

**TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME
(TEQIP)**

PHASE-III

INSTITUTIONAL DEVELOPMENT PROPOSAL

for

Sub-component 1.3

*Twinning Arrangements to Build Capacity and Improve Performance
of Participating Institutes*



INSTITUTE OF SCIENCE & TECHNOLOGY

(AUTONOMOUS)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

KUKATPALLY, HYDERABAD - 500085. TELANGANA, (INDIA)

1. INSTITUTIONAL BASIC INFORMATION

1.1 Institutional Identity

- **Name and address of the Institution:** JNTUH Institute of Science and Technology (IST),
Jawaharlal Nehru Technological University
Hyderabad, Hyderabad – 500085
- **Year of Establishment:** 1989
- **Is the Institution AICTE approved?:** Yes
- **Furnish AICTE approval No. :** F. No: AP – 18/BOS (PG)/91
- **Type of Institution:** **Govt. Funded**
- **Status of Institution:** **Autonomous Institution Status by UGC – A**
constituent unit of Jawaharlal Nehru Technological University Hyderabad (JNTUH)
- **Name and Designation of
Head of the Institution
(Full time appointee):** Prof. A. Jaya Shree,
Director IST

1.2 Academic Information:

• Engineering UG and PG programmes offered in Academic year 2016-17:

S.No	Title of programmes	Level (UG, PG, PhD)	Duration (Years)	Year of starting	AICTE sanctioned annual intake	Total student strength in all years of study
1	M.Tech (Biotechnology)	PG	2	1990	18+ 7 (Sponsored)	26
2	M.Tech (Biochemical Engineering)	PG	2	2011	18+ 7 (Sponsored)	13
3	M.Tech (Chemical Technology)	PG	2	2010	18+ 7 (Sponsored)	27
4	M.Tech (Environmental Management)	PG	2	1990	18+ 7 (Sponsored)	25
5	M.Tech (Environmental Geomatics)	PG	2	2002	18+ 7 (Sponsored)	25
6	M.Tech (Nanotechnology)	PG	2	2007	18+ 7 (Sponsored)	18
7	M.Tech (Nano Electronics and Photonics)	PG	2	2014	18+ 7 (Sponsored)	11
8	M.Tech (Spatial Information Technology)	PG	2	1992	18+ 7 (Sponsored)	30
9	M.Tech (Geo-informatics & Surveying Technology)	PG	2	2002	18+ 7 (Sponsored)	28
10	M.Tech (Water & Environmental Technology)	PG	2	1990	18+ 7 (Sponsored)	22
11	Ph.D in Spatial Information and Technology	Ph.D	3	1992	Admissions are as per the University Norms and existing vacancies	1
12	Ph.D in Water Resources	Ph.D	3	1989		12
13	Ph.D in Biotechnology	Ph.D	3	1989		14

14	Ph.D in Nano Science and Technology	Ph.D	3	2010		16
15	Ph.D in Chemical Engineering	Ph.D	3	2012		01
16	Ph.D in Environmental Management	Ph.D	3	1998		08
17	Ph.D in Environmental Geomatics	Ph.D	3	1998		08

- **NBA Accreditation Status of UG and PG programmes as on 31st December 2016:**

Total no of programmes eligible for accreditation (at least one batch pass out): **09**

No. of programmes accredited: **6**

No. of programmes applied for accreditation: **02**

- **Status of Faculty Associated with Teaching Engineering Students (Regular & Contract) as on 31st December 2016:**

No. of Sanctioned Regular Posts	Present Status : Number in Position by Highest Qualification												Total Number of regular faculty in Position	Total Vacancies	Total Number of contract faculty in Position
	Doctoral Degree				Masters Degree				Bachelor Degree						
	Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, Maths and English/ other languages)		Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, Maths and English/ other languages)		Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, Maths and English/ other languages)				
	R	C	R	C	R	C	R	C	R	C	R	C			
1	2	3	4	5	6	7	8	9	10	11	12	13	14= (2+4+6+ 8+ 10+12)	15=(1-14)	16= (3+5+7+9+ 11+13)
19	15	7	1	1	1	15	-	5	-	-	-	-	17	02	28

R=Regular, C=Contract

2. INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP) (Implementation period: April 2017- March 2020)

2.1 Give the Executive Summary of the IDP. Also include the mission and vision statement of your institution (max 2 pages).

Institute of Science and Technology has been engaged in offering Post Graduate programmes in Technical Education and research for the last 26 years. The primary objective of the Institute has been to generate highly qualified technical manpower tailored to the industry and academia. As our objective matches with that of TEQIP project objectives and also that of the Government of India, it is felt appropriate to seek funding under the TEQIP –III project.

Since the Institute has already involved in research in the areas of Hydrogen energy, Remote sensing and GIS applications, Plant Biotechnology and Animal cell culture Technology, microbial Biotechnology, Water Resource Management and hydrology, solar energy, battery applications, agriculture, sensors and biomedical applications **we would like to scale up the research activities in the above areas during TEQIP phase III.** The Institute has already have a moderate level of Industry Institute Interaction, **there will be a concentration on Industry Institute Interaction development.**

Therefore the following have been proposed in IDP.

- Faculty training both in India and abroad to gear up to the current challenges in advanced and upcoming technologies
- Continuing to care for academically weak students by conducting remedial classes, organizing personality development programmes and special coaching as per their requirement.
- Establishment of an Industry Institute Partnership Cell (IIPC) for enhancing collaborative research and process development.
- To offer Teaching and Research Assistantships to PGECET, non-GATE and non-sponsored M.Tech students and Research Assistantships to PhD students from next academic year on par with AICTE scholarships.
- The Institute is proposing various cells such as MIS cell, Office & Examination Automation cell and placement cell improving.

2.2 Provide an action plan with timelines for : (not more than 1 page for each sub-activity)

(a) Improving the learning outcomes of the students

I. Faculty training (qualification up gradation, subject up gradation & research competence, Pedagogical training, participation in conferences, seminars/workshops etc.)

a) Qualification Up gradation

S.No	Faculty Name	Name of the Centre	Present Qualification	Qualification to Be Upgraded	Area of Interest
1	Dr.A.Uma	Centre for Biotechnology	Ph.D	PDF	Molecular Biology & Proteomics
2	Dr.Archana Giri	Centre for Biotechnology	Ph.D	PDF	Metabolic Engineering
3	Dr.L.Saida	Centre for Biotechnology	Ph.D	PDF	Bioprocess Engineering
4	Dr.A.Jaya Shree	Centre for Chemical Sciences and Technology	Ph.D	PDF	Anti Cancer Research
5	Dr.Ch.Sasikala	Centre for Environment	Ph.D	PDF	Environmental Microbiology
6	Dr.T.Vijaya Lakshmi	Centre for Environment	Ph.D	PDF	Geomatics
7	Dr.V.Hima Bindu	Centre for Environment	Ph.D	PDF	Bio-fuels
8	Dr.Ch.Shilpa Chakra	Centre for Nano Sciences and Technology	Ph.D	PDF	Nanotechnology, Bio-Nano Technology
9	Sri.J.Venkatesh	Centre for Spatial Information and Technology	M.Tech	Ph.D	Geospatial Technology, Water Resources
10	Dr.M.V.S.S.Giridhar	Centre for Water Resources	Ph.D	PDF	Water resources

b) Subject Upgradation & Research competence

S.No	Faculty Name	Name of the Centre	Subject Domain	Place	Duration per Year
1	Dr.A.Uma	Centre for Biotechnology	Biotechnology	Georgiatech, USA	3 Weeks
2	Dr.Archana Giri	Centre for Biotechnology	Plant Biotechnology	University of Calgary, Canada	2-3 Weeks
3	Dr.L.Saida	Centre for Biotechnology	Bioprocess Engineering	Windsor University, Canada	2-3 Weeks
4	Dr.A.Jaya Shree	Centre for Chemical Sciences and Technology	Cancer Research	NIH, USA	2-3 Weeks
5	Dr.Ch.Sasikala	Centre for Environment	Bacterial Taxonomy & bioprospecting	Canada	2-3 Weeks
6	Dr.M.Anji Reddy	Centre for	Remote Sensing	USA	2-3 Weeks

		Environment	& GIS		
7	Dr.T.Vijaya Lakshmi	Centre for Environment	Environmental Geomatics	USA/Germany	2-3 Weeks
8	Dr.V.Hima Bindu	Centre for Environment	Environmental Management	USA /Japan	2-3 Weeks
9	Dr.Ch.Shilpa Chakra	Centre for Nano Sciences and Technology	Nanotechnology/ Materials and its Applications	Singapore/ Australia/ UK/ USA/ Europe/ India/ Dubai/ South Korea /Japan	2-3 Weeks
10	Dr.K.Venkateswara Rao	Centre for Nano Sciences and Technology	Nano Material and Its Applications	USA/Europe/Sri Lanka/UK/Abu Dhabi/Japan	2-3 Weeks
11	Sri.J.Venkatesh	Centre for Spatial Information and Technology	Advanced training in Remote Sensing	Purdue University, USA/ ITC Netherland/ NASA Visit	2-3 Weeks
12	Dr.B.Venkateswara Rao	Centre for Water Resources	Ground water	Burmingham University, UK	4 weeks
			Water resources	Melbourne University	4 weeks
13	Dr.K.Rammohan Reddy	Centre for Water Resources	Surface Hydrology	TEXAS USA	4 weeks
			Climate change	Copenhagen, Denmark	4 weeks
			Water & waste water treatment Technologies	Tsinghua University, China	4 Weeks
14	Dr.M.V.S.S.Giridhar	Centre for Water Resources	Climate change	Copenhagen, Denmark	2 weeks
			Water & waste water treatment Technologies	Tsinghua University, China	2 Weeks

c) Pedagogical training

S.No	Faculty Name	Name of the Centre	Place of training	Duration per Year
1	Dr.A.Uma	Centre for Biotechnology	ESCI, Hyderabad	5 days
2	Dr.Archana Giri	Centre for Biotechnology	ESCI, Hyderabad	5 days
3	Dr.L.Saida	Centre for Biotechnology	NITTR	5 days
4	Dr.A.Jaya Shree	Centre for Chemical Sciences and Technology	ISB Hyderabad	5 days
5	Dr.Ch.Sasikala	Centre for Environment	ESCI, Hyderabad	5 days

6	Dr.M.Anji Reddy	Centre for Environment	ISB, Hyderabad	5 days
7	Dr.T.Vijaya Lakshmi	Centre for Environment	Any IIM	5 days
8	Dr.V.Hima Bindu	Centre for Environment	Any IIM	5 days
9	Dr.Ch.Shilpa Chakra	Centre for Nano Sciences and Technology	India	5 days
10	Dr.K.Venkateswara Rao	Centre for Nano Sciences and Technology	India	5 days
11	Sri.J.Venkatesh	Centre for Spatial and Information Technology	Any ISB or IIM or NITTR	5 days
12	Dr.K.Manjula Vani	Centre for Spatial and Information Technology	NITTR Chandigarh/Chennai	5 days
13	Dr.B.Venkateswara Rao	Centre for Water Resources	Any ISB or IIM	5 Days
14	Dr.K.Rammohan Reddy	Centre for Water Resources	Any ISB or IIM	5 Days
15	Dr.M.V.S.S.Giridhar	Centre for Water Resources	Any ISB or IIM	5 Days

d) Participation in conferences, seminars/workshops

- All the Faculty will attend National & International Conference seminars/workshops as and when announced.

II. Staff training (Technical & Administrative staff)

S.No	Type	No of staff	Area	Place	Duration
1	Technical Staff	15	Hands on training on Instrumentation, Computing Applications	India	1 Week
2	Administrative staff	20	Administrative Training Programs	India	1 Week
3	Accounts	05	Tally Software	India	1 Week

III. Increasing capacity of UG, PG and PhD education (increasing enrollment and starting new UG, PG and PhD programmes)

- Institute is proposed to offer Teaching Assistantships (TA) to PGCET, non-GATE and non-sponsored M.Tech students and Research Assistantships to PhD students from next academic year on par with AICTE scholarships.

a) Centre for Biotechnology:

- Increasing Enrollment of Ph.D (Under TEQIP-III) 15% more of existing subject to fulfilment of UGC norms/vacancy criteria

b) Centre for Chemical Sciences & Technology:

- Increasing Enrollment of Ph.D (Under TEQIP-III) 15% more of existing subject to fulfilment of UGC norms/vacancy criteria

c) Centre for Environment:

- Increasing Enrollment of Ph.D (Under TEQIP-III) 15% more of existing subject to fulfilment of UGC norms/vacancy criteria

d) Centre for Nano Sciences and Technology:

- Starting new PG programme: M Tech Nano Electronics and Photonics with a Intake of 25 Student
- Increasing Enrollment of Ph.D (Under TEQIP-III) 15% more of existing subject to fulfilment of UGC norms/vacancy criteria

e) Centre for Spatial Information and Technology:

- Increasing Enrollment of Ph.D (Under TEQIP-III) 15% more of existing subject to fulfilment of UGC norms/vacancy criteria

f) Centre for Water Resources:

- Another M.Tech course namely Irrigation and Drainage Engineering is proposed in the next academic year.
- Increasing Enrollment of Ph.D (Under TEQIP-III) 15% more of existing subject to fulfilment of UGC norms/vacancy criteria

IV. Investing in smart classrooms, campus Wi-Fi (24*7 broadband connectivity and Wi-Fi access in all academic and administrative buildings and hostels (with a minimum of 2 MBPS speed for each connection), e-library etc.

- Establishing Smart Classrooms for each participating centres
- Surveillance System for Institute.
- Virtual Streaming
- Virtual Laboratories
- Video Conferencing facilities
- Facilities for Webinars for launching
- Total Automation of Examination & Administration

V. Improving the academic performance of SC/ST/OBC/academically weak students through innovative methods, such as remedial and skill development classes, peer assisted learning for increasing the transition rate, non cognitive skills and pass rate

At Institute level there will be establishment of dedicated Academic performance & monitoring cell. The expenditure will be met from TEQIP-III funds for the Manpower recruited under this head. The cell will have the following functions.

- Invited Talks /Seminar/workshop will be conducted for SC/ST/OBC/academically weak students to improve their Skills
- Special need based Coaching classes for weak students in extra time.
- Extra Coaching classes for development of Communication and linguistic skills
- Guidance Classes for Personality development.
- Career guidance coaching for GATE and CAT Examinations.
- To conduct remedial and skill development classes for academically weak students including Sc, ST, OBC and Minorities.
- Book Bank scheme: providing text book set to weak students for a semester.
- Teacher Guardian scheme for weak students : associating group of weak students for each of the faculty member for keeping a vigil eye on the academic performance of the students, solving their individual problems by meeting them once a week personally. Encouraging rewards to weak students for improvement in the performance.
- Making mixed group of student in various day to day academic activities comprising of weak students and well performing students.

VI. Instituting academic and non-academic reforms including NBA accreditation, programme flexibility (Is there any need to revise the curriculum? When it was last revised?)

- NBA and NAAC accreditations will be renewed for the existing programmes and will be applied for future programs.
- Already we have adopted CBCS for the existing programs. We are going to adopt CBCS for the proposed courses in IDP.
- Institute revises the curriculum for the programs offered in every alternate year.

(b) Improving employability of the students

1. Increasing interaction with industry (What are the industries located in the vicinity? What role of industry is perceived for the institute?)

S.No	Name of the Centre	Name of the Industries	Role of the Industry
1	Centre for Biotechnology	Biocon, GSK, IIN, Shanta Biotech, GVK Bio, TIFR, CCMB, Bharath Biotech, Virchow Biotech	<ul style="list-style-type: none">• The problems faced by the industry will be taken as a research project by meeting the field expenses.• The students are taking up projects at these industries thereby exposing them to the State of the art technologies.• We will have Collaborative projects with the Industries.
2	Centre for Chemical Sciences and Technology	Dr.Reddys laboratories, Aurobindo Pharma Limited, MSN Laboratories, HETERO Drugs, Dr.Reddy's life Sciences, GVK Bio, IICT, CCMB	
3	Centre for Environment	EPTRI, PETL, JETL, TSPPCB, NEERI, IICT, CCMB	
4	Centre for Nano Sciences and Technology	Nano Span India Pvt. Ltd, NED Energy Pvt. Ltd, Asian Cosmos, Hyderabad, DRDO, Hyderabad, ARCI, Hyderabad	
5	Centre for Spatial Information and Technology	NRSC, ICRISAT, ADRIN, NIRD, ICRISAT, APSAC, TRAC, TS I & CAD, TSCGWB, EPTRI, WALAMTARI, NGRI, IWMI, Infosys, TCS, Tech Mahindra, Wipro, HEXAGON etc industries are located in the vicinity of the university	
6	Centre for Water Resources	TS I & CAD, TSCGWB, TSPPCB, EPTRI, WALAMTARI, PETL, JEETL, NGRI, ICRISAT, NRSC, IWMI etc are the following industries are located in the vicinity of the university.	

2. Student career counseling and placement

- It is proposed to establish an independent Placement cell for career counselling and for conducting placements.
- Arranging for the various skill development programmes to the students to improve career and employment opportunities.

(c) Increasing faculty productivity and motivation

1. Sponsored research, consultancy and other revenue generating activities

- Establishment of an Industry Institute Partnership Cell (IIPC) for enhancing collaborative research and process development.

S.No	Name of the Centre	Activity
1	Centre for Biotechnology	<ul style="list-style-type: none">• It is an identified centre for second generation Bio-fuels and Research will be undertaken for improvisation of technology related to enzyme engineering, pretreatment & biomass hydrolysis.• Generation of Plants for high amounts of secondary metabolites by tissue culture & Metabolic Engineering.• Bioreactor design and process engineering
2	Centre for Chemical Sciences and Technology	<ul style="list-style-type: none">• Development of synthetic drugs against various cancer cell lines and their progression to metastasis. Centre focuses on Industry as well as govt. sponsored research in the area of drug design, lead identification and development in the area of anti cancer molecules.• Centre is keen in establishing incubation centre for industry participation and better R&D output.
3	Centre for Environment	<ul style="list-style-type: none">• The centre is poised to take up advance research in the areas of wastewater Treatment, microbial bioprospecting, Environmental geo-informatics
4	Centre for Nano Sciences and Technology	<ul style="list-style-type: none">• Centre has state of art equipments by which centre can undertake the following research projects.• Solar cell application, battery materials, sensors, Nano biotechnology Applications, Agro applications using eco-friendly nano materials.• Centre is keen in establishing incubation centre for industry participation and better R&D output.
5	Centre for Spatial Information and Technology	<ul style="list-style-type: none">• The centre is keen to undertake consultancy projects in applications of Geospatial Technology in natural sources• Pursuing sponsored research in hyperspectral microwave remote sensing and decision support systems• Development of Customized tools for planning the infrastructure development.• Design and development of Nanosatellite.
6	Centre for Water Resources	<ul style="list-style-type: none">• The centre has been recognised by CPHEEO and will undertake research in the areas of Water & Wastewater Treatment, water conservation, ground water management and Remote sensing applications in water resources.

2.3 Describe the following in brief:

1. Is there an ERP/MIS system existing, if yes, then any improvement, modification suggested.

- MIS System is existing. Present MIS system is covering entire information of the Institute. However we need a dedicated MIS Cell with manpower and infrastructure.

2. Is there any mechanism i.e. special classes being conducted in the institution for improving the GATE score?

- It is not applicable as we are offering only M.Tech Courses and they join with GATE score.

2.4 Please identify some endeavours and joint activities that you would undertake with the institution of focus state under sub-component 1.1 for twinning arrangement from among the ones listed below and/or any further ones and provide the yearly action plan for 3 years:

S. No	Suggested Activity/Indicator	Proposed Action	Target (number, %age, stage etc.) for institution under sub-component 1.1 over the baseline, if applicable		
			2017-18	2018-19	2019-20
1	Increase in student graduation rates	-	-	-	-
2	Improved Placement of graduates a) Placement Rate b) Placement Package	-	-	-	-
3	Increase in GATE qualified graduates	-	-	-	-
4	Smart classrooms	-	-	-	-
5	e-books and e-Journals	-	-	-	-
6	Increase in publications in refereed journals	Guiding in applying for various funding organizations for research grants to improve R&D and Publications.	5%	10%	15%
7	Seminars, meetings and conferences for students and faculty for training and academic development	Mentoring in organizing various National & International Conference by indicating various funding agencies.	10%	20%	30%
8	Sharing of faculty for teaching processes	Faculty Exchange for Academic activities in the fields of Biotechnology, Chemistry, Nano Science, Water, Environment and Geospatial Technology	15%	20%	25%

9	Faculty exchange for research and development purposes	We will promote Research for the faculty of the Mentee Institute in the areas of mutual interest.	10%	15%	20%
10	Student exchange at the PhD, Masters and Undergraduate levels	Some of the students from both the Institutes will get exchanged for UG, PG & Ph.D projects	15%	20%	25%
11	Joint supervision of PhD and/or Masters' student	It is possible to identify joint supervision projects in the areas of common interest.	15%	20%	25%
12	Joint activities with industry for joint R&D, internships and placement activities	Some industries at both the places will be identified for placement activity	10%	20%	30%
13	Seminars and learning forums on improving governance practices	Some good governing practices at both the places will be implemented jointly	5%	10%	15%
14	Improvement in NBA accreditation (including applied for cases)	Already some of the courses got accredited at Mentor Institute hence a helping hand can be extended to the Mentee institute	To Apply for NBA Accreditation for the eligible programs	Mock Visit	Actual visit
15	Helping in Grant of UGC Autonomy for non-autonomous institution	Since the Mentor institute is an Autonomous Institute under UGC, the experience can be extended for the Mentee Institute	To apply for Autonomy	Mock Visit	Actual visit
16	Any other form of endeavour	-	-	-	-

2.5 Identify the outreach programmes and systems which are already in place in your Institute to succeed in your role of twinning for strengthening of other institutions viz. related to faculty/students/non-teaching staff/Industry etc.

- Awareness programs on Municipal Solid Waste management and sewage treatment in the residential colonies.
- Conducting training programs on industrial waste management for stakeholders
- The centre will conduct summer school of 1month duration on “Geospatial Technology and its Applications” for faculty, students, non teaching and industries etc to enhance their skill, expertise and employability.
- Other programmes in this context which are in place include creating awareness about blood donation, swachh bharat, save electricity, water, afforestation, promoting usage of non conventional energy, electricity from solid waste
- Promotion of “Geospatial technology” at School level

- Centre for Water Resources is having adequate experience in harvesting the rain water at Institute level and already implemented rain water harvesting structures at JNTUH campus. It can extend the same methods and techniques to the mentee institutes or other TEQIP funded institutes as an outreach Programme.

2.6 Identify the academic and/or administrative challenges that you anticipate in your role of twinning and the mechanism that you have put in place and/or intend to put in place, to address these challenges.

There must be a coordinating teams comprising functionaries of TEQIP from both the mentor and mentee institutes to have an administrative communication with the heads of respective institutes as chairpersons. There needs to be identification of areas of collaborative academic and research activities between the two institutes so that mentoring can be focused effectively.

Since the Institute of Science and Technology JNTUH is having a very good experience in obtaining the research funding from various governmental and nongovernmental organizations, the senior and active researchers can mentor the faculty of mentee institute in this area. Similarly IST is very active in organizing the seminars, conferences and workshops. This is another activity where the IST, JNTUH can concentrate on the mentee institute for guiding. IST is also active in having the networking with various national and international academic and research institute some of its experience could be shared with the mentee institute.

2.7 Is there any difficulty in Recruitment and selection of high-quality faculty? If yes, what are the reason & action plan to solve the issue?

The university normally fills the vacancy positions of the university from time to time. However, the university has to obtain the state government's permission to fill the vacancies and to obtain the concurrence in following various reservation policies of the government. In this process there are certain delays and hurdles in recruitment of the faculty that too with high quality. In order to obviate this situation, the university has freedom to recruit the faculty on temporary and contract basis with the designations such as lecturers for junior faculty and academic advisers for senior and retired faculty.

2.8 Give an action plan for long term strategic partnership with the mentee institute after the end of the Project.

- Establishing administrative contacts, interaction with the concerned senior faculty members, chalking out programmes for introduction UG,PG course/a subject at UG/PG level, establishing lab facilities conducting training to the concerned staff, helping in preparation of course material for teaching and periodic review and up gradation.

- At the mentee institute we will facilitate to create a water harvesting and water treatment technologies cell of their institute and will be monitored by the mentoring institute on a long term basis. Further at a academic levels the achievements during the research, the TEQIP period will be made sustainable by constant interaction between mentee and mentoring Institutes.
- Encourage the faculty and students to take up joint R&D and Ph.D programmes.

2.9 Describe briefly the participation of departments/faculty/students in the IDP preparation.

The director IST, JNTUH has circulated the proforma of IDP for TEQIP phase - III to all the functionaries of the institute such as heads of participating centres, examination branch and administrative officers. The heads of various centres and the respective officers in turn have convened a meeting with all the faculty, administrative staff, research scholars and students of their units and discussed the IDP of TEQIP Phase - III for their inputs. Each centre has submitted their inputs to the director IST and the director in turn has consolidated the information with the help of heads and the senior faculty to give a final shape to the final form of the IDP prepared by IST, JNTUH.