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MINISTRY OF DEFENCE

DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION (DRDO)

RECRUITMENT AND ASSESSMENT CENTRE (RAC)



Advt. No. 96

CLOSING DATE : 20 days from date of publication of Advt. in Employment News
(**Note:** Last Date for submission of application is 19-Nov-2009 and 29-Nov-2009 for the candidates residing in Andaman & Nicobar Islands and Lakshadweep)

IN PURSUIT OF SELF-RELIANCE IN CRITICAL TECHNOLOGIES RELEVANT TO NATIONAL SECURITY, DRDO FORMULATES AND EXECUTES PROGRAMMES OF SCIENTIFIC RESEARCH, DESIGN, DEVELOPMENT, TESTING AND EVALUATION OF VARIOUS SYSTEMS, SUBSYSTEMS, DEVICES AND PRODUCTS REQUIRED FOR DEFENCE OF THE NATION. DRDO EMPLOYS HIGHLY QUALIFIED AND COMPETENT SCIENTISTS AND TECHNOLOGISTS IN THE GROUP 'A' (CLASS I) TECHNICAL SERVICE KNOWN AS DEFENCE RESEARCH & DEVELOPMENT SERVICE (DRDS).

RAC INVITES APPLICATIONS FOR FOLLOWING POSTS IN DRDS

Scientist 'F' (Rs. 37,400-67,000/- & Grade Pay 8,900/-)

Item No	Posts	Lab	Subject	Experience / Specialisation
1.	1	Research Centre Imarat (RCI), Hyderabad	Electronics Engineering	Ability to lead and manage a s/w development team while performing various tasks like project initiation, analysis and design. Knowledge of C/C++, Matlab, IV & V activities for avionics software subsystems and avionics integration. OR Requirements and interface analysis and software verification, validation and testing of realtime software design code. Knowledge of complete software Engg., life cycle along with documentation standards like IEEE 12207, MIL – 498 etc. Click here to view Job Profile
2.	1	Research Centre Imarat (RCI), Hyderabad	Instrumentation Engineering / Technology	Experience in instrumentation Engineering / Technology in the areas of Satellite control & Missile Auto Pilot & System design, System Engineering practices, Missile Trajectory design, Mission Planning, Mission Analysis for tactical & strategic system, Satellite command, control & technology system design, Development, operation, Green belt certification on design. Click here to view Job Profile

Scientist 'E' (Rs. 37,400-67,000/- & Grade Pay 8,700/-)

Item No	Posts	Lab	Subject	Experience / Specialisation
3.	1	Defence Institute of Physiology and Allied Sciences (DIPAS), Delhi	Physiology	MD/ M.V. Sc in Physiology. Research experience in areas related to high altitude physiology and aviation medicine. Research experience in central neural regulation of cardiorespiratory physiology. Click here to view Job Profile
4.	1	Defence Research & Development Laboratory (DRDL), Hyderabad	Electrical/Electronics/Computer Science Engineering	ME/M Tech in the relevant subject. Experience in Software Development Life Cycle, Defect Life Cycle, Embedded Software devices and in C++. Click here to view Job Profile
5.	1	Instruments Research & Development Establishment (IRDE), Dehradun	Electronics & Communication Engg	Ph D / M Tech degree in the area of Applied Optics/Optical Engineering/ Photonics. Research experience in the area of coherent and incoherent optical signal processing and more specifically in the areas of optical pattern recognition, optical security, digital holographic projection of three dimensional objects and computational optical sensing/imaging. The applicants must have Research publications in journals of international repute. Click here to view Job Profile
6.	1	Laser Science & Technology Centre (LASTEC), Delhi	Physics	Ph D degree in Experimental Laser Spectroscopy. Research experience in the area of Experimental Laser Spectroscopy. Experience in UV through IR laser spectroscopy for applications related to Laser remote sensing/ Lidar. Differential absorption techniques, Cavity Ring down Laser Spectroscopy, Photothermal Spectroscopy for qualitative and quantitative estimation of various species for these applications. Click here to view Job Profile
7.	1	Electronics & Radar Development Establishment (LRDE), Bangalore	Electronics/Electrical & Electronics/Electronics & Telecommunication Engineering	ME/M Tech/Ph D in relevant subject / specialization. Experience in the field of electronic systems and design & development of contemporary digital signal processors for Radar systems. Experience in the area of digital signal processors employing Digital Down Conversions, FPGAs, DSPs, etc. The candidate should have strong leadership traits to bring the desired focus for realizing such state of the systems in a time bound manner. Click here to view Job Profile
8.	1	Research Centre Imarat (RCI), Hyderabad	Civil Engineering	Experience in design and development of technical facilities for critical projects and R&D technologies. Experience in the areas of Garrison Engineering, Knowledge of scales of accommodation and SSR Pricing, Knowledge of procedures of land acquisition/alienation, Knowledge of planning, execution & maintenance of civil works and Defence works Procedures (DWP) is preferable. Click here to view Job Profile
9.	1	Centre for Military Airworthiness & Certification [RCMA(A/C)], Bangalore	Computer Science Engineering	M Tech in Computer Science. Experience in IV & V testing of embedded software. Click here to view Job Profile
10.	1	Vehicles Research & Development Establishment (VRDE), Ahmednagar	Mechanical Engineering	Specialisation in Tracked Vehicle Production. Experience in production / maintenance in Automotive Industry/ Army Base Workshop/Tracked Vehicle Workshop. Click here to view Job Profile

Scientist 'D' (Rs. 15,600-39,100/- & Grade Pay 7,600/-)

Item No	Posts	Lab	Subject	Experience / Specialisation
11.	1	Centre for Artificial Intelligence and Robotics (CAIR), Bangalore	Mechanical Engineering	Design, development and analysis of industrial manipulators and autonomous mobile robots. Development of localization and perception sensor interfaces for intelligent mobile robots. Development of digital circuits for robot control and microcontroller based embedded system application. Proficiency in the use of Matlab, Solid Works and visual Nastran for design, simulation and analysis of robot Kinematics, dynamics and path planning. Strong programming skills and driver and application software development experience. Design and development of tracked, wheeled, legged and hybrid mobile robots. Familiarity with the ADAMS design and analysis tool. FEM analysis. Click here to view Job Profile
12.	1	Defence Institute of Physiology and Allied Sciences (DIPAS), Delhi	Physics / Bio-Physics	Ph D in Physics Crystallography & Biophysics. Experience in areas related to cloning/expression/purification/structure, determination of many protein structures and their complexes. Click here to view Job Profile
13.	1	Defence Institute of Physiology and Allied Sciences (DIPAS), Delhi	Physiology (Spl in Biophysics & Electrophysiology)	Ph D in Science (Spl in Protein purification characterization & signaling). Experience in areas related to Endothelial cell signaling/dysfunctions/purification. Experience in Molecular signaling/human primary cell culture applications. Click here to view Job Profile
14.	1	Defence Laboratory (DL), Jodhpur	Physics	Ph D in Physics (Soft matter physics). Research experience in the area of colloidal and nano-structured soft materials. Experience of working on experimental techniques such as small angle X ray and neutron scattering, Atomic Force Microscopy, Transmission Electron Microscopy etc. Click here to view Job Profile
15.	1	High Energy Materials Research Laboratory (HEMRL), Pune	Chemistry	Ph D in Chemistry (Computational Chemistry and IR Spectroscopy) Experience in Low Temperature Matrix-Isolation FTIR and High Resolution Laser Spectroscopic Techniques coupled with Ab Initio Computational Calculations. Click here to view Job Profile
16.	1	Research Centre Imarat (RCI), Hyderabad	Mechanical Engineering	M Tech / ME in production Engg/Machine Design/ Reliability Engg with experience in Quality Control & Quality Assurance. Experience in NDT, NDE is desirable. Click here to view Job Profile
17.	1	Research Centre Imarat (RCI), Hyderabad	Electronics & Communication Engineering/ Electrical & Electronics Engineering / Electronics & Instrumentation Engineering	M Tech in EEE/ECE/Electronics & Instrumentation. Experience in design of Embedded systems based on Intel Microprocessors / DSP/Power PC processors. Experience in FPGA based design flow. Experience in complete Board design flow including functional tests. Knowledge of C/Assembly and exposure to serial buses like MIL-STD-1553B, Ethernet is preferable. (OR) Experience in digital ASIC design for System on Chip with a 32 bit micro controller. Knowledge of EDA tools from cadence/synopsis. Experience in digital backend tools for ASIC Backend design. Click here to view Job Profile

Scientist 'C' (Rs. 15,600-39,100/- & Grade Pay 6,600/-)

Item No	Posts	Lab	Subject	Experience / Specialisation
18.	1	Advanced Systems Laboratory (ASL), Hyderabad	Mechanical Engineering	M Tech in Mechanical Engg with Specialisation in Engineering design / design of Composite Structure. Experience in design and analysis of Composite motor cases / pressure vessels / Nozzles / Air Bottles. Proficiency in FEM Analysis, static and dynamic analysis for different types of loads and loading conditions and associated software. Design of composite to metal joints / cut-outs in composite structures. Design of test / acceptance plans and testing of Composite Motors/Nozzles/Air Bottles. Knowledge in Advanced reinforcements/resin systems and composite material properties for aerospace applications.
19.	1	Defence Bioengineering & Electromedical Laboratory (DEBEL), Bangalore	Bio Medical Engg	Medical graduate (MBBS) with post graduate in Bio-Medical Engineering with MEMS specialization. Work experience in the area of Project Management and Project Development.

20.	1	Defence Laboratory (DL), Jodhpur	Chemistry	Ph D in Polymer Technology. Research experience in the field of Polymer Composites & Specialisation in Polymer Science. Experience of working on processing and characterization of self reinforced polymer composites and carbon nanotube based nanocomposites.
21.	1	Instruments Research & Development Establishment (IRDE), Dehradun	Physics / Optical Engg.	Ph D in the field of optics of liquid crystals. Research experience in the field of liquid crystals optics, phase transitions and visco-elastic properties of liquid crystals. Knowledge of electrooptic properties of liquid crystals.
22.	1	Gas Turbine Research Establishment (GTRE), Bangalore	Aerospace Engineering	M Tech in Aerospace Engineering with specialization in Aerodynamics. Exposure in CFD, Axial flow compressor. Optimization and inverse design of airfoils.
23.	1	Gas Turbine Research Establishment (GTRE), Bangalore	Mechanical Engineering	In the area of Heat Transfer Analysis.

1. ESSENTIAL QUALIFICATIONS & EXPERIENCE:

For the post at Item No. 3 & 19

(i) Medical qualification from recognised university or equivalent (included in the first or the second schedule or the Part II of the Third Schedule to the Indian Medical Council Act, 1956 (102 of 1956). Holders of Medical qualifications included in Part II of the said Third Schedule should also fulfil the conditions specified in Sub- section (3) of Section 13 of the said Act)

OR

A Bachelor's Degree in Veterinary Science and Animal Husbandry (B.V. Sc. and A.H.) duly recognized by Veterinary Council of India.

(ii) MD/ M. V. Sc degree in Physiology for Item No. 3
M Tech degree in Bio Medical Engg for Item No. 19

(iii) 10 years practical and administrative experience for Scientist 'E' (Item No. 3) and 3 years for Scientist 'C' (Item No. 19) in the required field.

Weightage for higher qualification to be equated as research experience for lateral recruitment is as under: -

- Post Graduate Degree in Veterinary Science and Animal Husbandry – Two Years.
- Post Graduate Degree in Medicine - Three Years
- Post Graduate Degree in Engg - Two Years

For the Post other than at Item No. 3 & 19

(i) At least first class Master's Degree in Science Subjects, Mathematics, or Psychology, or at least first class Bachelor's Degree in Engineering or Technology or Metallurgy from a recognised university or equivalent with Experience / specialisation as mentioned against each item.

(ii) 13 years of Research or Design or Development or Production experience for Scientist 'F', 10 years for Scientist 'E', 7 years for Scientist 'D' and 3 years for Scientist 'C' as mentioned against each item in the last column.

Weightage for higher qualification to be equated as research experience for lateral recruitment is as under –

- Post Graduate Degree in Engg – Two Years.
- Doctorate Degree in Science or Mathematics – Three Years.
- Doctorate Degree in Engg. – Four Years.

Desirable

- (i) Ph D/ M Tech in the relevant area wherever not prescribed in the Experience / Specialization column .
- (ii) Knowledge of Chinese, French, Russian, German or Japanese foreign language.

2. AGE LIMITS (as on closing date of advertisement):

- (a) For Scientist 'C': not exceeding 35 years,
(b) For Scientist 'D' and Scientist 'E': not exceeding 45 years,
(c) For Scientist 'F': not exceeding 50 years.

The upper age limit as on Closing Date (inclusive), the upper age limit is relaxable by 5 years for physically handicapped persons for all posts except in the disciplines of Aero / Electronics / Electrical / Mechanical Engineering which are found not suitable for them. Age is relaxed upto 5 years for Central Govt employees as per rules. Age is also relaxable for Armed Forces personnel/ex-serviceman as per rules in vogue.

3. The applicants should ensure that they satisfy the eligibility criteria upto closing date of advertisement. The required experience will be **counted after the essential qualifications are obtained**. The prescribed Essential Qualifications are bare minimum and mere possession of same does not entitle candidates to be called for interview. Where number of applications received in response to an advertisement is large, it will not be possible for RAC to interview all the candidates. RAC may restrict the number of candidates for interview to a reasonable limit. The applicants will be short listed on the basis of subject knowledge / experience/ professional achievements/ aptitude for research / management skills and personal qualities / strength. The candidates should, therefore, mention all qualifications/experience/ achievements/ specialisation in relevant field including those over and above the minimum qualifications. After the interview, in accordance with the merit, the offer of appointment to the selected candidates will be restricted to the number of vacancies and minimum qualifying criteria. The appointment, however, will be subject to the completion of

formalities like medical examination prescribed for Group 'A' technical posts of Government of India with field service liability and character verification besides verification of **SC/ST/PH Certificate**, if applicable.

4. HOW TO APPLY:

Neatly filled applications typed or in own handwriting or downloaded on A4 size paper only in the prescribed **format** available at RAC website <http://rac.drdo.in> accompanied with a crossed non-refundable Indian Postal Order / Demand Draft of the value of Rs. 50/- (for each post) drawn in favour of **Director RAC**, payable at Delhi should be sent to **Director, Recruitment & Assessment Centre, Lucknow Road, Timarpur, Delhi –110054, preferably by registered post, superscribed "Application for post of Scientist '-', Advt. No. 96 item no." "**. There is no fee for SC/ST/PH candidates. **Closing date of receipt of application is 20 days from the date of publication of this advt in the Employment News (EN)**. However, the application from candidates in Andmaan & Nicobar islands and Lakshadweep, will be received **upto 30 days from date of publication in Employment News**.

Candidates may also apply online through RAC website <http://rac.drdo.in>

5. Fare concession is being given by Railways to unemployed youth in second class when travelling to attend interviews for job in Central Govt. Deptts. To avail free railway tickets, the candidate is required to submit an attested copy of (i) call/interview letter (ii) a copy of application form to railway authorities. The candidate is advised to utilise this facility given by the railways as no rail fair will be paid by this office, if the place is connected by rail.
6. Only Indian nationals need apply.
7. Self attested copies of certificates regarding essential qualifications and experience only should be attached along with the duly filled application and summary forms. Candidates, however, will have to produce all original certificates for verification at the time of interview.
8. Incomplete applications or those received late will be summarily rejected and no correspondence would be entertained in this regard.
9. CANDIDATES WORKING IN GOVERNMENT/PUBLIC SECTOR UNDERTAKINGS, AUTONOMOUS ORGANISATIONS/ARMED FORCES (INCLUDING DEPARTMENTAL CANDIDATES) MUST APPLY THROUGH PROPER CHANNEL. THEY SHALL NOT BE INTERVIEWED IF THEY FAIL TO PRODUCE A "NO OBJECTION CERTIFICATE" AT THE TIME OF INTERVIEW.
10. Candidates desirous of applying for more than one post must apply separately for each posts indicating Item No. of the posts accompanied by separate requisite Indian Postal Order / Demand Draft.
11. Selected candidates have the liability to serve anywhere in India.
12. **Number of vacancies are tentative and may vary.**
13. **CANVASSING IN ANY FORM WILL DISQUALIFY THE CANDIDATE**
14. Our e-mail address: dirrac@ndb.vsnl.net.in
15. **CHECK LIST:**

Please ensure that you have:

- (a) Used the application format on A4-size paper typed or downloaded from RAC websites and attached self -attested certificates (ref Para-4).
- (b) Rightly indicated the item number, subject and the post applied for.
- (c) Paste recent passport size photograph.
- (d) Attached an Indian Postal Order / Demand Draft of Rs. 50/- if you belong to UR/OBC Category.
- (e) Attached a requisite caste/disability certificate in case you belong to SC/ST/OBC/PH.
- (f) Attached a requisite NOC from the competent authority in case of serving Armed forces personnel and relieving certificate in case of retired Armed forces personnel.
- (g) Applied through proper channel if already employed as stated in para (9).
- (h) Keep the photocopy of application form.

WEBSITE FOR DOWNLOADING APPLICATION FORMS:

<http://rac.drdo.in>

For all queries related to recruitment of Scientists by RAC, please contact PRO Telefax No.: 011 23812608