NATIONAL AVIATION OLYMPIAD

National Aviation Olympiad 2026

Examination Structure

www.nationalaviationolympiad.com

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1. EXAMINATION STRUCTURE

The National Aviation Olympiad features a comprehensive examination structure designed to assess students' knowledge, analytical abilities, and problem-solving skills across aviation and STEM domains

1.1 Types of Questions

Questions in NAO 2026 for Phase 1 (Online/offline screening) and Phase 2 (State/UT rounds) come in three formats: **a) MCQs, b) MSQs and c) CSPs**. The definition, marking scheme and guidelines of all three formats are listed below:

A) What is MCQ?

MCQ stands for **Multiple Choice Question**. In this format, each question presents **four options**, out of which **only one option is correct**.

Marking Scheme:

- **Correct Answer:** Full marks awarded.
- **Incorrect Answer:** Negative marking applied.
- **Unattempt Question:** No marks awarded or deducted.

Guidelines:

Candidates are encouraged to answer carefully. Skipping a question carries **no penalty**, while selecting an incorrect option result in **a deduction of marks**. This pattern emphasizes **accuracy, conceptual understanding, and decision-making** under time constraints.

B) What is MSQ?

MSQ stands for **Multiple-Select Question**. Each MSQ presents **four options**, of which **one, two, three, or none** may be correct.

Marking Scheme:

- **All Correct Options Selected (and no incorrect ones):** Full marks awarded.
- **Partial Selection or Inclusion of Incorrect Options:** No marks awarded.
- **Unattempt Question:** No marks awarded or deducted.

Guidelines:

To earn full credit, candidates must select **exactly the correct combination of options**. Any deviation — including partial correctness — yields **zero marks**. This pattern evaluates a candidate's **analytical depth and comprehensive understanding** of the subject.

C) What is CSP?

The **Chain-Scoring Pattern (CSP)** is an evaluation method in which marks are awarded **only**

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while the chain of correct answers remains unbroken. Once a candidate selects an incorrect response, **the chain is broken**, and **no subsequent questions in that sequence are considered for marking**, regardless of whether they are answered correctly.

Example:
If there are five questions under the CSP model and a candidate's responses are as follows:

Question	Response	Result
1	Correct	Counted
2	Correct	Counted
3	Incorrect	Chain breaks
4	Correct	Not counted
5	Correct	Not counted

In this case, the candidate will be awarded marks **only for Questions 1 and 2**. The **moment an incorrect answer is recorded**, all subsequent answers within that chain are **disqualified from evaluation**. Each individual question of CSP model is a MCQ.

Guidelines:
The **Chain-Scoring Pattern (CSP)** is a unique evaluation system in which marks are awarded only while a continuous chain of correct answers is maintained. Each CSP set consists of a series of linked questions, and the candidate can continue earning marks only as long as each response in the sequence is correct. The moment an incorrect answer is selected, the chain breaks and all subsequent questions in that set are disqualified from marking, even if answered correctly**. Unattempt questions do not break the chain but also do not contribute to the score**. There is no negative marking in CSP. This pattern encourages **accuracy, focus, and conceptual consistency**—rewarding participants who demonstrate sustained understanding and disciplined answering rather than guesswork.

Note: The above rules apply uniformly to both **online** and **offline** examinations conducted under all formats.

1.2 Marking Scheme

For **Phase 1 and 2** – the questions are divided in two sections – Section A and Section B. Section A contains **Core Aviation** questions and carry more weightage. Section B contains questions on **STEM and logical reasoning**.

1.2.1 Phase 1 (Screening Test – School Level)

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- **Total Questions:** 60 (MCQ + MSQ)
- **Time Allocated:** 65 minutes (5 minutes form-filling + 60 minutes test)
- **Maximum Marks:** 90
- **Section A (Core Aviation):**
  - 30 MCQ questions × 2 marks each = 60 marks
  - Negative marking: -0.25 marks for each wrong answer
  - No deductions for skipped questions
- **Section B (STEM & Reasoning):**
  - 30 MSQ questions × 1 mark each = 30 marks
  - No negative marking for MSQs
  - No deductions for skipped questions

- **Difficulty Distribution:**
  - Easy: 50% (30 questions)
  - Medium: 30% (18 questions)
  - Difficult: 20% (12 questions)

Question Type	Number of Questions	Marks per Question	Total Marks
Section A (Core Aviation) [MCQ]	30	2 marks each	60
Section B (STEM) [MSQ]	30	1 mark each	30
Total	**60 Questions**	**65 Minutes**	**90 Marks**

1.2.2 Phase 2 (State/UT Round)

- **Total Questions:** 90 (40 MCQ + 40 MSQ + 10 CSP)
- **Time Allocated:** 95 minutes (5 minutes form-filling + 90 minutes test)
- **Maximum Marks:** 225
- **Section A (Core Aviation):**
  - 40 MCQ questions × 3 marks each = 120 marks
  - 5 CSP questions × 3 marks each = 15 marks
  - Negative marking: -0.5 marks for each wrong MCQ answer
  - No negative marking for CSPs
  - No deductions for skipped questions

- **Section B (STEM & Reasoning):**
  - 40 MSQ questions × 2 marks each = 80 marks
  - 5 CSP questions × 2 marks each = 10 marks
  - No negative marking for MSQs and CSPs
  - No deductions for skipped questions

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- **Difficulty Distribution:**
  - Easy: 50% (45 questions)
  - Medium: 30% (27 questions)
  - Difficult: 20% (18 questions)

Section	Question Type	Number of Questions	Total Marks
Section A – Core Aviation	40 MCQs + 5 CSPs	3 marks each	135
Section B – STEM	40 MSQs + 5 CSPs	2 marks each	90
Total	**90 Questions**	**95 Minutes**	**225 Marks**

1.2.3 Phase 3 (National Finale)

- **Total Participants:** 145 finalists (5 from each of 28 states + 5 from entire UT zone)
- **Evaluation Method:** Viva examination conducted by expert committee
- **Assessment:** Graded on scale of 1-10 on five different parameters
- **Final Score:** Weighted average scores from all expert committee members

- **Evaluation Parameters:**
  - Conceptual Understanding
  - Analytical Thinking
  - Communication & Presentation Skills
  - Innovation & Creativity
  - Overall Impression & Professionalism

1.3 Scoring and Tie Break Rules

In case two or more participants secure the same total marks, the following sequential tie-break criteria shall apply. All responses are evaluated through a **secure automated assessment system** ensuring accuracy, transparency, and uniformity across all participants. No manual alterations to scores are permitted after evaluation.

1.3.1 Phase 1 (Screening Test – School Level)

- **Higher MCQ Score:** Candidate with a higher total score in MCQ questions will be ranked higher.
- **Higher MSQ Accuracy:** If MCQ scores are equal, the candidate with a greater number of fully correct MSQs will be ranked higher.
- **Fewer Incorrect MCQ Responses:** The participant with fewer negative marks (i.e., fewer incorrect MCQs) will be preferred.
- **Joint Rank:** If all the above criteria fail to resolve the tie, candidates will be awarded the same rank.

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1.3.2 Phase 2 (State / UT Round)

- **Higher Score in Section A (Aviation):** Candidate with a higher combined score (MCQs + CSPs) in the Aviation section will be ranked higher.
- **Higher Score in Section B (STEM):** If still tied, the candidate with a higher combined score (MSQs + CSPs) in the STEM section will be ranked higher.
- **Fewer Incorrect MCQs:** The participant with fewer negative marks from incorrect MCQs will be ranked higher.
- **Higher CSP Score:** If the tie persists, the candidate with a higher aggregate score from CSP questions (both sections combined) will be ranked higher.
- **Joint Rank:** If none of the above resolves the tie, candidates shall be awarded the same rank

1.4 National Finale Evaluation

The **National Round** of the **National Aviation Olympiad (NAO)** in December 2026 will be conducted in the form of a structured viva examination to evaluate the finalists' understanding, analytical abilities, and communication skills in Aviation and STEM domains. A total of **145 finalists**, representing **28 States and 8 Union Territories** (5 from each state and 5 from entire UT Zone), will appear before an **Expert Committee** comprising eminent professionals from the **Academia, Industry and Policy Makers**.

1.4.1 Viva Panel Structure

To ensure fair, efficient, and comprehensive evaluation, multiple parallel viva panels shall be constituted as follows. Each panel will conduct viva examinations independently while adhering to the same scoring rubric and evaluation framework.

Parameter	Specification
Number of Panels	8 parallel panels
Experts per Panel	6 members (Total: 48 experts)
Expert Composition	(i) 2 members from Academia (ii) 2 members from Industry (iii) 2 members from Policy Makers
Evaluation Duration per Student	10–15 minutes (including questioning and scoring)
Total Duration	1 full day

1.4.2 Evaluation Parameters

The **viva examination** in the National Round is designed to assess participants holistically — beyond theoretical knowledge — by evaluating conceptual depth, analytical reasoning, communication clarity, and creative thinking. Each participant will appear before a **panel of six experts**, and their performance will be judged on **five key parameters**, each scored on a **1–10 scale**.

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Parameter	Evaluation Focus	Indicative Rubric / Criteria (Scored 1–10)
1. Conceptual Understanding	Measures the participant's grasp of Aviation and STEM principles, ability to recall and connect concepts, and clarity of fundamental ideas.	1–3: Basic recall, limited understanding 4–6: Clear understanding with minor gaps 7–8: Strong conceptual clarity and confidence 9–10: Exceptional depth, mastery, and ability to explain interconnected concepts clearly
2. Analytical Thinking	Tests reasoning, logic, and ability to apply knowledge to new or practical situations. Includes interpretation of case-based or scenario-based questions.	1–3: Linear or limited reasoning 4–6: Moderate analytical skill; needs prompting 7–8: Logical, coherent problem-solving 9–10: High-order analysis; applies concepts innovatively
3. Communication & Presentation Skills	Evaluates articulation, confidence, and structured delivery of responses, including ability to handle follow-up questions.	1–3: Inarticulate or hesitant 4–6: Clear but lacks structure or engagement 7–8: Confident, structured, and clear communicator 9–10: Excellent articulation with professional poise
4. Innovation & Creativity	Assesses originality of thought, ability to propose novel ideas or connect interdisciplinary perspectives, and creative reasoning.	1–3: Conventional thinking 4–6: Some creative input or new angle 7–8: Consistently demonstrates originality and curiosity 9–10: Highly innovative, shows visionary or design-based thinking
5. Overall Impression & Professionalism	Captures holistic evaluation — attitude, composure, presence, and engagement with the panel. Reflects readiness for professional or academic environments.	1–3: Nervous or unprepared 4–6: Average confidence and interaction 7–8: Professional, calm, and responsive 9–10: Exceptional demeanour, balanced intellect, and humility

1.4.3 Scoring Process

- Each expert independently assigns a score from **1 to 10** for all five parameters.
- Thus, for each participant:
  Total Raw Score per Expert= $\sum_{i=1}^{5} P_i$ (where P_i represents the score in each parameter)
- The **Weighted Average** of all expert scores is then computed as:

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$$Final\ Viva\ Score = \frac{\sum(Expert\ Score\ for\ all\ parameters)}{Number\ of\ Experts}$$

- The final score is normalized to a **scale of 10**, ensuring comparability across panels.

1.4.4 Data Recording and Submission

- Experts shall record their scores digitally (via secure evaluation portal or system) or on a printed **Viva Scoring Sheet**, signed immediately after each candidate's evaluation.
- Once recorded, scores are **locked** to prevent further modification.
- The Central Evaluation Secretariat (CES) will compile all raw data for normalization and verification.

1.4.5 Evaluation Moderation

To maintain consistency:

1. **Calibration Meeting:** Conducted before viva commencement, where all experts discuss and align their interpretation of the 1–10 scale using sample responses.
2. **Mid-Day Review:** A short coordination break may be scheduled mid-session to ensure uniform difficulty and fairness across panels.
3. **Normalization:** After all Vivas conclude, scores are statistically normalized across all panels to eliminate inter-panel scoring bias.
4. **Chief Judge Oversight:** The Chief Judge has final authority on interpretation of rubrics, resolving discrepancies, and approving final normalized results.

1.4.6 Final Compilation

Each participant's **final normalized viva score (out of 10)** will be combined with the expert committee's remarks to form their **official record of performance** at the National Round. These results shall be reviewed and authenticated by the **Chairperson of the Expert Committee** before public announcement.

1.4.7 Moderation & Normalization

To maintain consistency across all panels:

- A **pre-viva calibration session** shall be conducted for all experts to align interpretation of the grading scale.
- After the viva, all scores will undergo **statistical normalization** to account for inter-panel variation.
- The **Chief Judge or Chairperson of the Expert Committee** will oversee the normalization process and ensure fairness in final rankings.

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1.4.8 Confidentiality & Transparency

- All viva sessions will be **recorded** (audio/video) for transparency and audit purposes.
- Experts are required to maintain **strict confidentiality** regarding questions, scores, and deliberations.
- Scoring sheets will be sealed or digitally locked immediately after submission.

1.5 Oversight & Quality Control

A **Central Evaluation Secretariat (CES)** will coordinate logistics, timing, and documentation. Key responsibilities include:

- Synchronizing session timings across all panels
- Ensuring secure data compilation and result verification
- Handling any procedural clarifications under the supervision of the Chief Judge

The decisions of the **Expert Committee** and **Chief Judge** shall be final and binding in all respects.

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