

Government of India
Ministry of Communications
Department of Telecommunications
Telecommunication Engineering Centre
K. L. Bhawan, Janpath, New Delhi - 110001

-NOTIFICATION-

No. : 1-13/2021-Pers./TEC

Dated: 29.12.2021

Subject: - Engagement of Research Associate as per 'TEC Research Associate Scheme'

Telecommunication Engineering Centre, Department of Telecommunications, New Delhi intends to engage 04 Research Associate under its 'TEC Research Associate Scheme' for which applications are invited from eligible candidates/ students from the recognised universities/colleges in India as below: -

S. no.	Name of field/area	No. of RA required	Location
1.	Internet of Things (IoT)	01	New Delhi
2.	Mobile Technology	01	"
3.	Telecom Security	01	"
4.	Transmission	01	"

2. The term and conditions of the engagement as stipulated in "TEC Research Associate (RA) Scheme" issued vide OM No. 1-13/2021-Pers./TEC dated 29.12.2021 (**Enclosure - A**) shall be applicable. The specific areas with expected outcome for the above are given in **Annexure-V of the Scheme**.
3. The period of engagement will be initially for a period of two years which can be extended one year at a time, up to maximum of 5 years, on the recommendations of PAC (Performance Appraisal Committee).
4. A consolidated amount of Rs. 50,000/- per month on pro rata basis, all- inclusive, will be paid to RA. There shall be an annual increase of Rs. 5,000/- subject to satisfactory performance.

5. The willing and eligible applicant may send their duly filled application in the prescribed Proforma (**Annexure-I of Scheme**) along with other required documents by post or submit personally to the Assistant Director General (Estt.), Telecommunication Engineering Centre, K. L. Bhawan, Janpath, New Delhi-110001 on or before 28.01.2022 (last date). Delayed / incomplete applications will be rejected summarily.
6. List/panel of shortlisted candidates will be hosted on TEC Website and offer letters, as per actual requirement, will be sent to selected candidates through e-mail.
7. Selected candidates shall execute a 'Contract Bond' and a 'Non-Disclosure Agreement' on non-judicial stamp paper of Rs.100/- as per **Annexure-IV** and **Annexure-VI** of scheme.
8. For more details visit the website **www.tec.gov.in** or **www.dot.gov.in**.
9. In case of any query, mail be dropped at **adgpers-tec@gov.in**.

Enc: Enclosure A



(Harish Agarwal)
Director (Pers. & Estt.)
TEC, New Delhi
Tel: 011-23325227

Copy to:

- 1) Sr. PPS to Member (S), New Delhi
- 2) DDG (Estt.), DoT HQ, New Delhi
- 3) DDG(IT)/TEC/DoT for publishing on the TEC/DoT Website.



सत्यमेव जयते

Government of India
Ministry of Communications
Department of Telecommunications
TELECOMMUNICATION ENGINEERING CENTRE
Khurshid Lal Bhawan, Janpath, New Delhi – 110001

No. 1-13/2021-Pers./TEC

Dated: 29.12.2021

TEC Research Associates (RAs) Scheme

1.0 Objective:

- 1.1 Telecommunication Engineering Centre (TEC) is a National Standards Body under Department of Telecommunications (DoT), involved in formulation of Standards, Technical Regulations, Fundamental Technical Plans, specifications & common standards for telecommunication and related ICT equipment, services, systems & interoperability. It also interacts with multilateral agencies like ITU, APT and ETSI and other national/ international standardization bodies. It develops expertise to imbibe latest technologies and provides technical support/ policy inputs to DOT and technical advice to TRAI & TDSAT etc. To strengthen the standardization ecosystem in India, TEC is establishing various advanced test & certifications laboratories. TEC is also a Designating Authority (DA) for Conformity Assessment Bodies (CABs) and Certification Bodies (CBs) for telecom sector in India. The technical work at TEC Headquarters is divided among various Divisions such as Mobile, Radio, Information Technology, Internet of Things, Smart Network, Next Generation Switching, Transmission, Fixed Access, Future Networks, Telecom Certification, Standardization etc. Besides its headquarters in New Delhi, there are regional offices for Northern, Eastern, Western and Southern Regions located at New Delhi, Kolkata, Mumbai and Bengaluru respectively. For more details, visit the TEC website www.tec.gov.in.

- 1.2 In order to study, formulate, operationalize and have assessment of various standards/ programmes/ projects/ policies etc. and to engage effectively in emerging ICT areas such as Artificial Intelligence, Big Data, Cyber & Network Security, Internet of Things, 5G etc., TEC requires to attract young talent from the field of ICT, therefore it intends to engage Research Associates (RAs) on contract basis.
- 1.3 It will allow young persons to be associated with the TEC work for mutual benefit. It will enable TEC to interact with young scholars and to get fresh ideas and study/ research support. Simultaneously, it will provide an opportunity to young scholars to contribute in the TEC work and have an insight into the working of the TEC/ Government.

2. Eligibility Conditions:

- 2.1 Essential Qualification: Bachelor Degree course in Electronics/ Communications/ Telecommunications/ Information Technology/ Computers/ Electrical Engineering or related discipline with minimum 70% marks.
- 2.2 Desirable Qualification: Preference/weightage will be given to following qualifications as per details given in **Annexure-II**.
- i. Post-Graduation/ Master Degree course in Engineering, in Electronics/ Communications/ Telecommunications/ Information Technology/ Computers or related discipline with minimum 70% marks.
 - ii. (a) Work experience of one year or more in the relevant field as defined in **Annexure-VII**.

OR

(b) Successful Internship certificate of six months or more with TEC.

- 2.3 Age limit: - Candidates should be below 28 years of age as on 1st July of the year of advertisement.
3. **How to apply:** Interested and eligible candidates may submit their applications along with their CVs, areas of work interest in the prescribed application form (Attached at **Annexure-I**) accompanied by the self-attested copies of the academic and

experience certificate/testimonials, to designated office of TEC, in response to advertisement/ notification from TEC.

4. Selection:

- 4.1 A Selection Committee will be constituted with the approval of Head of TEC, comprising of three members (One DDG & one Director from TEC and One DDG/ Director from NTIPRIT/ DoT.
- 4.2 Details of selection process is given at **Annexure-II**.
- 4.3 TEC reserves the right to fill up any or all positions and select candidates in any suitable position depending upon the qualification and experience required for the said position.
- 4.4 Research Associateship is neither a job nor an assurance of a job with the TEC. Selected candidate has to enter into a contract with TEC.
- 4.5 Selected candidates shall execute a Contract Bond and a Non-Disclosure Agreement on non-judicial stamp paper of Rs.100/- as per **Annexure-IV & Annexure-VI**.
- 5. Training:** RAs would be provided orientation training of 1-2 weeks for acquiring work related knowledge/ skills.
- 6. Work Description & Responsibilities:**
- 6.1 The RAs will be primarily engaged for in-depth study, formulation, operationalization and assessment of various standards/ programmes/ projects/ policies etc. related to emerging ICT areas such as Artificial Intelligence, Big Data, 5G, Internet of Things, Smart Networks, Cloud Computing, Cyber & Network Security, new developments in the fields of Mobile Technologies, Satellite Communications, EMI/EMC, EMF exposure management, Green Telecom & Sustainable Development Goals etc. They will also be associated in preparation of contributions for various international standardization organizations such as International Telecommunication Union (ITU) Study Groups, APT, IEEE, IEC etc.

Further, they will also be engaged in various works emerging from new National Digital Communication Policy (NDCP) - 2018.

- 6.2 The RA would be attached with one of the Divisions of the TEC and required to provide high quality work. Depending on the requirements of TEC and candidate's personal skills, RAs can be rotated to other divisions within TEC.
- 6.3 The work of RAs will be monitored regularly. The attendance record and the details of work supervision shall be maintained by the Divisions/Units in TEC.
7. **Place of Posting:** The place of posting will be TEC Headquarters at Khurshid Lal Bhawan, Janpath, New Delhi.
8. **Remuneration:**
 - 8.1 A consolidated amount of Rs. 50,000/- per month on pro rata basis, all-inclusive, will be paid to every RA. There shall be an annual increase of Rs. 5,000/- subject to satisfactory performance.
9. **Leave:** Leave of 8 days shall be allowed in a year on pro-rata basis.
10. **TA/DA:**
 - 10.1 RAs will be allowed to undertake domestic tours for which TA will be allowed for travelling by Air in Economy class or by Rail in AC Two Tier.
 - 10.2 Reimbursement for Hotel accommodation of up to Rs. 750/- per day; reimbursement of taxi charges of up to Rs. 200 per diem for travel within the city and payment of daily allowance of Rs. 500/- per day to meet the other expenses.
11. **Performance Report Form:** Performance appraisal of RAs would be undertaken on six-monthly basis, reckoned from the month of joining, through a Performance Report Form (PRF) as prescribed at **Annexure-III**. In order to bring objectivity, assessment would be done by the reporting officer of the Division and reviewed by the Head of the Division. The Division shall forward the PRF to Personnel Division within one month after the completion of every six-month period. Thereafter, the PRF will be communicated to concerned RA by Personnel Division.



12. **Period of Engagement:** Initially for a period of 2 years, (can be extended one year at a time, up to maximum of 5 years, on the recommendations of Performance Appraisal Committee). In case a person leaves before completion of one year, he/she will not get any work certificate.
13. **Performance Appraisal Committee (PAC):** Performance Appraisal Committee will be chaired by Deputy Director General of the concerned Division and will comprise of two more officers, one from respective division and one from other division of TEC. PAC will appraise the work and performance of the RA at least one month prior to completion of term, for extension of the term to the third year & beyond. The PAC will devise its own procedures based on Performance Appraisal Form of the RAs.
14. **General conditions:**
- 14.1 The RAs will be under the administrative control of the concerned Head of the Division.
- 14.2 The RAs shall follow the rules and regulations of the TEC that are in general applicable to employees of the TEC. RAs are required to adhere to the administrative, financial and disciplinary regulations of TEC/ DoT/ Government. Regular attendance of the RAs will be ensured by the supervisor/controlling officer in the concerned Division by keeping an attendance register.
- 14.3 The RAs shall not reveal to any person or organization confidential information pertaining to TEC/DoT, its work and its policies.
- 14.4 The RAs may be deputed by the Division to attend symposia/seminars/conferences/workshop etc., in India.
- 14.5 RAs may, with the prior permission of the TEC, present their work to academic bodies and at seminars and conferences. However, even for this purpose information that is confidential to the TEC cannot be revealed under any circumstances.



- 14.6 Any papers and documents written and/or published by the RA should carry the caveat that the views presented are the personal views of the RA and do not represent or reflect the views of the TEC.
- 14.7 RA will follow the advice given to them by the TEC regarding representations to third parties.
- 14.8 In general, a RA may not interact with or represent the TEC vis-à-vis third parties. However, some RAs may specifically be authorized to interact with third parties on behalf of the TEC depending on the nature of their work areas.
- 14.9 No RA shall interact with or represent the TEC to the media (print and/or electronic) including social media and personal facebook/ twitter handles etc.
- 14.10 RAs will conduct themselves professionally in their relationship with the TEC and the public in general.
- 14.11 Any work done for TEC by the RA during the period of engagement will be the sole property of the TEC and TEC reserves the right to use any such work for its own purpose. The RA is barred from claiming intellectual property rights on the work done in TEC during the period of engagement.
- 14.12 The RAs are to work on a full time basis. Therefore, simultaneous employment with or without remuneration elsewhere is not permitted.
- 14.13 The positions are purely contractual and RAs shall have no legal right to claim his/her regularization/ appointment by absorption or otherwise against any regular posts in TEC/ DoT/ Government or any further contractual engagement on termination of engagement. The engagement with TEC is purely contractual, time-bound and non-regular. The engagement of the incumbent shall stand terminated automatically on completion of tenure.
- 14.14 The RAs shall settle their claims within one year.

15. Disengagement:

- 15.1 The TEC reserves the right to disengage any RA at any point of time without assigning any reason.
- 15.2 Research Associate will not be allowed to disengage within first year. If RA wishes to disengage in first year then the conditions of Contract Bond shall be applicable. After completion of one year, one-month notice must be given to TEC. Notice period may be waived by the Head of TEC at his own discretion.
- 15.3 Upon disengagement, the RA must hand over to the TEC, any papers, equipment or other assets which might have been given to the RA by the TEC in course of his work with the TEC. This will include any badges or ID Cards which may have been issued to the RA.
- 15.4 If it comes to the notice of the TEC that the RA who has been disengaged by the TEC continues to act in a manner which gives an impression that he is still engaged for the TEC, the TEC shall be free to take appropriate legal action against such RA.

16.0 Number of Research Associates:

- 16.1 TEC will assess the requirement of the RAs periodically preferably in the first quarter of calendar year. Present requirement is given at **Annexure-V**.
- 16.2 Engagement of RAs will be done normally once in a calendar year in synchronization with academic calendar of educational institutes.
- 16.3 The total number of RAs engaged at a time in TEC shall not normally exceed an average of 2 RAs per Division.

17.0 Scheme Review: TEC reserves the right to review the scheme at any time. The Scheme so reviewed will be placed on the website of TEC.

18.0 Power to remove difficulties: Head of TEC or his appointed/ nominated representative shall have the power to remove any difficulty in the way of the implementation of this scheme.



Application Form for "Research Associate" on contract basis in TEC*(Applicants should submit only one application)*

1. Name:
2. Father/Husband Name:
3. Gender:
4. Date of Birth:

(Please enclose mark-sheet of class 10th as age-proof)

5. Correspondence Address:

Paste latest
Passport Size
Photograph

6. Permanent Address:

7. Contact details:

Email id.:

Phone: (Residence)

Mobile No:

8. Academic Record:

Examination	Branch/ Specialization	Name of Institute / Board	Year of passing	CGPA*	Percentage marks
Bachelor Degree in Engineering/ Technology					
Post- Graduate Degree in Engineering/ Technology					
Any other					

***Applicants with CGPA degree should fill in equivalent percentage marks also and should submit documentary proof of conversion norm of their institute/ university, failing which a CGPA will be multiplied with 9.5 for deriving the equivalent percentage marks.**

9. National Institutional Ranking Framework (NIRF) ranking in engineering category
(please see Note 1 of Annexure-III) of
- (i) Engineering Graduation institute:
- (ii) Engineering Post-Graduation institute:
10. Work experience (please enclose copy of certificate on the letter head of employer):
11. Internship details (organization & topic):
12. Academic distinction (special achievements), if any:
13. Key projects/ papers/ presentations:
14. Area of interest:
15. Additional information in support of your suitability:

I certify that the above information furnished by me is true to the best of my knowledge and belief. I also agree that in the event of any misrepresentation and/or falsification of information, my engagement shall be liable for termination without notice and without prejudice to any other administrative/legal proceedings that TEC may deem fit to initiate. I shall abide by the terms and conditions specified by TEC.

(Name & Signature of the Candidate)

List of Documents: (Self-attested copies)

1. Mark-sheet of Class 10th
2. Mark-sheet of Engineering Graduation
3. Mark-sheet of Engineering Post-Graduation
4. Documentary proof of CGPA to Percentage conversion norm
5. Work experience/ Internship Certificate
6. Any other document



SELECTION PROCESS

1. All the received application will be scrutinized for eligibility based on essential qualifications, age etc. and applications of ineligible candidates will be rejected summarily.
2. Thereafter, merit list of all eligible candidates will be prepared by the selection committee on the basis of score obtained by each candidate. Score of every candidate will be calculated by adopting following methodology:

Sl. No.	Item	Total marks	Score	
I	Engineering Graduation percentage	50	Percentage marks X 0.5	
II	Engineering Graduation Institute NIRF* ranking	10	NIRF ranking**	Marks
			1-20	10 marks
			21-50	7 marks
			51-100	5 marks
			Others	0
III	Engineering Post-Graduation Institute NIRF* ranking	10	NIRF ranking**	Marks
			1-20	10 marks
			21-50	7 marks
			51-100	5 marks
			Others	0
IV	Experience [as per 2.2 (ii)(a)] OR Internship [as per 2.2 (ii)(b)]	5	5 marks	
V	Sub-total score	75	Sum of (I) to (IV), upto two digits of decimal	
VI	Interview	25		
VII	Total Score	100	Sum of (V) & (VI)	

*Note 1: The National Institutional Ranking Framework (NIRF) is released by the Ministry of Human Resource Development (MHRD), Government of India. This framework ranks various institutions on the basis of their performance against pre-defined parameters. NIRF ranking is a reflection of the institution's standing vis-a-vis other institutions of the similar category. Details about NIRF and rankings are available at <https://www.nirfindia.org/Home>.

**Note 2: The ranking of the institute as applicable on the date of RA notification will be taken into account for granting marks.

3. The merit list will be prepared on the basis of sub-total of scores at 2 (V). If 'N' number of RAs are to be engaged then $3 \times N$ candidates will be short listed, in order of their merit and will be invited for interview.
4. Merely fulfilling of the essential qualifications will not entitle a candidate for being called for interview. TEC reserves the right to shortlist and call a candidate for interview.
5. The selection committee will conduct the interview of short-listed candidates for final selection. Maximum marks allotted for interview is 25.
6. The final merit list will be prepared on the basis of total score at 2 (VII) and the candidates will be selected in the order of the merit.

Performance Report Form of RAs

Year of Report:

Period Fromto

Part-I : Basic Details

Name	
Date of Birth	
Date of joining	
Division	
Reporting Authority (Name & Designation of the Officer)	

Part-II : Performance Appraisal

Brief Description of task	Deliberations	Actual Achievements

MODEL CONTRACT BOND

[On a non-judicial stamp paper of Rs.100/-]

This bond is made with Telecommunication Engineering Centre (hereinafter referred to as the "TEC") by Mr./Ms. _____ (hereinafter referred to as the "Research Associate").

Effective Date:

This bond shall be effective from _____ day of _____ 20xx.

Declaration:

I, Mr./Ms. _____ hereby acknowledge and bind myself to the extent that I would serve TEC for a period of two years (extendable by one year at a time subject to maximum period of 5 years on mutual consent) and in any case not less than twelve months from the date of joining. I also agree that in case I terminate the engagement within a period of twelve months of my joining, I shall pay Rs. 1,00,000/- (Rupees One Lac only) to TEC. I also agree to serve a notice of minimum of one month or forfeit one months' remuneration in lieu of notice period if I decide to terminate the engagement with TEC.

Witness:

1) Name: _____
Address: _____

Contact No: _____

2) Name: _____
Address: _____

Contact No.: _____

(Signature of the Authorized Officer of TEC)

(Signature of Research Associate)

**ASSESSMENT OF DIVISION-WISE PRESENT REQUIREMENT OF
RESEARCH ASSOCIATES**

Sl. No.	Division	Requirement of RA	Specific Areas	Expected Outcome
1.	Internet of Things (IoT)	01	Assisting in Technical report related work, IoT experience center/ incubation center and related works.	As M2M/IoT is an emerging technology therefore outcome will be expected in line with the progress of work in M2M/IoT working groups and associated work
2.	Mobile Technologies (MT)	01	Mobile Technologies related to 5G/5Gi, 6G, Open RAN and new/emerging wireless technologies	RA is expected to study, prepare reports/study paper and contribute to preparation of Essential Requirements (ERs)/GRs/IRs for 5G and new/emerging wireless technologies as well as contribute in standardization activities in ITU-T Study Groups.
3.	Telecom Security (TS)	01	<ul style="list-style-type: none"> Security lab related activities [Establishing the Security Test lab in TEC. The lab will have the capability of performing Security Testing of Telecom Network elements along with end user devices, Continuous analysis of vulnerabilities in DUT and dynamically varying the test scenarios] Study in Telecom forensics [activities include the studying the varied requirements for setting up a Cyber Forensic Assistance and training facility, developing the report and implementation of the same.] Study in Quantum Key Distribution in Telecom Networks [Quantum as evolving technology also requires work of research associates to continuously study on the concept and its 	<ul style="list-style-type: none"> Understanding of Security Testing tools, Analysis of reports, Analysis of Security including both known and unknown vulnerabilities, Creating of new test cases Study of telecom forensics concepts, Preparation of Concept paper for telecom forensics set up in TEC, Preparation of requirements, Installation of Forensics setup and creation of reports Study of quantum technology, Security aspects and process related to Quantum key distribution in telecom Networks along with different uses cases related to telecom and Interaction with stakeholders, Preparation of proposal to establish the test lab on the basis of different use cases, Installation in TEC

			use and effect on Telecom Networks]	
4.	Transmission (Tx)	01	Optical Fibre and Optical Transmission Systems and latest transport technologies needed for 5G, IOT etc.	<p>RA is expected to study, prepare reports/study paper and give presentation on following topics;</p> <ul style="list-style-type: none"> • Visible Light Communication Technologies • Terminology and overview of the architecture of Hetrogeneous Home Networks • Quantum Information technology for networks • Optical fibre and cable for Space Division Multiplexing Transmission • Design for Optical Fibre Submarine cable system • Cable identification for the construction and maintenance of optical fibre cable networks with optical sensing technique • Scientific Monitoring and Reliable Telecommunication Submarine Cable system • Interfaces of Optical Transport Network and its management aspects
	Total	04		

NON-DISCLOSURE AGREEMENT

[On a non-judicial stamp paper of Rs. 100/-]

This Non-Disclosure Agreement (hereinafter referred to as the “Agreement”) is entered into on (the “Effective Date”), by and between Telecommunication Engineering Centre (hereinafter referred to as “TEC”) and, with an address of (hereinafter referred to as “Research Associate”) (collectively referred to as the “Parties”).

CONFIDENTIAL INFORMATION

The Research Associate agrees not to disclose, copy, clown or modify any confidential information related to the TEC and agrees not to use any such information without obtaining prior written permission.

Confidential information refers to any data and/or information that is related to the TEC, in any form, including, but not limited to, oral or written. Such confidential information includes, but is not limited to, any information related to work in TEC such as discovery, processes, techniques, programs, knowledgebase, customer list, potential customers, all stakeholders, know-how or any other services related to TEC.

RETURN OF CONFIDENTIAL INFORMATION

The Research Associate agrees to return all the confidential information to TEC upon the termination of this Agreement.

OWNERSHIP

This Agreement is not transferable.

GOVERNING LAW

This agreement shall be governed by and construed in accordance with the laws of the Government of India and as defined on the Notification issued for engagement of Research Associate including subsequent amendments, if any.

(Signature of the Authorized officer of TEC)

Name & Designation:

Date:

(Signature of Research Associate)

Name:

Date:



Desired Work Experience

S. no.	Name of field/area where RA to be deployed	Requirements
1.	Internet of Things (IoT)	<ul style="list-style-type: none">• Having experience of working M2M/IoT related technologies
2.	Mobile Technology (MT)	<ul style="list-style-type: none">• Having knowledge of Mobile /Wireless/Microwave Communications
3.	Telecom Security (TS)	<ul style="list-style-type: none">• Minimum one year experience in the field of Cyber Security/Information Security/Optical Communication• The candidate should be certified by GIAC/ISCII/ISASCA/CWNP/CEH or any other equivalent security certification
4.	Transmission (Tx)	<ul style="list-style-type: none">• Having expertise in Optical Communication System, Fibre-wireless Communication System, Optical Network Survivability• Minimum one year experience in the field of Optical Fibre Communication System and Cable• Published Papers in the field of Optical Communication System

