

# SCIENCE ACADEMIES' SUMMER RESEARCH FELLOWSHIP PROGRAMME



Indian Academy  
of Sciences  
Bengaluru



Indian National  
Science Academy  
New Delhi



The National Academy  
of Sciences, India  
Prayagraj

**C S Ravi Kumar**

*Assistant Executive Secretary &  
Coordinator, Science Education Programme*

03 September 2019

Mr Arkaprava Layek  
Mandal Para, Kajora Gram  
Dist Paschim Baddhaman  
Asansol 713338 (West Bengal)

Email: [arkapravalayek97@gmail.com](mailto:arkapravalayek97@gmail.com)

Dear Mr Layek,

We are happy that you have successfully completed the summer fellowship awarded to you. We hope that this has been a useful experience and will help you to shape your career in science.

The Academy would like to present you with complimentary copy of the Academy publications "From so simple a beginning – The Expansion of Evolutionary thought".

We would like you to keep in regular touch with the Academy about your career. Your page in our website will therefore remain open for the next few years. You can access it using the same userid and password provided to you. Please use this page to let us know about your career whenever you have something significant to report.

Wishing you the best in your career,

Yours sincerely,

C S Ravi Kumar

**Contact Address:**

Indian Academy  
of Sciences  
P B No 8005  
C.V. Raman Avenue  
(near Mekhri Circle)  
Sadashivanagar P O  
Bengaluru 560 080

**Telephone :**

080-2266 1207

080-2266 1202

080-2266 1221

**Fax :** 080-2361 6094

**Email :**

[jointsrf@ias.ac.in](mailto:jointsrf@ias.ac.in)

**Website :** [www.ias.ac.in](http://www.ias.ac.in)





## SUMMER RESEARCH FELLOWSHIP PROGRAMME CERTIFICATE

*This is to certify that Mr Arkaprava Layek worked on a project entitled "Dinuclear cyclometalated iridium complexes: Synthesis, Photophysical and electro chemical characterization" during May - July 2019 as a Summer Research Fellow under the supervision of Dr Parna Gupta, Indian Institute of Science Education & Research, Kolkata. The Summer Research Fellowship Programme is jointly sponsored by IASc (Bengaluru), INSA (New Delhi) and NASI (Prayagraj).*

*Place: Bengaluru*

*Date: 08-09-2019*



*M. R. N. Murthy*

*M.R.N. Murthy*

*Chairman, Science Education Panel*

INDIAN ACADEMY OF SCIENCES

C. V. Raman Avenue, Post Box No. 8005, Raman Research Institute Campus, Sadashivanagar, Bengaluru 560 080, INDIA





**NATIONAL TESTING AGENCY**  
Excellence in Assessment



सत्यमेव जयते



**Council of Scientific & Industrial Research  
(Human Resource Development Group)**



### CERTIFICATE

**Joint CSIR-UGC National Eligibility Test (NET)  
for Junior Research Fellowship (JRF) and Eligibility for Lectureship (LS)/Assistant Professor  
held on 15th December 2019 (on 27th December 2019 in Assam and Meghalaya) and  
Result declared on 23rd January 2020.**

E-certificate No.: DEC19C00248

CSIR-HRDG Ref. No.: 15/12/2019(ii) EU-V

Roll No.: TL0116201701

Certified that ARKAPRAVA LAYEK

Son/Daughter of SUVENDU LAYEK and  
NITA LAYEK has been declared qualified for award of Junior

Research Fellowship (JRF) in the Subject CHEMICAL SCIENCES

( 059 Rank), under CSIR Fellowship scheme. Further, he/she has also been declared qualified for eligibility for Lectureship (LS)/Assistant Professor in the above subject area provided he/she fulfils the eligibility criteria laid down by University Grants Commission (UGC).

The offer of Junior Research Fellowship is valid for a period of two years w.e.f- 01.07.2020 and is not extendable. It will be governed by the terms and conditions of CSIR Junior Research Fellowship scheme (terms and conditions of the scheme is available at CSIR-HRDG website [www.csirhrdg.res.in](http://www.csirhrdg.res.in)).

In order to accept the offer of Junior Research Fellowship, he/she should send the joining report, undertaking and attestation proforma which can be downloaded from the CSIR-HRDG website, and submit the same, duly completed in all respect to the Deputy Secretary(EMR)/Under Secretary(EMR) at the address given overleaf.

This is an electronic certificate only, its authenticity and category in which the candidate had appeared should be verified from National Testing Agency (NTA) by the institution/appointing authority. This electronic certificate can also be verified by scanning the QR Code.

Date of issue: 18.12.2020

**Under Secretary (EXAM)  
CSIR-HRDG**

#### **Important Notes:**

- This certificate is being issued on the basis of information provided by the candidate in his/her application form. The Appointing Authority/Fellowship Awarding Authority should verify the original documents/certificates of the candidate while considering him/her for appointment/awarding fellowship, as CSIR-HRDG is not responsible for the same. In case the candidate has qualified under Result Awaited (RA) category, the certificate will be valid only from the date of acquiring the requisite qualification. The details of eligibility criteria for this test are given overleaf.
- In case the candidate does not fulfill any of the eligibility conditions and/or category status (SC/ST/OBC-NCL/EWS/PwD etc.) as claimed by the candidate in his/her application form, this certificate may be treated as cancelled.





**NATIONAL TESTING AGENCY**  
Excellence in Assessment



**Council of Scientific & Industrial Research**  
(Human Resource Development Group)

## **IMPORTANT INFORMATION - JOINT CSIR-UGC NET DECEMBER 2019**

### **Important Notes:**

1. The Appointing Authority/Fellowship Awarding Authority must verify the original documents/certificates including the percentage score or the equivalent in case of other grading system and the recognition of the University/Instt. of the candidate as well as eligibility criteria and SC/ST/OBC-NCL/EWS/PwD status (wherever applicable) while considering him/her for appointment/awarding fellowship, as CSIR-HRDG is not responsible for the same.

### **2.a Essential educational qualifications:**

M.Sc or equivalent degree/Integrated BS-MS/BS 4 yrs./B.E/B.Tech/B.Pharm/MBBS with at least 55% marks for General (UR)/General-EWS and OBC candidates and 50% for SC/ST and PwD candidates.

Candidates enrolled for M.Sc or having completed 10+2+3 of the above qualifying examinations as on the closing date of submission of online application form i.e. 15.10.2019 (08.11.2019 for candidates of Jammu & Kashmir) are also eligible to apply under the Result Awaited (RA) category) on the condition that they complete the qualifying degree with the requisite percentage of marks within the validity period of two years to avail the fellowship. Such candidate will have to submit the attestation form duly certified by the Head of the Department of the Institute from where the candidate is appearing or has appeared.

B.Sc. (Hons.) or equivalent degree holders or students enrolled in integrated MS-Ph.D. program with at least 55% marks for General (UR)/General-EWS and OBC candidates and 50% for SC/ST and PwD candidates are also eligible to apply. Candidates with Bachelor's degree will be eligible for CSIR fellowship only after getting registered/enrolled for Ph.D./Integrated Ph.D. program within the validity period of two years.

Candidates possessing only Bachelor's degree are eligible to apply only for Junior Research Fellowship and not for Lectureship/Assistant Professor.

Specification of degrees (whether bachelor or Master) as notified by UGC in its Gazette Notification No. F.5-1/2013(CPP-II) dated 15th July 2014 and as amended from time to time, shall apply.

The eligibility for Lectureship/Assistant Professor of NET qualified candidates will be subject to fulfilling the criteria laid down by UGC. Ph.D. degree holders who had passed Master's degree prior to 19th September 1991 with at least 50% marks are eligible to apply for Lectureship/Assistant Professor only.

### **2.b Upper Age Limit & Relaxation:**

Junior Research Fellowship (JRF): 28 years as on 01.07.2019 (relaxation up to 5 years for SC/ST/PwD/Women candidates and up to 3 years for OBC-Non-Creamy layer (Central List) candidates.

Lectureship (LS)/Assistant Professor: No upper age limit.

3. SC/ST/OBC/PwD/EWS certificate should be as per GOI instructions and in the prescribed format.
4. The National Eligibility Test (NET) for Lectureship/Assistant Professor is conducted on behalf of University Grants Commission (UGC), New Delhi and it will be governed by the Rules & Regulations of UGC in this regard.
5. Contact Address for CSIR JRF:

Scientist-in-Charge/ Deputy Secretary/ Under Secretary (EMR-I)  
CSIR-HRDG, CSIR Complex, Library Avenue, Pusa, New Delhi – 110012  
Email: soemr1@csirhrdg.res.in





# वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद् COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

## मानव संसाधन विकास समूह, परीक्षा एकक

### Human Resource Development Group, Examination Unit

सी.एस.आई.आर. कॉम्प्लेक्स, लाईब्रेरी एवेन्यू, पूसा, नई दिल्ली-110 012

CSIR Complex, Library Avenue, Pusa, New Delhi-110 012

Dated: 14.12.2020



Sr.No. 1061910391

Ref.No: 16/06/2019(i) EU-V

ROLLNO: 130998

Mr. ARKAPRAVA LAYEK

S/O SUVENDU LAYEK

MANDAL PARA, KAJORA GRAM, ANDAL, DIST - PASCHIM

BARDDHAMAN

ASANSOL WEST BENGAL 713338

Sub: - Joint CSIR-UGC National Eligibility Test (NET) for Junior Research Fellowship (JRF) and eligibility for Lectureship (LS) held on 16.06.2019 and result declared on 09.08.2019.

Dear Candidate,

CSIR is pleased to inform you that you have been declared qualified in the above examination for award of Junior Research Fellowship and secured **68** rank in CHEMICAL SCIENCES subject under CSIR Fellowship scheme. Further, you have also been declared qualified for eligibility for Lectureship (LS) in the above subject area, subject to fulfilling the eligibility criteria laid down by UGC.

The offer of Junior Research Fellowship is valid for a period of two years w.e.f. 01.01.2020 and is not extendable. It will be governed by the terms and conditions of the CSIR Junior Research Fellowship.

In order to accept this offer, you should send the joining report, undertaking and & attestation proforma (which can be downloaded from our website [www.csirhrdg.res.in](http://www.csirhrdg.res.in)) and submit the same, duly completed in all respects to The Deputy Secretary (EMR)/ Under Secretary (EMR) at the address given overleaf.

This letter may be treated as a certificate.

Yours sincerely,

के. नहन्शांग / K. Ngahanshang  
अवर सचिव (परीक्षा)/Under Secretary (Exam.)  
वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्  
Council of Scientific & Industrial Research  
सी. एस. आई. आर. कॉम्प्लेक्स, पूसा, नई दिल्ली-12  
CSIR Complex, Pusa, New Delhi-110012

#### Important Note:

- This certificate is being issued on the basis of information provided by the candidate in his/her application form. The appointing authority/fellowship awarding authority should verify the original records/certificates of the candidate while considering him/her for appointment/fellowship, as Examination Unit, CSIR Complex is not responsible for the same. In case the candidate has qualified under RA (Result Awaited Category), the certificate will be valid only from the date of acquiring the requisite qualification as stipulated in the notification. The details regarding the eligibility criteria for this test are given overleaf.
- In case the candidate does not fulfil any of the eligibility conditions and Caste/PwD/EWS status (wherever applicable), this certificate may be treated as cancelled.



## INSTRUCTIONS FOR NET QUALIFIED CANDIDATES-JUNE, 2019

1. The Supervisor/Guide/Fellowship awarding Authority/Lectureship appointing Authority Viz. University/Instt. must verify the original record/certificates including the CGPA Conversion/Percentage and recognition of the University/Instt. of the candidate regarding eligibility criterion & caste/PwD/EWS certificate (if applicable) for this test while considering him/her for fellowship/appointment, as CSIR-HRDG (Examination Unit) is not responsible for the same.
2. Extract of Eligibility Criterion as laid down in the Notification No.10-2(5)/2019(i)-E.U.II published in Employment News dated **16<sup>th</sup> – 22<sup>th</sup> February, 2019** for this examination:
- (a) **EDUCATION QUALIFICATION** : M.Sc or equivalent degree/ Integrated BS-MS/BS-4 years /B.E./B.Tech/B.Pharm/MBBS with at least 55% marks for General and OBC candidates and 50% for SC/ST and PwD candidates.

Candidates enrolled for M.Sc or having completed 10+2+3 years of the above qualifying examination as on the closing date of online submission of application form (**i.e. 22.03.2019**), are also eligible to apply in the above subject under the Result Awaited(RA) category on the condition that they complete the qualifying degree with requisite percentage of marks within the validity period of two years to avail the fellowship.

The eligibility for Lectureship of NET qualified candidates will be subject to fulfilling the criteria laid down by UGC. Ph.D degree holders who have passed Master's degree prior to 19<sup>th</sup> September 1991, with at least 50% marks are eligible for lectureship only.

(b) **UPPER AGE LIMIT & RELAXATION:**

- (i) JRF: Maximum 28 years as on **01.01.2019** {relaxation in upper age up to 5 years for candidates belonging to SC/ST/PwD/Female candidates and up to 3 year for candidates belonging to OBC (Non Creamy Layer) (Central list only as provided in National Commission for Backward Classes website [www.ncbc.nic.in](http://www.ncbc.nic.in))}.
- (ii) LECTURESHIP : No upper age limit for Eligibility for Lectureship.

3. SC/ST/OBC/PwD/EWS certificates should be in GoI prescribed format

**PLEASE NOTE:**

4. The applicant has been declared successful based on the information furnished by him/her in the application form and his/her performance in the above test.

5. i) The terms and conditions for CSIR Junior Research Fellowship are available on CSIR, HRDG website: <http://www.csirhrdg.res.in>.

ii) The eligibility for Lectureship (NET) test is conducted on behalf of University Grants Commission, New Delhi and it will be governed by the rules/regulations of UGC in this regard.

6. Contact Address for CSIR JRF: The Scientist-in-Charge/Deputy Secretary/Under Secretary(EMR-1)  
CSIR HRDG, CSIR Complex, Library Avenue,  
Pusa, NEW DELHI-110012.  
Contact No. S.O.(EMR-1) 25842074 DS(EMR) 25842532  
Scientist-in-Charge (EMR-1) 25847953  
Helpline Email: [soemr1@csirhrdg.res.in](mailto:soemr1@csirhrdg.res.in)





Organising Institute  
Indian Institute of Technology Bombay

# GATE 2021 Scorecard

Graduate Aptitude Test in Engineering (GATE)



Candidate's Details

Name

ARKAPRAVA LAYEK

Parent's / Guardian's Name

SUVENDU LAYEK

Registration Number

CY21S11404902

Date of Birth

16-Apr-1997

Examination Paper

Chemistry (CY)



Ankaprava Layek

(Candidate's Signature)

Performance

GATE Score

477

Marks out of 100\*

47

Qualifying Marks\*\*

36.2

32.5

24.1

General

EWS/OBC (NCL)

SC/ST/PwD

Number of Candidates  
Appeared in this paper

23465

All India Rank in this  
paper

1482

Valid up to 31<sup>st</sup> March 2024

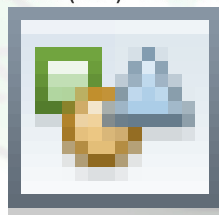
\* Normalized marks for Civil Engineering (CE), Computer Science and Information Technology (CS) and Mechanical Engineering (ME) Papers.

\*\* A candidate is considered qualified if the marks secured are greater than or equal to the qualifying marks mentioned for the category for which valid category certificate, if applicable, is produced along with this scorecard.

Prof. Deepankar Choudhury

Organising Chairperson, GATE 2021  
(on behalf of NCB - GATE, for MoE)

19<sup>th</sup> March 2021



c20ed6df1c213ebde02000062d7e661d

The GATE 2021 score is calculated using the formula

$$GATE\ Score = S_q + (S_t - S_q) \frac{(M - M_q)}{(\bar{M}_t - M_q)}$$

where,

$M$  is the marks obtained by the candidate in the paper, mentioned on this GATE 2021 scorecard

$M_q$  is the qualifying marks for general category candidate in the paper

$\bar{M}_t$  is the mean of marks of top 0.1% or top 10 (whichever is larger) of the candidates who appeared in the paper (in case of multi-session papers including all sessions)

$S_q = 350$ , is the score assigned to  $M_q$

$S_t = 900$ , is the score assigned to  $\bar{M}_t$

In the GATE 2021 score formula,  $M_q$  is 25 marks (out of 100) or  $\mu + \sigma$ , whichever is greater. Here  $\mu$  is the mean and  $\sigma$  is the standard deviation of marks of all the candidates who appeared in the paper.

Qualifying in GATE 2021 does not guarantee either an admission to a post-graduate program or a scholarship/assistantship. Admitting institutes may conduct further tests and interviews for final selection.

## Codes for XE and XL Paper Sections (compulsory section and any other two sections)

### XE: Engineering Sciences

- A – Engineering Mathematics (compulsory)
- B – Fluid Mechanics
- C – Materials Science
- D – Solid Mechanics
- E – Thermodynamics
- F – Polymer Science and Engineering
- G – Food Technology
- H – Atmospheric and Oceanic Sciences

### XL: Life Sciences

- P – Chemistry (compulsory)
- Q – Biochemistry
- R – Botany
- S – Microbiology
- T – Zoology
- U – Food Technology

Graduate Aptitude Test in Engineering (GATE) 2021 was organized by Indian Institute of Technology Bombay on behalf of the National Coordination Board (NCB) - GATE for the Department of Higher Education, Ministry of Education (MoE), Government of India.



# GATE<sup>2020</sup> Scorecard

Name

ARKAPRAVA LAYEK

Registration Number

CY20S21405079

Examination Paper

Chemistry (CY)



Amkaprava Layek

(Candidate's Signature)

Marks out of 100\*

32

Qualifying Marks\*\*

26.7

24.0

17.8

All India Rank  
in this paper

1889

Number of Candidates  
appeared in this paper

24414

GATE Score

430

Valid from March 18, 2020 to March 17, 2023

Qualified

March 18, 2020

**Prof. B. R. Chahar**  
Organizing Chairman, GATE 2020  
(on behalf of NCB – GATE, for MHRD)



f6e2c2cc3f9ef3b84980371fefcaed42

Qualifying in GATE 2020 does not guarantee either an admission to a post-graduate programme or a scholarship/assistantship. Admitting institutes may conduct further tests or interviews for final selection.

In the GATE 2020, the qualifying marks for a general category candidate in each paper is  $\mu + \sigma$  or 25 marks (out of 100), whichever is greater, where  $\mu$  is the mean and  $\sigma$  is the standard deviation of marks of all the candidates who appeared in the paper. The qualifying marks for OBC(NCL) and SC/ST/PwD candidates are 90% and two-third of a general category candidate in the paper respectively.

The GATE 2020 score was calculated using the formula

$$GATE\ Score = S_q + (S_t - S_q) \frac{(M - M_q)}{(\bar{M}_t - M_q)}$$

where

$M$  is marks (out of 100) obtained by the candidate in the paper

$M_q$  is the qualifying marks for general category candidate in the paper

$\bar{M}_t$  is the mean of marks of top 0.1% or top 10 (whichever is greater) of the candidates who appeared in the paper (in case of multi-session papers including all sessions)

$S_q = 350$ , is the score assigned to  $M_q$

$S_t = 900$ , is the score assigned to  $\bar{M}_t$

In multi-session (Civil Engineering and Mechanical Engineering) papers, the normalized mark of  $j^{th}$  candidate in the  $i^{th}$  session  $\hat{M}_{ij}$  was computed using the formula

$$\hat{M}_{ij} = \frac{\bar{M}_t^g - M_q^g}{\bar{M}_{ti} - M_{iq}} (M_{ij} - M_{iq}) + M_q^g$$

where

$M_{ij}$  is the actual marks obtained by the  $j^{th}$  candidate in  $i^{th}$  session

$\bar{M}_t^g$  is the average marks of the top 0.1% of the candidates considering all sessions

$M_q^g$  is the sum of mean and standard deviation marks of the candidates in the paper considering all sessions



$\bar{M}_{ti}$  is the average marks of the top 0.1% of the candidates in the  $i^{th}$  session

$M_{iq}$  is the sum of the mean marks and standard deviation of the  $i^{th}$  session

Graduate Aptitude Test in Engineering (GATE) 2020 was organised by Indian Institute of Technology Delhi on behalf of the National Coordination Board (NCB) – GATE for the Department of Higher Education, Ministry of Human Resources Development (MHRD), Government of India.



Joint CSIR - UGC NET December 2019  
National Testing Agency - Score Card

<b>Application Number :</b>	191620082143	<b>Roll Number :</b>	TL0116201701	 <small>ARKAPRAVA LAYEK 16/09/2019</small>	
<b>Candidate's Name :</b>	ARKAPRAVA LAYEK				
<b>Mother's Name :</b>	NITA LAYEK				
<b>Father's Name :</b>	SUVENTU LAYEK				
<b>Category :</b>	GENERAL	<b>Person with Disability(PwD) :</b>	No		
<b>Gender :</b>	MALE	<b>Date of Birth :</b>	16-04-1997		
<b>Subject :</b>	CHEMICAL SCIENCES				
<b>No of Candidates in this Subject</b>	<b>Registered :</b>	65356	<b>Appeared :</b>		53390
<b>Applied For :</b>	APPLIED FOR JRF				

Marks Obtained

Part A	11.500
Part B	35.500
Part C	70.000
Total Marks Obtained	117.000
Total Marks Obtained (in words)	One Hundred Seventeen point Zero Zero Zero Only
NTA Score	99.5373665

Dated : 15.01.2020

Senior Director, NTA

Note:

1. This electronically generated Score Card is the official result declared by NTA and does not require any signature.
2. Candidate's particulars including Category and Person with Disability (PwD) have been indicated as mentioned by the candidate in the online Application Form
3. The NTA Score indicates the percentage of candidates who have scored EQUAL TO OR BELOW(same or lower raw marks)candidates. The NTA scores of a Candidate have been calculated as follows:  

$$\frac{100 \times \text{Number of candidates appeared in the examination with raw marks EQUAL TO OR LESS than the candidate}}{\text{Total number of the candidates appeared}}$$
4. The National Testing Agency has taken due care while uploading the Score Card. However, in case of any inadvertent error, the NTA reserves the right to rectify the same at a later stage.
5. No separate intimation about score card shall be issued.
6. Instructions relating to issuance/obtaining Eligibility Certificate to qualified candidates will be notified separately later by CSIR on their website [www.csirhrdg.res.in](http://www.csirhrdg.res.in).





**COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH  
HUMAN RESOURCE DEVELOPMENT GROUP  
CSIR Complex, Library Avenue  
Pusa, New Delhi - 110 012, India**

The date of declaration of result of **Joint CSIR-UGC Junior Research Fellowship & Eligibility for Lectureship (NET)**  
**Exam** held on 16th June, 2019 is 09/08/2019

**Marks Statement**

Roll Number : <b>130998</b>	
Name : <b>Mr. ARKAPRAVA LAYEK</b>	
Subject : Chemical Science	
Applied For : <b>JRF-LECTURESHIP</b>	
<b>Marks obtained</b>	
<b>Part A</b>	<b>16</b>
<b>Part B</b>	<b>34</b>
<b>Part C</b>	<b>46</b>
<b>Total Marks</b>	<b>96</b>
<b>Percentage</b>	<b>48%</b>
<b>Rank</b>	<b>68</b>
<b>Result</b>	<b>JRF(NET)-CSIR</b>
CSIR HRDG is not responsible for any inadvertent error that may have crept in the result being published on internet.	