Form 1 – Application for INCOSE ASEP, CSEP, and Extensions

Form 2 contains detailed instructions for guidance on preparing this application form.

A few helpful hints for working with this form:
- **The shaded areas in the form are for you to type or paste inputs, they will expand to accommodate any length of text.**
- **The check boxes can be activated with a click of your left mouse button to check or uncheck the box (i.e., insert (or remove) an "X" in the square boxes).**
- **The form is protected to prevent unauthorized modifications.**
- **Please submit this form when completed in its current Microsoft Word format; do not convert it to any other format, such as PDF, for submittal. Forms not submitted in the original Microsoft Word format will be returned to the applicant.**

Section 1: General Information

Applicant's Name:
   Family: Sharma   Given: Rajesh   Middle Initial:

Year of Birth: 1976   Birthplace (City, State, and Country): **BANGALORE, KARNATAKA, INDIA**

Mailing Address:
  Number & Street: No. 24, B Block, Radial Road, Connaught Place
  City: NEW DELHI
  State or Province: Delhi
  Zip or Postal Code: 110001
  Country: India

E-mail Address: rajesh.sharma@incose.org

Phone Numbers:
  Business: +91 11 2586 2966
  Home: +91 11 2331 7751

Name of Present Organization: Xylophones, Yaks, and Zippers, Incorporated (XYZ, Inc.)

Address of Present Organization:
  Number & Street: Priya Complex, Basant Lok, Vasant Vihar
  City: NEW DELHI
  State or Province: Delhi
  Zip or Postal Code: 110057
  Country: India

Section 2: INCOSE Membership & Certification Interest

Are you an individual, senior, or student member of INCOSE? Yes ☒ No ☐
(Note that applicants for ASEP must be members of INCOSE.)

If yes, what is your INCOSE member number? 12345
For how many years have you been an INCOSE member? 1

Do you currently have or have you ever had any level of INCOSE SEP certification?
Yes ☐ No ☒

If yes, please indicate the current level, certification number, date attained, and expiration date.
☐ Associate Systems Engineering Professional (ASEP)
    Certification Number   , Date Attained   , Expiration Date
☐ Certified Systems Engineering Professional (CSEP)
    Certification Number   , Date Attained   , Expiration Date
☐ Expert Systems Engineering Professional (ESEP)
    Certification Number   , Date Attained   , Expiration Date N/A

Type of Certification Requested with this Application – Please Indicate in List Below
☐ Associate Systems Engineering Professional (ASEP)
☒ Certified Systems Engineering Professional (CSEP)
☐ Transition from ASEP to CSEP
☐ Acquisition Extension (Acq)
(Note: if applying for ESEP, please use Form 41, not this form.)

Exam First Option for CSEP Applicants Only

Applicants have the option of taking the exam prior to having their application package completed, reviewed and approved. If applicants choose this option they must agree to the following conditions:

- All sections of this form must be completed and submitted along with the non-refundable application fee.
- Applicants will be authorized to take the certification exam before INCOSE receives the recommendations from their references or reviews their experience.
- Applicants will be authorized to take the exam at most three times within one year of application submission.
- Applicants will pay the exam fee separately to the testing organization each time the exam is scheduled.
- Applicants will not be allowed to claim or use the notation of INCOSE Systems Engineering Professional (SEP) until they have been notified by INCOSE that they have successfully completed the entire certification process (e.g., not by only passing the certification exam).

I wish to exercise this option and acknowledge the above conditions: Yes ☒   No ☐

Section 3: Fee Payment (Applicable Fees Are Listed on the INCOSE Web Site at https://www.incose.org/cc_orders/incosecertpayment.asp)

Is your present organization a member of the INCOSE Corporate Advisory Board (CAB)?
Yes ☐ No ☒

(See http://www.incose.org/about/organization/cab.cfm for a list of CAB organizations)
Note: Employees of CAB organizations are eligible for INCOSE-member discounted application fees.
I have submitted the non-refundable application fee via: ☒ Credit card payment in the amount of $300 made online at the Certification Payment page of the INCOSE website, if application is being submitted electronically ☐ Check in the amount of $ _____ enclosed with this application, if application is being submitted in paper form ☐ Part of a group payment: Indicate organization name and date of payment:

Section 4: Education – CSEP only, ASEP Applicants & Acquisition (Acq) Extension Applicants Skip to Section 7

Colleges and Universities:*	From	To	Date of Graduation	Major Field	Degree
1. Indian Institute of Technology, Kanpur	2003	2005	Jun 2005	Radio Frequency Design Technology	Master of Technology
2. Naval College of Engineering	1996	2000	Jul 2000	Electrical Engineering	Bachelor of Technology
3.					
4.					

* Copies of college or university transcripts or diplomas must be submitted as proof of having received a degree

Section 5: Experience – CSEP only, ASEP Applicants & Acquisition (Acq) Extension Applicants Skip to Section 7

Objective: The applicant must describe the requisite minimum years of experience (five (5) for CSEP) in performing/demonstrating systems engineering functions, tasks, and leadership in the areas defined in Attachment A to Form 2. Under "Your Duties and Responsibilities" include the depth of full detail typically provided on a job resume about the SE tasks/functions you performed and the products produced. **Applications with insufficient detail may result in denial.**

Education/Experience Compensation: Applicants who lack a technical Bachelor's degree must describe an additional five (5) years of engineering experience with a non-technical Bachelor's degree, or an additional ten (10) years of engineering experience in lieu of no Bachelor's degree. The additional years of engineering experience required to compensate for lack of a technical Bachelor's degree may be in any engineering field, including systems engineering.

List Your Experience:
1. **Start with your current position (P1) and continue in reverse chronological order.**
2. **Be sure to complete the table at the end of this section with a summary of your total months of systems engineering experience in all SE functional areas and job positions.**

Please indicate your status and the minimum years of experience that are applicable to you:

☒ Technical Bachelor's degree – five (5) years
☐ Non-technical Bachelor's degree – ten (10) years
☐ No Bachelor's degree – fifteen (15) years
Note: INCOSE is the final authority on degree applicability.

P1 Date (Month & Year) From: Jun 2011 Date to: todate

Organization Name: Xylophones, Yaks, and Zippers, Incorporated (XYZ, Inc.)

Immediate Supervisor/Peer:
   Name: Cmde Deepak Verma
   Title: Director
  Address: 34 Khan Market New Delhi-110003, India
  E-mail Address: Deepak.verma@incose.org
  Phone Number: +91 11 6600 0666

Reference(s) that will cover this position (if none, state so): Reference 1,2,3

Your Title/Position: Senior Systems Engineer

Your Duties and Responsibilities:
(**NOTE: The attached box for your inputs will expand to accommodate the information you provide; the size of the empty box is not an indication that limited input is expected.**)
Requirements Engineering (4 month, Ref: Commodore Deepak Verma, Cdr Amit Bhatnagar, Cdr Anil Singh): Formulated Systems Requirements of ABC123 Air warfare, Surface warfare, Navigation, aircraft control modes. Refined system requirements of Simulator subsystem. Performed functional analysis of Air-warfare (AW), Surface warfare (SW) of ABC123 and ABC 134 Projects. Analysed and formulated requirements of ABC system interface with HIJ and

MNOP.

Technical Planning (2 months, Ref: Cdr Amit Bhatnagar): Formulated detailed project plan for Project ABC123; Carried out risk assessment and made risk response plan. Ensured compliance to project plans towards achievement of project milestones viz., SRD submission, SAD submission, test documents submission. Tracked the progress of Project ABC123. Identified and analysed risks to development and integration milestones in respect of organisation's work share.

Architecture/Design Development(4 months, Ref: Commodore Deepak Verma, Cdr Amit Bhatnagar, Cdr Anil Singh): As a senior member of architecture team, participated in formulation of Functional architecture of ABC123 and ABC134 equipment. Major tasks within this team included designing the Air-warfare (AW), surface warfare(SW) and Tri-Platform Integrated Multisensor Data (TPIMD) interface messages and documenting them in ICDs. Participated as member of team to review Software Architecture of Central Data Manager (CDM), TPIMD, Fault Tolerance System(FTS), Simulator subsystem, Air Warfare(AW) and Surface Warfare(SW). Key task within this team was to ensure these elements could demonstrate full compliance against Customer requirements.

Qualification, Verification, and Validation(3 months, Ref: Commodore Deepak Verma, Cdr Amit Bhatnagar, Cdr Anil Singh): Audited and reviewed test documents for unit testing of Navigation and Aircraft control software components in accordance with the interface requirements. Participated in the unit testing of Electronic warfare, Navigation and Aircraft control components developing test planning and test procedure documentation used for the test.

Process Definition(2 month, Ref: Commodore Deepak Verma, Cdr Amit Bhatnagar):Reviewed, critiqued and restructured Configuration management process with development industry partner JKL. Audited change management procedures and change artefacts in order to refine the change management process for ABC123 and ABC134 projects. Mentored the customisation of IEEE 12207 SDLC lifecycle process to suit shorter development timelines.

P2 Date (Month & Year) From: Jul 2006 Date to: May 2011

Organization Name: Weapons and Electronics Systems Engineering Establishment(WESEE) MoD, GOI

Immediate Supervisor/Peer:
   Name: Cdr Amit Bhatnagar
   Title: Senior Systems Engineer
  Address: 34 Khan Market New Delhi-110003, India
  E-mail Address: amit.bhatnagar@incose.org
  Phone Number: +91 98 99 795811

Reference(s) that will cover this position (if none, state so): Reference 1,2, 3

Your Title/Position: Systems Engineer

Your Duties and Responsibilities:
(**NOTE: The attached box for your inputs will expand to accommodate the information you provide; the size of the empty box is not an indication that limited input is expected.**)
Requirements Engineering (12 months, Ref: Commodore Deepak Verma, Cdr Amit Bhatnagar, Cdr Anil Singh): Captured user requirements for new prototype ABC system. Imbibed lessons

learnt from earlier projects namely QRS and ABC-SNF. Prepared the requirements management plan. Carried out transformation of Stakeholders' requirements- SQR (staff qualification requirements) ABC to System requirements. Analysed and refined the functional and non functional requirements. Documented project scope. Developed detailed technical requirements to satisfy the staff requirements. Decomposed, derived, and allocated requirements from the SQR(staff qualification requirements) ABC and subordinate requirements documents to the SRDs, System Requirements, System Descriptions, and Block Diagrams.

Baseline Control (2 months, Ref: Cdr Amit Bhatnagar): Participated as a team member for formulation of Configuration management plan. Key task within this team was to liaise with key stakeholders to agree and then formalize appropriate processes for controlling updates to key documents. Established Rational clearquest toolset based software configuration control mechanism for the change management of project artifacts(documents, software modules code).

Technical Planning (10 months, Ref: Cdr Amit Bhatnagar): Developed project management plan. Presented project plan to the Project management board, comprising of Program manager, Project sponsor and higher management stakeholders for approval. Performed Scope definition, created WBS for new ABC Project. Prepared and presented resource breakdown structure. Recruited and contracted new resources to suffice project requirements. Developed project schedule, formulated communications management plan and oversaw execution throughout the duration of the project.

Architecture/Design Development(14 months, Ref: Commodore Deepak Verma, Cdr Amit Bhatnagar, Cdr Anil Singh): Analysed candidate system architectures; drawing of metrics and evaluation criteria to evaluate the candidate architectures. Presented trade off analysis of all candidate architectures to suitable stakeholders. Prepared functional, structural and deployment system architecture from a top level requirements of desired ABC system. Formulated SARAD(System Architecture and Resource Allocation description) based on IEEE-12207 and IEEE-1471-2000 (Recommended Practice for Architectural Description of Software intensive systems) specific to MiniABC system(New prototype ABC system). Performed identification of software and hardware CIs. Participated in formulation of specifications of each hardware CI. Formulated software architecture of the MiniABC system derived from the System architecture. Presented logical, process, deployment and physical views as part of system architecture document. Undertook Information modelling for all track and sensor information flowing in the desired ABC system. Derived and documented software requirement specification for each software component. Designed and documented internal architecture of each software component from software requirement specifications. Iteratively built and developed top level software design in IBM Rational Rose for realtime systems. Performed iterative design-test-design and built software system modules to meet the application module interface and data requirements.

Qualification, Verification, and Validation(12 months, Ref: Cdr Amit Bhatnagar, Cdr Anil Singh): Formulated Quality acceptance plan and hardware acceptance plan with hardware partner(s). Established hardware acceptance criteria based on non-functional systems requirements and derived functional requirements. Improvised the existing software-testing framework for component / module level black-box testing. Integrated various COTS testing tools into the testing framework. Participated in drafting and approval of test documents(TVPR, TVPL) for unit testing

of 06 software components. Formulated the Integration test document for system wide integration of MiniABC system. Successfully presented harbour and sea trials of the final ABC system to the appointed acceptance and trials team.

Tool Support(1 month, Ref: Cdr Amit Bhatnagar): Analysed and formulated requirements for Software engineering tools environment for development of Project MiniABC. Established framework for development of systems modules. Enhanced existing tools framework by incorporating totalDB, spyker toolsets by Realtime Lynx OS based debugging tools.

Training(2 months, Ref: Commodore Deepak Verma, Cdr Amit Bhatnagar): Conducted domain training of software engineers and project leads on basics of ABC domain and Naval concept of operations. Authored ABC domain training manual; customized software kernel development(KDI) procedures to an abridged porting manual for MiniABC. Conducted training to customise Lynx OS kernel for MiniABC applications.

Systems Integration(4 months Ref: Cdr Amit Bhatnagar):Formulated Integration test plans with ABC(hardware partner) and DEF (Systems integration partner). Analysed and defined Hardware interface requirements of MiniABC with Ship's navigation radar and sensor. Finalised interface requirements with Systems integrator. Participated in integration effort onboard the Naval Vessel with the ship's onboard sensors, Radar and EW equipment.

P3 Date (Month & Year) From: Date to:
Organization Name:
Immediate Supervisor/Peer: Name: Title: Address: E-mail Address: Phone Number:
Reference(s) that will cover this position (if none, state so):
Your Title/Position:
Your Duties and Responsibilities: (**NOTE: The attached box for your inputs will expand to accommodate the information you provide; the size of the empty box is not an indication that limited input is expected.**)
P4 Date (Month & Year) From: Date to:
Organization Name:
Immediate Supervisor/Peer: Name: Title: Address: E-mail Address: Phone Number:
Reference(s) that will cover this position (if none, state so):
Your Title/Position:

Your Duties and Responsibilities:
(**NOTE: The attached box for your inputs will expand to accommodate the information you provide; the size of the empty box is not an indication that limited input is expected.**)

P5 Date (Month & Year) From: Date to:
Organization Name:

Immediate Supervisor/Peer:
   Name:
   Title:
   Address:
   E-mail Address:
   Phone Number:

Reference(s) that will cover this position (if none, state so):
Your Title/Position:
Your Duties and Responsibilities: (**NOTE: The attached box for your inputs will expand to accommodate the information you provide; the size of the empty box is not an indication that limited input is expected.**)

P6 Date (Month & Year) From: Date to:
Organization Name:

Immediate Supervisor/Peer:
   Name:
   Title:
   Address:
   E-mail Address:
   Phone Number:

Reference(s) that will cover this position (if none, state so):
Your Title/Position:
Your Duties and Responsibilities: (**NOTE: The attached box for your inputs will expand to accommodate the information you provide; the size of the empty box is not an indication that limited input is expected.**)

P7 Date (Month & Year) From: Date to:
Organization Name:

Immediate Supervisor/Peer:
   Name:
   Title:
   Address:
   E-mail Address:
   Phone Number:

Reference(s) that will cover this position (if none, state so):
Your Title/Position:
Your Duties and Responsibilities: (**NOTE: The attached box for your inputs will expand to accommodate the information**)

you provide; the size of the empty box is not an indication that limited input is expected.)

Summary Table on Breadth and Depth of Applicant's SE Experience
In the following table, list the total months of experience gained in each system engineering area listed in the table below at each position (P1 to P7) worked. <u>Applications with insufficient detail in the written section to justify the claims in this summary table may result in denial.</u> A few helpful hints for working with this table: • **The experience summarized should be your equivalent full-time experience in calendar months (rounded to the nearest whole month and no credit for overtime work/penalty for vacation time) in each SE work area and should be supported by the detailed information provided above.** • **The time for each period of performance and the total time in this table in the bottom right cell should not exceed the respective calendar time claimed above. (See Form 2 for further guidance on providing this information and for an explanation of why the information is needed.)** • **Update the pertinent shaded cells in this table.** • **Some cells are pre-populated with a zero to support the embedded formulas.** • **To update the "Total Months of Effort in Each SE Work Area" in the right-hand column and/or the "Total for All Areas" in the bottom row after making your entries, place your computer cursor over the desired cell, right click the cursor, and then click the "Update Field" option on the menu.**

Work in Months on Position PX in SE Area / SE Work Areas - Detailed Definitions of the Work Areas Are Provided in Form 2	P1	P2	P3	P4	P5	P6	P7	Total Months of Effort in Each SE Work Area
Requirements Engineering	4	12	0	0	0	0	0	16
Risk and Opportunity Management	0	0	0	0	0	0	0	0
Baseline Control	0	2	0	0	0	0	0	2
Technical Planning	2	10	0	0	0	0	0	12
Technical Effort Assessment	0	0	0	0	0	0	0	0
Architecture/Design Development	4	14	0	0	0	0	0	18
Qualification, Verification, and Validation	3	12	0	0	0	0	0	15
Process Definition	2	0	0	0	0	0	0	2
Tool Support	0	1	0	0	0	0	0	1
Training	0	2	0	0	0	0	0	2
Systems Integration	0	4	0	0	0	0	0	4
Quality Assurance	0	0	0	0	0	0	0	0
Specialty Engineering	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total per Position	15	57	0	0	0	0	0	72

Section 6: References – ASEP Applicants & Acquisition (Acq) Extension Applicants Skip to Section 7

An application shall contain the names of and reference endorsements of not less than three qualified references meeting the following criteria:

- **They shall not be related to the applicant by blood or marriage,**
- **They shall have personal knowledge of the experience on which the applicant predicates his/her qualifications.**
- **A qualified reference is a supervisor or associate fellow worker who is equal or at a higher level in abilities and qualifications "systems engineering wise," and, because of that can attest to the applicant's systems engineering knowledge and past experience in successfully performing systems engineering tasks.**
- **References endorsing additional general engineering experience due to the applicant's educational situation need to be qualified to attest to the applicant's general engineering knowledge and past experience in successfully performing general engineering tasks.**
- **At least one reference should be a current or former supervisor.**
- **The applicant's experience reported and confirmed by the references must cover the entire period of systems engineering experience (and additional general engineering experience, if applicable) needed by the applicant to qualify for certification.**
- **Each individual reference does not have to confirm the entire period of the applicant's experience, but the collective set of references must support the entire period of the applicant's required experience, including both depth and breadth of experience requirements.**
- **The applicant must send Form 4A "CSEP Reference's Instruction Letter" and Form 4B "CSEP Reference's Comments and Recommendations" to each reference.**
- **The applicant is responsible for getting his or her references to provide a timely submission (preferably within two weeks) of their comments and recommendations to the INCOSE Certification Office in support of the CSEP application.**

Reference 1

Name: Commodore Deepak Verma
    Address: c/o XYZ Inc.
    Number and Street: 34 Khan Market
    City: New Delhi
    State or Province: Delhi
    Zip or Postal Code: 110003
    Country: India
Phone Number: +91 11 6600 0666
Email Address: **Deepak.verma@incose.org**
Work Relationship of Reference to Applicant: Immediate supervisor; Program Manager
Applicant Position(s) (P1-P7) to be Covered by this Reference: P1,P2

Reference 2

Name: Commander(Retd) Amit Bhatnagar
    Address: c/o XYZ Inc.

Number and Street:	34 Khan Market
City:	New Delhi
State or Province:	Delhi
Zip or Postal Code:	110003
Country:	India

Phone Number: +91 98 99 795811
Email Address: **amit.bhatnagar@incose.org**
Work Relationship of Reference to Applicant: Immediate Supervisor
Applicant Position(s) (P1-P7) to be Covered by this Reference: P1, P2

Reference 3
 Name: Commander(Retd) Anil Singh
   Address: c/o ABC Ltd.
   Number and Street: 24th Cross Road, Banashankari Stage II, Basavangudi
   City: Bangalore
   State or Province: Karnataka
   Zip or Postal Code: 560029
   Country: India
Phone Number: 09871222113
Email Address: **anil.singh@incose.org**
Work Relationship of Reference to Applicant: Peer
Applicant Position(s) (P1-P7) to be Covered by this Reference: P1,P2

Reference 4 (Optional)
 Name:
   Address:
   Number and Street:
   City:
   State or Province:
   Zip or Postal Code
   Country:
Phone Number:
Email Address:
Work Relationship of Reference to Applicant:
Applicant Position(s) (P1-P7) to be Covered by this Reference:

Reference 5 (Optional)
 Name:
   Address:
   Number and Street:
   City:
   State or Province:
   Zip or Postal Code:
   Country:
Phone Number:
Email Address:
Work Relationship of Reference to Applicant:
Applicant Position(s) (P1-P7) to be Covered by this Reference:

Section 7: Affidavit by Applicant

I, the undersigned, have read the contents and information hereof, and to the best of my knowledge and belief the statements contained in this application are true in substance and effect and are made in good faith. I further state that I have read the INCOSE Code of Ethics and pledge to adhere to it. I further understand that my name (with organization/division, city, state, and country) will be posted on the INCOSE public web site and may be otherwise communicated by INCOSE if I am recognized as a Systems Engineering Professional. I understand that I have an ongoing obligation to keep my information current with INCOSE. I further understand that my experience will be considered only through the date of this application, noted below. I understand that I have one calendar year from the application date to complete all of the activities associated with the application.

Accept Affidavit: Yes ☒   No ☐

Applicant's Signature: RAJESH SHARMA (Typed Name Is Accepted as Signature on Email Submittal)

Date: 1 Dec 2013