guide projects in order to generate new technology that is relevant to rural mass.	**THREATS** • Lack of faculty members with focus on innovation, desire to contribute to society, and work for the development. The exiting faculties are old and have no interest.

9. Additional Information, if any

Nil

Important Highlights

Rural Technology Action Group – Eastern India
Indian Institute of Technology, Kharagpur

Introduction:

Coordinated by Dr R Chidambaram, office of the Principal Scientific Advisor,, Rural Technology Action Groups (RuTAG) has been set up to promote potential technologies for rural entrepreneurs and users &presently interacting with the 20 NGOs in the states of West Bengal, Odisha, Jharkhand and Bihar.

Foot operated Amber Charkha

Foot-driven Charkha at KVIC JGM

Traditionally, Women operating this charkha earn meagerly and are subjected to dire drudgery. The drive of the machine had shifted from single hand to double legs. This has made it easy to operate and reducing the drudgery. The productivity has increased from 16-18 to 32-34 spindles per day

Muri (Puffed Rice) Machine

Muri machine at Keshyari

Muri puffing machine had insulated perfectly by brick and mud, which allows protection from heat. It allows the production of 40-45 kg Muri per hour as against 4kg/hr. by traditional method.

Sabai Grass Rope

Leg operatedat Nayagram

A large number of rural people are making ropes and the physical drudgery is enormous. The machine is leg-driven and one person can operate it and feed grass simultaneously. The production rate 10 kg/day as against the 3 kg by hand.

Jute Rope Machine

Motorized machine

A motorized, jute rope making machine involves negligible drudgery and the productivity has increased by 10 times compared to hand twisting

Dual fiber Extractor Machine

Sisal extractor

Ramie and sisal fibers are long and sturdy, they can be used for various purpose e.g. marine, agriculture and general industrial user, handicrafts etc. This leg-operated equipment allows obtaining 20 kg of finished ramie and 1 kg of finished sisal fiber per hour.

Pedal driven Potter's Wheel

Pedal driven potter's wheel

The wheel is based on a revolutionary concept using the bicycle pedal as the source of power; enabling the potter to a comfortable sitting position. Moulding of the pot and driving the wheel carried out simultaneously. The income of the potters have increased from petty Rs. 50 to Rs. 250/day.

Mat-stick Feeding Machine

Hand operated

The process of manually weaving of mat is complicated. An innovative mat stick feeding machine developed that makes easy and comfortable to weaving process. The productivity per person has increased two times.

Papose (doormat) Making Machine

Coir Rope Door Mat (Papose)

Papose (doormat), coconut coir rope weaved tightly in various geometrical shapes. The weaving and tighten process is done manually thus involves physical drudgery and product is loosely packed and fetches less price. An innovative machine makes the tighten process easy and comfortable.

Mechanized Dhenki

Motorized dhenki at Govindpur

In traditional dhenki two persons are involves for dehusking and it yields about 4-5 kg/hour milled rice. A domestic level mechanized dhenki with a capacity of 14-15kg/hour has been working efficiently.