



No. 2373 AITT/Dt. 24.11.2023
(VT-I-03/2022)

From,
Dr. B.B.Mohanty,
Controller of Examinations.

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

Sub: Bill of Materials for Practical Examination of AITT December -2023.

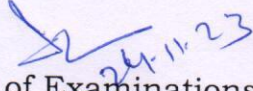
Ref: DGT Notification F.No.-DGT-18011/4/2023-O/O DIR-TT Cell (FTS. No. E. 62494) dated 18/10/2023

Sir/Madam,

In inviting reference to the DGT Notification on the subject cited above, I am to say that the AITT December -2023 under CTS & DST Examination in Annual System for Engg. Drawing & Practical Subjects have been scheduled with effect from 1st December -2023 to 6th December-2023.

In view of the above the Bill of Materials developed by the SCTE&VT, Odisha are enclosed herewith for procurement of Raw Materials & smooth conduct of Practical Examination of AITT December-2023.

Encl: As above.


Controller of Examinations

BILL OF MATERIAL REQUIRED FOR EACH TRAINEE FOR THE FOLLOWING TRADES
DURING THE ALL INDIA TRADE TEST OF CRAFTSMEN (ANNUAL
PATTERN/SUPPLEMENTARY) UNDER CRAFTSMAN TRAINING SCHEME & DUAL SYSTEM
MODE TO BE HELD IN THE MONTH OF
DEC -2023

Year-2

ELECTRICIAN

1. D.O.L Starter
2. Connecting wire
3. Wire wound variable resistor
4. Push button switch ----- 240 v ,5A
5. Various types of resistor
6. Sq. cage Induction motor (3hp, 440V)
7. Contractor with auxiliary contact NO & NC (32amp, 415V)
8. Relay & Timer
9. Push button switch
10. Tachometer
11. MCB (32 Amp)
12. PVC wire-2.5 mm²
13. Pin insulator
14. ACSR (7strandard)

FITTER

1. ISF 75 X 65 X 6 MM & 75 X 35 X 6 MM -2 piece
2. MS flat (50X50X6)mm - 2 PC

MACHINIST

1. C I Round ϕ 120 X 20 L
2. M.S Round bar (ϕ 40x110 L)mm

MECHANIC MOTOR VEHICLE

- | | |
|--|--------|
| 1. Cotton Waste | 5 Kg |
| 2. Kerosene | 2ltr. |
| 3. Grease | 1 Kg |
| 4. Emery paper | 3 Pc. |
| 5. Brake Oil | 1 ltr. |
| 6. Wheel Cylinder kit | 2 set |
| 7. Cotton waste | |
| 8. Kerosine | |
| 9. Gear oil SAE 80W90 | |
| 10. Differential oil SAE 85W140 | |
| 11. Brake fluid Dot ¾ | |
| 12. Emery paper | |
| 13. Gear box oil seal | |
| 14. Differential oil seal | |
| 15. Gear box packing kit/ packing paper | |
| 16. Differential packing kit/packing paper | |
| 17. Adhesive bond (Anabond 666) | |

18. Grease

REFRIGERATION & AIR CONDITIONING TECHNICIAN

1. Emery paper
2. Cotton waste
3. Petrol
4. Gasket
5. Compressor oil
6. Thermostat switch
7. Relay
8. Over load protector
9. Carbon tetra chloride

ELECTRONICS MECHANIC

1. CPU & PC
2. Microcontroller trainer kit
3. LVDT Trainer kit
4. AM , FM , PWM OFC Trainer kit
5. Different types of Smartphone's
6. Lead acid battery , UPS , load
7. IC 555
8. Transistor BC 547 - 1no
9. Resistor 1K Ω 1/2 watt - 2 nos
10. Capacitor 0.1 mF, 0.01 mF - 1 no each
11. Diode 1N 4148 - 2 nos
12. Linear potentiometer 50K Ω -1no
13. Thermistor (around 100 Ω)-1no
14. Led strip
15. Flexible wires

WIREMAN

1. P.V.C Wire copper/aluminum 1.5mm²- 10mtrs.
2. P.V.C Wire copper-2.5mm²,2mtrs/TRAINEE
3. Series testing board with lamp -200 watt, 250volt
4. Fuse wire 35 S.W.G
5. Fuse wire, 10Amp
6. P.V.C Wire ,2.5 Sqmm
7. Armoured Cable 3 1/2 core
8. Diode IN 4007
9. Electrolytic Capacitor 1000 M.F/12V
10. Carbon resistance 1Kilo Ohm/0.25W
11. P.V.C Insulation tape 19mm
12. Solder
13. Flux Resin

TURNER

1. M.S. Rod ϕ 35 X 75 L
2. M.S. Rod ϕ 45 X 150 L

INSTRUMENT MECHANIC

1. Load cell with 5gm- 200gm
2. Temperature control Trainer kit

INFORMATION COMMUNICATION TECHNOLOGY SYSTEM MAINTENANCE

- | | |
|------------------------------------|-----------------------------|
| 1. Desktop PC | PC with Internet connection |
| 2. Windows Server OS | LCD Projector with software |
| 3. Telnet/Remote desktop computing | ADSL Modem software |

MECHANICAL MACHINE TOOL MAINTENANCE

1. M.S Rod (ϕ 65x100)MM

ATTENDANT OPERATOR CHEMICAL PLANT

1. Distill water
2. Mercury
3. Kerosene
4. Leveling Pipe
5. Mobil

LABORATORY ASSISTANT CHEMICAL PLANT

1. Coconut oil, olive oil, Rice Bran oil, Castor oil
2. NaOH (caustic soda)
3. Copper carbonate

MECHANIC MINING MACHINERY

1. MS Bar -: ϕ 25 mm-350 gm per Trainee

MECHANICS AGRICULTURE MACHINERY

1. Power triller and power weeder
2. Cotton waste- As required
3. Maize seller
4. Spare parts as per requirement
5. Trainee too kit
6. Kerosene as per required
7. Grease gun
8. Air impact wrench

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

1. MS Flat – 100mm x 70mm X15mm 01no/Trainee
2. MS Rod – Dia. 30mm x35mm 01 no/Trainee

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

Year-1**ELECTRICIAN**

1. Graph paper
2. Load bank
3. 2.5 mm² copper wire
4. DOL starter
5. PVC conduit pipe, 19 mm dia.
6. PVC terminal box
7. Wood screw No. 6X12 mm
8. Wood screw No. 6X20 mm
9. 5 sq mm PVC cable
10. Flush-mounting 2-way switch
11. Batten lamp
12. Terminal plate
13. Bulb 40 w
14. PVC round block
15. PVC box
16. PVC Tee
17. PVC insulation tape
18. Marking pen
19. Marking thread
20. Self-tapping screw
21. PVC bend
22. Connecting cable
23. Tube light, 40 w
24. DPST switch
26. SPT switch

FITTER

1. M.S Flat(60 X 40 X 12) MM
2. Fe-310
3. STOCK SIZE 70 ISF (55X6)

MACHINIST

1. M.S FLAT (65×65×10)MM
2. M.S Round bar (∅ 35x130 L)mm

MECHANIC MOTOR VEHICLE

1. Dial bore gauge
2. Cotton waste
3. Kerosine-2 ltr/ unit
4. Engine oil SAE 20W40- as per specification of oil quantity for oil change the engine
5. Oil filter
6. Distilled water
7. Hydrometer
8. Lead acid battery
9. Emery paper
10. Petroleum jelly

11. Grease
12. Diesel
13. Cotton waste
14. Clearing Brush
15. Gasket

REFRIGERATION & AIR CONDITIONING TECHNICIAN

1. Emery paper
2. Cotton waste
3. Insulation tape
4. Refrigerant R-22
5. Brazing rod
6. Brazing flux
7. Pressure testing kit
8. Soap solution
9. Charging pipe
10. Nitrogen cylinder
11. Gas cane

ELECTRONICS MECHANIC

1. IC 7402
2. Resistor 330 ohm,5.6k,68k,1.2k,4.7k,10k
3. Led
4. Capacitors - 0.5micro farad,0.002micro farad,10micro farad
5. Transistor 8n6005
6. Pot 1k
7. Diode IN4007
9. IC 74LS73
- 10 IC LM- 337,7486,7400
12. SMD KIT
13. TRIAC
14. RASISTOR 330 OHM
15. LED
16. DIAC

WIREMAN

1. 1 way Switch, Socket, Regulator, Holder , Board (8"x10"),Lamp 100wt.,Screw, PVC pipe (including all fittings).
2. Wire 1 sq mm
3. Sulphuric Acid, Distil water
4. Connecting cables
5. Switch SPT 6A, 250 V
6. Choke 40 W, 0.43A, 250V
7. Electrolytic capacitor, 2.5micro Farad, 415 V
8. I.C.D.P. switch 16 A, 250 volts
9. Incandescent lamp 100W
10. Batten lamp-holder, 6A, 250V
11. PVC conduit pipe 2.5"
12. Wood screw No. 6*20mm

WELDER

1. M.S Flat ISF 50 ×10 x150 mm - 2 pcs/Trainee
2. MS sheet- 100mmX50mmX2mm – 4 Nos/Per Trainee
3. MS Flat- 100mmX50mmX12mm – 2 Nos/Per Trainee
4. MS copper coated filler rod- 1/16 inch or 1/18 inch
5. Oxygen cylinder
6. Acetylene Cylinder
7. Electrode- 3.15 mm and 4 mm
8. Wire brush

TURNER

1. M.S. Round bar Φ 30×150 mm/Trainee
2. M.S ROUND BAR [ϕ 30 X 65 L]/Trainee

ATTENDANT OPERATOR CHEMICAL PLANT

1. M.S Flat
2. Pendulum
3. Vernier caliper

CARPENTER

1. Hard wood 12mm X 60mm X 500 mm – 1.No/ Trainee
2. Hard wood 6mm X 160mm X 220 mm – 1.No/ Trainee
3. Fevicol - 50g. per Trainee

DRESS MAKING

1. Brown paper
2. Tailor chalk
3. Fabric – 40 mtrs per unit
4. Matching color thread - 20 nos
5. Hook - 3 pkts

FOOD PRODUCTION GENERAL

1. Rice -500gm
2. Carrot, Cabbage, Beans, Capsicum
3. Garlic, Onion, Salt
4. Oil, Corn flour
5. Soya Sauce, Tomato Sauce, Chilli Sauce
6. Chicken-500gm
7. Bread, Milk, Sugar
8. Dry Fruits, Condensed Milk

IoT TECHNICIAN SMART AGRICULTURE

1. Colour code Resistors, SMD Resistors (Different values)
2. Arduino Uno Board,

3. Solar Power Lab
4. Jumper wire
5. LED, LDR, POT (10K), Touch sensor, Ultrasonic Sensor, PIR, IR sensor, Rain sensor, MQ-2

IoT TECHNICIAN SMART CITY

1. Seven segment display common cathode and common anode
2. Digital trainer Kit
3. Arduino Uno Board
4. LED, IR sensor
5. Jumper wire
6. Solar trainer Kit

IoT TECHNICIAN SMART HEALTHCARE

1. Transistor,
2. Resistor, SMD resistor (Different values).
3. Jumper wire
4. Digital Trainer Kit
5. 12 lead ECG simulator trainer

LABORATORY ASSISTANT CHEMICAL PLANT

1. Caustic soda,
2. Dilute Hcl
3. Bulb (3nos)
4. 3 meter wire
5. Carbonate salt
6. Sulphite salt, Sulphide salt.
7. Nitrite salt, Chloride salt, Bromide salt

MASON (BUILDING CONSTRUCTOR)

1. Measuring tape 30 mtr.
2. Chain pin
3. Cement
4. Sand
5. Bricks
6. Tray
7. Trowel
8. Fly Ash
9. 1/2" & 3/4" Stone Chips
10. Water
11. 6mm & 8mm M.S Rod
12. 1/2" Ply board for setring

MECHANIC AUTO BODY PAINTING

1. Paints(Top coat, Clear coat , Base coat)

2. Spray Gun
3. Compressor

MECHANIC AUTO BODY REPAIR

1. Spot welding Machine: 01 no/Trainee
2. Sheet Metal (0.8mm)
3. Leather Gloves
4. Dust mask.
5. Dent Beating Tool kit: 5 sets
6. Fender panel
7. Cotton Gloves
8. P 80 Abrasive Disc

MECHANIC MINING MACHINERY

1. 80mmX50mmX10mm

MECHANICS AGRICULTURE MACHINERY

1. Engine
2. Cotton waste-
3. Oil filter
4. Spare parts as per requirement
5. Trainee tool kit
6. Kerosene
7. Gasket
8. Air impact wrench

PLUMBER

1. ½ inch Saddle, ferrule, union , gate valve ,water meter FTA,MTA,UPVC pipe ½ inch Teflon tape, solvent cement.
2. 20mm PPR pipe long 300mm, 2 0mm socket.

PUMP OPERATOR CUM MECHANIC

1. Cotton Waste
2. Emery Sheet
3. Soldering iron, 40W
4. Soft Solder
5. Flux
6. Diesel
7. Single Strand Copper wire, 0.75mm-1 Coil./Trainee
8. PVC Elbow, 25mm
9. PVC Valve, 25mm
10. PVC Tee, 25mm

SEWING TECHNOLOGY

1. Fabric

- Matching color thread
- Tailor chalk
- 2. Plain Fabric
 - Matching color thread
 - Tailor chalk
 - Bottom
- 3. Fabric
 - Matching color thread
 - Tailor chalk
 - Button
 - Pest bocrom

SMARTPHONE TECHNICIAN CUM APP TESTER

1. Keypad Phone or old smart phone
2. Tweezer
3. Soldering and De-soldering Station
4. IPA Solution
5. Liquid flux
6. Jumper Wire
7. Digital Multimeter
8. Solder

SOLAR TECHNICIAN (ELECTRICAL)

1. Voltmeter(digital & analog)
2. ammeter
3. Watt meter
4. Frequency meter
5. Trainees tool kit
6. Crimping ferrule
7. Crimping spade lug
8. Conducting paste
9. Finished simple twist joint
10. Sand paper
11. Resin solder.
12. 10watt poly crystalline
13. Dc load bank
14. Dc volt meter comparable with specification of module
15. Dc ammeter comparable with specification of module
16. Dc watt meter.
17. Mc connector

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

1. MS flat (85 x 75 x 10) mm

MECHANIC DIESEL

1. Kerosine-2 ltr/ unit
2. Oil cane

3. Carbon brush for starter motor
4. Cotton waste
5. Bush of starter motor
6. Battery cable
7. Digital Multimeter
8. 12 volt battery
9. Carbon brush of alternator
10. Rectifier for alternator
11. Copper wire(2.5 sq mm)
12. Emery paper
13. Grease
14. Solder, flux, soldering iron

MECHANIC TRACTOR

1. Cotton waste-
2. Kerosine-2 ltr/ unit
3. Fuel filter
4. Diesel-as required
5. Grease
6. Emery paper

INFORMATION COMMUNICATION TECHNOLOGY SYSTEM MAINTENANCE

1. Resistor
2. Vero board
3. Ribbon wire
4. Video Card

INSTRUMENT MECHANIC

1. Diodes IN4007
2. Flexible Wire ,Switches

TECHNICIAN MECHATRONICS

1. Mild Steel Flat (45x32x10)mm =2 each/Trainee

MARINE ENGINE FITTER

1. Engine assembly
2. Spare parts as per requirement.
3. Trainees tool kit.
4. Cotton waste- As required.
5. Kerosene as per required.

MECHANICAL MACHINE TOOL MAINTENANCE

1. Mild Steel (Flat)- 80x55x10-1 piece/Trainee
2. Mild steel (Flat)- 55x55x10- 2 piece/Trainee
- 3.

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