

## Government of India Ministry of Defence

#### **Defence Research & Development Organisation (DRDO)**

गैस टरबाइन अनुसंधान स्थापन, बेंगलूरु-560 093

## GAS TURBINE RESEARCH ESTABLISHMENT, BENGALURU-560 093

दिनांक / Dated : 19<sup>th</sup> - May -2025

Date of Publication on DRDO Website: 19<sup>th</sup> - May -2025 Last Date for Receipt of Applications : 08<sup>th</sup> June -2025

(with 21 days closing duration)

#### Engagement of Retired Government Employees as 'Consultant' in GTRE, Bangalore on contract basis

1. DRDO/GTRE invites applications from Retired employees from Central Government/State Government/PSU/Autonomous Bodies having considerable experience of functioning in Central Government Ministries/Departments for engagement as Consultant on short term contract basis as per Post Specific Terms of Reference (TOR). The relevant details and eligibility criteria are given below.

#### 2. Brief Description about the Requirement:-

	No. of	Pay Level of		TOR		
Post Code	Posts	<b>Retired official</b>	Category	(Term of	Contract	Location
				Reference)	duration /	
					period	
2025/GTRE/259	01	Level -14	Technical	Enclosed	One (01) year	Bengaluru
		of Pay		Annexure I	and	
		Matrix as			extendable as	
		per			per norms	
		approved 7 <sup>th</sup> CPC				
		/ CPC				
2025/GTRE/260	01	Level -12	Technical	Enclosed	One (01) year	Bengaluru
		of Pay		Annexure II	and	
		Matrix as			extendable as	
		per			per norms	
		approved			•	
		7 <sup>th</sup> CPC				

2025/GTRE/261 2025/GTRE/262	01	Level -10 of Pay Matrix as per approved 7 <sup>th</sup> CPC  Level -10 of Pay Matrix as per approved 7 <sup>th</sup> CPC	Technical	Annexure III	One (01) year and extendable as per norms  One (01) year and extendable as per norms	Bengaluru
2025/GTRE/263	01	Level -10 of Pay Matrix as per approved 7 <sup>th</sup> CPC	Technical	Enclosed Annexure V	One (01) year and extendable as per norms	Bengaluru
2025/GTRE/264	01	Level -10 of Pay Matrix as per approved 7 <sup>th</sup> CPC	Admin	Enclosed Annexure VI	One (01) year and extendable as per norms	Bengaluru
2025/GTRE/265	01	Level -7 of Pay Matrix as per approved 7 <sup>th</sup> CPC	Technical	Enclosed Annexure VII	One (01) year and extendable as per norms	Bengaluru
2025/GTRE/266	01	Level -7 of Pay Matrix as per approved 7 <sup>th</sup> CPC	Admin	Enclosed AnnexureVIII	One (01) year and extendable as per norms	Bengaluru
2025/GTRE/267	01	Level -7 of Pay Matrix as per approved 7 <sup>th</sup> CPC	Technical	Enclosed  Annexure IX	One (01) year and extendable as per norms	Bengaluru

#### 3. Eligibility Criteria:

- a. The applicants, who have retired from Central / State Govts, PSUs, Autonomous Bodies, Universities, Govt. R&D Organizations and possessing practical knowledge, adequate experience in the field relevant to the functioning for which applying (as per annexed TOR as applicable refers).
- b. Persons possessing experience of having worked with DRDO would be accorded preference during selection/appointment.
- c. Possessing effective communication (both oral and written) and interpersonal skills with a strong flair for in-depth examination of his/her areas of work.
- d. The applicant must have had unblemished Service Record.
- e. No retired Government Servant shall be eligible for appointment as a Consultant unless there is a gap of fifteen (15) days between his/her retirement and appointment as consultant.
- f. The applicant must have retired at prescribed PAY LEVEL as mentioned above.
- 4. **Age Limit:** The maximum age limit of the applicant shall not be more than **63 years** as on the closing date for receipt of the application.

#### 5. Procedure for Appointment:-

- a. The applications received by the **Closing Date** shall be preliminarily scrutinized /examined, as regards fulfillment of Basic Eligibility Criteria and the TOR, by a locally-constituted Committee. Subsequently, a duly-constituted Screening Committee shall scrutinize the applications to assess the suitability of the candidates and short-list the applicants, keeping in view the eligibility criteria, requirements (TOR), GFR provisions and the relevant Guidelines.
- b. The merit-wise panel recommended by the Screening Committee for appointment, including wait-listed candidates, shall be valid for six (06) months.
- c. The Offer of Appointment, containing the Terms & Conditions of engagement, shall be issued by the Directorate of Personnel, DRDO HQ after obtaining the approval of the Competent Authority on the recommendations of the Screening Committee.
- d. On receipt of the 'Offer of Appointment', the 'Consultant' shall be required to submit the following documents:-
  - (i) Letter of Consent;
  - (ii) Contract Agreement, duly signed, in the prescribed pro forma (Enclosed);
  - (iii) Non-Disclosure Agreement Confidential Clause with the Government of India, and Ethics & Integrity Clause (proforma of both enclosed, both duly signed;
  - (iv) An undertaking towards acceptance of the Terms & Conditions contained in the Offer of Appointment.
- e. Before the Contract Agreement is executed, the employing office shall carry-out the preappointment activities of verification of relevant documents like PPO, Medical Fitness Certificate, Police Verification, etc.
- f. The selected candidate shall be required to sign the Contract Agreement and Non-Disclosure Agreement (03 copies, each) on a Non-Judicial Stamp Paper of Rs. 500/- with the employing office (as per the proforma prescribed).

#### 6. Terms & Conditions governing the Engagement:-

- a. The "Consultant' shall perform the job(s)/task(s) as per the Terms of Reference (TOR) enclosed herewith at *ANNEXURE- I to IX (as applicable)*.
- b. The engagement of a retired Government servant as 'Consultant' shall not be construed as a case of 're-employment'.
- c. The 'Consultant' shall not exercise any statutory, legal or financial power(s).

- d. The appointment as 'Consultant' shall be of a temporary (non-official) nature against the specific job(s), and the 'Consultant' shall not be entitled for any benefit/compensation/absorption/regularization of service with DRDO.
- e. The engagement as 'Consultant' shall be initially for the contractual duration of one (1) year only (from the date of engagement), unless extended.
- f. The 'Consultant' appointed shall, in no case, represent or give opinion or advice to others in any manner which is adverse to the interests of the Ministry of Defence/Department of Defence R&D/DRDO, nor will he/she indulge in any activity outside the terms of the contractual assignment. Further, in the course of execution of his/her duties under the contract, he/she shall declare the arising 'conflict(s) of interest' (if any) and shall refrain from advising/influencing on any such matters.
- g. The 'Consultant' shall, under no circumstances, share data and information with any bilateral agency/multilateral agency or with any person/institution without the specific prior approval of the Chairman DRDO / Secretary DD (R&D) to that effect.
- h. The 'Consultant' shall not publish any article based on the data, inputs & information obtained during the course of his/her official assignment, without obtaining specific prior approval of the Chairman DRDO / Secretary DD (R&D).
- i. The Intellectual Property Rights (IPR) of the data & deliverables shall be the exclusive property of DRDO only.
- j. The 'Consultant' shall hand-over the entire set of records of the assignment to DRDO before expiry of the contract and before release of the final payment, whichever is earlier.
- k. If the 'Consultant' fails to perform/address the assigned jobs/tasks or if the quality of the delivered output is not to the satisfaction of the employing office or if the laid- down time-schedule is not adhered to by the 'Consultant' or if the 'Consultant' is found lacking in honesty & integrity or is unauthorised absent from work, or at any time without assigning any reason, the contract entered into may be terminated by the Competent Authority, by giving a prior written notice of one (1) week.
- I. The 'Consultant' may also resign from the assignment by giving a prior notice of one (1) month. Payment of one (1) month's remuneration, in lieu of notice period, by either side, may be considered at the discretion of the Competent Authority.
- m. The Competent Authority for settling any dispute arising out of the terms & conditions of the Contract or for interpreting any of the terms & conditions of the Contract or for any uncovered condition(s) shall be DG (HR), DRDO, whose decision shall be final & binding upon the 'Consultant'.
- n. Periodic Monitoring of Performance & Deliverables shall be carried-out by the employing office in accordance with the provisions contained in the relevant Guidelines.
- o. The detailed General Terms & Conditions, enclosed herewith at <u>APPENDIX-'B'</u> shall be applicable.
- 7. <u>Remuneration:</u> A fixed monthly amount shall be admissible, arrived at by deducting the basic pension from the pay drawn at the time of retirement. The amount so fixed shall remain unchanged for the term of the contract. There will be no annual increment/ percentage increase during the contract period:-

#### Advertisement No.: DRDO/GTRE/HRD/Consultants/001/2025-26

Category	Remuneration	Conveyance Allowance
Pensioners	A fixed monthly amount shall be admissible, arrived at by deducting the basic pension from the pay drawn at the time of retirement.	
Non-Pensioners	<ul> <li>(i) Pay Level - 7 of the above post code - Rs.30,000/-</li> <li>(ii) Pay Level - 10 of the above post code - Rs.40,000/-</li> <li>(iii) Pay Level - 12 of the above post code - Rs.60,000/-</li> </ul>	(i) Rs.3,000/- upto pay level - 11 (ii) Rs. 5,000/- for pay level 12 & above.
	(iv) <b>Pay Level - 14</b> of the above post code - Rs.75,000/-	

- 8. <u>Allowances</u>: Consultants shall not be entitled to any kind of allowance/benefit such as Dearness Allowance, Transport Facility, Residential Accommodation, Personal Staff, CGHS, Medical reimbursement, reimbursement of telephone/internet resources etc. However, should they require to travel inside the country in connection with the official work of the organization, he would be entitled to TA/DA at the rate commensurate with his/her Grade Pay/Pay Level (as may be applicable) from which he/she retired.
- 9. The 'Consultant' shall follow the normal working hours of the employing office. However, as work exigencies may demand, he/she may be required to work beyond the stipulated working hours.
- 10. <u>Drawal of Pension</u>: A retired Govt. official appointed as a consultant shall continue to draw pension and the dearness relief on pension during the period of his engagement as a consultant. His/her engagement as consultant shall not be construed as a case of re- employment.
- 11. <u>Leave</u>: Paid Leave of absence, at the rate of 1.5 days for each completed month of service, is admissible. However, no accumulation of leave beyond a calendar year may be allowed.
- 12. Interested eligible retired officials of Central Government/State Government/PSU/Autonomous Bodies may submit their applications in the enclosed **FORMAT** (<u>APPENDIX 'A'</u>) with all the requisite supporting documents received at the following address or by email to <u>director.gtre@gov.in</u>

The Director,

Gas Turbine Research Establishment,
Government of India, Ministry of Defence,
Defence Research & Development Organisation
C.V Raman Nagar, Post No. 9302,
Bengaluru -560093.

- 13. Applications received after closing date will be rejected automatically without any intimation to the applicant. DRDO reserves the right to cancel this advertisement, and to not to proceed in the matter for engagement of consultant, at any stage, and accept or reject any or all applications, without assigning any reason whatsoever.
- 14. Cutoff date for receipt of application is 21 days from the publication of Advertisement.

\*\*\*\*\*

## Appendix - 'A'

# PROFORMA OF APPLICATION FOR ENGAGEMENT OF RETD GOVT. EMPLOYEES AS CONSULTANT IN DRDO

1.	Post Code:	2025/GTRE/
	Advertisement No.:	DRDO/GTRE/HRD/Consultants/001/2025-26
2.	Name in Full: (in Block letters)	
3.	Date of superannuation: (DD-MM-YYYY)	
4.	Designation at the time of Superannuation	
5.	Basic Pay & Grade Pay/ Pay Level at the time of Superannuation	
6.	Name of the Organization last served with address	
7.	Date of birth (DD-MM-YYYY)	
8.	Age (As on closing date of advertisement):	
9.	Gender:	Male/Female
10.	Address for correspondence :	
	E-mail :	
	Contact No.:	Mobile No: Landline:
11.	Educational Qualification (Graduation onwards):	
12.	Areas of Research : (for Scientific / Technical posts)	
	Area of Specialization : (for Admin. posts)	-NA-

#### Advertisement No.: DRDO/GTRE/HRD/Consultants/001/2025-26

13.	Complete record of ser (with special reference		=	efore superannuation: which application is made)
	Post Held with Pay Level	From	То	Subjects Handled (in brief)
14.	Complete list of publisl / monographs Researc etc. (for Scientific / Tec posts only)	h papers		
15.	Details of Knowledge of Computer	f		
16.	Any other relevant info (please enclose separal ifrequired)			

#### **Declaration**

I hereby declare that the particulars furnished above are true and correct to the best of my knowledge and belief. I understand and agree that in the event of any information being found false OR incorrect / incomplete or ineligibility being detected at any time before or after selection, my candidature is liable to be rejected and I shall be bound by the decision of the Department. I have read this circular and ready to accept all the terms and conditions (Appendix -'B') for engagement of Consultants.

(Signature of the Applicant)
Date:

#### Following documents are to be enclosed by the applicant

- 1. Identity Proof
- 2. Proof of Address
- 3. Copy of P.P.O
- 4. Copy of proofs of Educational Qualification
- 5. Copy of Service Verification Certificate

\*\*\*\*\*\*

Appendix - 'B'

# TERMS AND CONDITIONS FOR ENGAGEMENT AS CONSULTANT IN THE LABS/ESTTS/ UNITS OF DRDO

- 1. The consultant shall perform the services as per Terms of Reference and the task/ jobs assigned to him/her by the Director of the concerned Lab/Estt/Unit, where he is engaged.
- 2. The working hours would be that of the working hours of the lab/estt/unit where he/she is engaged.
- 3. Under special circumstances, the Consultant could be called for services on holidays or beyond normal working hours for which no other benefits/ leave will be granted.
- 4. The consultancy will start for a period of one year from the date he / she enters into the contract Agreement with DRDO.
- 5. The consultant shall be paid remuneration and conveyance allowance as per Para 6 of Government of India, Ministry of Defence letter No. DHRD/DRDO CONSULANT/GUIDELINES/E/685/D(R&D)/2022 dated 06<sup>th</sup> July 2022, issued under Govt letter No.DHRD/76682/Consultant/C/M/01 dated 27<sup>th</sup> July 2022, subject to ceiling that remuneration plus pension drawn by the consultant shall not be more than the last pay drawn by him / her at the current rate of DA. Mandatory deduction, if any, will be made. The remuneration for services rendered in a month shall be payable in subsequent month.
- 6. Secretary DD(R&D) shall have the right to examine/review/ terminate the consultancy services provided by him /her at any time.
- 7. The consultant shall perform his/her obligations under his/her consultancy with all necessary skills, diligence, efficiency and economy.
- 8. The consultant shall meet high standard for ethics and integrity under the agreement of appointment.
- 9. No other facility whatsoever except remuneration and conveyance allowance shall be provided to him/her by DRDO in his/her capacity as Consultant.
- 10. The Department shall not be responsible for any loss, accident, damages/injury suffered by him/her whatsoever arising in or out of the execution of his/her work, including travel.
- 11. The Consultants shall abide with Contract Agreement, Non-Disclosure Agreement, General Conduct Rules, Information Security Act and other restrictions as applicable to Govt employees.
- 12. Paid leave of absence at the rate of 1.5 days for each completed month of service. Accumulation of the leave beyond a calendar year may not be allowed.
- 13. During the terms of the consultancy, he/she shall not be engaged in any private business or professional activity which could conflict with the interest of the Government. The engagement of Consultants is of a temporary (non-official) nature against the specific jobs.

	<b>Declaration</b>	
l,	(name of the Consultant) $\mathrm{S/o}$	hereby
agree unconditionally w in DRDO.	rith all above referred Terms and Conditions for e	engagement of consultant
Date :	(Sig	gnature of Applicant)
Place :	Nai	,

## Terms of Reference (TOR) for Engagement of DRDO Consultant (Level-14) for SMG

- 1. Whether the proposed engagement is against vacant post or for specific project:

  Not against a vacant post
- 2. Precise statement of objectives for appointment of consultant and discipline or domain where engagement of consultant is required:

  The service of the consultant is primarily required to assist the GTRE team involved in the various activities for the numerical simulation of transient dynamic event listed below.
  - Bird impact analysis of Bullet nose.
  - Bird impact analysis of Inlet strut.
  - Bird impact analysis of fan rotor blade.
  - Assessment of Fatigue Life of Rotor Blade for Tiny Hard Particle Impact.
  - Safety evaluation of Fan Rotor Blades for Multiple Hail-Stone Impact.
  - Assessment of fan casing for blade containment.
  - Assessment of HP compressor casing for blade containment.
  - Assessment of turbine casing for blade containment.
- 3. Category of Work:- Technical work
- 4. Pay level of Consultant (at the time of retirement/superannuation): Level 14
- 5. Discipline of domain, where engagement of consultant is required:

  Structural assessment of the aero gas turbine engine critical components to meet FOD (Foreign Object Damage) and blade containment certification requirements.
- 6. The expertise/skills/knowledge required for engagement as Consultant:
  In order to carry out the activities mentioned in para 2, the consultant must have the following skills/ expertise/ knowledge:-
  - A PhD degree with a minimum of 20 years of experience in the field of finite element analysis to simulate the FOD in frontal engine components and blade containment.
  - Should have a deep understanding of structural dynamics, contact mechanics, wave mechanics, fracture mechanics, high-strain material properties of the materials, and damage properties of the component material.
  - Transient simulation of highly dynamic events such as bird-strike and blade-containment.
  - Experience in design validation of safety-critical engine components for airworthiness of aero-engine.
  - Low cycle fatigue life evaluation of rotating engine components subjected to foreign objects impact such as tiny hard particles, hail-stone, etc.

• Should have a good understanding to carry out the non-linear explicit simulations of transient dynamic events using commercially available LS-DYNA software.

### 7. Outline of the tasks to be carried out:

The consultant will be responsible for completing the assigned tasks related to numerical simulation of transient dynamic analysis, such as bird impact and blade containment in the stipulated time schedule as mentioned in para 8.

8. Estimated time period required for complete task: Initially one year (extendable for second year, as decided by the competent authority)

Govt of India

#### Ministry of Defence

#### <u>DRDO</u>

## Terms of Reference (TOR) for Engagement of Consultants

# (i) Whether the proposed engagement is against vacant post or for specific work or project

It is for a specific series of work meet technical requirements of gearbox module pertaining to various projects and testing. Following are the Gearbox group requirements in this regard:

- 1. Drawing preparation of various developmental gearbox components, subassemblies & assemblies.
- 2. Engine Gearbox assembly.
- 3. Technical support for gearbox testing and associated documentation.

## (ii) Precise statement of objectives for appointment of Consultant:-

## (a) Discipline or domain, where engagement of consultant is required:

Aero-Engine Gearbox Component/assembly drawing, manufacturing (Technical Co-ordination), assembly and testing.

## (b) Expertise / skills / knowledge required for engagement as consultant

- a. Expertise in preparation of component and assembly drawings.
- b. Expertise in gearbox Assembly/Dis-assembly activities for standalone and engine level testing as per established aero standard practice. The activities includes preparation of fitment chart as per assembly procedure and drawing, sub assembly/assembly of Jets, plugs, filters, bearings, dynamic seals, gear shafts, interference fit assembly etc.
- c. Knowledge of Inspection of critical dimensions and ability to understand the interface drawings for integration of test article to the gearbox test cell.
- d. Skills for supervision on assembly of various test set-up for the gearbox level tests.
- e. Exposure in system level gearbox drawing requirements for co-ordination in manufacturing of gearbox components and able to understand the Non-

conformance report for deviation against production drawing.

**Note:** A candidate retired preferably from Level-12 would be ideally suitable for undertaking the above tasks.

## (iii) Outline of the tasks to be carried out:-

# (Details of work required to be carried out / specific tasks / activities to be assigned to consultants should be indicated)

- (a) Generation/revision of component/assembly drawings for ongoing/development project based on testing feedback and scheme.
- (b) Co-ordination in Inspection of critical dimension of gearbox component for gearbox assembly preparation.
- (c) Co-ordination in manufacturing activities.
- (d) Carry-out Gearbox assembly and its integration with engine/stand alone test rig along with assembly documentation.
- (e) Preparation/co-ordination of test related reports after testing of each gearbox.

## (iv) Estimated time period required for completion of tasks:- 1 year (12 months)

Extendable for second year based on work/project requirement as decided by the competent authority.

Details of the work proposed to be assigned are as follows:

Activity	Time plan for the activity and Monitoring Schedule
(a) Generation/revision of component/assembly drawings for development project based on testing feedback and scheme.	Monthly, Quarterly and half yearly
(b) Co-ordination in Inspection of critical dimension of gearbox component for gearbox assembly preparation.	During each build before testing (on going throughout the year)
(c) Co-ordination in manufacturing activities.	Timelines as per the project schedule.
(d) Carry-out Gearbox assembly and its Integration with engine/stand alone test rig along with assembly documentation.	During each build before testing (on going throughout the year)

Annexure-2 (Post Code: 2025/GTRE/260)

(e) Preparation/co-ordination of test related Before and after the stand alone reports after each gearbox test run. testing of gearbox.

## Government of India Ministry of Defence, DRDO

## Terms of Reference (TOR) for Engagement of Consultants

1. Whether the proposed engagement is against vacant post or for specific work or project:

The proposed engagement of consultant is for specific tasks in various Test Facilities in C.V. Raman Nagar campus of GTRE.

2. Precise statement of Objectives for appointment of Consultant:

The services of consultant is primarily required to assist Group Head, Test Facilities for

- a. Operation of High Mass Flow High Pressure Air Supply Facility (HMFHPASF) and maintenance of various electrical & electronic sub systems of the facility like Facility Control System, 275 KVA and 225 KVA Servo Stabilizers, Emergency power backup facility, etc. Carrying out Fault Diagnosis of Facility Control System of HMFHPASF and rectification.
- b. Operation of Roof Mounted Thrust Stand System in Engine Test Cells for engine installation & removal and maintenance of electrical systems.
- c. Operation, Testing and Maintenance of Electrical Load Bank and Hydraulic Load Bank of Secondary Power System (SPS) in Engine Test Cell.
- d. Operation of Compressed Air Starting System, Fuel Supply System and Thrust Stand Calibration System in Test Cell and maintenance of electrical systems.
- e. Operation and Maintenance of Compressor Test Facility, Environmental Control System (ECS) Test Facility and Qualification Test Facility (QTF) and Maintenance of Electrical Heater System & other sub-systems.
- f. Provisioning and measurement of Pressure, temperature, speed and flow parameters in the test facilities and co-ordination for on-site calibration / lab calibration of sensors & transmitters.
- g. Assisting in preparation of specification and scheme drawings for modification of existing facilities to support test requirements at Test Facilities.
- h. Regular Documentation and Engine Run Data recording Activities related to Test Facility activities.
- i. Co-ordination / inspection during fabrication at vendor's works, installation & commissioning of Electrical systems at test site, etc.

## 3. Category of Work:

Technical Work

4. Pay level of the consultant at the time of retirement

Level 10

## 5. Discipline or domain, where engagement of consultant is required:

- a. Diploma in Electrical Engineering or equivalent from a recognized University.
- b. Minimum of 16 years experience and expertise in operation and maintenance of High Mass Flow High Pressure Air Supply Facility, Compressor Test Facility, Roof mounted and Ground Mounted Thrust Stand System for aero engine testing.

## 6. Expertise/skills/knowledge required for engagement as consultant:

- a. Should have expertise and experience in operation of High Mass Flow High Pressure Air Supply Facility, maintenance of electrical / electronic sub-systems in the facility such as servo stabilizers, Emergency power back up system, Electrically operated Field Valves in yard piping, etc. and Fault Diagnosis of Control System & its rectification.
- b. Should have expertise in operation and electrical maintenance of Test Cell Systems such as Roof Mounted Thrust Stand System, Electrical Load Bank & Hydraulic Load Bank of Secondary Power System (SPS), Thrust Stand Calibration System, Compressed Air Starting System, Fuel Supply System, Bleed Air Extraction System, etc.
- c. Shall have experience in Operation & Maintenance of various Aero Gas Turbine Test Facilities such as Compressor Test Facility, Environmental Control System (ECS) Test Facility, Qualification Test Facility (QTF), etc.
- d. Shall have experience in installation & commissioning and maintenance of various transmitters/sensors to measure Pressure, temperature, speed and flow in test cell and their on-site calibration including coordination for lab calibration.
- e. Should possess effective communication (both oral and written) and interpersonal skills with a strong flair for in-depth knowledge in his area of work.
- f. Shall be conversant in using computers for generation of technical write ups, reports and documents
- g. Shall be able to draft technical specification for procurement / services for various spares of Test Facilities.

(Post Code: 2025/GTRE/261)

## 7. Outline of the tasks to be carried out:

- a. Operation & Electrical Maintenance of various Aero Gas Turbine Test Facilities such as High Mass Flow High Pressure Air Supply Facility, Compressor Test Facilities, ECS Test Facility, Qualification Test Facility, Secondary Power Supply (SPS) System, Bleed Air Extraction System, etc.
- b. Operation of Roof mounted Thrust stand System in Test Cell for Installation of Gas Turbine Engines for testing and its removal. Carrying out in-situ calibration of Thrust Stand System with the engine mounted on to the thrust stand in test cells.
- c. Electrical Maintenance of all sub-systems of the test facility and carrying out of calibration of various sensors /transmitters as required by the schedule.
- d. Supervision of activities related to Test Facility and their follow up till completion and assisting GTRE personnel in ongoing project works.
- e. Any other work assigned by Technology Director-Test Facilities / Project Manager on need basis from time to time.

## 8. Estimated time period required for completion of tasks

Three years (extendable as per norms)

(Post Code: 2025/GTRE/262)

## Government of India Ministry of Defence DRDO

# Terms Of reference (TOR) for engagement of consultant

1. Whether the proposed engagement is against vacant post or for specific project

The proposed engagement is for specific project (Kaveri Dry Engine) in Manufacturing Group

2. Precise statement of objective for appointment of consultant

- Study of method sheet and drawings for critical machining operation and achieving geometrical and dimensional tolerances within micron level of accuracy.
- Manufacturing of special cutting tools and machining of critical profiles such as internal counter boring, spot facing, internal chamfering profiles, and dowel holes corrections offset machining on Kaveri dry engine components.
- To coordinate with methods and module for necessary technical clarifications.
- To provide guidance and consultancy to the operators on the above while carry out the machining
- To conduct trial machining of the component for establishing cutting parameters.
- 3. Category of Work: Technical Work
- 4. Pay Level of the consultant at the time of retirement: Pay Level 10
- 5. Discipline or domain where engagement of consultant is required
  - ITI in Machinist trade
  - Carry out critical machining operation by thorough study of Master process sheet and method sheets.
  - Maintaining micron level Geometrical and dimensional tolerances as per drawing on the project components for 2 numbers of Jig boring machine.
- 6. The expertise/skills/ knowledge required for engagement as consultant
  - 32 years of experience in Jig Boring operation of aero engine components and related knowledge
  - Critical Jig boring operation, job setting, cutting tool selection, cutting parameters etc for machining on Nickel based alloys, Titanium alloys & cobalt alloys.
  - Expert in fixture manufacturing, gear box machining, aero engine blade locking slots, and critical dowel pin holes machining, axis correction for Kaveri dry Engine project
- 7. Outline of task to be carried out

## **Annexure-4**

(Post Code: 2025/GTRE/262)

Following tasks to be carried out by engaged consultant

- Study of work orders and verification with part list
- Study of Drawing , Method sheet and Master process sheet
- Support for arrangement of necessary tools and fixtures for manufacturing
- To coordinate with QA and modules in technical trouble shooting
- Priorities the component machining as per the production schedule
- Technology development for gear box manufacturing of KDE project.
- To ensure successful execution of jobs with his wealth of experience in machining of gas turbine engine components especially aero engine componentsmade out of titanium alloys, nickel based alloys and meet the quality requirements.
- 8. Estimated time period required for completion of tasks Initially One Year& extendable as per norms.

Annexure-5 (Post Code: 2025/GTRE/263)

## GOVERNMENT OF INDIA MINISTRY OF DEFENCE, DRDO

# Terms of Reference (TOR) for engagement of consultants

1. Whether the proposed engagement is against vacant post or for specific work or project

The proposed engagement of consultant is for specific tasks in Metal forming & Joining Division of Prototype Fabrication Group of GTRE.

2. Precise statement of objectives for appointment of consultant:

The service of consultant is primarily required to assist Group Head of Metal forming & Joining Division for

- Fabrication of Lube system, Fuel system pipe line sub-assemblies for KDE engine project, ATGG engine.
- b. Preparation of job for vacuum brazing of honeycomb rings to forgings for KDE Engine project.
- c. Fabrication of sheet metal components & assemblies for ATGG engine
- 3. Category of work:

Technical Work

4. Pay level of consultant at the time of retirement:

Level 10

- 5. Discipline or domain where engagement of consultant is required
  - a. ITI, NAC (sheet metal) from recognized institute
  - b. Minimum of 18 years of experience and expertise in
    - Fabrication of pipe line sub assemblies for gas turbine engine
    - Preparation of job for honeycomb vacuum brazing.
- 6. Expertise/skills/knowledge required for engagement as consultant
  - a) Shall have expertise & experience in manual pipe bending & fabrication of pipe line sub assemblies made out of SS, Nickel alloys, titanium alloys.
  - b) Shall have expertise & experience in maintaining quality requirements on thin walled tubes made out of stainless steel, Nickel alloys, and Titanium alloys during tube bending operation.
  - c) Shall have expertise & experience in weld edge preparation of bent tubes prior to orbital TIG welding.
  - d) Shall have expertise & experience in fabrication of pipe line sub assemblies for gas turbine engines
  - e) Shall have expertise & experience in fabrication of sheet metal assemblies made out of Nickel alloys.

Annexure-5 (Post Code: 2025/GTRE/263)

f) Shall possess effective communication skills (both oral and written) and interpersonal skills with a strong flair for in depth knowledge in his area of work.

### 7. Outline of tasks to be carried out

- a) Fabrication of Lube system, Fuel system pipe line sub-assemblies for KDE engine project, ATGG engine.
- b) Preparation of job for vacuum brazing of honeycomb rings to forgings for KDE Engine project.
- c) Fabrication of sheet metal components & assemblies for ATGG engine
- d) Any other fabrication work related to gas turbine engine projects of GTRE assigned by group director of Metal forming & joining division

## 8. Estimated time period required for completion of tasks

Three years (extendable as per norms)

## Terms of Reference (TOR) for Engagement of Audit Consultant (Level-10) for FAD

- 1. Whether the proposed engagement is against vacant post or for specific project: Specific work of handling the Audit Matters of the lab
- Precise statement of objectives for appointment of Consultant and discipline or domain where engagement of consultant is required:
   The service of the consultant is primarily required to assist the officers involved in handling the audit work of the lab.
- 3. Category of Work:- Administrative
- 4. Pay level of Consultant (at the time of retirement/superannuation): Level 10 🗸
- 5. Discipline of domain, where engagement of consultant is required: Audit related documentation and correspondence
- 6. The expertise/skills/knowledge required for engagement as Consultant: The applicant must have prior experience of handling correspondence related to evacuation/monitoring/planning/documentation of Defence R&D Projects and a prior experience in handling Defence procurement proposals with a working knowledge of Defence procurement procedures, manuals, such as GFR-2017, PM-2020 of DRDO, etc. The applicant must have a sound working knowledge of computer and good writing skills, with a strong flair for in-depth examiniation of his/her areas of work. He/she must have strong knowledge on all Govt. audit matters such as ISO Audit, MFAI, IAR, CAG audit correspondence, LAO audit and its related correspondence, post contract audit, demand scrutiny and GFR.
- 7. Outline of the tasks to be carried out: Supporting the concerned officers in handling all Test audit/Local audit, demand scrutiny, procurement proposal scrutiny, and other matters as mentioned in Sl. No. 6.
- 8. Estimated time period required for complete task: Initially one year (extendable for second year, as decided by the competent authority)

(Post Code: 2025/GTRE/265)

## GOVERNMENT OF INDIA MINISTRY OF DEFENCE, DRDO

# Terms of Reference (TOR) for engagement of consultants

# 1. Whether the proposed engagement is against vacant post or for specific work or project

The proposed engagement of consultant is for specific tasks in Metal Forming & Joining Division of Prototype Fabrication Group of GTRE.

# 2. Precise statement of objectives for appointment of consultant:

The service of consultant is primarily required to assist Group Head of Metal Forming & Joining division for

- a) Fabrication of sheet metal components for KDE Engine, K-LCA Engine projects.
- b) Fabrication of sheet metal assemblies & welded assemblies for KDE Engine, K-LCA Engine projects.

## 3. Category of work:

Technical Work

## 4. Pay level of consultant at the time of retirement:

Level 7

# 5. Discipline or domain where engagement of consultant is required

- a. ITI, NAC (sheet metal) from recognized institute
- b. Minimum of 18 years experience and expertise in sheet metal fabrication activities of gas turbine engine assemblies

# 6. Expertise/skills/knowledge required for engagement as consultant

- a) Shall have expertise and experience in fabrication of sheet metal components and welded assemblies of gas turbine engine.
- b) Shall have expertise & experience in Rolling of thin metallic sheets made out of Nickel alloys, Titanium alloys, and heat resistant steels.
- c) Shall have expertise & experience in press forming of thin metallic sheets made out of Nickel alloys, Titanium alloys, and heat resistant steels.
- d) Shall have expertise & experience in fabrication of welded assemblies made out of Titanium alloys, Nickel alloys. Shall be capable of preparing the joints for TIG welding of titanium alloys.
- e) Shall have expertise & experience in carrying out dimensional inspection of assemblies prior to welding as well as after welding. Shall document the inspection results and shall coordinate for getting clearance from Engineering department/concerned shop in charge.

**Annexure-7** (Post Code: 2025/GTRE/265)

7. Outline of tasks to be carried out

- a) Fabrication of sheet metal components for KDE Engine, K-LCA Engine projects.
- b) Fabrication of sheet metal assemblies & welded assemblies for KDE Engine, K-LCA Engine projects.
- 8. Estimated time period required for completion of tasks

Three years (extendable as per norms)

(Post Code: 2025/GTRE/266)

## Terms of Reference (TOR) for Engagement of Stores Consultant for MMG (Level-7)

- 1. Whether the proposed engagement is against vacant post or for specific project:

  Specific work of handling the Stores Management of the lab
- 2. Precise statement of objectives for appointment of Consultant and discipline or domain where engagement of consultant is required:

  The service of the consultant is primarily required to assist the officers involved in handling the Stores work of the lab.
- 3. Category of Work:- Administrative / Stores
- 4. Pay level of Consultant (at the time of retirement/superannuation): Level-7
- 5. Discipline of domain, where engagement of consultant is required: Stores Management
- 6. The expertise/skills/knowledge required for engagement as Consultant: The applicant must have prior experience of handling correspondence related to Project & Build-up Stores and a prior experience in handling Stores Ledgers, Stores accounting and condemnation & disposal with a working knowledge of GFR-2017, SMG-2023 of DRDO, etc. The applicant must have a sound working knowledge of computer and good writing skills, with a strong flair for in-depth examination of his/her areas of work. He/she must have strong knowledge on Stores Disposal matters through MSTC, GeM, Ordinance Salvage Depots and other modes of disposal.
- 7. Outline of the tasks to be carried out: Supporting the concerned officers in handling all Test audit/Local audit matters.
- 8. Estimated time period required for complete task: Initially one year (extendable for second year, as decided by the competent authority)

the branch of the little of the bar bar barren and a part of the second

Annexure-9 (Post Code: 2025/GTRE/267)

## Terms of Reference (TOR) for Engagement of Consultant (Level-7) for ECSG

- 1. Whether the proposed engagement is against vacant post or for specific project:
  The engagement of consultant is for a Specific Project viz Technology Demonstration of Engine Fuel Control System Project (EFCS), Project No.: TD/14-15/GTR-128 (UCN: 320839042)
- 2. Precise statement of objectives for appointment of Consultant and discipline or domain where engagement of consultant is required:

The service of the consultant is primarily required to assist the officers/scientists during assembly, rig integration and qualification testing of EFCS. Further, the consultant shall also associate with the officers/scientists during engine integrating of EFCS and ground testing of gas turbine engine.

- 3. Category of Work:-Scientific/Technical Post
- 4. Pay level of Consultant (at the time of retirement/superannuation): Level 7
- 5. Discipline of domain, where engagement of consultant is required: Assembly and Testing of Engine Fuel Control System Line Replaceable Units.
- 6. The expertise/skills/knowledge required for engagement as Consultant: The applicant is required to have prior experience and sound working knowledge in assembly, rig integrating, engine integration and testing of Hydro-Mechanical Fuel Control System for Gas Turbine Engine. The individual should also possess strong knowledge on the intricacies and the various processes involved during assembly and testing of the critical Engine Fuel Control System Line Replaceable Units.
- 7. Outline of the tasks to be carried out:

Supporting the concerned officers in the following activities related to EFCS.

- a) Assembly of indigenous EFCS.
- b) Rig integration and Qualification Testing of indigenous EFCS.
- c) Engine integrating of EFCS and ground testing.
- 8. Estimated time period required for complete task: Initially one year (extendable for second year, as decided by the competent authority)

terminal to the second of the page of the Charles of the Contract of the Contr