SCOPE OF WORK

FOR

HIRING OF TECHNICAL SERVICES FOR DESIGN, DEVELOPMENT PROTOTYPING AND INTEGRATION OF AERO-MECHANICAL SYSTEMS

1. The hiring of Technical services will be for a period of **12 months** from the date of Supply Order.
2. Technical activities mainly involve design and development of various aero-mechanical systems of different UAV programs. This involves structural design, analysis, structural testing, Environmental Stress Screening (ESS) testing, aerodynamic studies, propulsion system integration studies, design of Ground Handling Equipment(GHEs) / Ground Support Systems (GSEs), General Systems, design of hydraulic circuits, development of Landing gear systems, mechanical prototype fabrication, mechanical integration, pre-launch activities etc. Since the R&D work are under development in nature, the activities may be repeated or additional activities may be required in order to realize the final product acceptable to the users.
3. The technical services activity involves the following tasks to be executed during the contract period by dedicated team . The technical services hired through this demand need to work at various technology divisions throughout the contract period on all working days and Saturdays and Sundays only on need basis.
4. The skill set to carry out these activities are identified as, ITI holders, Diploma in Engineering / and degree Graduates. And the entire technical services hired through this demand should work with technology divisions on all working days as mentioned in para-3 above; the cost estimation is made based on the data from Minimum Wages Act, Ministry of Labour.

5. This scope of work made to three parts as follows :

    Part-A: Technical Requirement

    Part-B: Terms and Conditions of Contract

    Part-C : Vendor Qualification Criteria

PART-A: TECHNICAL REQUIREMENT

The following work shall be carried out for the development activities towards Design, Development and Successful completion of the task:

1. **STRUCTURAL DESIGN AND ANALYSIS OF AERO-MECHANICAL SYSTEMS**

1.1 Activities:

a) Assist system managers in carrying feasibility study, conceptual design, configuration design and layout design of UAV variants.
b) Preliminary design of UAV airframe structure with metallic and composite materials.
c) Design and development of airborne LRUs.
d) Assisting analysis engineer in carrying out stress analysis, thermal analysis, impact analysis, fatigue analysis, aero-elastic studies
e) Generation of engineering drawings for manufacturing, assembly & testing
f) Co-ordination with in-house prototype fabrication agency for hardware realization
g) Carrying out equipment layout, Weight and CG management studies in CAD & MS Excel package.
h) Assisting IT manager in CAD center maintenance & up gradation.

1.2 Skill-Set Required:

a. Should be able to read and analyze engineering drawings, drawing symbols
b. Knowledge of Solid works / CATIA and Auto CAD software tools.
c. Knowledge of MS office tools (word, excel, ppt, project)
d. Knowledge of materials science, composites, manufacturing.

2. **STRUCTURAL TESTING AND ENVIRONMENTAL STRESS SCREENING (ESS) ACTIVITIES**

2.1 Activities:

a. *Section vibration test in X, Y & Z direction*: This involves vibration test of airframe module as per ADE specifications, Surface preparation and installation of 8 Tri-axial accelerometer sensors on the module at different locations and on vibration shaker/slip table as per SOP, Continuity check of low noise cables, Connection of accelerometers to data acquisition system, Vibration data acquisition for module-1 in X, Y and Z axes, Carry out vibration data analysis.
b. *Preparation of test fixture/wiffle tree and checking of sensors for static/dynamic test* : This involves Modelling and analysis of test fixture as per test requirement, Fabrication of test fixture, Design and fabrication of wiffle tree as per loading scheme, Calibration checks for LVDTs, load cells and accelerometers, Self-calibration checks for data acquisition systems
c. *Static load test wing/airframe* : This involves Surface preparation for strain gage installation using degreasing agents and fine emery, Installation of single axis, rosette strain gages with proper alignment using standard strain installation procedure, Three/Four wire configuration in quarter bridge circuit, Fixing of test articles on fixture/hard flooring, Positioning of wiffle tree on test article and load tree balancing, Installation of load cells and LVDTs at designated loading/response locations as per

test plan, Strain gage, LVDT and load cell connectivity check with data acquisition system, Strain, displacement and load data acquisition and analysis.

d. *Wing deployment/wing frequency test*: This involves Marking of accelerometer locations on wing, Positioning of accelerometers on the wing, Continuity check of low noise cables, Laying of low noise cables from accelerometers to data acquisition system, Excitation of wing using tap/impact hammer for frequency test, Acquisition of accelerometer time history, Extraction of wing frequency/wing deployment time.
e. *Ground vibration test*: This activity involves Marking of accelerometer locations on airframe, Positioning of accelerometers along pitch/yaw direction, Continuity check of low noise cables, Laying of low noise cables from accelerometers to data acquisition system, Connection of modal shakers to data acquisition system, if needed, Suspension of airframe using nylon belts, Excitation of structure using modal shakers or impact hammer.
f. *Structural coupling test*: This activity involves Arranging the bungee cord in required number of loops to separate the flexible and rigid modes, Positioning of accelerometers at desired locations, Connection and setting up of the sensors in terms of channel count and sampling rate with data acquisition system, Excitation to control surfaces for different test cases through signal generator, Capturing of response using data acquisition system, Data analysis, interpretation and validation.
g. *RTRS/Flight trials and post flight data analysis*: This involves Surface preparation for structural instrumentation, Installation of single / rosette strain gages and accelerometers at critical locations as desired by the design, Retrieval of strain and vibration data from telemetry after highspeed ground test/flight test, Processing, signal analysis, interpretation and comparison with previous flight/ground test results.
h. Assisting system managers in carrying out Environmental Stress Screening Tests like temperature cycling, shock test, humidity test, rain water test, mud test, sand test, lightening test etc.

2.2 Skill-Set Required:

a. Should be able to read and analize engineering drawings.
b. Knowledge of MS office tools (MS word, MS excel, MS ppt, MS project)
c. Knowledge of matlab
d. Knowledge of concepts of engineering mechanics and solid mechanics / strength of materials

3. DESIGN & DEVELOPMENT OF LANDING GEAR SYSTEMS & GENERAL SYSTEMS

3.1Activities:

a. Design & Development of Hydraulic Circuits, required for UAVs and to implement it on Iron Bird Structure along with Interfacing components and Actuators.
b. Working for design & development of Landing Gear System and Integration with UAV and Interaction with certifying agencies to evolve the qualification and acceptance criteria etc.
c. Design & development of Iron bird structure along with hydraulic interfacing
d. Design & development of on-board / ground general systems

e. Development of weapon bay related systems.
f. Solid Modelling of LG Components, Hydraulic system components and circuits.
g. Drawing generation of the Components and Assembly.
h. Interaction with work centres for realization of hardware
i. Testing and integration activities
j. Interaction with manufacturing centres for realization of hardware
k. Maintaining fasteners and assemble prototype

3.2Skill-Set Required:

a. Should be able to read and analyze engineering drawings, hydraulic circuits.
b. Knowledge of Solid works / CATIA and Auto CAD software tools.
c. Knowledge of MS office tools (word, excel, ppt, project)
d. Knowledge of materials science, concepts of fluid mechanics.
e. Coordination with Work Centers and Assembly of hardware, testing and integration works.
f. Expertise in 3-D modeling, generation of drawings and assembly of hardware

4. AERODYNAMIC STUDIES

4.1Activities:

a. Assisting system manager in carrying out Aerodynamic design and analysis of for various aircraft configurations
b. Assisting system manager in carrying out performance evaluation of for various aircraft configurations.
c. Assisting system manager in carrying out aerodynamic data generation for flight mechanics studies for various aircraft configurations.
d. Assisting system manager in carrying out air load estimation for structural design for various aircraft configurations.
e. Assisting system manager in carrying out CFD analysis, wind tunnel testing and post flight analyses of for various aircraft configurations.
f. Assisting system manager in carrying out stores integration and separation studies with aircrafts
g. Assisting system manager in carrying out applied research in the field of advanced aerodynamics.

4.2Skill-Set Required:

a. Should be able to read and analyze engineering drawings.
b. Knowledge of Solid works / CATIA and Auto CAD software tools.
c. Knowledge of MS office tools (word, excel, ppt, project)
d. Knowledge of concepts of fluid mechanics, aerodynamics.
e. Knowledge of Matlab / python / C / C++

5. PROPULSION SYSTEM INTEGRATION

5.1 Activities:

a. Design and development of Fuel system components
b. Design and development of test rigs and Ground Support Equipment for the Fuel system components
c. Qualification of fuel system components

d. Documentation of qualification and testing activities
e. Integration of fuel system on UAV.
f. Assembly of fuel system components (Accumulator, filter, fuel NRV, pneumatic NRV, P2 hose, Different size of fuel hoses etc) in rigs for testing and final assembly in airframe
g. Fuel leak check and flow checks for flight trials
h. Shifting of Components(Accumulator, filter, fuel NRV, pneumatic NRV, P2 hose, Different size of fuel hoses etc) and Rigs (Fuel charging rig, 22kg gas bottles, weighing machine) from division to integration site and to Vibration testing site

5.2 Skill-Set Required:

a. Should be able to read and analize engineering drawings.
b. Knowledge of Solid works / CATIA and Auto CAD software tools.
c. Knowledge of MS office tools (word, excel, ppt, project)
d. Knowledge of concepts of fluid mechanics, aerodynamics

6. PROTOTYPE FABRICATION

6.1 Activities:

Manufacturing, fabrication and processing of metallic components are being entrusted with a dedicated prototyping centre at ADE. Manufacturing and fabrication of mechanical components including reworks are being facilitated with this team. This division consists of Production planning and Control (PPC) section, Machine Shop, CNC Shop, welding section, Electro-Plating Shop, Maintenance Section, Raw Material Stores etc. major activities at different work centers of fabrication division are as follows

a. **PPC Section**: Carrying out feasibility study, carrying out material estimation, preparation of RFA file, assisting process team in generating process plan document, interaction with users for any technical clarifications, obtaining daily status of activities from various work Centers, Updation of status in PPC computer centers, maintenance of PPC CAD centre.
b. **Raw material cutting section and stores**: Loading & unloading of raw materials (metallic) to various cutting machines, assisting in raw material cutting, segregation, cross checking of user supplied materials against specification in engineering drawing.
c. **Machine shop**: Carrying out machining, turning, grinding, milling, precision machining, Loading and unloading of jobs, comparing material supplied against engineering drawing, assisting inspector for carrying out stage inspection, assisting in tool crib maintenance, assisting in machine maintenance etc.
d. **CNC shop**: Carrying bout CNC programming, CNC milling operations on different machines, Loading and unloading of jobs, comparing 3D CAD model given by user with engineering drawing, interaction with user / internal customer/PPC, Machining, etc., assisting inspector for carrying out stage inspection, assisting in tool crib maintenance, assisting in machine maintenance etc., communication to user and PPC about status of job cards status.
e. **Welding section**: Assisting welder in carrying out TIG welding operation, gas cutting, arc welding plasma cutting etc. cleaning of jobs before and after welding, coordinating with PPC for any technical clarifications, inventory log book

maintaining of welding safety items, welding accessories, coolants etc.

f. **Electro-plating shop**: Preparation of electrolyte bath as per requirements, loading & unloading of jobs, communication to user and PPC about status of job cards, Inventory log book maintain of safety equipment etc.
g. **Painting shop:** Preparation of painting and primers as per requirements, communicationtouserandPPCaboutstatusofjobcards,Inventorylogbook maintain of safety equipment etc.
h. **Maintenance section***:* Carrying out preventive and breakdown maintenance (mechanical & electrical) activities at various work centers of PET, Inventorylogbook maintain of safety equipment, maintenance equipment etc., assisting in providing service of material handling equipment like battery trolley ad fork lift services to various divisions / work centers, inventory of grease, coolants, spares, accessories etc.
i. **Sheet metal shop***:* Carrying out all sheet metal activities,. Tooling development, generation of development drawings, interaction with user / internal customer/PPC, Machining, etc., assisting inspector for carrying out stage inspection, assisting in tool crib maintenance, assisting in machine maintenance etc., communication to user and PPC about status of job cards status

6.2 Skill-Set Required:

a. Experience in turning, milling, grinding, material cutting, welding, electro-plating, painting, CNC programming sheet metal work
b. Should be able to read and analyze engineering drawings,
c. Knowledge of Solid works / CATIA and Auto CAD software tools.
d. Knowledge of MS office tools (word, excel, ppt, project)
e. Knowledge of drawing symbols, fasteners rivets, material science, anchor nuts, torqueing schemes etc.
f. Excellent communication skills

7. DESIGN OF GROUND HANDLING SYSTEMS AND GROUND SUPPORT SYSTEMS

7.1Activities:

a. Assist system manager in Design & Development of GHEs / GSEs like CG rigs, assembly jigs & fixtures, assembly trolley, transportation trolley, testing fixtures etc.
b. Generation of engineering drawings manufacturing, assembly & testing
c. Co-ordination with in-house prototype fabrication agency for hardware realization

7.2 Skill-Set Required:

a. Should be able to read and analize engineering drawings,
b. Knowledge of Solid works / CATIA and Auto CAD software tools.
c. Knowledge of MS office tools (word, excel, ppt, project)
d. Knowledge of drawing symbols, fasteners rivets, material science, anchor nuts, torqueing schemes etc.

8. MECHANICAL INTEGRATION OF AIRCRAFT

8.1 Activities:

a) Preparation of set of structural members and fasteners as per engineering drawing.
b) Ensure that all structural members are properly positioned, aligned and fastened with specified fasteners/rivets/anchor nuts and torque as per drawing for all modules of the

airframe.

c) Assembly of various sub-systems / systems, Booster section, wing, wing deployment mechanism, fin mechanism, actuator mechanism etc as per respective Standard Operating Procedures (SOPs).
d) Trial assembly of all LRU's as per layout plan with proper fastener.
e) Matching and fastening of skins for all modules and fixing with specified fasteners.
f) Offering of all modules for Quality Assurance (QA) team inspection and rectification of observations if any for QA team clearance.
g) Preparation of dummy article for Layout studies and initial launch trials.
h) Preparation of technological article for various ground tests
i) Assisting in carrying of CG measurements, fin orthogonality checks, booster thrust line measurement tests etc.
j) Assisting System Manager in design and development of various GHEs & GSEs.

8.2 Skill-Set Required:

a. Should be able to read assembly drawings
b. Knowledge of fasteners, rivets, anchor nuts, drawing symbols, jigs, fixtures
c. Knowledge of Solid works / CATIA and Auto CAD software tools.
d. Knowledge of MS office tools (word, excel, ppt, project)

9. DESIGN AND FABRICATION OF COMPOSITE MATERIALS / STRUCTURES

10.1 Activities:

a. Assist in fabrication of prototype composite components using advanced composites and processes.
b. Testing and characterization of raw materials & composites through mechanical testing, thermo-analytical techniques, NDT techniques etc
c. Co-ordination with related aero-mechanical divisions for design data generation, study of characterization, performance of composites.

10.2Skill-Set Required:

a. Should be able to read engineering drawings
b. Knowledge of MS office tools (word, excel, ppt, project)
c. Knowledge of material science, mechanical testing, ND Evaluation.
d. Knowledge of Auto CAD, Solid Works/CATIA CAD packages.

10. TECHNCAL SUPPORT ACTIVITIES & DOCUMENTATION

11.1 Activities:

a. Evolve test plan & SOP towards structural testing, vibration testing and certification
b. Liaison with vendors for manufacture, assembly, mechanical integration, testing & prototype activities towards product realization
c. Documentation of qualification and testing activities
d. Documentation of integration activities

e. Preparation of QA documents
f. Preparation of SOP documents for Realization, testing and integration of fuel system components
g. Generate various documents like Standard Operating procedures (SOP), Acceptance Test Plan(ATP), Qualification Test Plan (QTP), Process planning documents, Quality Assurance Plan (QAP), Inspection report, Technical memos, change document, design document, analysis document, assembly document, welding sequence document, work instructions, maintenance manual, safety manual, ISO/AS 9100 documents, Management Review Input reports, Process performance reports, post flight analysis documents, Defect Investigation (DI) reports, calibration reports, test reports etc
h. Preparation of presentation for Group Directorate Council Meeting (GCM), Technology Directorate Council Meeting (TCM), Lab Council Meeting (LCM), Flight Readiness Review (FRR) meetings, Mission Readiness Review (MRR) meetings etc
i. Preparation of test reports and various associated documents
j. Preparation of Job card status reports, shortage list at fabrication centre
k. Document / drawing scanning and maintaining of the scanned documents in database and retrieving the data wheneverrequired.
l. Preparation of Interface documents, Interconnectivity documents etc
m. Requirements generation for new LRUdesigns
n. Estimation and generation of requirements for Ground Support Equipment forIntegration
o. Flight trial support.
p. Drafting Notes, IONs, Contingency items, Entry the leaves etc.
q. To draft letters to maintain files for outgoing and incoming documents/files
r. Interaction with users / internal customers and PPC about status of job cards
s. Maintenance of Inventory log book maintain of safety equipment, welding accessories, paint consumption log book, stationary log book, effluent log book, cleaning, material log book etc.
t. Activities as and when assigned by work centres of ADE.

11.2Skill-Set Required:

a. Knowledge of MS office tools like MS word, MS excel, MS ppt, MS project
b. Excellent written and oral communication skills
c. Ability to read, understand and talk in English language
d. On need basis, candidate(s) should be ready to travel to flight trial site/range at Chitradurga, Karnataka, India for technical support activities.

11. PURCHASE MANAGEMENT

12.1 Activities:

a. Maintenance of finance and accounts data, compilation and preparation and submission of yearly forecast and revised budget estimates, regular monitoring and control over expenditure

againstbudgetallocation,maintainingcommitment/expenditurefigures,preparation andpropersubmissionofexpenditure reports, scrutiny and reply to audit observations/objections raised by management, local audit/test audit, interaction with HQ, and customers pertaining to budget and fund allocation are need to carried out through Budget & Accounts Division.

b. Purchase management, operation and logistic support consist of: Data entry in various registers and software, Assist in meetings, Preparations of minutes etc.
c. Orders, letters, approvals etc., Organising files, Settings of bills, Advance copy, Briefing papers, Sending and receiving mails etc.

12.2Skill-Set Required:

a. Knowledge of MS office tools like MS word, MS excel, MS ppt, MS project
b. Excellent written and oral communication skills
c. Ability to read, understand and talk in English language

PART-B: TERMS AND CONDITIONS OF CONTRACT

1. **Selection of Candidate**: The candidates referred by the contractor will be screened by an internal screening committee (constituted by ADE) to assess the candidate suitability to the technical requirements projected in this document. The candidate will be selected or considered only if his / her skill set meets the requirements of ADE.

2. **Salary Disbursement**: The salary shall be disbursed to the savings Bank account of the employees so deployed by the contractor latest by 05th of every calendar month and proof of ESI deductions, EPF deductions (if applicable) to be submitted along with bills.

3. **Issuance of Pay slip**: The contractor shall issue Pay Slips to all his/her employees, the complete details of their entitled minimum wages as per Minimum Wages Act (and related notifications/amendments) and ESI (if applicable), EPF, Gratuity (if applicable), bonus(if applicable)other allowances and statutory deductions and copy to be submitted to ADE for clearing the bills. The contractor should provide the details of individual's EPF and ESIC account number and monthly EPF and ESIC contribution remittance transaction number to ADE. Contractor to issue salary slips (post salary disbursement), in presence of ADE representative at ADE after getting candidate signature in a well maintained '**Wage register'.**

4. **No. of Working Days**: The contract employees deputed by the contractor are required to work 26 days in a month. However, the salary will be paid to the candidate as per the actual number of days present and worked towards assigned activities. ADE will be forwarding monthly attendance details to the contractor, which shall be considered for payment calculations.

5. **Variable Dearness Allowance (VDA) amendments**: Any increase w.r.t. minimum wages act notification pertaining to VDA / ESI / EPF based on Govt. notification as applicable from time to time, the contractor has to pay them to his/her employees of this contract. The same will be reimbursed by ADE based on the supporting documents provided by the contractor such as Govt. notification, proof of payment etc, without which the payment will not be made. The rates of minimum wage may be obtained from official website of Chief Labour Commissioner (central), New Delhi which updates twice in a year i.e. April and October.

6. **Bonus Clause (If applicable)**:If a candidate works for more than 30 days in a financial year, Vendor to provide monthly bonus to all **eligible personnel** as per latest govt. regulation/notification as per the Payment of Bonus act, 1965.

7. **Working hours**: The contract employees deputed by the contractor should reach office on or before 0815 hrs. on all working days and should not leave the establishment before 1645 hrs. (Thus ensuring minimum of 8.5 hours of duty every

day which includes 30 minutes of lunch break). All the working hours will be recorded in attendance register maintained at Work Centre where candidates are deputed.

8. The contractor and his/her employees will be bound by as per the rules & regulations of the organization for Security & Administrative requirements.

9. **ADE Infrastructure damage Clause**: Personnel deployed by the contractor at ADE shall be making use of the infrastructure and technical facilities of ADE under the guidelines of the concerned Divisional/Section Officers. The contractor is solely responsible for any damage or malfunction of any of the infrastructure of ADE due to mishandling by the deputed candidates. The damage cost thus incurred (if any) will be deducted from contractor's payment.

10. **Issuance of Joining letter**: The contractor shall issue necessary **identity cards & joining letters** on appointment, relieving letters on resigning, experience letter on resignation (on candidate's request) to the employees so deployed by him. Candidate's salary details, designation, rules and conditions of the contract to be clearly mentioned in the Joining letter.

11. **Facilities to deputed candidates**: The hired technical services work may be executed by vendor's personnel within ADE's Premises, using ADE's systems & infrastructure. The firm is not required to supply any equipment or raw material for the job. The personnel deputed by the contractor shall make their own arrangements for transport to attend the office. However, the washroom, working area, canteen facility will be made available for the deputed candidates inside ADE premise.

12. **Termination of service of deputed candidate**: ADE shall have the right to dispense with the services of any persons deployed by the contractor for **non- execution of the assigned task satisfactorily or for violating of office discipline during the contract period**. Vendor / contactor will be responsible for the misdeeds or non-compliance of security/ administrative rules and regulations.

13. **Relieving Clause**: The candidate who wish to terminate the contract, should submit a written resignation letter to ADE through the contractor at least 7 days in advance. The contractor to provide a suitable replacement for the resigned candidate within 7 days of time.

14. **Leave Clause**: The deputed contract employees are eligible for maximum of two days of paid leaves per month. However, the leave to be recommended, approved and sanctioned by the ADE work supervisor or as decided by ADE team as per time to time ADE requirements. Any unauthorized absence from place of duty or unsanctioned leaves of candidate will attract penalty on candidate and contractor. This will also lead to immediate termination of the candidate from the contract.

15. **Background Verification of deputed candidates** : The contractor should also check

all the documents, marks sheets, experience certificate (if applicable), relieving letter from previous employer (if applicable), other credentials of the candidates before selecting them for ADE interview / screening or before giving joining letter to the candidate. The vendor/contractor concerned will also be required to produce a Police Verification certificate, character certificate and antecedents of all the personnel who may be detailed to work inside ADE premises. An attested copy of the valid Passport of the individual concerned is also acceptable in lieu of the Police Verification certificate.

16. **Income tax deductions**:Income tax shall be recoverable from the vendor's/contractor's bills as per rules.

17. **Change of deputed candidate**:In case of any change in the person(s) deployed in course of execution of the contract (due to resignation / dismissal of candidates), vendor must ensure the replacement within 7 days of time.

18. **Non-Disclosure Clause**: Any documents, products, drawings, test reports, databases, letters of correspondence and such other related information are solely property of ADE and the same should not be carried out of ADE premises in any form without the written permission from Director, ADE.

19. **Security Breach**:Vendor must be responsible for any breach of rules including security rules, information pilferage, usage of electronic/memory devices like flash memory devices/USB drives/thumb drives/CD/DVD/mobile phones etc., inside ADE premises. Contractor is solely responsible for any security breach by the deputed candidate via social media accounts like face book, whatsApp, instagram, linked-in etc.

20. Vendor should provide email-ID, fax no., mobile no. and office phone numbers for communication.

21. **Outstation Service**: It is to be noted that on need basis, deputed candidate(s) should be ready to work at **ADE's flight testing and trial sites**for technical support activities. These activities include manufacturing support activities, mechanical integration work, structural testing, propulsion system and composite lay-up related activities. Vendor has to provide a minimum daily allowance for all deputed personnel towards their transportation, accommodation and food expenses incurred. This shall be worked out for maximum of **250 man days per year**. The contractorshould meet the expenses for the above from their '**Service charges**' itself.

22. It is estimated from the past performance the above mentioned activities may be completed within **1608 man-months.**

Sl No.	Category	Man-months
1	Semi-skilled (ITI)	35 x 12 = 420
2	Skilled (Diploma) / Degree	25 x 12 = 300
Total		**720 Man months**

23. **Issue of Safety PPE Kits** :The contractor should issue **safety shoes** (one set per year), **safety helmet** (one No. per year), and **safety jacket/coat** (with firm name printed on the coat/jacket) (one set per year) to all the deputed personnel. It is mandatory requirement for **all the deputed candidates as per the industry safety policy of DRDO.** The contractorshould meet the expenses for the above from their '**Service charges**' itself. Contractor to ensure that the issued safety gear(s) are surrendered by the candidates who resign from the contract or terminated from the contract before relieving them. And the replaced candidates to be provided with new safety gear(s)

24. **Work Supervision by Contractor** :The contractor should depute a supervisor to monitor, supervise & review the progress of the activities and adherence to safety norms, adherence to security norms, grievance re-dressaletc by his candidates. The supervisor is expected to review the work at least twice in a week. Suitable seating place will be provided to the supervisor (by ADE) to carry out his work. Supervisor also to ensure correctness of all the documents provided by him for the processing the payment is in order. Supervisor is also responsible for taking acknowledgement from the candidates for monthly credit of salary, EPF, bonus, ESI etc.

25. **Contract Termination Clause** : ADE reserves the right to terminate the contract on following conditions :
    (i) Not meeting timeline targets as defined
    (ii) Unannounced / unauthorized leave of deputed employee for more than a week
    (iii) Not adhering above terms, (iv) Dereliction of duties, (v) Not adhering to ADE safety norms, ADE security norms, ADE IT Policy, (vi) Unsatisfactory performance or unproductive performance of deputed contract employee , (vii) Violating Office discipline, misconduct of any means which tarnish the Organisation, (viii) Non-payment of salary to the deputed candidates, (ix) Discretion of the Director, ADE

26. **Proprietary Clause**: All items developed by contract employees under this contract are proprietary of ADE and shall not be disclosed and supplier does not have any rights on the work carried out during the contract period.

27. Contractor shall maintain highest level security for the items developed and for the development environment for this contractual work.

28. **Insurance Scheme** : Contractor is expected to provide an appropriate insurance scheme for the deputed candidates who are not covered (or for those who are eligible as per labour laws) under ESI scheme or as per the eligibility. The premium for the insured candidate shall be of the same percentage as current ESI rates, i.e 3.25%. The insurance offered by the contractor should cover medical benefits, sickness benefits, maternity benefits, dependent benefits, disablement benefits and other benefits as defined in ESI act, 1948.The contractorshould meet the expenses for the above from their '**Service charges**' itself. The vendor/contractor is solely responsible for incurring expenditure

for any injury (accidental / non-accidental) caused to their personnel who may be detailed to work at ADE and also during transit to the work places. ADE will not be responsible for any injury/death of deployed man power / technical services during the execution of job. Contractor is solely responsible for any personal injuries (accidental / non-accidental) caused to the deputed staff at ADE, Bangalore or its flight trial sites (during outstation work). Contractor to bring out the insurance coverage for the deputed staff (Clearly mentioning major and minor accidents/incidents) as per the govt. industrial act norms during pre-bid meet at ADE. Contractor should submit the proof of Insurance to ADE after placemen of supply order.

29. **Payment to Contactor :** Contractor to furnish the following along with monthly bill / invoices without which the same shall not be processed. All ti documents to be submitted to ADE for processing within 2 days from the salary disbursement :
    a) Monthly attendance sheet of contractual employees
    b) Monthly detailed salary sheet (clearly mentioning all deductions, employer contributions etc)
    c) EPF monthly contribution remittance sheet
    d) ESIC monthly contribution remittance sheet
    e) Proof of remittance in EPFO portal for online transaction
    f) Monthly bonus to contractual employees (if applicable)
    g) Photocopy of Contractor's licenses(valid license) issued under contract labour (regulation and abolition) act, 1970. (it should be ensured that the license remains valid throughout the contract period)

30. **Penalty Clause** : Failure of in-time payment to deputed candidates or partial delivery of services will attract a penalty of 0.5 % week (or as applicable). This penalty is applicable for all **non-paid services** by the contractor.

31. **Adherence to Labour Laws by the contactor** :
    Contractor to ensure strict and mandatory adherence to following acts/rules/regulations and their corresponding latest amendments/notifications from respective ministries :
    a) Contract Labour Act (Regulations and Abolition), 1970
    b) Minimum Wages Act, 1948
    c) Payment of Bonus Act, 1965
    d) Payment of Gratuity Act, 1972
    e) Employee compensation Act, 1923
    f) Payment of wages Act, 1936
    g) Factory Act, 1948
    h) Employees State Insurance Act, 1948
    i) EPF and Miscellaneous provision Act, 1952
    j) Maternity Benefit Act, 1961
    k) The equal remuneration Act, 1976
    l) Employee's pension scheme, 1995

PART-C: VENDOR QUALIFICATION CRITERIA

1. Vendor / firm / Industry partner should be a registered Indian vendor

2. Firm to have at least 3 years of experience in supplying / deputing competitive and talented human resources to reputed organizations / Institutes / DRDO laboratories.

3. Firm to furnish at least one completed SO copy along with technical bid.

5. Industry Partner to furnish a photocopy of Contractor's licenses (valid license) issued under contract labor (regulation and abolition) act, 1970. Otherwise firm will not be technically evaluated.