

DETAILED SYLLABUS FOR THE POST OF OVERSEER GRADE II
(MECHANICAL) IN UNIVERSITIES IN KERALA

CAT.NO. 036/2024

Module No	Module topics	Marks
1	Drawing instruments, Geometrical constructions, Lettering, Curves used in engineering practice, Dimensioning, Scales, Projection: Isometric projection, Oblique projection, Perspective projection, Orthographic views, Projection of point, line, plain figures, solids. Sectional views, Free hand sketching, Development of surfaces and Intersection of solids. Workshop Calculation and Science: Metals, Properties of Engineering Materials	17
2	Screw threads, Screwed fasteners, Foundation bolts, Rivets, Welded joints and symbols, Trade theory of Fitting shop, Turning shop, Welding shop, Machinist Trade, Sheet metal shop, Foundry, and Electrician and Electricity Related Calculation, IC and EC Engines and Engine related theory, Mass Production, Interchangeability, Tolerance and allowance, limits and fits, Production drawing, Name plate and bill of materials, Jigs and Fixtures. Workshop Calculation and Science : Mass, Volume, Weight and Density	20
3	Shafts, Keys, Couplings, Bearings, Gear and Gear Drive, Pulleys, Belt drive, Rope Drive, Chain drive Workshop Calculation and Science: Work, Power, Energy, Heat and Temperature	14
4	Pipe fittings and Valves, Cams and Followers, Pumps, Boilers, Boiler Mountings and Accessories, Hydraulic, Pressure vessels, Pneumatics and Related Equipment.	10
5	Press and Press tools and related theories Workshop Calculation and Science: Mensuration, Levers and Simple Machines,.	8

6	Measuring tools, Gauges and Inspection tools, Precision Measuring Tools Workshop Calculation and Science: Trigonometry, Friction, Centre of Gravity, Area of Cut, Algebra, Elasticity.	9
7	Lay out of Machine foundations. Process path. Workshop Calculation and Science: Heat and Heat treatment.	5
8	Computer Basics, AutoCAD 2D basics, 2D commands and related features, 3D basics, 3D commands and related features, Assembly and Detail Drawings in 2D and 3D, Printing, File Preparation. Workshop Calculation and Science: Profit and Loss, Estimate and Costing	12
9	Solid works /AutoCAD Inventor or 3D Modelling : Sketching features- Constraints and creative	5

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper