SYLLABUS

For candidates who have made up their mind to become a partner in the National Defence, the syllabuses for various groups of selection are as follows.

Since the competition is of all India basis, one needs to be prepared well and show his best performances in the Selection Tests. The Syllabus recommended is as follows:-

FOR GROUP 'X'(TECHNICAL) TRADES

SYLLABUS – SCIENCE

1. Physical world and measurement
2. Kinematics
3. Laws of motion
4. Work, energy and power
5. Motion of system of particles &rigid body
6. Gravitation
7. Mechanics of solids and fluids
8. Heat and thermodynamics
9. Oscillation
10. Waves
11. Electrostatic
12. Current electricity
13. Magnetic effect of current and magnetism
14. Electromagnetic induction and alternating current
15. Electromagnetic Waves
16. Optics
17. Dual nature of matter and radiation
18. Atomic nucleus
19. Solids and semiconductors devices
20. Principles of communication

SYLLABUS – MATHEMATICS

1. Sets relations and functions
2. Trigonometric functions
3. Mathematical induction
4. Cartesian system of rectangular coordinates
5. Straight line

6. Family of lines
7. Circles and family of circles
8. Conic sections
9. Complex numbers
10. Quadratic equations and linear inequations
11. Sequences and series
12. Permutations and combinations
13. Binomial theorems
14. Exponential and logarithm series
15. Solutions of triangle
16. Inverse trigonometric functions
17. Matrices and determinants
18. Function, limit and continuity
19. Differentiation
20. Applications of derivatives
21. Indefinite integrals
22. Definite integrals
23. Differential equation
24. Probability
25. Logarithm
26. Statistics
27. Mathematical logic
28. Boolean Algebra

SYLLABUS FOR GROUP 'X'
EDUCATION INSTRUCTOR TRADE

1. Current Affairs and General English (objective type)
2. English (descriptive paper)

SYLLABUS-ENGLISH
FOR GROUP 'X'(TECHNICAL)& GROUP 'Y'TRADES

I. Comprehension

A small passage followed by questions.
1. To judge comprehension
2. Drawing of inferences
3. Use of vocabulary

II Composition

1. Agreement of subject with verb
2. Patterns of verb and their use.
3. Sequence of tenses.
4. Transformation of sentences-Compound, Complex, Simple, Negative, Affirmative.

III Grammar

1. Spellings
2. Word formation
3. Antonyms and synonyms
4. One word substitution
5. Correct usage of articles
6. Correct usage of prepositions
7. Correct usage of adjectives-degrees of comparison
8. Correct of conjunctions
9. Correct usage of Nouns and Pronouns
10. Correct usage of numbers (Singular-Plural)
11. Word order
12. Correct usage of Adverbs

IV. Idioms and Phrases

1. Use of simple idioms
2. Use of Common proverbs

V. Direct/Indirect sentences; Narration change

1. Change of various types of sentences from direct to indirect form and vice-e-versa.

VI. Active and Passive Voices

1. Change of all types of sentences from active to passive form and vice-e-versa.

SYLLABUS FOR GP 'Y'

REASONING AND GENERAL AWARNESS (RAGA)

Reasoning (Verbal and Non-Verbal)

1. Numerical Series
2. Distance and Direction Sense Test
3. Mathematical Operations (Assigning Value to Arithmetic Sign)
4. Number Ranking & Time Sequence Test
5. Assign Artificial Values to Mathematical Digit
6. Inserting Correct Mathematical Sign
7. Human Relation
8. Coding and Decoding
9. Odd Man Out
10. Mutual Relation Problem
11. Tallest Youngest Relation
12. Dictionary Words
13. Analogy
14. Non Verbal Reasoning
15. Number Coding
16. Number Puzzle

Mathematics

17. Ratio and Proportion
18. Average
19. LCM, HCF
20. Profit and Loss
21 Time, Distance and Speed
22. Percentage
23. Simplification of Numbers
24. Fractions
25. Area of Triangle, Square and Rectangle
26. Surface area and Volume of Cuboids, Cylinder, Cone and Sphere
27. Probability
28. Simple Trigonometry

GK and CA

29. General Science
30. Civics

31.   Geography
32.   Current Events
33.   History
34.   basic Computer Operation

SYLLABUS FOR GROUP 'Y '
MEDICAL ASSISTANT TRADE CHEMISTRY

1. Some basic concepts of Chemistry
2. States of matter
3. Atomic structure
4. Classification of elements and periodicity in properties
5. First law of thermodynamics and chemical energetic
6. Chemical bonding and molecular structure
7. Equilibrium-I – Equilibrium process and phase equilibrium
8. Equilibrium-II – Ionic Equilibrium in solutions
9. Redox reactions
10. Principles and processes of extraction of elements
11. Hydrogen
12. s-Block Elements
13. Some p-Block Elements
14. Organic Chemistry – some basic principles
15. Hydrocarbons
16. Purification and characterisation of carbon compounds
17. Organic compounds with functional group containing halogens
(Haloalkanes and Haloarenes)
18. Environmental Chemistry
19. Atomic structure and chemical boundary
20. The solid state
21. Solutions
22. Thermodynamics
23. Electrochemistry
24. Chemical kinetics
25. Surface Chemistry
26. P-Block Elements
27. d-and f-Block Elements
28. Coordination compounds and organometallies
29. Nuclear Chemistry
30. Stereo Chemistry
31. Organic compounds with functional groups containing Oxygen-I
32. Organic compounds with functional groups containing Oxygen-II
33. Organic compounds with functional groups containing Nitrogen
34. Polymers

35. Bimolecular
36. Chemistry in everyday life

BIOLOGY

1. Living world
2. Diversity of life
3. Cell and Cell division
4. Genetics
5. Morphology of plants and animals
6. Physiology of plants
7. Physiology of animals
8. Reproduction, Development and Growth
9. Ecology and Environment
10. Biology in Human Welfare

ENGLISH

Same as Group 'X'