

## APPENDIX-I

The scheme, standard and syllabus of the examination

### A. SCHEME OF EXAMINATION

1. The Competitive examination comprises:

- (a) Written examination as shown in para 2 below.
- (b) Interview for intelligence and personality test (vide Part 'B' of this Appendix) of such candidates as may be called for interview at one of the Services Selection Centres.

2. The subjects of the written examination, the time allowed and the maximum marks allotted to each subject will be as follows:

(a) For Admission to Indian Military Academy, Indian Naval Academy and Air Force Academy:—

Subject	Code	Duration	Maximum Marks
1. English	11	2 Hours	100
2. General Knowledge	12	2 Hours	100
3. Elementary Mathematics	13	2 Hours	100

(b) For Admission to Officers' Training Academy:—

Subject	Code	Duration	Maximum Marks
1. English	11	2 Hours	100
2. General Knowledge	12	2 Hours	100

The maximum marks allotted to the written examination and to the interviews will be equal for each course i.e. the maximum marks allotted to the written examination and to the interviews will be 300, 300, 300 and 200 each for admission to the Indian Military Academy, Indian Naval Academy, Air Force Academy and Officers' Training Academy respectively.

3. The papers in all the subjects will consist of objective type questions only. The question papers (Test Booklets) of General Knowledge and Elementary Mathematics will be set bilingually in Hindi as well as English.

4. In the question papers, wherever necessary, questions involving the metric system of Weights and Measures only will be set.

5. Candidates must write the papers in their own hand. In no circumstances will they be allowed the help of a scribe to write answers for them.

6. The Commission has discretion to fix qualifying marks in any or all the subjects of the examination.

7. The candidates are not permitted to use calculator for answering objective type papers (Test Booklets). They should not therefore, bring the same inside the Examination Hall.

### B. STANDARD AND SYLLABUS OF THE EXAMINATION

#### STANDARD

The standard of the papers in Elementary Mathematics will be of Matriculation level. The standard of papers in other subjects will approximately be such as may be expected of a graduate of an Indian University.

## **SYLLABUS**

### **ENGLISH (Code No. 11)**

The question paper will be designed to test the candidates' understanding of English and workmanlike use of words.

### **GENERAL KNOWLEDGE (Code No. 12)**

General Knowledge including knowledge of current events and of such matters of everyday observation and experience in their scientific aspects as may be expected of an educated person who has not made a special study of any scientific subject. The paper will also include questions on History of India and Geography of a nature which candidate should be able to answer without special study.

### **ELEMENTARY MATHEMATICS (Code No. 13)**

#### **ARITHMETIC**

Number System—Natural numbers, Integers, Rational and Real numbers. Fundamental operations, addition, subtraction, multiplication, division, Square roots, Decimal fractions. Unitary method, time and distance, time and work, percentages, applications to simple and compound interest, profit and loss, ratio and proportion, variation.

Elementary Number Theory—Division algorithm. Prime and composite numbers. Tests of divisibility by 2, 3, 4, 5, 9 and 11. Multiples and factors. Factorisation Theorem. H.C.F. and L.C.M. Euclidean algorithm. Logarithms to base 10, laws of logarithms, use of logarithmic tables.

#### **ALGEBRA**

Basic Operations, simple factors, Remainder Theorem, H.C.F., L.C.M., Theory of polynomials, solutions of quadratic equations, relation between its roots and coefficients (Only real roots to be considered). Simultaneous linear equations in two unknowns—analytical and graphical solutions. Simultaneous linear inequations in two variables and their solutions. Practical problems leading to two simultaneous linear equations or inequations in two variables or quadratic equations in one variable & their solutions. Set language and set notation, Rational expressions and conditional identities, Laws of indices.

#### **TRIGONOMETRY**

Sine  $\times$ , cosine  $\times$ , Tangent  $\times$  when  $0^\circ \leq \times \leq 90^\circ$  Values of  $\sin \times$ ,  $\cos \times$  and  $\tan \times$ , for  $\times = 0^\circ, 30^\circ, 45^\circ, 60^\circ$  and  $90^\circ$

Simple trigonometric identities.

Use of trigonometric tables.

Simple cases of heights and distances.

#### **GEOMETRY**

Lines and angles, Plane and plane figures, Theorems on (i) Properties of angles at a point, (ii) Parallel lines, (iii) Sides and angles of a triangle, (iv) Congruency of triangles, (v) Similar triangles, (vi) Concurrence of medians and altitudes, (vii) Properties of angles, sides and diagonals of a parallelogram, rectangle and square, (viii) Circles and its properties including tangents and normals, (ix) Loci.

#### **MENSURATION**

Areas of squares, rectangles, parallelograms, triangle and circle. Areas of figures which can be split up into these figures (Field Book), Surface area and volume of cuboids, lateral surface and volume of right circular cones and cylinders, surface area and volume of spheres.

#### **STATISTICS**

Collection and tabulation of statistical data, Graphical representation frequency polygons, histograms, bar charts, pie charts etc. Measures of central tendency.

### **INTELLIGENCE AND PERSONALITY TEST**

The SSB procedure consists of two stage Selection process - stage I and stage II. Only those candidates who clear the stage I are permitted to appear for stage II. The details are:-

(a) Stage I comprises Officer Intelligence Rating (OIR) tests are Picture Perception\* Description Test (PP&DT). The candidates will be shortlisted based on combination of performance in OIR Test and PP&DT.

(b) Stage II comprises Interview, Group Testing Officer Tasks, Psychology Tests and the Conference. These tests are conducted over 4 days. The details of these tests are given on the website [www.joinindianarmy.nic.in](http://www.joinindianarmy.nic.in).

The personality of a candidate is assessed by three different assessors viz. The Interviewing Officer (IO), Group Testing Officer (GTO) and the Psychologist. There are no separate weightage for each test. The marks are allotted by assessors only after taking into consideration the performance of the candidate holistically in all the test. In addition, marks for Conference are also allotted based on the initial performance of the Candidate in the three techniques and decision of the Board. All these have equal weightage.

The various tests of IO, GTO and Psych are designed to bring out the presence/absence of Officer Like Qualities and their trainability in a candidate. Accordingly candidates are Recommended or Not Recommended at the SSB.

## **APPENDIX-II**

### **SPECIAL INSTRUCTIONS TO CANDIDATES FOR OBJECTIVE TYPE TESTS**

#### **1. ARTICLES PERMITTED INSIDE EXAMINATION HALL:**

Clip board or hard board (on which nothing is written), a good quality Black Ball Pen for marking responses on the Answer Sheet. Answer Sheet and sheet for rough work will be supplied by the invigilator.

#### **2. ARTICLES NOT PERMITTED INSIDE EXAMINATION HALL:**

- Do not bring into the Examination Hall any article other than those specified above e.g. any valuable/costly items, mobile phones, Smart/Digital watches other IT gadgets, books, bags, notes, loose sheets, electronic or any other type of calculators, mathematical and drawing instruments, Log Tables, stencils of maps, slide rules, Test Booklets and rough sheets pertaining to earlier session(s) etc.
- **Possession (even in Switched off mode)/use of Mobiles, phones, Bluetooth, pagers or any other communication devices or any other incriminating material (notes on e-Admit Card, papers, eraser etc.) are not allowed inside the premises where the examination is being conducted. Any infringement of these instructions shall entail disciplinary action including ban from future examinations.**
- **Candidates are advised in their own interest not to bring any of the banned items including mobile phones/Bluetooth/pagers to the venue of the examination, as no arrangements for safekeeping will be made at the venue of the examination. Candidates are advised not to bring any valuable/costly items to the Examination Halls, as no arrangement for safe keeping of the same will be made at the venue of the examination. Commission will not be responsible for any loss in this regard.**

#### **3. PENALTY FOR WRONG ANSWERS:**

**THERE WILL BE PENALTY (NEGATIVE MARKING) FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.**

- (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one third (0.33)** of the marks assigned to that question will be deducted as penalty.
- (ii) If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happens to be correct and there will be same penalty as above for that question.