

### 13.1. Indicative Syllabus for Computer Based Examination:

#### 13.1.1. Matriculation level

**General Intelligence:** It would include questions of non-verbal type. The test will include questions on similarities and differences, space visualization, problem solving, analysis, judgment, decision making, visual memory, discriminating observation, relationship concepts, figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship, arithmetical computation and other analytical functions.

**General Awareness:** Questions are designed to test the general awareness of the environment and its application to the society. Questions will also be designed to test 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. The test will also include questions relating to India and its neighbouring countries especially pertaining to Sports, History, Culture, Geography, Economic scene, General Polity including Indian Constitution, and Scientific Research etc. These questions will be such that they do not require a special study of any discipline.

**Quantitative Aptitude:** This paper will include questions on problems relating to Number Systems, Computation of Whole Numbers, Decimals and Fractions and relationship between Numbers, Fundamental arithmetical operations, Percentages, Ratio and Proportion, Averages, Interest, Profit and Loss, Discount, use of Tables and Graphs, Mensuration, Time and Distance, Ratio and Time, Time and Work, etc.

**English Language:** Candidates understanding of the Basics of English Language, its vocabulary, grammar, sentence structure, synonyms, antonyms and its correct usage, etc. his/her writing ability would be tested.

#### 13.1.2. 10+2 (Higher Secondary) level

**General Intelligence:** It would include questions of both verbal and non-verbal type. The test will include questions on Semantic Analogy, Symbolic operations, Symbolic/Number Analogy, Trends, Figural Analogy, Space Orientation, Semantic Classification, Venn Diagrams, Symbolic/Number Classification, Drawing inferences, Figural Classification, Punched hole/pattern-folding & unfolding, Semantic Series, Figural Pattern – folding and completion, Number Series, Embedded figures, Figural Series, Critical Thinking, Problem Solving, Emotional Intelligence, Word Building, Social Intelligence, Coding and decoding, Other sub-topics, if any Numerical operations.

**General Awareness:** Questions are designed to test the candidate's general awareness of the environment and its application to the society. Questions are also designed to test knowledge of current events and of such matters of everyday observation and experience in their scientific aspect as may be expected of an educated person. The test will also include questions relating to India and its neighbouring countries especially pertaining to History, Culture, Geography, Economic Scene, General polity and scientific research.

**Quantitative Aptitude:** Arithmetic, Number Systems, Computation of Whole Number, Decimal and Fractions, Relationship between numbers Fundamental arithmetical operations: Percentages, Ratio and Proportion, Square roots, Averages, Interest (Simple and Compound), Profit and Loss, Discount, Partnership Business, Mixture and Allegation,

Time and distance, Time and work. Algebra: Basic algebraic identities of School Algebra and Elementary surds (simple problems) and Graphs of Linear Equations. Geometry: Familiarity with elementary geometric figures and facts: Triangle and its various kinds of centres, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles. Mensuration: Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square, Base Trigonometry: Trigonometry, Trigonometric ratios, Complementary angles, Height and distances (simple problems only) Standard Identities etc., Statistical Charts: Use of Tables and Graphs, Histogram, Frequency polygon, Bar-diagram, Pie-chart

**English Language:** Spot the Error, Fill in the Blanks, Synonyms/ Homonyms, Antonyms, Spellings/ Detecting Mis-spelt words, Idioms & Phrases, One word substitution, Improvement of Sentences, Active/ Passive Voice of Verbs, Conversion into Direct/ Indirect narration, Shuffling of Sentence parts, Shuffling of Sentences in a passage, Cloze Passage, Comprehension Passage.

### **13.1.3. Graduation & above level:**

**General Intelligence:** It would include questions of both verbal and non-verbal type. This component may include questions on analogies, similarities and differences, space visualization, spatial orientation, problem solving, analysis, judgment, decision making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning and figural classification, arithmetic number series, non-verbal series, coding and decoding, statement conclusion, syllogistic reasoning etc. The topics are, Semantic Analogy, Symbolic/Number Analogy, Figural Analogy, Semantic Classification, Symbolic/ Number Classification, Figural Classification, Semantic Series, Number Series, Figural Series, Problem Solving, Word Building, Coding & de-coding, Numerical Operations, symbolic Operations, Trends, Space Orientation, Space Visualization, Venn Diagrams, Drawing inferences, Punched hole/ pattern –folding & un-folding, Figural Pattern – folding and completion, Indexing, Address matching, Date & city matching, Classification of centre codes/ roll numbers, Small & Capital letters/ numbers coding, decoding and classification, Embedded Figures, Critical thinking, Emotional Intelligence, Social Intelligence, Other sub-topics, if any.

**General Awareness:** Questions will be designed to test the general awareness of the environment and its application to the society. Questions will also be designed to test knowledge of current events and of such matters of every day observations and experience in their scientific aspect as may be expected of any educated person. The test will also include questions relating to India and its neighbouring countries especially pertaining History, Culture, Geography, Economic Scene, General Polity& Scientific Research.

**Quantitative Aptitude:** The questions will be designed to test the ability of appropriate use of numbers and number sense of the candidate. The scope of the test will be computation of whole numbers, decimals, fractions and relationships between numbers, Percentage, Ratio & Proportion, Square roots, Averages, Interest, Profit and Loss, Discount, Partnership Business, Mixture and Alligation, Time and distance, Time & Work, Basic algebraic identities of School Algebra & Elementary surds, Graphs of Linear Equations, Triangle and its various kinds of centres, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles, Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square base, Trigonometric

ratio, Degree and Radian Measures, Standard Identities, Complementary angles, Heights and Distances, Histogram, Frequency polygon, Bar diagram & Pie chart.

**English Language:** Candidates' ability to understand correct English, his basic comprehension and writing ability, etc. would be tested.

The questions in Parts A, B, & D will be of a level commensurate with the essential qualification viz. Graduation and questions in Part C will be of 10th standard level.

