

## ANNEXURE-C

### Syllabus for ATOs of Diploma /Degree Category (Diploma level 1st year common syllabus (90 marks) and Entrepreneurship, Management & Smart Technology (10 marks)

1. **COMPUTER APPLICATION:** Computer Organisation, Computer Software, Computer Network and Internet, File Management and Data Processing, Problem Solving methodology, Overview of C Programming Language, Advanced Features of C.
2. **ENGINEERING PHYSICS:** Units and Dimensions, Scalars and Vectors, Kinematics, Work and Friction, Gravitation, Oscillations and Waves, Heat and Thermodynamics, Optics, Electrostatics & Magneto statics, Current Electricity, Electromagnetism & Electromagnetic Induction, Modern Physics.
3. **ENGINEERING CHEMISTRY:** Physical Chemistry (Atomic structure, Chemical bonding, Solutions, Electrochemistry), Inorganic Chemistry (Metallurgy, Alloys), Organic Chemistry (Hydrocarbons), Industrial Chemistry (Water Treatment, Lubricants, Fuel, Polymer, Chemicals in Agriculture).
4. **ENGINEERING MATHEMATICS-II:** Vector Algebra, Limits and Continuity, Derivatives, Integration, Differential Equation.
5. **ENGINEERING MECHANICS:** Fundamentals of Engineering Mechanics, Equilibrium, Friction, Centroid & Moment of Inertia, Simple Machines, Dynamics.
6. **BASIC ELECTRICAL ENGINEERING:** Fundamentals, A.C. Theory, Generation of Electrical Power, Conversion of Electrical Energy, Wiring and Power Billing, Measuring Instruments.
7. **BASIC ELECTRONICS ENGINEERING:** Electronic Devices, Electronic Circuits, Communication System, Transducers and Measuring Instruments.
8. Entrepreneurship, Management & Smart Technology.

### Syllabus for Diploma level Engineering Drawing, Engineering Mathematics and English (Total 50 marks).

1. **DIPLOMA LEVEL ENGINEERING DRAWING:** Introduction to Engineering Drawing, Drawing Instruments, Free hand drawings (lines, polygons, ellipse, geometrical figures, solid objects, hand tools & measuring tools), Lines, Drawing of Geometrical figures, Lettering & Numbering, Dimensioning & its practice, Types of arrowhead, Sizes & layout of drawing sheets, Methods of presentation of Engg. Drawing, Symbolic representation, Projections, Orthographic projection from isometric projection, Reading of fabrication drawing.
2. **ENGINEERING MATHEMATICS-I:** Matrices and Determinants, Trigonometry, co-ordinate Geometry in two Dimensions, Circle, Co-ordinate Geometry in three Dimensions, Sphere.
3. **COMMUNICATIVE ENGLISH:** literature Appreciation (Reading comprehension, Text), Vocabulary, Application of English Grammer, Formal Writing Skills, Elements of Communication (Introduction to Communication, Professional Communication, Non-verbal Communication).