



No. 1967 AITT/Dt. 01.12.2021  
VT-XVI-II/2019

From,  
Shri S. K. Mishra,  
Controller of Examinations.

To  
The Principal,  
All Govt. & Private ITI s of Odisha .

Sub: Bill of Materials for Practical Examination of AITT Dec-2021.

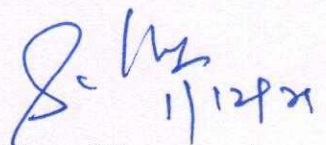
Ref: DGT Letter No. MSDE-18011/08/CTS/Dec-21/2021-TTC dated 17<sup>th</sup> November-2021 and Guidelines vide No. MSDE-18011/08/CTS/Dec-21/2021-TTC(e-File No 44186) dated 26<sup>th</sup> November-2021.

Sir,

In inviting reference to the DGT letters on the subject cited above, I am to say that the AITT under CTS Examination in Annual System (Session 2019-21,2020-21 & 2020-22) for Practical Subjects have been scheduled with effect from 14<sup>th</sup> November-2021.

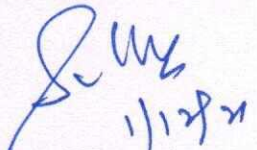
In view of the above the Bill of Materials developed by the DGT ( of 10 Most Popular Trades) as well as SCTE&VT (of rest different Trades) are enclosed herewith for procurement of raw materials & smooth conduct of Practical Examination of AITT Dec-2021.

Encl: As above.

  
Controller of Examinations

Memo No. 1968 /AITT/Dt. 01.12.2021

Copy to the Principals of All the ITI s of Odisha (Both Govt. & Pvt. Except Nodal Govt. ITI s ) for information & necessary action.

  
Controller of Examinations



**CONFIDENTIAL**

**BILL OF MATERIAL REQUIRED FOR EACH TRAINEES FOR THE FOLLOWING TRADES DURING  
THE ALL INDIA TRADE TEST OF CRAFTSMEN (ANNUAL PATTERN) UNDER CRAFTSMAN  
TRAINING SCHEME TO BE HELD IN THE MONTH OF DECEMBER-2021**

**AITT-December-2021**  
**Bill of Materials**

**Year-1**

**1ST YEAR BILL OF MATERIAL FOR AITT PRACTICAL EXAMINATION UNDER CTS & DST (YEARLY  
PATTERN) TO BE HELD IN THE MONTH OF DECEMBER-2021**

**ATTENDANT OPERATOR CHEMICAL PLANT**

1. Mild steel flat size :- 60 x 60 x 6mm, File, Try Square, Hacksaw 1 No.
2. Micrometres Flat plate (Metal) 1 Set.
3. Voltmeter, Ammeter, Lamp, Rheostat, Connecting Wire etc. 1 Set.

**AUTO BODY PAINTING**

1. Air compressor Machine
2. Different materials & body fillers used in body paint Industry.
3. Hood Panels (4nos)

**AUTO BODY REPAIR**

1. MIG welding machine
2. Gas welding complete

**BAKER AND CONFECTIONER**

1. Refined Flour, Yeast, Salt, Sugar, Butter, Banana, Banana Essence, Baking Powder, Baking Soda, Condensed Milk, Vegetable Oil, Almonds, Eggs, mozzarella cheese, Tomato, Onion, Garlic, Capsicum, Oregano, Chilli flakes, Potato, Bread crumbs, White Pepper, Mayones, Green Pea, Carrot, Lettuce etc.

**CARPENTER**

1. (155\*55\*2)-2 pieces

**COMPUTER HARDWARE AND NETWORK MAINTENANCE**

1. Digital Multimeter
2. CPU
3. Desktop (Personal computer)
4. Resistors, Diodes, ICs and transistors (NPN/PNP)
4. Anti virus Software



**DESKTOP PUBLISHING OPERATOR**

1. One Personal Computer with window-7, Page Maker, Corel draw, Photoshop, MS-Office.
2. One Laser/Inkjet Printer.
3. A-4 photocopier paper for taking out prints.
4. Printed text pages for composing.
5. Internet Connection

**DRAUGHTSMAN (MECHANICAL)**

- |                   |                          |
|-------------------|--------------------------|
| 1. Drawing sheet  | 01 no.                   |
| 2. Drawing pencil | H, HB, 2H (01 nos. each) |
| 3. Erasser        | 01 no.                   |
| 4. Cellotape      | 01 roll (for batch)      |
| 5. Sand paper     | 05 sheets (for batch)    |

**DRESS MAKING**

1. Cotton fabric - 1 mtr
2. Blouse Hooks - 5 nos
3. Brown Paper - 1 no each student
4. Drafting kit - 1 no
5. Matching thread - 1 reel

**FOUNDRYMAN**

1. Any wooden pattern.
2. Moulding equipments, sand, suitable additives, Moisture teller m/c
3. Melting equipment with desired quantity of scrap for aluminium melting.
4. Fettle equipments and instruments for dimension measures.

**ICTSM**

1. CD drive
2. Diodes, Resistors, Flexible wire
3. MS- Office

**INDUSTRIAL PAINTER**

1. Wood batten.
2. Nails ( 25.4 mm.)
3. Screw (25.4 mm.)
4. Glue

**INSTRUMENT MECHANIC**

1. DC voltage source (15v, 5v)
2. Resistors (100, 10k)
3. PN Diode
4. zener diode
5. Connecting wires
6. Digital Multimeter



**IOT(SMART AGRICULTURE)**

1. BC547, BC557, AC128, BU205, SL100, 2N3055, DMM
2. Digital Trainer Board, IC7400, 7402, 7404, 7408, 7432, 7486
3. Arduino UNO, POT-10K
4. DC Motor

**IOT(SMART CITY)**

1. Transistor, Resistor, Capacitor, Diode, Inductor, Transformer
2. Digital Multimeter
3. 1N4007, Step down Transformer, 560Ω 1/2 watt resistor
4. Arduino UNO, Desktop Computer system, LED

**IOT(SMART HEALTH CARE)**

1. Digital IC trainer
2. Transformer - Step Down, Centre Tapped, Driver, IFT, and Auto Transformer etc.
3. Battery Eliminator.
4. Diode-1N4007
5. Resistor-560Ω 1/2W.
6. 12 lead ECG simulator trainer kit.
7. DSO

**LABORATORY ASSISTANT CHEMICAL PLANT**

1. Apparatus for verifying Faraday's first law
2. Inorganic salt like ( $\text{Na}_2\text{CO}_3$ , KCl,  $\text{BaSO}_4$ ,  $\text{AgNO}_3$ ,  $\text{NaNO}_2$ )
3. Bunsen burner, glass rod, hotch glass, platinum loop
4. Charcoal, conc. HCl &  $\text{H}_2\text{SO}_4$  and other chemicals available in the lab for determining PH acid and basic radical analysis.

**MACHINIST**

1. M.S FLAT 85x85x10)mm
2. M.S FLAT(27x27x10)mm

**MARINE ENGINE FITTER**

1. Kerosene.
2. Lubricant Oil.
3. Petrol Engine
4. Diesel Engine

**MASON(BUILDING CONSTRUCTOR)**

1. Measuring tape 30 mtr.
2. 1/2 inch stone chips
3. 1/2 inch Ply boards for setting
4. 1/2 & 1 inch nail
5. Cement
6. Sand
7. Bricks
8. Tray
9. Trowel
10. Straight snip



**MECHANIC AGRICULTURE MACHINERY**

1. Engine assembly
2. Cotton waste- As required
3. Battery
4. Trainees tool kit
5. Spare parts as per requirement
6. Hydrometer
7. Grease gun
8. Cylinder bore dial gauge
9. Kerosene

**MECHANIC MECHATRONICS**

1. Mild Steel Flat (45x32x10)mm (2Nos)

**PAINTER GENERAL**

1. Plywood sheet 1' x 1'
2. French/ wood polish
3. Computer
4. Drawing paper sheet
5. Pencil
6. Brush
7. Black Colour (Poster/ water)

**PLASTIC PROCESSING OPERATOR**

1. Available Mould for Injection Moulding.
2. HDPE ( Injection Grade )
3. Required Tools and Equipment

**PLUMBER**

1. Cement, bricks, river sand, Aggregate, C.I frame with cover, Grating Gully trap.
2. ½ inch GI pipe 300mm long
3. Socket
4. Teflon tape
5. Lubricant oil.

**SEWING TECHNOLOGY**

1. Cotton Cloths-21Mtrs
2. Thread-20Pieces
3. Cloth-30Mtrs
4. Thread-20 Pieces
5. Button-130Pieces
6. Blouse Piece-20 Nos
7. Thread-20 Nos
8. Button-105 Pieces

**SHEET METAL WORKER**

1. 24 SWG G.I. sheet (350 mm X 250 mm )

**SURVEYOR**

1. Eraser
2. Set of Scale
3. Cello Tape



**TURNER**

1. MS BAR Ø36×150

**MECHANIC REPAIR AND MAINTENANCE OF HEAVY VEHICLE**

- 1-Battery
- 2- Brake fluid
- 3-Hydrometer
- 4-Clutch kit

**TOOL & DIE MAKER**

1. MS Flat 85 × 75 × 14 mm. -- 01 no.

**TEXTILE WET PROCESSING TECHNICIAN**

1. Cotton Fabric 0.25 mtr each
2. Hydrogen peroxide
3. PH paper
4. Sodium silicate
5. Mild steel ( 95x 77x 5 mm)

**MECHANIC TRACTOR**

1. Hydraulic oil 5 liters
2. Grease
3. Distilled water 5 liters.
4. Emery paper ..... As required

**MECHANICAL MACHINE TOOL MAINTENANCE**

1. MS ROD (80x45)MM

**PUMP OPERATOR CUM MECHANIC**

1. Filter element --- Oil type air filter – DF10
2. Cotton Waste --- 2 Kg.
3. Kerosene --- 5 Ltrs.
4. Lubricant Oil--- 20W 40 - 2 Ltr.
5. Wire Brush--- 5 Pcs.
6. Soap Oil--- 1 Ltr.
7. Diesel --- 5 Ltr.
8. Jubilee Clamp--- 25 mm, 50 mm( 2 Pcs each)

**FOOD PRODUCTION GENERAL**

1. Rice-500gm., Butter-100gm., Dal-150gm., Oil-500ml.
2. Tomato, Onion, Garlic, Ginger, Coriander leaves
3. Garam masala, Jeera powder, Dhania Powder, Salt, Chilli Powder, Turmeric powder,
4. Chicken -500gm, Cornflour, Cabbage, Carrot, Beans, Cheese -250gm.
5. Milk, Sugar, Suji& Cardamom

**Note:** \*All tools, Instrument and equipment as per syllabus of the trade should be kept ready in working condition.



**AITT-December-2021**  
**Bill of Materials**

**Year-2**

**2ND YEAR BILL OF MATERIAL FOR AITT PRACTICAL EXAMINATION UNDER CTS & DST (YEARLY PATTERN) TO BE HELD IN THE MONTH OF DECEMBER-2021**

**MECHANIC MACHINE TOOL MAINTENANCE**

1. MS Rod Dia (30x80)mm

**ATTENDANT OPERATOR CHEMICAL PLANT**

1. Lime Powder - 20kg
2. Distilled Water - 50ltr

**DRAUGHTSMAN (MECHANICAL)**

1. Drawing sheet
2. Drawing pencil
3. Eraser
4. Cellotape
5. Sand paper
6. Computer in auto cad

**ICTSM**

- |                                       |        |
|---------------------------------------|--------|
| 1. Flatbed Scanner with Driver CD/DVD | 01 No  |
| 2. Computer System                    | 02 Nos |
| 3. CAT-5 Cable                        | 4 mtr  |
| 4. RJ 45 Connector                    | 4 nos  |
| 5. Crimping Tool                      | 1 No   |

**INSTRUMENT MECHANIC**

1. Boiler level indicator, Constant oil level indicator.
2. Pyrometer.
3. PLC.

**TEXTILE WET PROCESSING TECHNICIAN**

- |                             |             |
|-----------------------------|-------------|
| 1. Cotton hank yarn         | 50 Grams.   |
| 2. Material for vat dyeing  | As required |
| 3. Cotton fabric            | 1 Mtr       |
| 4. Direct printing paste    | As required |
| 5. Screen printing material | As required |



**SURVEYOR**

- 1 Drawing sheet A3-One for Each
- 2 Pencil HB
- 3 Eraser
- 4 Set of scale
- 5 Cello Tape

**LABORATORY ASSISTANT CHEMICAL PLANT**

1. Glass wires available in the laboratory
2. Burette, Pipette, conical flask, measuring cylinder, watch glass, burette stand
3. Analytical balance, spatula etc.
4. Chemicals such as KOH, coconut oil, olive oil, calcium tablet, conc.H<sub>2</sub>SO<sub>4</sub>, HCL
5. Filter paper

**MACHINIST**

1. 80×100 CI BLOCK

**MECHANIC MECHATRONICS**

1. Old Gear Pump.
2. Diesel
3. Cotton Waste
4. Emery Paper
5. Oil Cane

**MECHANIC AGRICULTURE MACHINERY**

1. Power tiller
2. Cotton waste- As required
3. Fertilizer applicators
4. Trainees tool kit
5. Spare parts as per requirement
6. Oil Cane
7. Grease gun



**PAINTER GENERAL**

1. Stoving Enamel paint
2. NC Thinner
3. Aquabased paint
4. Aquabased thinner
5. Sand paper (Size-160, 200 & 300)

**TURNER**

1. M.S. Round bar  $\Phi$  50x85 mm

**TOOL & DIE MAKER (Press Tool, Jigs & Fixture)**

1. 45 x 75 mm Round rod 1 piece

**Note: \*All tools, Instrument and equipment as per syllabus of the trade should be kept ready in working condition.**

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