

## Chaitanya Bharathi Institute of Technology [ARI-C-25622][C-25622]

## Section 1: Policy And Institutionalization Of I&E Activities In HEIs (Academic Calendar Year 2020-21 & 2021-22)

### 1.1) Adoption Level of Innovation and Entrepreneurship (I&E) Policy in HEIs: Registration; Policy Formulation; Policy Implementation

Completion of Action Items (status as on 7th November 2022 )					
Registered in the NISP portal for I&E Policy Adoption	Yes				
Institute has Formulated an Innovation and Entrepreneurship (I&E) Policy	Yes				
Institute has Action Plans for Implementation of the I&E Policy	No				

#### Contact:

Faculty Name:	Dr P Narahari Sastry
Designation:	Professor
Email ID:	naraharisastry_ece@cbit.ac.in
Mobile No.	9948397802

### 1.2) Performance Level of Institution's Innovation Councils (IICs) Established in HEIs: Scores and Stars Obtained

Annual Performances of IIC Institute	Stars Secured
IIC 1.0 (2018-19)	1,2,3
IIC 2.0 (2019-20)	2.5
IIC 3.0 (2020-21)	4
IIC 4.0 (2021-22)	4

#### Contact:

IIC President of the Institute:	Dr. P. Ravinder Reddy
Designation:	Principal

Email ID:	principal@cbit.ac.in
Mobile No.	8466997204

# 1.3) Activeness of Trained Innovation Ambassadors in Driving Campus I&E Ecosystems in HEIs: Trained IA/HEI and Nos of Prescribed Activities undertaken by IA

Sr. No.	Name of the Faculty IA	Level of Training	No of I&E Expert Talks/Sessions Conducted
1	Dr. JALAJA ENAMALA	Advance	0
2	Dr M Balasubbareddy	Advance	0
3	SREENIVASA REDDY BEEMI REDDY	Advance	0
4	N Lalitha Kumari	Advance	0
5	S TULASI RAM	Advance	4
6	MANASA KOTHA	Advance	0
7	Srikanth R	Advance	0
8	Ganesh Botla	Advance	0
9	Chintakunta Nagendranatha Reddy	Advance	0
10	Ravi Degala	Advance	0
11	Mohammed Sikander	Advance	0
12	Dr. Bishwambhar Mishra	Advance	0
13	Dr. Rahul	Advance	0
14	Dr B.Veera Jyothi	Advance	0
15	sugamya katta	Advance	0
16	Mrs.R.Uma Devi	Advance	0
17	K.Bhagya Lakshmi	Advance	0
18	sugamya katta	Advance	0
19	Dr. JALAJA ENAMALA	Advance	2
20	Dr. V Swapna	Advance	2

Sr. No.	Name of the Faculty IA	Level of Training	No of I&E Expert Talks/Sessions Conducted
21	Dr. N. V. Koteswara Rao	Advance	0
22	Dr. G. N. R. PRASAD	Advance	0
23	Gubbala venkata ramesh	Advance	0
24	Vanitha Guda	Advance	5
25	Baddam indira	Advance	0
26	Prof. Rajanikanth Aluvalu	Advance	6
27	Mrs. S. Shoba Rani	Advance	0
28	Dr. V Swapna	Advance	0
29	Rahul	Advance	0
30	Dr. V. Aruna	Basic	0
31	M Sangeetha	Basic	2
32	Dr L Suresh Kumar	Advance	0
33	Dr Panyam Narahari Sastry	Basic	0
34	D.Nagadevi	Basic	0
35	Dr. B M Pratima	Basic	0
36	P VASSANTH SENA	Basic	0
37	Dr. Prasanna Rani R	Basic	0
38	P. Varaprasad Goud	Basic	0
39	Sanjeeb Kumar Mandal	Basic	0
40	Ms. B.Deepthi	Advance	0
41	K H Vijaya Kumari	Advance	0

#### 1.4) Participation in KAPILA/SIH Program

HEI Registered in the KAPILA Portal	C-25622	Yes
HEI Participated in the Smart India Hackathon (2022)	C-25622	Yes

## Section 2: Teaching and Learning: Academic Programs related to Innovation and Entrepreneurship (I&E) Offered by the HEI

#### 2.1) Academic Courses in Innovation, Entrepreneurship and IPR

Srno	Title of Course	Course Code	Academic Year	Type of Course	Level of Course	Course Offering Department/ Centre/ Unit Name	Total Credit Score	Cour: Start Date
1	Enterpreneurship	18ME O04	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	18-01 2021 00:00
2	Principles of Entrepreneurship	16ME E16	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	18-01 2021 00:00
3	Research Methodology	16ME 006	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	18-01 2021 00:00
4	Principles of Entrepreneurship	18ME E13	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	18-01 2021 00:00
5	Intellectual Property Rights	16ME 004	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	11-02 2021 00:00
6	Enterpreneurship	16ME 001	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	08-02 2021 00:00
7	Engineering Exploration	20ME C03	2020-21	Core Course	Bachelor	Mechanical Engineering	3	15-04 2021 00:00
8	Enterpreneurship	16ME O01	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	10-08 2020 00:00
9	Research Methodology and Intellectual Property Rights	20MEM 103	2020-21	Elective Course	Master	Mechanical Engineering	3	04-01 2021 00:00

Srno	Title of Course	Course Code	Academic Year	Type of Course	Level of Course	Course Offering Department/ Centre/ Unit Name	Total Credit Score	Cour: Start Date
10	Research Methodology	16ME 006	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	10-08 2020 00:00
11	Enterpreneurship	18ME 004	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	10-08 2020 00:00
12	Engineering Research Methodology	16ME E12	2020-21	Elective Course	Bachelor	Mechanical Engineering	3	10-08 2020 00:00
13	Research Methodology and Intellectual Property Rights	20ME C103	2020-21	Elective Course	Master	Mechanical Engineering	3	04-01 2021 00:00
14	Engineering Exploration	20ME C03	2020-21	Core Course	Bachelor	Mechanical Engineering	3	07-12 2020 00:00
15	Enterpreneurship	18ME 004	2021-22	Elective Course	Bachelor	Mechanical Engineering	3	24-01 2022 00:00
16	Research Methodology and Intellectual Property Rights	20MEM 103	2021-22	Elective Course	Master	Mechanical Engineering	3	20-12 2021 00:00
17	Intellectual Property Rights	18ME 007	2021-22	Elective Course	Bachelor	Mechanical Engineering	3	03-08 2021 00:00
18	Engineering Exploration	20ME C03	2021-22	Core Course	Bachelor	Mechanical Engineering	3	06-12 2021 00:00
19	Enterpreneurship	18ME 004	2021-22	Elective Course	Bachelor	Mechanical Engineering	3	03-08 2021 00:00
20	Social Media Analytics	18IT E09	2020-21	Elective Course	Bachelor	Information Technology of Engineering	3	08-02 2021 00:00

Srno	Title of Course	Course Code	Academic Year	Type of Course	Level of Course	Course Offering Department/ Centre/ Unit Name	Total Credit Score	Cour Start Date
21	Cyber Security	18IT E16	2020-21	Elective Course	Bachelor	Information Technology	3	08-02 2021 00:00
22	Artificial Intelligence	18IT C22	2020-21	Core Course	Bachelor	Information Technology	3	08-02 2021 00:00
23	Information Security	18IT C23	2020-21	Core Course	Bachelor	Information Technology	3	08-02 2021 00:00
24	EMBEDDED SYSTEMS AND INTERNET OF THINGS	16IT C31	2020-21	Elective Course	,Bachelor	Information Technology	3	10-08 2020 00:00
25	Block Chain Technology	18IT E20	2020-21	Elective Course	Bachelor	Information Technology	3	10-08 2020 00:00
26	Artificial Intelligence	18IT C22	2021-22	Core Course	Bachelor	Information Technology	3	27-0 2022 00:00
27	Information Security	18IT C23	2021-22	Core Course	Bachelor	Information Technology	3	25-0° 2022 00:00
28	Embedded Systems	18IT C28	2021-22	Core Course	Bachelor	Information Technology	3	19-0 2021 00:00
29	Internet of Things	18IT C29	2021-22	Core Course	Bachelor	Information Technology	3	24-0° 2022 00:00
30	Mobile Application using Kotlin	20IT E02	2021-22	Elective Course	Bachelor	Information Technology	3	31-0 <sup>-</sup> 2022 00:00
31	Intellectual property rights and bioethics	20BT E03	2021-22	Elective Course	Bachelor	Biotechnology	3	01-02 2022 00:00

Srno	Title of Course	Course Code	Academic Year	Type of Course	Level of Course	Course Offering Department/ Centre/ Unit Name	Total Credit Score	Cour: Start Date
32	IoT and its Applications	18EC E25	2021-22	Elective Course	Bachelor	Electronics and Communications Engineering	3	24-01 2022 00:00
33	Enterpreneurship	20ME E03	2021-22	Elective Course	Bachelor	Mechanical Engineering	3	31-01 2022 00:00
34	Research Methodology	18ME O03	2021-22	Elective Course	Bachelor	Mechanical Engineering	3	31-01 2022 00:00
35	Principles of Enterpreneurship	18ME E13	2021-22	Elective Course	Bachelor	Mechanical Engineering	3	31-01 2022 00:00
36	Intellectual Property Rights	18ME 007	2021-22	Elective Course	Bachelor	Mechanical Engineering	3	24-01 2022 00:00
37	Industry 4 0	20CSC05	2020-21	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	09-05 2022 00:00
38	Mobile Application Development	18CSE 02	2020-21	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	03-08 2021 00:00
39	Artificial Intelligence	18CSC25	2021-22	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	02-08 2021 00:00
40	Human Computer Interaction	18CSE22	2021-22	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	31-05 2021 00:00
41	Devops	18CSE24	2021-22	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	23-08 2021 00:00
42	Technical Writing Skills	18EGO 01	2021-22	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	23-08 2021 00:00

Srno	Title of Course	Course Code	Academic Year	Type of Course	Level of Course	Course Offering Department/ Centre/ Unit Name	Total Credit Score	Cour: Start Date
43	Social Networking and its Impact	18CSE32	2021-22	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	24-01 2022 00:00
44	Mobile Application Development	18CSE04	2020-21	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	08-10 2020 00:00
45	Research Methodologies	18MEO03	2020-21	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	08-10 2020 00:00
46	Artificial Intelligence	18CSC25	2020-21	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	02-08 2020 00:00
47	Mobile Applications and Services	20CSE119	2021-22	Elective Course	Master	COMPUTER SCIENCE AND ENGINEERING	3	25-10 2021 00:00
48	Internet of Things	18CSE09	2021-22	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	02-08 2021 00:00
49	Natural Language Processing	18CSE31	2021-22	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	02-08 2021 00:00
50	Intellectual Property Rights	16MEO04	2021-22	Elective Course	Bachelor	COMPUTER SCIENCE AND ENGINEERING	3	02-08 2021 00:00
51	Entrepreneurship	16ME E20	2020-21	Elective Course	Master	MCA	3	10-08 2020 00:00
52	Entrepreneurship	20MCE102	2021-22	Elective Course	Master	MCA	3	17-05 2021 00:00

### 2.2) Non-Academic Courses in Innovation, Entrepreneurship and IPR

Srno	Title of Course	Academic Year	Type of Certificate Program	Certificate Program/MDP/FDP/EDP Sponsored/Supported by	Certificate Program Offering Department/ Centre/ Unit Name	Progran Start Date
1	Virtual Reality	2020-21	Faculty Development Program (FDP)	Central Govt. Agency	Information Technology	01-09- 2020 00:00:00
2	Current trends and emerging advances in Marine Navigation Communication PHASE 1	2020-21	Faculty Development Program (FDP)	Central Govt. Agency	Electronics and Communications Engineering	23-11- 2020 00:00:00
3	Current trends and emerging advances in Marine Navigation Communication PHASE 2	2020-21	Faculty Development Program (FDP)	Central Govt. Agency	Electronics and Communications Engineering	07-12- 2020 00:00:00
4	Placement Training	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	Information Technology	18-05- 2022 00:00:00
5	Cyber Security	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	Information Technology	23-01- 2022 00:00:00
6	Online Hands- on National Workshop on Ethical Hacking and Cyber Security and National Online Workshop on Python Programming	2021-22	Short-term Certificate Program	Self Sponsored/Supported	Master of Computer Applications	16-07- 2021 00:00:00

Srno	Title of Course	Academic Year	Type of Certificate Program	Certificate Program/MDP/FDP/EDP Sponsored/Supported by	Certificate Program Offering Department/ Centre/ Unit Name	Progran Start Date
7	Recent Trends In Advanced Materials Science and Engineering Technology RTAMSET-21	2020-21	Faculty Development Program (FDP)	Self Sponsored/Supported	Chemistry	05-09- 2021 00:00:0C
8	Green Technology and Sustainability Engineering	2020-21	Faculty Development Program (FDP)	Central Govt. Agency	AICTE	07-09- 2020 00:00:00
9	Patent Drafting for Beginners	2020-21	Faculty Development Program (FDP)	Central Govt. Agency	NPTEL	14-09- 2020 00:00:00
10	AICTE Training And Learning (ATAL) Academy Online FDP on Waste Technology	2020-21	Faculty Development Program (FDP)	Central Govt. Agency	AICTE	27-01- 2021 00:00:00
11	BUILDING DATA DRIVEN SOLUTION USING DATA ANALYTICS WITH L AND DL ALGORITHM	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	24-06- 2021 00:00:00
12	BUILDING DATA DRIVEN SOLUTION USING DATA ANALYTICS WITH L AND DL ALGORITHM	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	24-06- 2021 00:00:00

Srno	Title of Course	Academic Year	Type of Certificate Program	Certificate Program/MDP/FDP/EDP Sponsored/Supported by	Certificate Program Offering Department/ Centre/ Unit Name	Progran Start Date
13	BLOCK CHAIN	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	04-01- 2021 00:00:00
14	DATA SCIENCE FOR BIG DATA ANALYTICS IN CLOUD USING ADV TOOL PHASE 1	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	23-11- 2020 00:00:00
15	DATA SCIENCE FOR BIG DATA ANALYTICS IN CLOUD USING ADV TOOL PHASE 2	2020-21	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	14-12- 2020 00:00:00
16	Bharateeya Chaitanya	2020-21	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	29-06- 2020 00:00:00
17	Organized Five- Day International Short Term Training Program (STTP) On Blockchain for Digital Transformation	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	12-08- 2021 00:00:00
18	Natural Language Processing Applications and Challenges	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	11-03- 2021 00:00:00
19	Faculty in- house training Programme	2021-22	Faculty Development Program (FDP)	Self Sponsored/Supported	COMPUTER SCIENCE AND ENGINEERING	23-04- 2022 00:00:00

Srno	Title of Course	Academic Year	Type of Certificate Program	Certificate Program/MDP/FDP/EDP Sponsored/Supported by	Certificate Program Offering Department/ Centre/ Unit Name	Progran Start Date
20	Trends and Challenges of Hybrid Electric Drive Utilities in Transport Sector- Phase1	2021-22	Short-term Certificate Program	Central Govt. Agency	Electrical and Electronics Engineering	03-08- 2020 00:00:00
21	Trends and Challenges of Hybrid Electric Drive Utilities in Transport Sector - Phase 2	2021-22	Short-term Certificate Program	Central Govt. Agency	Electrical and Electronics Engineering	02-11- 2020 00:00:0C
22	Trends and Challenges of Hybrid Electric Drive Utilities in Transport Sector - Phase 3	2021-22	Short-term Certificate Program	Central Govt. Agency	Electrical and Electronics Engineering	22-02- 2021 00:00:00

# Section 3: Pre-Incubation and Incubation Infrastructure & Facilities are Currently in Operation to Promote I&E Agenda (AY 2020-21 & 2021-22)

# 3.1) Existence of Pre-Incubation Facility (Tinkering Lab/Makers' Space/Design Centre/New Gen IEDC/IEDC/EDC/Innovation Cell/Startup Cell) (>= 600 Sq. Ft. Floor Area)

Sr. No.	Type of the Unit	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
1	IEDC	IEDC	Dr P. Prabhakar Reddy	9885468253	prabhakarreddy_mech@cbit.ac.in	

Sr. No.	Type of the Unit	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
2	Innovation Cell	Innovation Cell	Dr Umakanta Choudhury	9985306575	director_ii@cbit.ac.in	
3	Startup Cell	Startup Cell	Dr Umakanta Choudhury	9985306575	director_ii@cbit.ac.in	
4	AICTE- IDEALab	AICTE IDEA Lab	B V S Rao	9290545750	bvsrao_mech@cbit.ac.in	Mentoring Support,Pre- Incubation Facility Support (Idea to Prototype and Innovative Business Plan Developmen

#### 3.2) Existence of Incubation Facility (>= 1500 Sq. Ft. Floor Area)

Sr. No.	Name of Unit	In-charge Name	Contact no	ı
1	CBIT Research and Entrepreneurship Hub	Dr. Umakanta Choudhury,Dr A.D Sharma,Dr NLN Reddy,Dr Ravindra Pagaku,Dr Rajasri Yadavali	9985306575,9440934242,9849466587,9959183419,9908994251	•
2	MSME Incubation Centre	Umakanta Choudhury	9985306575	(
3	EDC	Dr Prabhakar Reddy	9885468253	I
4	ACIC CBIT Research and Entrep Hub	Dr Ravinder Reddy	9391033002	I

Sr. No.	Name of Unit	In-charge Name	Contact no	l
5	CBIT Research and Entrepreneurship Hub	Dr. Umakanta Choudhury,Dr A.D Sharma,Dr NLN Reddy,Dr Rajasri Yadavali	9985306575,9440934242,9849466587,9959183419,9908994251	1

### 3.3) Existence of IPR Cell / Patent Facilitation Unit / Technology Transfer Centre at the institute

Sr. No.	Type of the Unit	Name of Unit	In-charge Name	Contact no	Email	Govt. Schemes
1	IPR Cell	IPR CELL	Umakanta Choudhury	9985306575	director_ii@cbit.ac.in	Mentoring Support,Pre- Incubation Facility Support (Idea to Prototype and Innovative Business Plan Development)

## Section 4: Generation and Support of Prototypes / Innovations at HEI and Recognition received (AY 2020-21 & 2021-22)

# 4) Total no. of Innovations (Verified and Recommended) in Different TRLs (4-9) are Recorded in the YUKTI National Innovation Repository of the IIC Institute ( Status as on 7th November 2022 )

Sr. No.	Innovation Name	Developed as part of	FY of Development (FY. 2020- 21,2021-22)	TRL Stage	Team Lead/Innovator Name	Current Engagem of Team Lead in Institute
1	Energy Conservation through Smart Sensing	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	G. Vanitha	Faculty
2	Encoder- Decoder Approach to Automated Essay Scoring for a Deeper Semantic Analysis	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	I SRUJANA	Faculty
3	PRODUCTIVITY BOOSTER	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	Dr E Padmalatha	Faculty
4	Building CI/CD Pipeline for Microservices Applications	Academic Research Assignment/Industry Sponsored Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	Dr Sangeeta Gupta	Faculty

Sr. No.	Innovation Name	Developed as part of	FY of Development (FY. 2020- 21,2021-22)	TRL Stage	Team Lead/Innovator Name	Current Engageme of Team Lead in Institute
5	WBSA with QR- code for efficient usage of metro services using Private Cloud	Academic Research Assignment/Industry Sponsored Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	Dr Sangeeta Gupta	Faculty
6	COVID 19 TRACKER	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	Dr Sangeeta Gupta	Faculty
7	SOCIAL DISTANCING ALERTING SYSTEM	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	A mohan	Faculty
8	RECHARGEABLE WIRELESS SENSOR NETWORKS WITH MULTIPLE SINKS	Academic Research Assignment/Industry Sponsored Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	DR B VeeraJyothi	Faculty
9	A MODEL FOR EVENT TIME EXTRACTION AND ITS APPLICATION TO TEMPORAL QUESTION ANSWERING SYSTEM	Academic Research Assignment/Industry Sponsored Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	G. Vanitha	Faculty

Sr. No.	Innovation Name	Developed as part of	FY of Development (FY. 2020- 21,2021-22)	TRL Stage	Team Lead/Innovator Name	Current Engageme of Team Lead in Institute
10	AUTOGRADING OF C PROGRAMMING ASSIGNMENTS USING FORMAL SEMANTICS	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	I SRUJANA	Faculty
11	VIDEO ANALYSIS FOR WEAPON DETECTION AND ALERTING	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	CH.MADHAVI SUDHA	Faculty
12	Personality Prediction System	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	k MarysudhaRani	Faculty
13	Tracking Attention of Social Media Events using Bi- LSTM	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	CH.MADHAVI SUDHA	Faculty
14	HANDWRITTEN MATHEMATICAL EXPRESSION RECOGNITION	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	Swathi Edem	Faculty

Sr. No.	Innovation Name	Developed as part of	FY of Development (FY. 2020- 21,2021-22)	TRL Stage	Team Lead/Innovator Name	Current Engagemo of Team Lead in Institute
15	Hand Gestures Based Tetris Game	Academic Requirement/Study Project	2021-22	TRL 6: Prototype system tested in intended environment close to expected performance	B.Deepthi	Faculty
16	BRAIN TUMOR DETECTION USING SEGMENTATION	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	S Durga Devi	Faculty
17	STRUCTURED IMAGE DETECTION USING DEEP LEARNING	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	Dr Sangeeta Gupta	Faculty
18	ROAD POTHOLE DETECTION USING ULTRASONIC SENSORS	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	E Kalpana	Faculty
19	AN E- COMMERCE APPLICATION FOR FARMERS	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	Susmitha Tumma	Faculty

Sr. No.	Innovation Name	Developed as part of	FY of Development (FY. 2020- 21,2021-22)	TRL Stage	Team Lead/Innovator Name	Current Engageme of Team Lead in Institute
20	Smart Assistance for the Visually Impaired People	Academic Requirement/Study Project	2021-22	TRL 6: Prototype system tested in intended environment close to expected performance	Dr. Kolla Morarjee	Faculty
21	Machine Learning and CNN Models for Survival Prediction in COVID Patients	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	Dr. Kolla Morarjee	Faculty
22	RANKING SYSTEM FOR ALL THE TOURISM RELATED HOTEL INDUSTRIES USING NLP AND ML APPROACH	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	RUPESH MISHRA	Faculty
23	No More Hunger App	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	Susmitha Tumma	Faculty
24	Emotion Recognition System using CNN & RNN	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	RUPESH MISHRA	Faculty

Sr. No.	Innovation Name	Developed as part of	FY of Development (FY. 2020- 21,2021-22)	TRL Stage	Team Lead/Innovator Name	Current Engageme of Team Lead in Institute
25	Fire Detection using Image Processing and Machine Learning	Academic Requirement/Study Project	2021-22	TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype)	T.Prashanthi	Faculty
26	Video Surveillance System using Intelligent Robot Agent	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	KARTHIK KARMAKONDA	Faculty
27	Smart Irrigation System	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	N. Nishitha	Student
28	Motivate Narrate sense react	Academic Requirement/Study Project	2021-22	TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype)	N. Nishitha	Student
29	Fee Managment System	Academic Requirement/Study Project	2021-22	TRL 6: Prototype system tested in intended environment close to expected performance	S.Navy prakeerthi	Student

## Section 5: Start-ups/Ventures Established and Supported at HEI and & Recognitions Received (AY 2020-21 & 2021-22)

5) Total no of Ventures/Startups (Verified and Recommended) are Recorded in the YUKTI National Innovation Repository of the IIC Institute (Status as on 7th November 2022)

Sr.	Startup/Venture	Startup/Venture	CIN No/LLP/OPC/RC No
No.	Name	Registered as	
1	FASTWORKS CONSULTING SERVICES PRIVATE LIMITED	Private Limited Firm (Pvt. Ltd.)	U72900TG2016PTC111667  View Document (https://api.mic.gov.in//uploads/institutes/innovationcontes

Section 6: Collaboration with Other Incubation Units, HEIs and Industry Associations to Strengthen Better Services and Support to Innovation & Startups at HEI (AY 2020-21 & 2021-22)

6) Collaboration with Other Incubation Units, HEIs and Industry Associations to Strengthen Better Services and Support to Innovation & Startups at HEI (AY 2020-21 & 2021-22)

Sr. No.	Collaborated Agency Name	Collaborated Agency Type	Period of Collaboration (No. of Years)	Current Status of Collaboration	Date of MOU / Agreement Signed on	View
1	M/s Fastworks consulting Services Pvt ttd (3D Labs India)	Corporate/Industry Association	2 Үг	Active	13-08-2021	View (/U
2	Lionchgarge E- mobility Pvt Ltd	Corporate/Industry Association	5	Active	09-03-2022	View (/U

Sr. No.	Collaborated Agency Name	Collaborated Agency Type	Period of Collaboration (No. of Years)	Current Status of Collaboration	Date of MOU / Agreement Signed on	View
3	M.N. Mikheev Institute of Metal Physics of Ural Branch of Russian Academy of Sciences (IMP UB RAS, Yekaterinburg, Russia)	Institute of Metal Physics of Ural Branch of Russian Academy of Sciences (IMP UB RAS, Yekaterinburg,		Active	01-06-2022	
4	Curtin University			Active	01-01-2020	View (/U
5	Kernel Sphere Pvt Ltd			Active	01-01-2020	View (/U
6	Codechef	Knowledge/Mentoring Agency	2 Yr	Active	31-01-2022	View (/U
7	SVAK Life Sciences, Hyderabad	Corporate/Industry Association	3 Yr	Active	30-01-2021	View (/U
8	M.N. Mikheev Institute of Metal Physics of Ural Branch of Russian Academy of Sciences (IMP UB RAS, Yekaterinburg, Russia)	Educational Institute astitute of letal Physics of ral Branch of ussian cademy of ciences (IMP B RAS, ekaterinburg,		Active	01-06-2022	View (/U
9	Zoom Technologies Pvt Ltd	Technologies Association		Active	01-01-2020	View (/U
10	Cares Renewables	Corporate/Industry Association	5	Active	18-06-2020	View (/U
11	JRSPF Corporate/Industry Technologies Association Private Limited		3 Yr	Active	22-02-2022	View (/U

Sr. No.	Collaborated Agency Name	Collaborated Agency Type	Period of Collaboration (No. of Years)	Current Status of Collaboration	Date of MOU / Agreement Signed on	View
12	GreenBubble Algal works Pvt Ltd Bengaluru	Corporate/Industry Association	2	Active	30-01-2021	View (/U
13	CSIR-Indian Institute of Chemical Technology, Hyderabad.	Govt. Agency (Central)	5 Yr	Active	28-02-2020	View (/U
14	National Highways Authorities of India (NHAI)	Govt. Agency (Central)	2 Yr	Active	03-09-2020	View (/U
15	ISIE India	Corporate/Industry Association	2	Active	26-02-2021	View (/U
16	Innopark Ventures	Corporate/Industry Association	2 Yr	Active	17-02-2020	View (/U
17	T-Works , Foundation (Section-8 Company incorporated by by Govt. of Telangana)	Govt. Agency (State)	2 Yr	Active	23-02-2021	View (/U
18	M/s. Binford Research Labs	Corporate/Industry Association	2	Active	17-05-2022	View (/U
19	Mass Mutual Global Business Services India LLP	Business Association		Active	11-11-2021	View (/U
20	Manya Education Pvt Ltd	ication Pvt Agency		Active	01-01-2020	View (/U
21	M/s. Green Waves Environmental Solutions (GWES), Vishakhapatnam		3	Active	07-01-2021	View (/U

Sr. No.	Collaborated Agency Name	Collaborated Agency Type	Period of Collaboration (No. of Years)	Current Status of Collaboration	Date of MOU / Agreement Signed on	View
22	M/s Green Bubble Alga works Pvt Ltd, Bengaluru	Non Govt. Agency	3 Yr	Active	30-01-2021	View (/U
23	Wind Stream Energy Technologies India Private Limited	Corporate/Industry Association	3	Active	05-07-2020	View (/U
24	Unrban Rebox	Corporate/Industry Association	2 Yr	Active	12-04-2022	View (/U
25	GATI INTELLECT SYSTEMS LTD	Corporate/Industry Association	2	Active	30-12-2021	View (/U
26	Telangana state council of Science & Technology (TSCOST)		3 Yr	Active	01-01-2020	View (/U
27	Atlas Education Consultants Pvt Ltd	Corporate/Industry Association	3 Yr	Active	01-01-2020	View (/U
28	Biosephia Engineering Services (BES)	Corporate/Industry Association	3 Yr	Active	28-01-2021	View (/U
29	Kapil Knoledge Hub Pvt Ltd	Knowledge/Mentoring Agency	3	Active	20-10-2021	View (/U
30	College Bag Pvt.Ltd	Corporate/Industry Association	2 Yr	Active	10-02-2021	View (/U
31	Unacademy	Corporate/Industry Association	2 Yr	Active	19-03-2022	View (/U
32	Engineering Govt. Agency (Central) Stuff College of India		3	Active	11-11-2021	View (/U
33	NAVATHA Corporate/Industry SUPPLY CHAIN Association SOLUTIONS		2	Active	30-06-2020	View (/U

Sr. No.	Collaborated Agency Name	Collaborated Agency Type	Period of Collaboration (No. of Years)	Current Status of Collaboration	Date of MOU / Agreement Signed on	View
34	VisCommerce Pvt Ltd	Corporate/Industry Association	2	Active	19-02-2022	View (/
35	Hyderabad Institute Of Electrical Engineers( HIEE)	Knowledge/Mentoring Agency	3 Yr	Active	14-02-2020	View (/
36	Regional Telecom Training Centre, BSNL	Govt. Agency (Central)	2	Active	12-03-2021	View (/
37	International School of Engineering (INSOFE)	Educational Institute	2 Yr	Active	01-01-2020	View (/
38	Tie Grad	Corporate/Industry Association	2	Active	09-05-2022	View (/
39	Interleaved Multidisciplinary Research Centre(IMRC)	Corporate/Industry Association	2	Active	11-09-2020	View (/
40	Research and Innovation Circle of Hyderabad (RICH)	Govt. Agency (Central)	2	Active	29-08-2020	View (/
41	Data Security Council of India (DSCI) and Government of Telangana	Govt. Agency (State)	2	Active	05-03-2020	View (/
42	Rowan University( New Jersey, USA)	Educational Institute	5	Active	22-10-2020	View (/

### Section 7: Intellectually Property (IP) Generated and

### Commercialization

### 7.1) IPR Filed and Published (Copyrights & Design only)

Sr. No.	Title/Name of IP (Copyright/Design Only)	Type of IP	IP Registration Number of Copyright/Design	Date of Filed/Published	Has this IP(Copyright & Designs Only) been Commercialized/Transferred to Industry/Startup/Society?
1	A MODEL FOR EVENT TIME EXTRACTION AND ITS APPLICATION TO TEMPORAL QUESTION ANSWERING SYSTEM	Design	202041035785	18-09-2020	No
2	A MODEL FOR EVENT TIME EXTRACTION AND ITS APPLICATION TO TEMPORAL QUESTION ANSWERING SYSTEM	Design	2021106681	24-08-2021	No
3	Bidirectional Isolated DC-DC converter circuit for EV Battery storage	Copy Right	L-112510/2022	20-12-2021	No
4	Ecological work through selfpowered cost- efficient Energy proportional connected computing Literary/ Dramatic	Copy Right	202141024084	17-09-2020	No
5	Covid Cases Predictor	Copy Right	323/2022-CO/S	05-01-2022	No
6	Indian Railway Tracking and Delay Prediction	Copy Right	326/2022-CO/S	05-01-2022	No

Sr. No.	Title/Name of IP (Copyright/Design Only)	Type of IP	IP Registration Number of Copyright/Design	Date of Filed/Published	Has this IP(Copyright & Designs Only) been Commercialized/Transferred to Industry/Startup/Society?
7	A Wallet Based Smart App with QR- code for efficient usage of metro services using Private Cloud Infrastructure	Copy Right	320/2022-CO/S	05-01-2022	No
8	Building CI/CD Pipeline for Microservices Applications	Copy Right	325/2022-CO/S	05-01-2022	No
9	Bidirectional Isolated dc-dc converter circuit for EV battery storage	Copy Right	L-112510/2022	28-02-2022	No
10	Virtual Mouse	Copy Right	2376/2022-CO/	05-01-2022	No
11	Energy Conservation through Smart Sensing	Copy Right	2372/2022-CO/	05-01-2022	No
12	Encoder-Decoder Approach to Automated Essay Scoring for a Deeper Semantic Analysis	Copy Right	2367/2022-CO/	05-01-2022	No
13	Fingerprint Image Identification	Copy Right	4043/2022-CO/	23-02-2022	No
14	Nutritious Recipe Advisor for Personalized Diet	Copy Right	4042/2022-CO/	23-02-2022	No
15	Social Distancing Alerting System	Copy Right	4041/2022-CO/	23-02-2022	No
16	Productivity Booster	Copy Right	4040/2022-CO/	23-02-2022	No

Sr. No.	Title/Name of IP (Copyright/Design Only)	Type of IP	IP Registration Number of Copyright/Design	Date of Filed/Published	Has this IP(Copyright & Designs Only) been Commercialized/Transferred to Industry/Startup/Society?
17	A Fuzzy based SoC Control for Battery Life Extension	Copy Right	5809/2022-CO/	16-03-2022	No
18	Smart blind stick	Design	352891-001	14-01-2022	No

### 7.2) Patents Filed by HEI

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
1	A SYSTEM AND METHOD FOR DISASTER MANAGEMENT USING FLYING AD- HOC NETWORK	2020102992	24-10-2020
2	Dynamic computation offloading form based on occlusion detection in drone video analysis	202141033513	26-07-2021
3	NOISE ADAPTIVE APPROACH FOR IMPROVING THE BIT ERROR RATE (BER) IN THREE DIMENSIONAL TURBO CODES	202241026206	05-05-2022
4	IML- Traffic Prediction: INTELLIGE NT TRAFFIC PREDICTION USING MACHINE LEARNING.	202041027655	30-06-2020
5	Woman Safety Hidden Malicious Chip Using IoT- Based Location Tracking Technology	2021101341	16-03-2021
6	Rechargeable wireless sensor networks with multiple sinks	202141015900	16-04-2021
7	CNG/Natural gas kit design for two wheelers	202011020786	20-07-2020
8	Machine learning based ball throwing machine	202041040702	21-09-2020
9	Design and development of two wheeler mud guard using glass and jute	202141008703	02-03-2021
10	Deep learning-based adaptive windmill compensation system and method thereof	202141042314	18-09-2021
11	Control on pollution levels of petrol engine with low cost catalytic converter	202141044968	04-10-2021
12	Control of exhaust emissions of auto rickshaw engine run with diesel fuel	202141044969	04-10-2021
13	Insulated partially adiabatic diesel engine operated with methanol and vegetable oil	202141044970	04-10-2021

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
14	Wobbling free magnetic coupled body -fluid pumping apparatus	202141061650	30-12-2021
15	Wind turbine duct having exit fold and shallow slots	202241004270	25-01-2022
16	Development of auto pilot delivery drone an unamanned aerial vehicle	202241023144	20-04-2022
17	Microbial Pigment composition as Nucleic acid staining agent	202241004271	25-01-2022
18	An IOT Based Novel Frame work ForMonitoring Behavior of Autism Affected Persons	202041031963	21-08-2020
19	Secure Human Authentication System with Three Level Multi Model Biometric Fusion Using Artificial Neural Networks.	202141016077	16-04-2021
20	Early Detection of Diabetic Retinopathy using Deep representations with Binary CNN	202041055763	08-01-2021
21	On Secure Public Cloud Using Open Hardware And Software Standards.	202041008575	02-10-2020
22	System for Mitigating Circulating Current in type Modular Multilevel Converter (MMC)	202141049019	05-11-2021
23	IOT based automation of industry using optimized robotics process	202141031661	13-08-2021
24	Intelligent motion detecting sensor for domestic	202141055280	10-12-2021
25	Design of Power Quality Analyzer(PQA) using Field Programmable Gate Array(FPGA)	202241010487	04-03-2022
26	A Power transmission network based on optimal generalized interline power flow controller(ogipfc) for optimal power flow for complex network to meet increased load demand.	202141023572	11-06-2021
27	Control of pollutant levels of insulated diesel engine operated with CNG and ethanol	202241038958	15-07-2022
28	Control of aldehydes in high grade insulated diesel engine with low cost catalytic converter	202241039527	15-07-2022
29	Control of aldehydes in medium grade insulated diesel engine with inexpensive catalyst	202241039528	15-07-2022
30	High degree insulated engine having optimized air gap thickness run with alternative fuel.	202241039529	15-07-2022

Sr. No.	Title/Name of Patent	IP Registration Number	Date of Filed/Published
31	Spark ignition engine with copper coated piston, copper coated liner and copper coated cylinder head	202241039530	15-07-2022
32	Insulated diesel engine fuelled with carbureted ethanol and waste plastic oil to reduce pollution levels	202241038957	22-07-2022
33	Enhancement of transfer of heat in a corrugated heat exchanger	202241038959	22-07-2022
34	Control of pollution levels of diesel engine with different levels of insulation fuelled with carburated methanol and waste plastic oil	202241038960	22-07-2022
35	Diesel engine with different levels of insulation for controlling pollutant levels	202241038961	22-07-2022
36	Real time Multi Class Cardio Arrhythmia Classification, Based on DNN implemented in the IOT Cloud platform	202141038591	03-09-2021
37	Smart Agriculture using Sensor in IoT	202141042980	01-10-2021
38	Arificial Intelligence (AI) Enabled Framework for Detection of Cardio Vascular Diseases	202241032967	09-06-2022

### 7.3) Patent Published / Granted Data

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
1	202141057066	A MINING APPROACH FOR WATER PIPE LINE LEAKAGE DETECTION AND LOCALIZATION	12-08-2021	Published	2021		
2	202141055280	INTELLIGENT MOTION DETECTING SENSOR FOR DOMESTIC APPLICATION	29-11-2021	Published	2021		

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
3	202141052790	A SYSTEM OF INDEXING FOR PROCESSING SPATIO-TEXTUAL SKYLINE QUERIES	17-11-2021	Published	2021		
4	202141052788	WSN FRAMEWORK INTERNET OF THINGS (IOT) FOR ENERGY EFFICIENT AND RELIABLE SUSTAINABLE AGRICULTURAL PRODUCTION	17-11-2021	Published	2021		
5	202141051117	MACHINE LEARNING BASED DOCTOR APPOINTMENT WITH DISEASE PREDICTION	11-08-2021	Published	2021		
6	202141049019	SYSTEM FOR MITIGATING CIRCULATING CURRENT IN TYPE MODULAR MULTILEVEL CONVERTER (MMC)	27-10-2021	Published	2021		
7	202141048720	STOCK TRADING: INTELLIGENT COMPLEX STOCK TRADING USING MACHINE LEARNING AND DEEP LEARNING.	25-10-2021	Published	2021		
8	202141047521	Early Detection of Depression and Anxiety Using Al and Mobile Device.	20-10-2021	Published	2021		

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
9	202141047508	A NOVEL E- COMMERCE FRAMEWORK FOR FUTURE BUSINESS	19-10-2021	Published	2021		
10	202141047288	AN IMAGE PROCESSING SYSTEM WITH CONVOLUTIONAL NEURAL NETWORK MODULES AND METHOD THEREOF	18-10-2021	Published	2021		
11	202141044970	INSULATED PARTIALLY ADIABATIC DIESEL ENGINE OPERATED WITH METHANOL AND VEGETABLE OIL	10-04-2021	Published	2021		
12	202141044969	CONTROL OF EXHAUST EMISSIONS OF AUTO RICKSHAW ENGINE RUN WITH DIESEL FUEL	10-04-2021	Published	2021		
13	202141044968	CONTROL ON POLLUTION LEVELS OF PETROL ENGINE WITH LOW COST CATALYTIC CONVERTER	10-04-2021	Published	2021		

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
14	202141044783	SYNTHESIS OF E-WASTE BASED ON MACHINE LEARNING & ARTIFICIAL INTELLIGENCE AUTONOMOUS MANAGEMENT SYSTEM FOR SMART ENVIRONMENT	10-02-2021	Published	2021		
15	202141042980	Smart Agriculture Using Sensors in Internet of Things (IOT)	22-09-2021	Published	2021		
16	202141042314	Deep Learning- based Adaptive WindMill Vibration Compensation System and Method Thereof	18-09-2021	Published	2021		
17	202141041760	Generating and stabilizing nano bubbles for therapeutic application	15-09-2021	Published	2021		
18	202141041223	ARTIFICIAL INTELLIGENCE BASED SMART POWERING TECHNIQUE USING SOLAR TRACKING SYSTEM	14-09-2021	Published	2021		
19	202141041209	Helical Fluid Flow of a Comprehensive B- Oldroyd Unsteady State with Partial Derivative	14-09-2021	Published	2021		

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
20	202141038591	REAL TIME MULTI CLASS CARDIO ARRHYTHMIA CLASSIFICATION, BASED ON DNN IMPLEMENTED IN THE IOT CLOUD PLATFORM	25-08-2021	Published	2021		
21	202141033513	DYNAMIC COMPUTATION OFF-LOADING SCHEME BASED ON OCCLUSION DETECTION IN DRONE VIDEO ANALYSIS	26-07-2021	Published	2021		
22	202141033357	MACHINE LEARNING AND FUZZY LOGIC BASED SMART DETECTION OF CHRONIC LUNG CANCER	25-07-2021	Published	2021		
23	202141030571	MACHINE LEARNING AND IOT BASED SMART WEARABLE SYSTEM FOR AUTONOMOUS MANAGEMENT OF DIABETES MELLITUS	07-07-2021	Published	2021		
24	202141028520	POWER QUALITY AND INTELLIGENT DIGITAL PROTECTION RELAYS IN MICROGRID	25-06-2021	Published	2021		

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
25	202141027908	ISLANDING DETECTION FOR INVERTER BASED DISTRIBUTED GENERATION WITH LOW FREQUENCY CURRENT HARMONIC INJECTION THROUGH Q CONTROLLER ANDROCOF ANALYSIS	22-06-2021	Published	2021		
26	202141023572	A POWER TRANSMISSION NETWORK BASED ON OPTIMAL GENERALIZED INTERLINE POWER FLOW CONTROLLER (OGIPFC) FOR OPTIMAL POWER FLOW FOR COMPLEX NETWORKS TO MEET INCREASED LOAD DEMAND	27-05-2021	Published	2021		
27	202141022953	BUOYANCY EFFECTS ON MHD CHEMICALLY REACTING AND RADIATING CASSON FLUID PAST A PERMEABLE STRETCHING SHEET IN A POROUS MEDIUM	23-05-2021	Published	2021		

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
28	202141020965	VIRTUAL MOM – RESPONSIVE BABY MONITORING TOY	05-09-2021	Published	2021		
29	202141018457	A HYBRID SCHEDULING SYSTEM FOR OFFLOADING IN MOBILE CLOUD COMPUTING AND EDGE COMPUTING	21-04-2021	Published	2021		
30	202141016846	MANURE SPREADING IN PRECISION FERTILIZATION BY HYDRAULIC DEVICE WITH DRAGGLED TECHNOLOGY	04-09-2021	Published	2021		
31	202141016077	SECURE HUMAN AUTHENTICATION SYSTEM WITH THREE LEVEL MULTI MODEL BIOMETRIC FUSION USING ARTIFICIAL NEURAL NETWORKS	04-05-2021	Published	2021		
32	202141015900	RECHARGEABLE WIRELESS SENSOR NETWORKS WITH MULTIPLE SINKS	04-05-2021	Published	2021		
33	202141010836	SOLAR THERMAL AND PV-T SYSTEMS FOR DOMESTIC APPLICATIONS	15-03-2021	Published	2021		

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
34	202141008703	DESIGN AND DEVELOPMENT OF TWO WHEELER MUD GUARD USING GLASS AND JUTE FIBER	03-02-2021	Published	2021		
35	202141007260	MACHINE LEARNING ENTHUSED FARMING MODEL FOR PRECISION AGRICULTURE	22-02-2021	Published	2021		
36	202141006933	A LOW COST PORTABLE EARTH DETECTING SAFETY PLUG POINT	19-02-2021	Published	2021		
37	202141003308	EFFECT OF CHEMICAL TREATMENT ON NATURAL FIBRE REINFORCED COMPOSITES	25-01-2021	Published	2021		
38	202141001092	Durable Ultra-low Power Cardiac Pacemaker Device	01-10-2021	Published	2021		
39	201741015659	A COMPOSITE MATERIAL EXTRUSION AND METHOD OF MANUFACTURING THEREOF	05-03-2017	Granted	2021		
40	201741042348	Improved Process of Purification of Paraoxonase 1 Enzyme from Human Plasma and Methods thereof	26-11-2017	Published	2019		

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
41	2020102992	A SYSTEM AND METHOD FOR DISASTER MANAGEMENT USING FLYING AD- HOC NETWORK	24-10-2020	Published	2020	Applicant	View (/l
42	202241026206	NOISE ADAPTIVE APPROACH FOR IMPROVING THE BIT ERROR RATE (BER) IN THREE DIMENSIONAL TURBO CODES	05-05-2022	Published	2022	Applicant	View (/l
43	202041027655	IML- Traffic Prediction: INTELLIGE NT TRAFFIC PREDICTION USING MACHINE LEARNING.	30-06-2020	Published	2020	Applicant	View (/I
44	2021101341	Woman Safety Hidden Malicious Chip Using IoT- Based Location Tracking Technology	16-03-2021	Published	2021	Applicant	View (/I
45	202011020786	CNG/Natural gas kit design for two wheelers	20-07-2020	Published	2020	Applicant	View (/l
46	202041040702	Machine learning based ball throwing machine	21-09-2020	Published	2020	Applicant	View (/l
47	202141061650	Wobbling free magnetic coupled body-fluid pumping apparatus	30-12-2021	Published	2021	Applicant	View (/l
48	202241004270	Wind turbine duct having exit fold and shallow slots	25-01-2022	Published	2022	Applicant	View (/l

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
49	202241023144	Development of auto pilot delivery drone an unamanned aerial vehicle	20-04-2022	Published	2022	Applicant	View (/l
50	202241004271	Microbial Pigment composition as Nucleic acid staining agent	04-02-2022	Published	2022	Applicant	View (/l
51	202041031963	An IOT Based Novel Frame work ForMonitoring Behavior of Autism Affected Persons	21-08-2020	Published	2020	Applicant	View (/l
52	202141016077	Secure Human Authentication System with Three Level Multi Model Biometric Fusion Using Artificial Neural Networks.	16-04-2021	Published	2021	Applicant	View (/I
53	202041055763	Early Detection of Diabetic Retinopathy using Deep representations with Binary CNN	08-01-2021	Published	2021	Applicant	View (/l
54	202041008575	On Secure Public Cloud Using Open Hardware And Software Standards.	02-10-2020	Published	2020	Applicant	View (/l
55	202141049019	System for Mitigating Circulating Current in type Modular Multilevel Converter (MMC)	05-11-2021	Published	2021	Applicant	View (/l

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
56	202141031661	IOT based automation of industry using optimized robotics process	13-08-2021	Published	2021	Applicant	View (/
57	202241010487	Design of Power Quality Analyzer(PQA) using Field Programmable Gate Array(FPGA)	04-03-2022	Published	2022	Applicant	View (/
58	202241038958	Control of pollutant levels of insulated diesel engine operated with CNG and ethanol	15-07-2022	Published	2022	Applicant	View (/
59	202241039527	Control of aldehydes in high grade insulated diesel engine with low cost catalytic converter	15-07-2022	Published	2022	Applicant	View (/
60	202241039528	Control of aldehydes in medium grade insulated diesel engine with inexpensive catalyst	15-07-2022	Published	2022	Applicant	View (/
61	202241039529	High degree insulated engine having optimized air gap thickness run with alternative fuel.	15-07-2022	Published	2022	Applicant	View (/

Sr. No.	Patent Registration Application No	Patent Title	Patent Application Date	Status of Patent Applications	Patent Published / Granted Calendar Year	Institute applied the Patent as	View
62	202241039530	Spark ignition engine with copper coated piston, copper coated copper coated copper coated cylinder head	15-07-2022	Published	2022	Applicant	View (/
63	202241038957	Insulated diesel engine fuelled with carbureted ethanol and waste plastic oil to reduce pollution levels	22-07-2022	Published	2022	Applicant	View (/
64	202241038959	Enhancement of transfer of heat in a corrugated heat exchanger	22-07-2022	Published	2022	Applicant	View (/
65	202241038960	Control of pollution levels of diesel engine with different levels of insulation fuelled with carburated methanol and waste plastic oil	22-07-2022	Published	2022	Applicant	View (,
66	202241038961	Diesel engine with different levels of insulation for controlling pollutant levels	22-07-2022	Published	2022	Applicant	View (/
67	202241032967	Arificial Intelligence (AI) Enabled Framework for Detection of Cardio Vascular Diseases	17-06-2022	Published	2022	Applicant	View (/

### 7.4) IP Commercialized and Transferred to Industry/Startup

Sr. No.	Name of Technology Licenced/Transferred/Commercialized	Technology Type	Patent/Licence Holder name (Institute Co- ownership is Must)	Technology Transferred to	Name of Licensee
1	Transformer Monitoring System Software	Non- IP/Non- Patented Technology	Chaitanya Bharathi Institute of Technology and Kernelsphere Technologies Private Limited Contact number of license	Start-up	Kernelsphere Technologies
2	IoT Based GPS Tracking System	Non- IP/Non- Patented Technology	Chaitanya Bharathi Institute of Technology	Institute	Kernelsphere Technologies Private Limited
3	Covid Protection Equipment	Non- IP/Non- Patented Technology	CBIT & IMRC	Start-up	Mг. PC Reddy

#### **Declaration**

To, The ARIIA Committee MHRD's Innovation Cell New Delhi

#### Joint Declaration by the Head of the Institute and Nodal Officer

#### Dear Sir,

Herewith, myself **Prof. P. Ravinder Reddy** (Head of Institute) and **Dr. N.L.N. Reddy** (Nodal Officer) jointly declaring on behalf of our institute is that all the information submitted are true and correct to best of our knowledge.

Thank you

The Head of Institute

The Head of Institute

CRIT 07/11/202

Prof. P. Ravinder Reddy, Head of the Institution, Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana Nodal officer

Dr. N.L.N. Reddy, Nodal Officer, Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana