

**DETAILED SYLLABUS FOR THE POST OF JUNIOR INSTRUCTOR
(PLASTIC PROCESSING OPERATOR) IN INDUSTRIAL TRAINING
DEPARTMENT**

CAT NO:647/2023

MODULE .1 - BASIC SAFETY & BASIC FITTINGS - (15MARKS)

TOPICS WORKSHOP SAFETY
 PERSONAL SAFETY
 TYPES OF FIRES &FIRE EXTINGUISHERS
 HAND TOOLS ,MARKING & MEASURING TOOLS ,CUTTING
 TOOLS, CLAMPING
 DEVICES
 DRILLING MACHINE & ITS OPERATIONS,
 THREAD CUTTING OPERATIONS

MODULE.2 - BASIC ELECTRICITY - (5MARKS)

TOPICS ELECTRICAL QUANTITYS AND ITS UNITS
 ELECTRICAL CIRCUITS, OHMS LAW
 TYPES OF EARTHING & FUSES

MODULE.3 - GROUP OF PLASTICS - (10MARKS)

TOPICS POLYMERISATIONS, TYPES OF POLYMERS
 THERMOPLASTICS & THERMOSET PLASTICS; PROPERTIES
 &APPLICATIONS
 IDENTIFICATION &TESTING OF PLASTICS

MODULE .4 - INJECTION MOULDING PROCESS - (10 MARKS)

TOPICS CLASSIFICATION OF INJECTION MOULDING MACHINE
 MACHINE PARTS & FUNCTIONS
 INJECTION MOULDS
 TROUBLE SHOOTING OF INJECTION MOULDING PROCESS
 COMPONENTS OF HYDRAULIC SYSTEM &THEIR FUNCTIONS

MODULE .5 - COMPRESSION MOULDING PROCESS - (10 MARKS)

TOPICS COPRESSION MOULDING MACHINE PARTS & FUNCTIONS
 COMPRESSION MOULDS

TRANSFER MOULDING

TROUBLE SHOOTING OF COMPRESSION MOULDING
PROCESS

MODULE.6 - BLOW MOULDING PROCESS - (15MARKS)

TOPICS BLOW MOULDING MACHINE PARTS & FUNCTIONS
 CLASSIFICATION OF BLOW MOULDING MACHINE
 COMPONENTS OF PNEUMATIC SYSTEM &THEIR FUNCTIONS
 TROUBLE SHOOTING OF BLOW MOULDING PROCESS

MODULE. 7 - EXTRUSION PROCESS - (15 MARKS)

TOPICS EXTRUDER PARTS AND FUNCTIONS
 EXTRUSION PROCESS
 BLOWN FILM, PIPE, MONOFILAMENT, WIRE COATING, CAST
 FILM
 CALENDERING, REPROCESSING OF PLASTICS
 PVC COMPOUNDING
 TROUBLE SHOOTING OF EXTRUSION PROCESS

MODULE.8 - FIBER REINFORCED PLASTICS - (5MARKS)

TOPICS MATERIALS USED IN F.R.P. PROCESS
 VARIOUS F. R. P. MOULDING TECHNIQUES

MODULE.9 - THERMO FORMING PROCESS - (5MARKS)

TOPICS THERMO FORMING SHEETS
 THERMO FORMING MOULDS, HEATING METHODS
 VARIOUS FORMING METHODS

MODULE .10 - ROTATIONAL MOULDING PROCESS - (10 MARKS)

TOPICS ROTATIONAL MOULDING MACHINES, MOULDS
 IMPORTANCE OF PREDRYING
 METHODS JOINING
 BUFFING AND SANDING

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.