

Syllabus for Written Examination for Recruitment of Vocational Instructor.

Trade:- Workshop Calculation and Science.

Syllabus:-

Unit -

- Systems of unit- FPS, CGS, MKS/SI unit, unit of length, Mass and time, Conversion of units.

Number System:-

- Natural number, integers, real number, irrational number, rational number, Prime number, square, cube, problem solving.

Roots-

- Square and Square Root, method of finding out square roots

Fraction-

- Fractions, Decimal fraction, L.C.M., H.C.F., Multiplication and Division of Fractions and Decimals, conversion of Fraction to Decimal and vice versa. Simple problems.

Algebra:-

- Arithmetic and Geometric Progression, Addition, Subtraction, Multiplication, Division, Algebraic formula, Linear equations (with two variables). Quadratic equation. Properties of quadratic equation. Binomial theorem.
- Vector Algebra- vector and scalar quantities, type of vectors, geometric representation of vector, addition and subtraction of vectors, unit vector i , j and k , magnitude and direction of vectors

Ratio & Proportion:-

- Simple calculation on related problems.

Percentage:-

- Simple calculation. Changing percentage to decimal and fraction and vice-versa.

Mensuration:-

- Area and perimeter of square, rectangle, parallelogram, triangle, circle, semi circle, Volume of solids – cube, cuboid, cylinder and Sphere. Surface area of solids – cube, cuboid, cylinder and Sphere.

Trigonometry:-

- Trigonometry Identities, Trigonometrical function, Trigonometrical ratios, measurement of angles. Trigonometric tables

Statistic-

- Simple problem on Statistics- Frequency distribution table - Calculation of Mean value. - Examples on mass scale productions. -Cumulative frequency -Arithmetic mean, Probability

Indices-

- Definition, law of indices, problem solving,

Calculus:-

- Differential Calculus- functions, Limits, differentiation by 1st Principal, partial differentiation, application of differentiation.
- Integral Calculus- Indefinite Integration, methods of integration, definite integrals, application of integration, evaluation of multiple integration.