



## **Annex 2 - Technical Specifications and Drawings**

**PUBLIC WORKS CONTRACT FOR the supply of  
'School Furniture in 6 schools in the West Bank'**

**PZA1203211-10027**

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## 1 General Items Specifications

### 1.1 Specific Colour Plan

TS-1 The following table specifies the colour plan for different types of items:

BoQ Item No.	Item	Paint colour
Item 23.2	Laboratory Locker/Technology lab	Blue (5007) /Silver (9007)
Item 12.2	Metal Cabinet (2 Doors)/Technology lab	
Item 8.2	Computer Table/Technology lab	Blue (5007)
Item 7.2	Teacher Chair/Technology lab	
Item 6.3	Student Chair 6/Technology lab	
Item 6.2	Student Chair 6 /Resource Room	
Item 9.2	Stool Chair/Technology lab	
Item 11.2	Teacher Desk (Classroom)/Technology lab	

### 1.2 Metal Painting

- All metal shall be painted after applying anticorrosive treatment with at least three stages and cleaned from oil, grease, dust, and other dirt using special thermal control painting for metal furniture to form a layer of base painting of (iron phosphate) (0.4 – 0.8) gm/m<sup>2</sup>.
- Automatic spray painting shall be applied to be followed by a drying process in a thermal furnace with suitable temperature and time for the process.
- Thickness of painting (60 – 80) micron.
- (Aboxpolyster powder) paint should be used.
- Painting of iron, assembly, delivery and storage must be carried out away from climatic influence i.e. sun, dust etc.

### 1.3 Marking of goods:

The supplier shall put his commercial mark on all supplied pieces of goods by stamp or by fixing a sticker properly –approved by the Contracting Authority- on the bottom face of the goods, this mark shall contain the name of the factory, tender No. and the name of the donor, in a clear and permanent manner and approved by the Contracting Authority.

### 1.4 Packing:

- The supplied goods shall be packed by using special plastic sheets (with air bubbles ) to prevent scratching of paintings and surfaces of goods .
- Large items should be packed unassembled using special cardboard for this type of furniture.

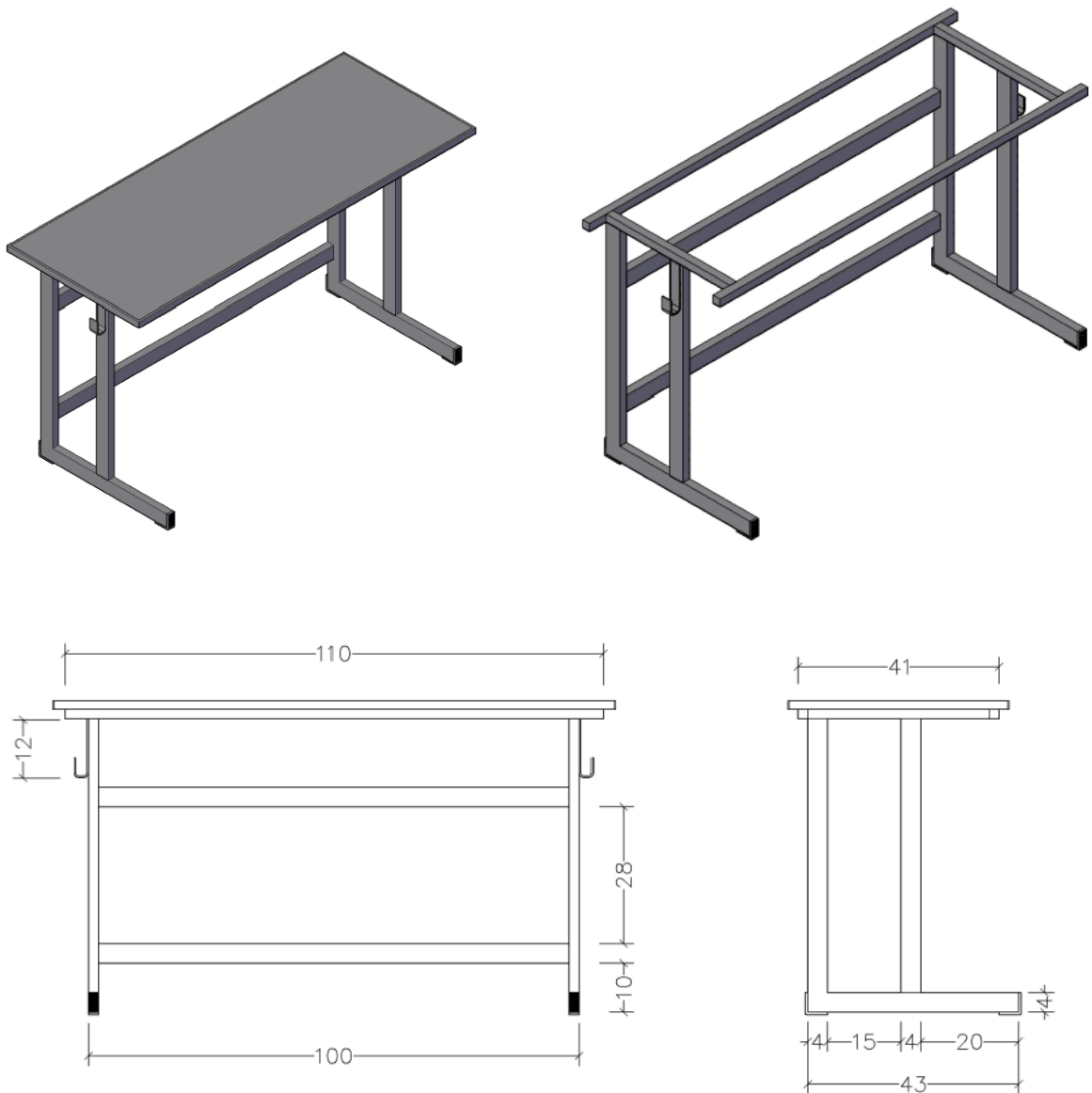
- The supplier shall assemble the furniture at his expenses and responsibility, at the assigned places according to instructions and Annex-1: (BoQ).

## 1.5 Inspections and tests:

The Contracting Authority has the right to test sample of this item at specialized labs or institutions at the Palestinian Authority area or nearby countries, at the supplier's expenses.

## 2 Student's desks Specifications

### 2.1 Drawings



## 2.2 Item 1: Student Desk 4

### 2.2.1 General Technical Specifications

No. of pupils	2 pupils
Height	64 cm
Dimension of table board	45 x 115 cm
Thickness of the table board	17 mm
Dimension of metal tubes	20 x 20 mm & 40 x 20 mm
Color of the top surface of table board (Formica)	Grey (3130)
Color of the bottom surface of table board (Formica)	White
Color of the belt	Black
Painting colour:	Marengo No. 7016

### 2.2.2 Metal framework

- The metal frame shall be made from hollow metal profile tubes.
- Dimensions: 20 x 20 mm and 40 x 20 mm, thickness: 1.25 mm.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.
- Additional holes in the metal framework shall be made besides and equal in number to the existing holes to enable future maintenance.
- All ends of the metal squares must be closed with black plastic covers.
- Plastic heels are to be installed under the legs to elevate the iron parts from the ground and must be fixed with metal screws.
- Two bag-holders should be fitted at each side of table.

### 2.2.3 Table board

- The table board shall be made of pre-cut plywood (SANDWICH), best quality.
- Thickness of table board shall be 17 mm, dimensions: 115 x 45 cm. It shall be covered with colored plastic FORMICA on both sides.
- Top Formica thickness: 0.8mm. Color: grey (3130)
- Bottom Formica thickness: 0.5mm. Color: white
- The table board shall be belted using INJECTION POLYURETHANE THERMOSET.
- The belt thickness must be (5- 8mm). Color: black
- The table board shall be fixed on the metal framework using galvanized metal screws, (3.5) cm.
- Number of screws: 12. It should be fixed from the bottom.
- Raw materials should be flexible.
- The polyethylene materials should not be used due to harmful material.
- The materials that will be used for manufacturing are similar to these used globally for manufacturing food containers, which means it is safe to be used
- The used dyes and raw materials should be free of any cancerous materials.
- Strength for the disk top should be high "not less than 250 kg".



## 2.3 Item 2: Student Desk 5

### 2.3.1 General Technical Specifications

No. of pupils	2 pupils
Height	70 cm
Dimension of table board	45 x 115 cm
Thickness of the table board	17 mm
Dimension of metal tubes	20 x 20 mm & 40 x 20 mm
Color of the top surface of table board (Formica)	Beige (cream) (3231)
Color of the bottom surface of table board (Formica)	White
Color of the belt	Black
Painting colour:	Marengo No. 7016

### 2.3.2 Metal framework

- The metal frame shall be made from hollow metal profile tubes.
- Dimensions: 20 x 20 mm and 40 x 20 mm, thickness: 1.25 mm.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.
- Additional holes in the metal framework shall be made besides and equal in number to the existing holes to enable future maintenance.
- All ends of the metal squares must be closed with black plastic covers.
- Plastic heels are to be installed under the legs to elevate the iron parts from the ground and must be fixed with metal screws.
- Two bag-holders should be fitted at each side of table.

### 2.3.3 Table board

- The table board shall be made of pre-cut plywood (SANDWICH), best quality.
- Thickness of table board shall be 17 mm, dimensions: 115 x 45 cm. It shall be covered with colored plastic FORMICA on both sides.
- Top Formica thickness: 0.8mm. Color: beige (cream) (3231).
- Bottom Formica thickness: 0.5mm. Color: white.
- The table board shall be belted using INJECTION POLYURETHANE THERMOSET.
- The belt thickness must be (5- 8mm). Color: black
- The table board shall be fixed on the metal framework using galvanized metal screws, (3.5) cm.
- Number of screws: 12. It should be fixed from the bottom.
- Raw materials should be flexible.
- The polyethylene materials should not be used due to harmful material.
- The materials that will be used for manufacturing are similar to these used globally for manufacturing food containers, which means it is safe to be used
- The used dyes and raw materials should be free of any cancerous materials.
- Strength for the disk top should be high "not less than 250 kg".

## 2.4 Item 3: Student Desk 6

### 2.4.1 General Technical Specifications

No. of pupils	2 pupils
Height	76 cm
Dimension of table board	45 x 115 cm
Thickness of the table board	17 mm
Dimension of metal tubes	20 x 20 mm & 40 x 20 mm
Color of the top surface of table board (Formica)	Grey (3130)
Color of the bottom surface of table board (Formica)	White
Color of the belt	Black
Painting colour:	Marengo No. 7016

### 2.4.2 Metal framework

- The metal frame shall be made from hollow metal profile tubes.
- Dimensions: 20 x 20 mm and 40 x 20 mm, thickness: 1.25 mm.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.
- Additional holes in the metal framework shall be made besides and equal in number to the existing holes to enable future maintenance.
- All ends of the metal squares must be closed with black plastic covers.
- Plastic heels are to be installed under the legs to elevate the iron parts from the ground and must be fixed with metal screws.
- Two bag-holders should be fitted at each side of table.

### 2.4.3 Table board

- The table board shall be made of pre-cut plywood (SANDWICH), best quality.
- Thickness of table board shall be 17 mm, dimensions: 115 x 45 cm. It shall be covered with colored plastic FORMICA on both sides.
- Top Formica thickness: 0.8mm. Color: grey (3130).
- Bottom Formica thickness: 0.5mm. Color: white.
- The table board shall be belted using INJECTION POLYURETHANE THERMOSET.
- The belt thickness must be (5- 8mm). Color: black
- The table board shall be fixed on the metal framework using galvanized metal screws, (3.5) cm.
- Number of screws: 12. It should be fixed from the bottom.
- Raw materials should be flexible.
- The polyethylene materials should not be used due to harmful material.
- The materials that will be used for manufacturing are similar to these used globally for manufacturing food containers, which means it is safe to be used
- The used dyes and raw materials should be free of any cancerous materials.
- Strength for the disk top should be high "not less than 250 kg".

### 3 Student's chairs Specifications

#### 3.1 Drawings:



#### 3.2 Item 4: Student Chair 4

##### 3.2.1 General Technical Specifications

No. of pupils	1 pupil
Height	38 cm
Dimension of plastic seat	33.5 x 34.5 cm
Dimension of plastic back	19.5 x 34.5 cm
Plastic color	Grey
Thickness of plastic	5-8 mm
Diameter of iron pipes:	22 mm,10/20mm
Width of chair:	40 cm
Painting colour:	Marengo No. 7016
Note: plastic dimensions measured by cms ( $\pm 0.5$ ) cm	

### 3.2.2 Metal framework

- The metal framework shall be made from metal pipes. Diameter: 22 mm, thickness 1.5 mm.
- The lateral metal connections shall be made of elliptical profile 10/20 mm with a thickness of 1.25mm.
- All ends of metal pipes should be closed with plastic covers.
- Plastic heels are to be installed at the bottom of the chair's legs.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.

### 3.2.3 Chair back and seat

Note: Samples are available for bidders, to manufacture plastic parts with same chemical composition, same hardness, shape, and thickness)

- Chair back and seat shall be made of reinforced plastic. Thickness: 5-8mm.
- The chair back shall be fixed by metal screw; length 1.5cm, required number: 4.
- It shall be fixed from the backside.
- The seat shall be fixed by metal screw; length: 1.5 cm, required number: 4.
- Strength for the plastic material of chair parts shall be according to international standards for this product.
- High flexibility for shocks resistant according to international standards.
- Safe material for human touching that does not contain any mercury, lead, or any other harming materials.
- Made of first-class raw materials, and free of any cancerous materials.
- Resistant to direct sunlight for more than 4 years.

## 3.3 Item 5: Student Chair 5

### 3.3.1 General Technical Specifications

No. of pupils	1 pupil
Height	42 cm
Dimension of plastic seat	33.5 x 34.5 cm
Dimension of plastic back	19.5 x 34.5 cm
Plastic color	Beige (cream)
Thickness of plastic	5-8 mm
Diameter of iron pipes:	22 mm,10/20mm
Width of chair:	40 cm
Painting colour:	Marengo No. 7016
Note: plastic dimensions measured by cms ( $\pm 0.5$ ) cm	

### 3.3.2 Metal framework

- The metal framework shall be made from metal pipes. Diameter: 22 mm, thickness 1.5 mm.
- The lateral metal connections shall be made of elliptical profile 10/20 mm with a thickness of 1.25mm.
- All ends of metal pipes should be closed with plastic covers.
- Plastic heels are to be installed at the bottom of the chair's legs.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.

### 3.3.3 Chair back and seat

Note: Samples are available for bidders, to manufacture plastic parts with same chemical composition, same hardness, shape, and thickness)

- Chair back and seat shall be made of reinforced plastic. Thickness: 5-8mm.
- The chair back shall be fixed by metal screw; length 1.5cm, required number: 4.
- It shall be fixed from the backside.
- The seat shall be fixed by metal screw; length: 1.5 cm, required number: 4.
- Strength for the plastic material of chair parts shall be according to international standards for this product.
- High flexibility for shocks resistant according to international standards.
- Safe material for human touching that does not contain any mercury, lead, or any other harming materials.
- Made of first-class raw materials, and free of any cancerous materials.
- Resistant to direct sunlight for more than 4 years.

## 3.4 Item 6: Student Chair 6

### 3.4.1 General Technical Specifications

No. of pupils	1 pupil
Height	46 cm
Dimension of plastic seat	37 x 37 cm
Dimension of plastic back	22.5 x 37.5 cm
Plastic color	Grey
Thickness of plastic	5-8 mm
Diameter of iron pipes:	22 mm,10/20mm
Width of chair:	44 cm
Painting colour:	Marengo No. 7016
Note: plastic dimensions measured by cms ( $\pm 0.5$ ) cm	

### 3.4.2 Metal framework

- The metal framework shall be made from metal pipes. Diameter: 22 mm, thickness 1.5 mm.

- The lateral metal connections shall be made of elliptical profile 10/20 mm with a thickness of 1.25mm.
- All ends of metal pipes should be closed with plastic covers.
- Plastic heels are to be installed at the bottom of the chair's legs.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.

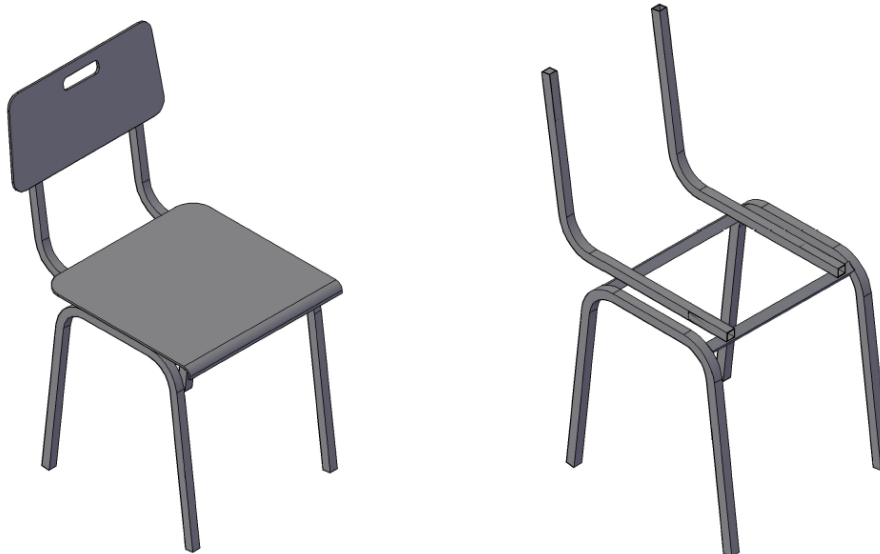
### 3.4.3 Chair back and seat

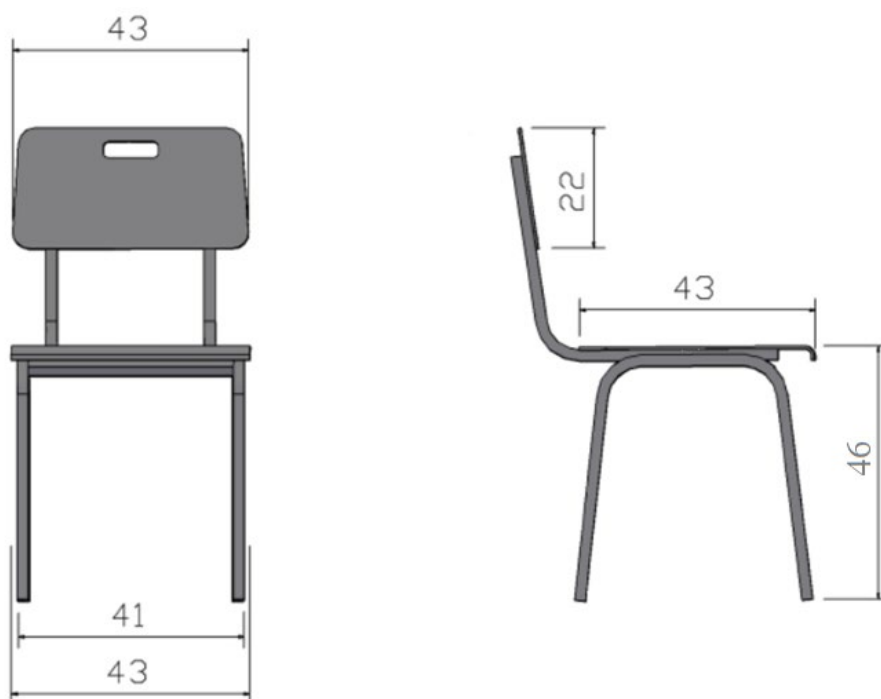
Note: Samples are available for bidders, to manufacture plastic parts with same chemical composition, same hardness, shape, and thickness)

- Chair back and seat shall be made of reinforced plastic. Thickness: 5-8mm.
- The chair back shall be fixed by metal screw; length 1.5cm, required number: 4.
- It shall be fixed from the backside.
- The seat shall be fixed by metal screw; length: 1.5 cm, required number: 4.
- Strength for the plastic material of chair parts shall be according to international standards for this product.
- High flexibility for shocks resistant according to international standards.
- Safe material for human touching that does not contain any mercury, lead, or any other harming materials.
- Made of first-class raw materials, and free of any cancerous materials.
- Resistant to direct sunlight for more than 4 years.

## 4 Item 7: Teachers chair Specifications

### 4.1 Drawings:





## 4.2 General Technical Specifications

Use	In classroom and staff room
Height	46 cm
Dimension of plastic seat	42 x 43 cm
Dimension of plastic back	22 x 43 cm
Plastic color	Grey
Thickness of plastic	5-8 mm
Diameter of iron pipes:	(20x20) mm
Width of chair:	44 cm
Painting colour:	Marengo No. 7016
Note: plastic dimensions measured by cms ( $\pm 0.5$ ) cm	

## 4.3 Metal framework

- The metal framework shall be made from metal pipes. Diameter: (20x20) mm, thickness 1.25 mm.
- All ends of metal pipes should be closed with plastic covers.
- Plastic heels are to be installed at the bottom of the chair's legs.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.

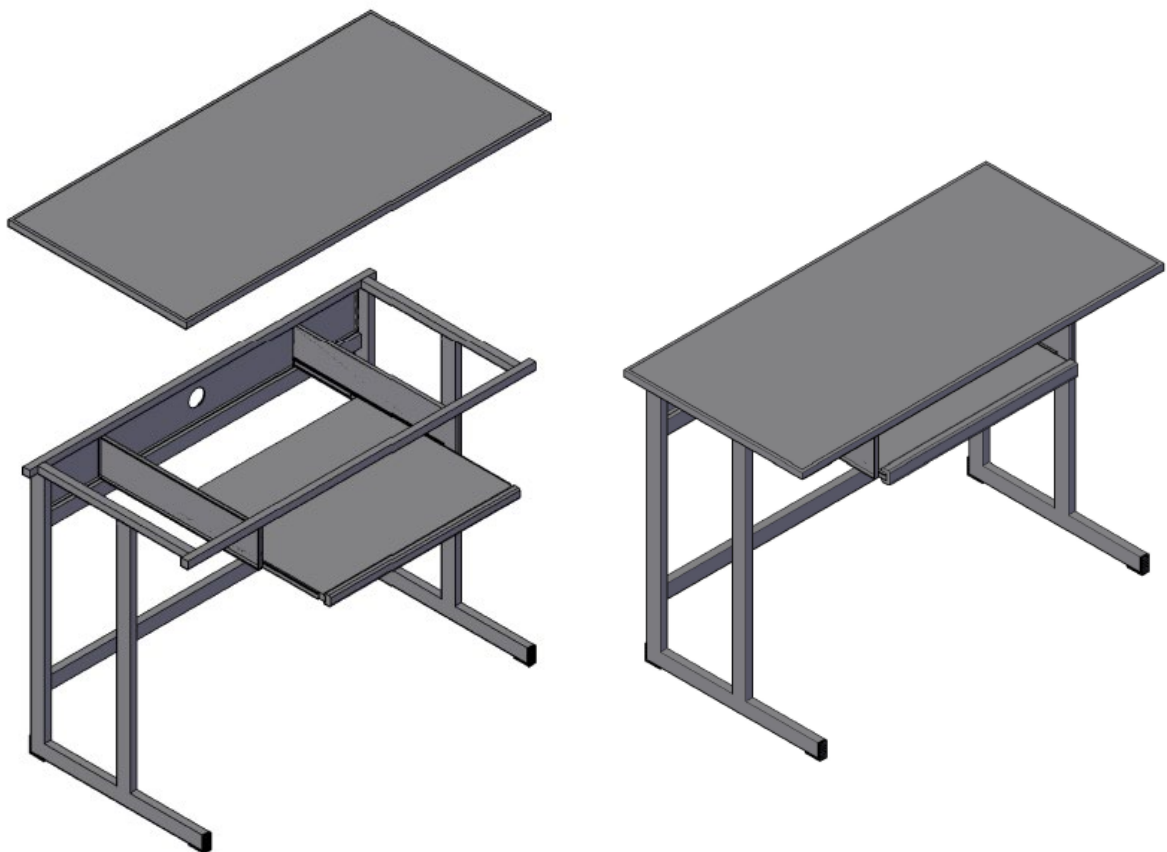
#### 4.4 Chair back and seat

Note: Samples are available for bidders, to manufacture plastic parts with same chemical composition, same hardness, shape, and thickness)

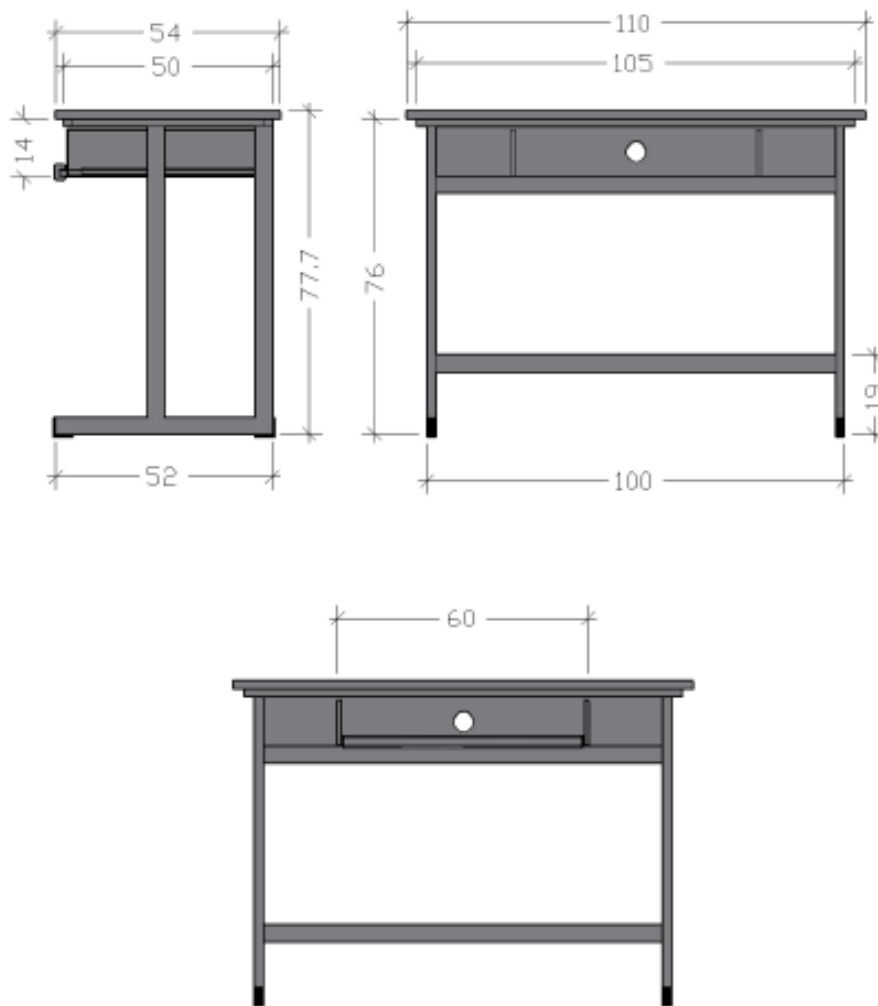
- Chair back and seat shall be made of reinforced plastic. Thickness: 5-8mm.
- The chair back shall be fixed by metal screw; length 3.5 cm, required number: 2.
- It shall be fixed from the backside.
- The seat shall be fixed by metal screw; length: 3.5 cm, required number: 2.
- Strength for the plastic material of chair parts shall be according to international standards for this product.
- High flexibility for shocks resistant according to international standards.
- Safe material for human touching that does not contain any mercury, lead, or any other harming materials.
- Made of first-class raw materials and free of any cancerous materials.
- Resistant to direct sunlight for more than 4 years.

### 5 Item 8: Student Computer tables Specifications

#### 5.1 Drawings:







## 5.2 Metal framework

- The metal frame shall be made from hollow metal profile tubes.
- Dimensions: 20 x 20 mm and 40 x 20 mm, thickness: 1.25 mm.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.
- Additional holes in the metal framework shall be made besides and equal in number to the existing holes to enable future maintenance.
- All ends of the metal squares must be closed with black plastic covers.
- Plastic heels are to be installed under the legs to elevate the iron parts from the ground and must be fixed with metal screws.

## 5.3 Table board

- The table board shall be made of pre-cut plywood (SANDWICH), best quality.
- Thickness of table board shall be 17 mm, dimensions: 110 x 54 cm. It shall be covered with colored plastic FORMICA on both sides.
- Top Formica thickness: 0.8mm. Color: grey (3130).

- Bottom Formica thickness: 0.5mm. Color: white.
- The table board shall be belted using INJECTION POLYURETHANE THERMOSET.
- The belt thickness must be (5- 8mm). Color: black
- The table board shall be fixed on the metal framework using galvanized metal screws, (3.5) cm.
- Number of screws: 12. It should be fixed from the bottom.
- Raw materials should be flexible.
- The polyethylene materials should not be used due to harmful material.
- The materials that will be used for manufacturing are similar to these used globally for manufacturing food containers, which means it is safe to be used
- The used dyes and raw materials should be free of any cancerous materials.
- Strength for the disk top should be high "not less than 250 kg".

#### **5.4 Keyboard Holder**

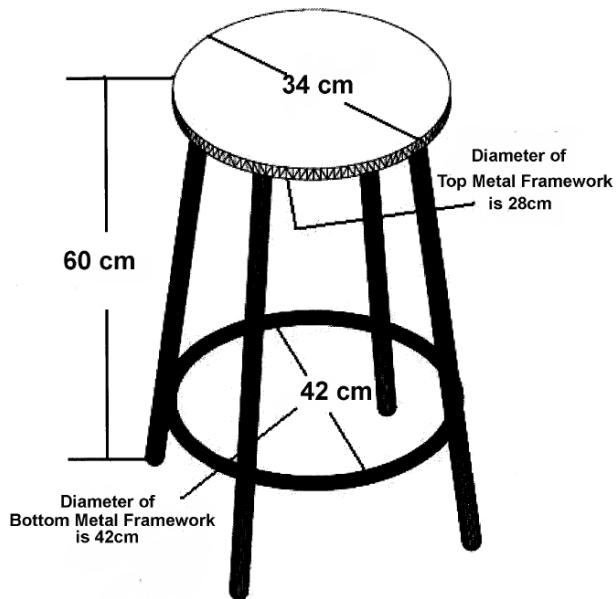
- Two-piece of sheet metal 1.5 mm thick shall be centrally welded to the upper frame of the table to hold the keyboard shelf.
- One piece of sheet metal 1.5 mm thick shall be welded at the front of the table.
- In this piece, a hole 5 cm in diameter shall be made and covered with a hard plastic ring.
- A shelf made of plywood (sandwich) with thickness of 17 mm, 60 x 45 cm covered with stretched laminating (thickness 2 mm).
- The shelf shall be belted from front with wooden natural wood (U) shape. Colour: black.
- The shelf shall move on painted metal rails 1.25 mm thick and wheels.

#### **5.5 Painting colour:**

- Epoxy polyester powder) paint should be used, colour: Marengo No. 7016

## 6 Item 9: Stool Specifications

### 6.1 Drawings:



### 6.2 Stool frame and seat

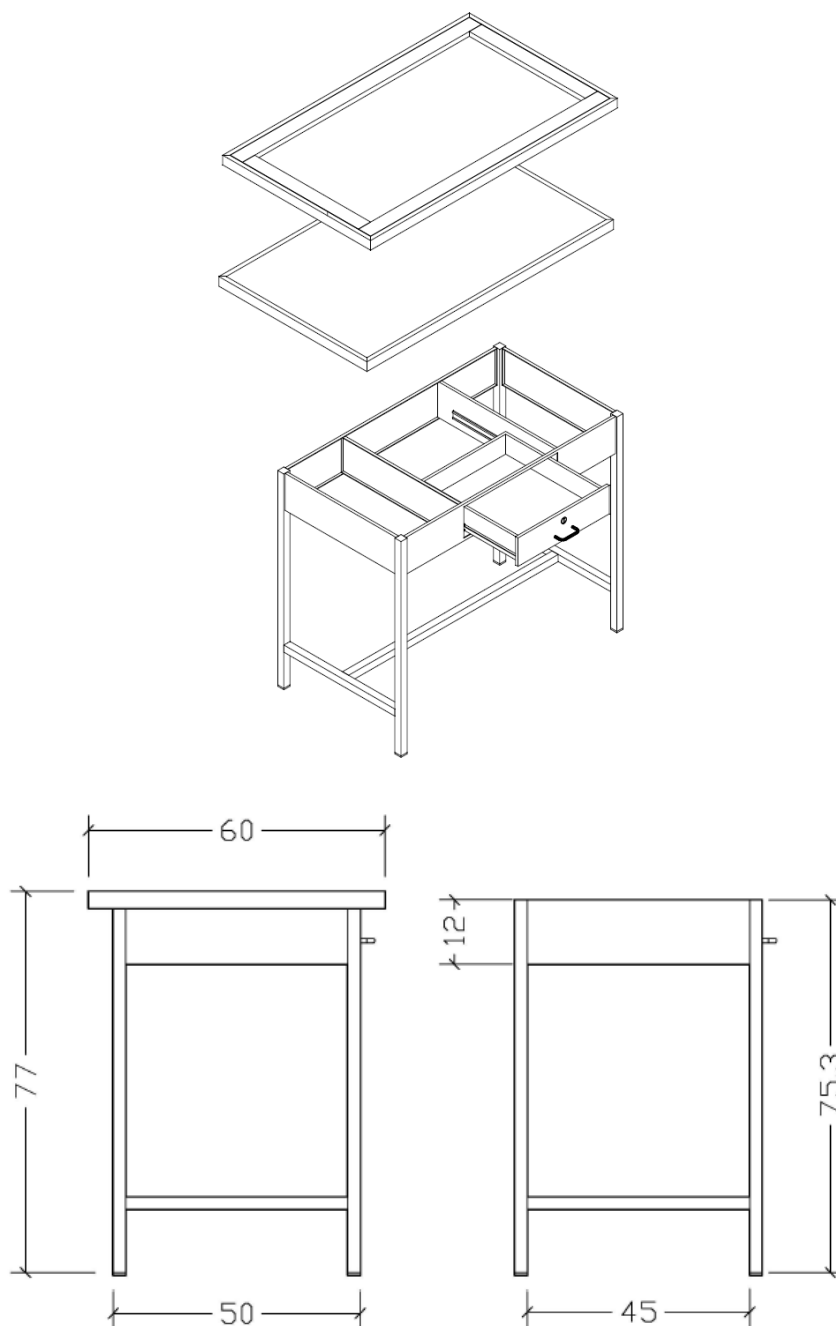
- Height: 60 cm
- Four-legged stool chair.
- The legs shall be made of metal profile pipe 22 mm in diameter and 1.25 mm thick as shown on attached figure.
- The chair shall have two rings made of metal profile pipes of 16 mm in diameter and 1.25 mm in thickness.
- All metal parts shall be welded using CO2 continuous welding.
- The seat shall have a disc-like shape, diameter 34 cm made of Natural Sweden wood 34 mm thick, painted with lacquer paint OR disk-like shape concave diameter 34 cm made of reinforced plastic. Thickness 3-5mm, weight not less than 500gm.
- The seat shall be fixed to the metal framework by using galvanized metal screws, (3 cm).
- Number of screws: 4.
- Plastic heels are to be installed under the chair at the metal open ends.

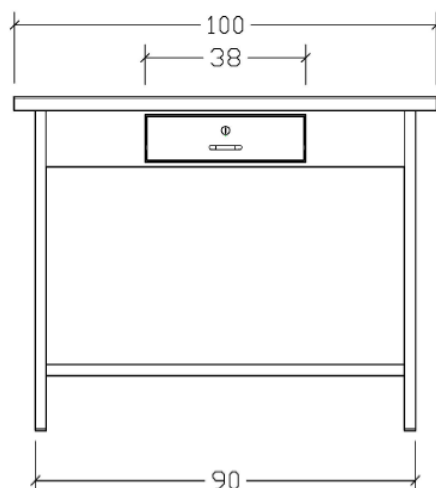
### 6.3 Painting colour:

- Epoxy polyester powder) paint should be used, colour: Marengo No. 7016

## 7 Item 10: Teacher desk (staffroom) Specifications

### 7.1 Drawings:





## 7.2 Metal framework

- The metal framework shall be made from hollow squared steel profile tubes 25 x 25mm and 1.25 mm thick.
- A drawer made of metal sheet 0.8mm thick shall be installed with lock and Chromium coated handle.
- Metal rails made of metal 1.25 mm thick with metal wheels on both sides for the drawer to slide on.
- A metal sheet cover 0.8 mm thick and width of 130 mm shall be installed around the level of the drawer.
- The bottom edges of the metal frame shall be covered with plastic heels.
- All metal pieces are to be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used. Plastic heels are to be installed under the legs to elevate the iron parts from the ground.

## 7.3 Table board

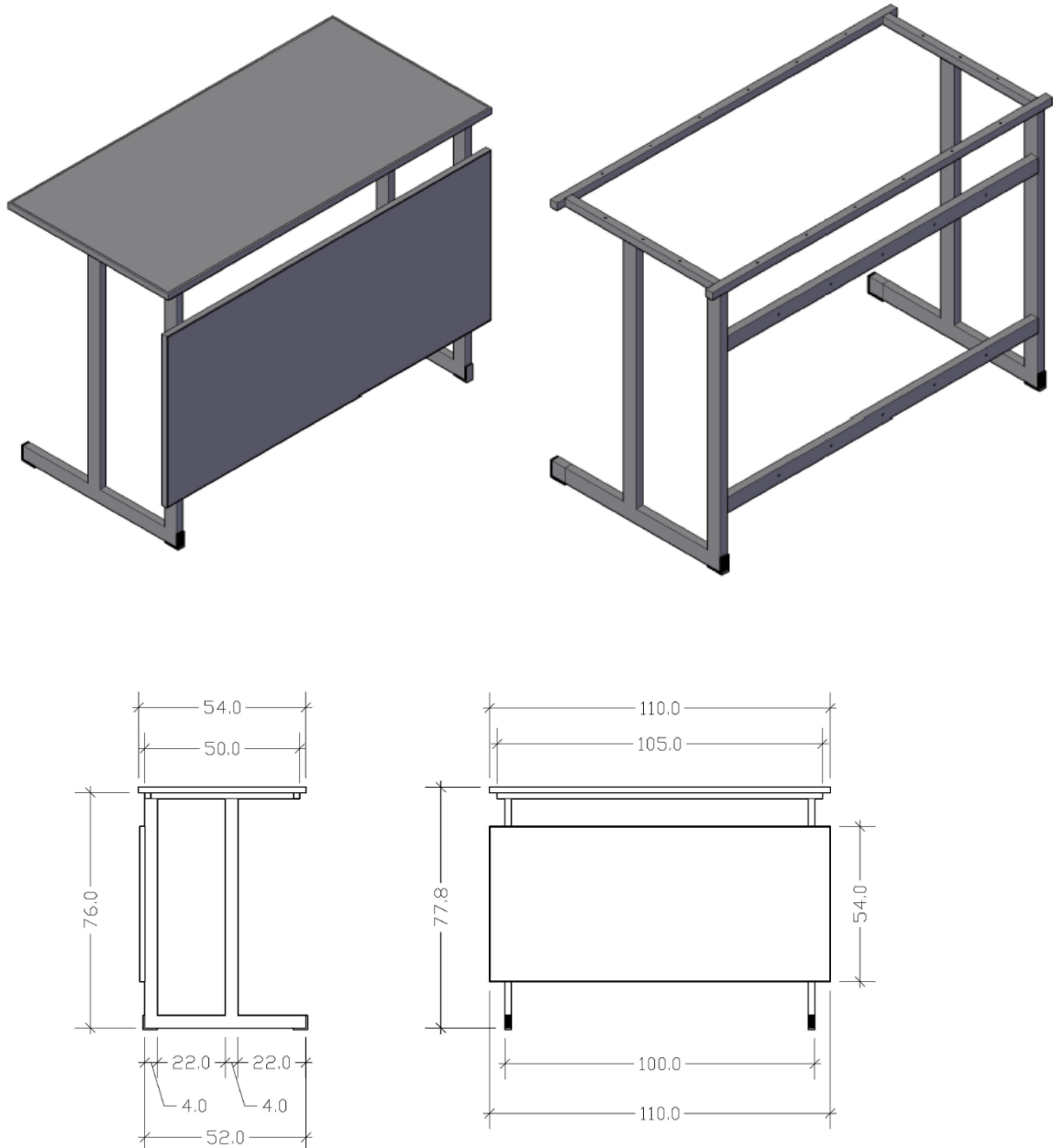
- The table board shall be made of "sandwich" wood, best quality.
- Thickness of plywood is 17 mm, dimensions: 100 x 60 cm.
- It shall be covered with stretched laminated plastic sheets (Formica) 0.8 mm thick. Colour: Grey (3130).
- The table board shall be thickened by using strips of plywood (sandwich) wood 17 x 50 mm around the backside edges of the table's board.
- Beech wood shall be used in belting the edges of the table board 15 mm thick and 34 mm wide.
- The beech belt shall be fixed by using adhesives of best quality and after fixing of Formica to the board.
- The beech belt shall be painted with three coats of lacquer paint in addition to a prime coat and to be fixed by using adhesive materials with no nailing.
- The table board shall be fixed on the metal framework using galvanized metal screws. Number of screws: 10.
- Formica type is "MATT".

#### 7.4 Painting colour:

- Epoxy polyester powder) paint should be used, colour: Marengo No. 7016

### 8 Item 11: Teacher Desk (Classroom) Specifications

#### 8.1 Drawings:



#### 8.2 Metal framework

- The metal framework shall be made of hollow metal profile tubes.
- Dimensions: 20 x 20 mm and 40 x 20 mm, thickness: 1.25 mm.

- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be applied.
- Additional holes in the metal framework shall be made equal in number to the existing holes to enable future maintenance.
- All ends of the iron squares must be closed with plastic covers.
- Plastic heels are to be installed under the legs to elevate the iron parts from the ground and must be fixed with metal screws.

### **8.3 Table Board and Front Cover**

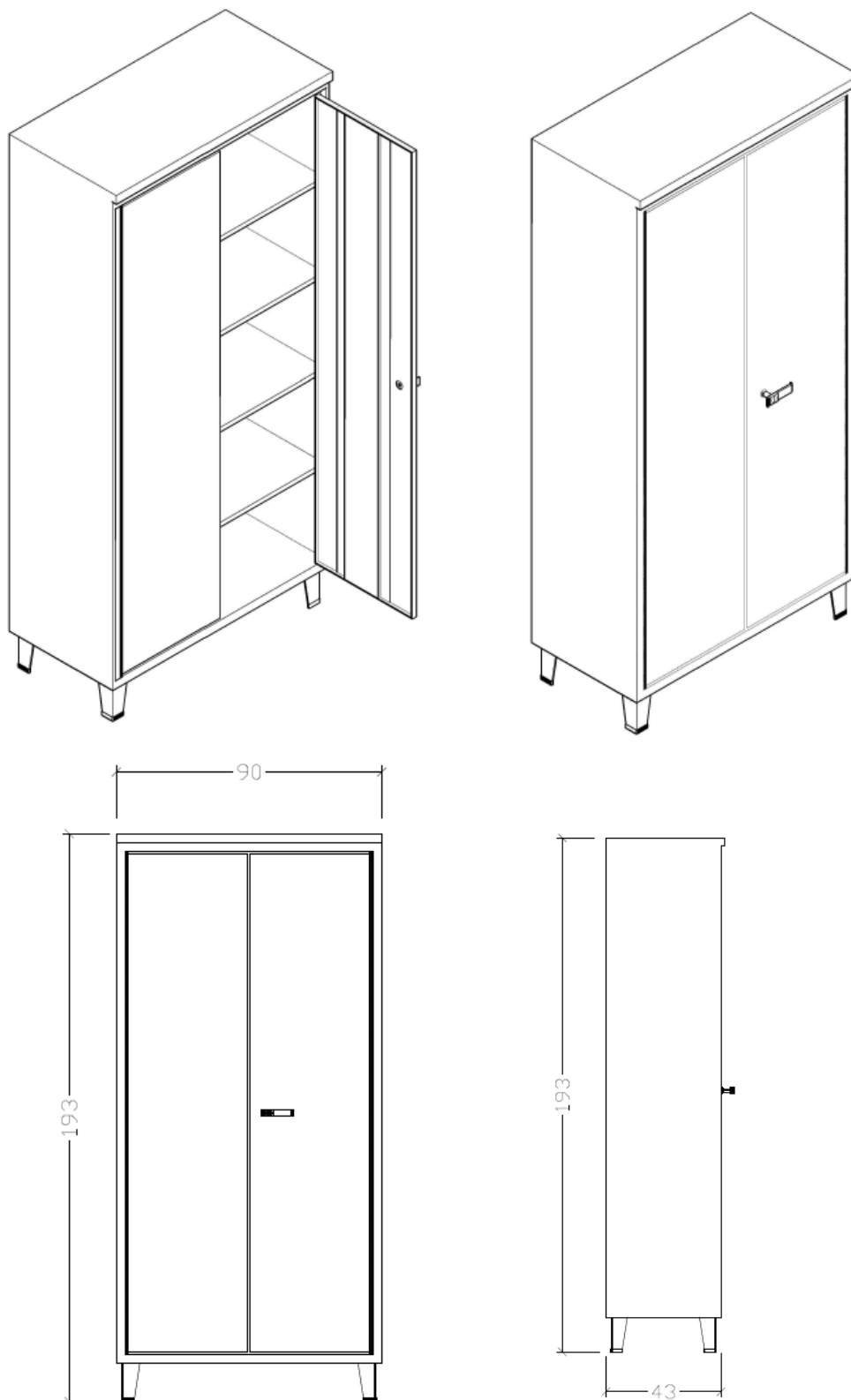
- The table board and front cover shall be made of pre-cut plywood (SANDWICH), best quality.
- Thickness of table board shall be 17 mm, dimensions: 110 x 54 cm. It shall be covered with coloured plastic FORMICA on both sides.
- Top Formica thickness: 0.8mm. Colour: grey (3130).
- Bottom Formica thickness: 0.5mm.
- The table board shall be belted using INJECTION POLYURETHANE THERMOSET.
- The belt thickness must be (5- 8mm). Colour: black
- The table board and front cover shall be fixed on the metal frame using galvanized metal screws, (3.5) cm.
- Number of screws: 12 for each. It should be fixed from the bottom, and inside.
- Raw materials should be flexible.
- -he polyethylene materials should not be used due to harmful material.
- The materials that will be used for manufacturing are similar to these used.
- globally for manufacturing food containers, which means it is safe to be used.
- The used dyes and raw materials should be free of any cancerous materials.
- Strength for the disk top should be high "not less than 250 g".

### **8.4 Painting colour:**

- Epoxy polyester powder) paint should be used, colour: Marengo No. 7016

## 9 Item 12: Metal Cabinet (2 Doors)

### 9.1 Drawings:





## 9.2 Metal framework

- The whole metal framework shall be made of metal sheets with a minimum thickness of 0.8 mm including the back of the cabinet and the internal shelves.
- All metal pieces are to be welded together properly, strongly and in conformity with regulations, by using CO<sub>2</sub> and point welding.
- Plastic heels shall be fixed at the bottom of the cabinet.

## 9.3 Dimensions

Length: 193 cm, Width: 90 cm, Depth: 43 cm.

## 9.4 Internal division

Four movable shelves shall be internally installed with four graduated supports.

## 9.5 Doors

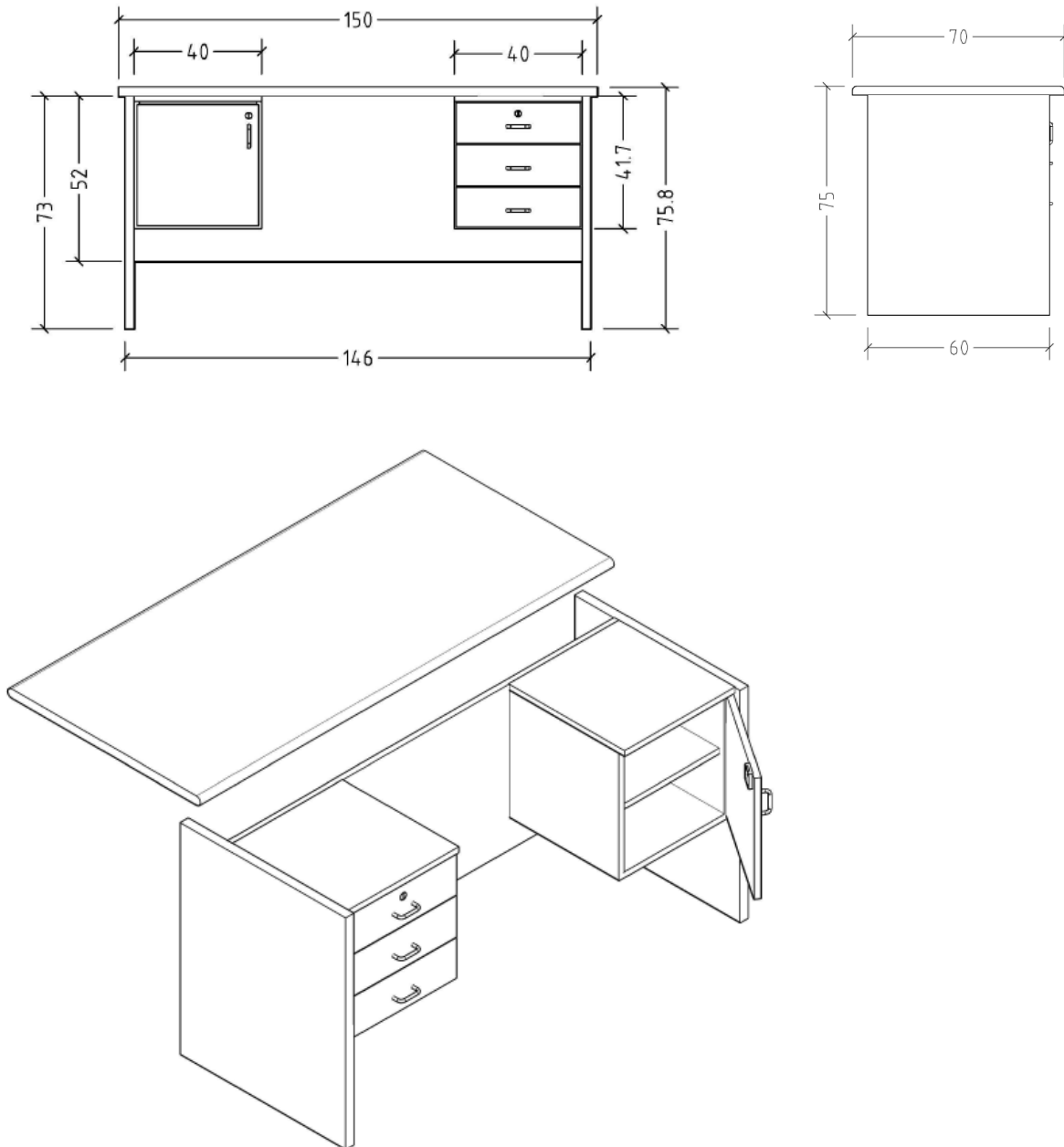
- Two doors for the cabinet shall be installed with properly movable hinge pillars all over the side length of the door.
- The doors shall be reinforced in the middle with a metal sheet bar with a minimum width of 20 cm each door having ( — )
- A cylindrical lock shall be installed made of chrome with triple closing directions (top, bottom, side).

## 9.6 Painting color

Epoxy polyester powder paint should be used, colour: beige مبزر (3010) and brown مبزر (6418).

## 10 Item 13: Headmaster/Officer Desk

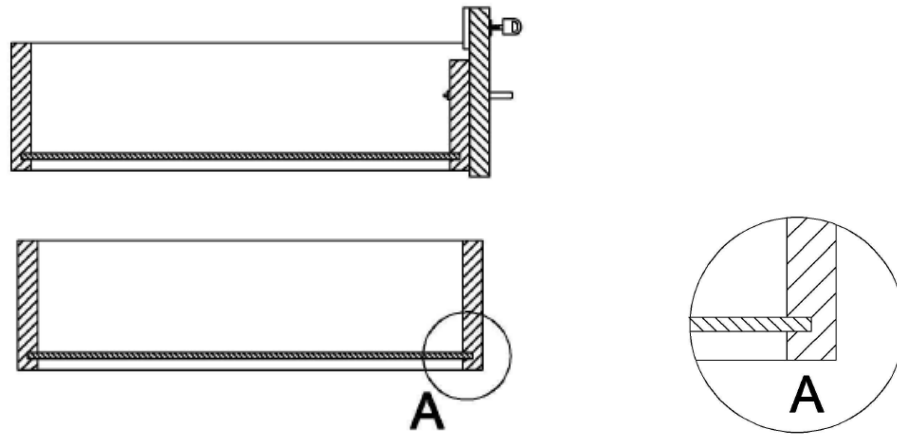
### 10.1 Drawings



### 10.2 Technical Specifications

- Dimensions: 150x70x75H
- Shape dimensions as attached figure
- Both sides of the desk, should be made of (MDF) of best quality and with thickness of 28 mm.

- Top board of the desk (face) shall be made of (MDF) of best quality with thickness of 28 mm. with rounded as a 1/2 circle for two long edges, the four edges shall be painted with at least 3 layers of base and transparent lacquer paint, as shown on attached figure.
- The front panel, drawers and the compartment should be made of (MDF) of best quality, thickness (17mm).



- All parts of the desk shall be covered with a layer of melamine colour: Beech wood.
- The desk shall contain a compartment unit at the left-hand side and a drawer unit with three drawers at the right side.
- Drawers and compartments made of pre-cut plywood (sandwich) thickness 17 mm best quality covered with a layer of melamine drawer base shall be fixed as shown in figure.
- All edges should be covered by plastic belt, thickness (1.5-2mm), colour black.
- Plastic heels shall be installed under the desk (quantity:4) as shown on figure (sample is available at The Ministry of Education).
- Knobs of good quality shall be installed on the compartment and drawers in a way allows for smooth opening and closing.
- The side of the compartment shall be fixed with chromium plated metal hinges (Yugoslavian type) of best quality. (2 hinges)
- The top drawer and the compartment shall have cylindrical locks of best quality.
- The drawers shall slide on steel rails 1.25 mm thick with wheels to ensure smooth movement of the drawers.
- All parts of the desk shall be assembled by using metal angles and galvanized metal screws, special for wooden furniture.
- Type of locks for compartment and top drawers are from best quality approved by The Contracting Authority.

## 11 Item 14: Wooden closet shelves with two bottom doors

### 11.1 Drawings

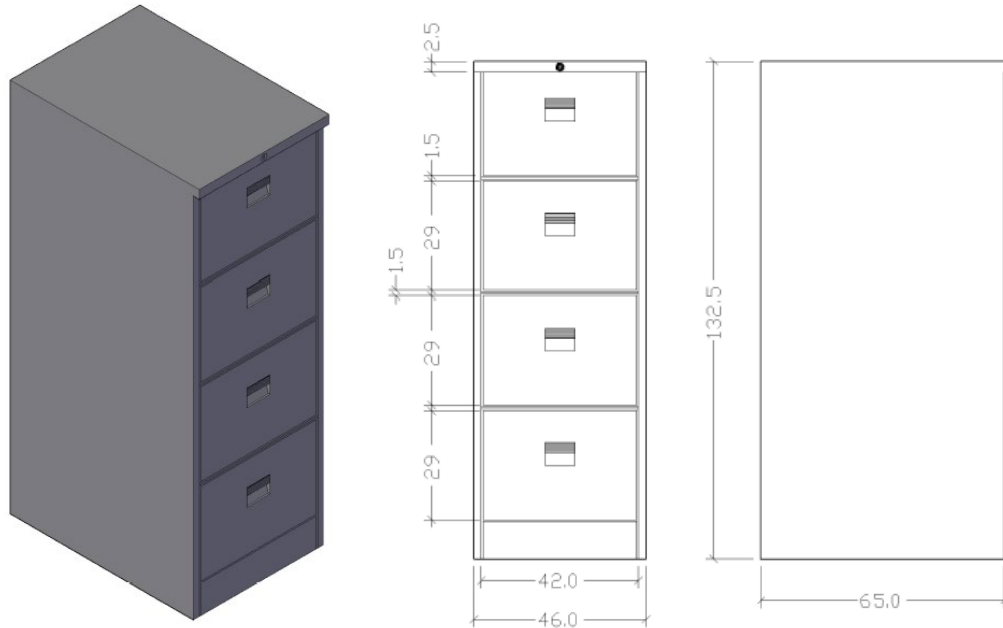


### 11.2 Technical specifications.

- Dimensions: Length: 200 cm, Width: 82 cm, Depth: 40 cm
- Shall be made as shown on attached figure.
- Shall be made of (MDF) with a minimum thickness of 17mm, best quality.
- Shelves shall be made of (MDF) with a minimum thickness of 28mm best quality.
- all part of closet shall be covered with a layer of melamine colour: Beech wood.
- all edges shall be covered with plastic belt, thickness (2) mm. colour: black.
- Back of closet shall be covered with (mozanite), colour: white.
- Two metallic handles shall be fixed on wooden doors.
- A cylindrical lock of best quality shall be installed on wooden doors to be locked firmly.
- All part of closet shall be assembled by using metal angles and galvanized metal screws special for wooden furniture.
- Plastic angle heels are to be installed under the closet (quantity:4) to elevate the wooden parts from the ground.

## 12 Item 15: File Cabinet (4 Drawers)

### 12.1 Drawings



### 12.2 Metal framework

- The metal framework shall be made of metal sheets 0.8 mm thick including the back.
- All metal pieces are to be welded together properly, strongly and in conformity with regulations by using CO<sub>2</sub> and point welding.
- Plastic heels shall be installed at the bottom of the cabinet's legs.
- A (U) shape horizontal divider between drawers is from metal sheets 0.8 mm thick shall be installed between drawers.

### 12.3 Dimensions

Length: 132.5 cm, Width: 46cm, Depth: 65 cm.

### 12.4 Internal division

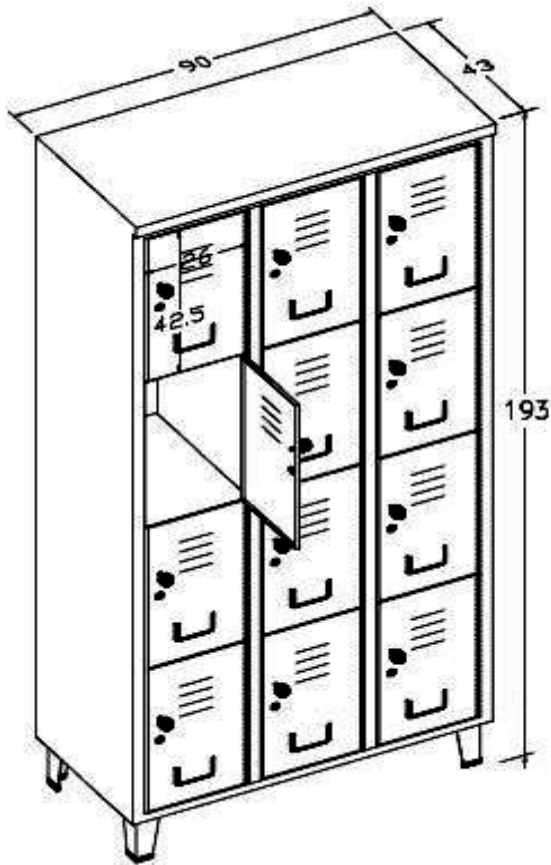
- Four drawers with the same size shall be installed with plastic rails and pulleys (Wheels) to ease opening and closing the drawers.
- Each drawer shall have a plastic grip and a card index on the upper part.
- A pressed lock shall be installed on the top to lock the cabinet.
- Rails out of metal sheet shall be fixed on both sides; thickness: 1.25 mm for the drawers to slide on.

## 12.5 Painting colour

(Epoxy polyester powder) paint should be used, colour: beige مېزر (3010) and brown مېزر (6418).

## 13 Item 16: Metal Cabinet (12 Doors)

### 13.1 Drawings



### 13.2 Metal framework

- The whole metal framework shall be made of metal sheets with a minimum thickness of 0.8 mm including the back of the cabinet and the internal shelves.
- All metal pieces are to be welded together properly, strongly and in conformity with regulations, using Co2 and point welding.
- Plastic heels shall be fixed at the bottom of the cabinet.

### 13.3 Dimensions

Length: 193 cm, Width: 90 cm, Depth: 43 cm.

### 13.4 Internal division

- The cabinet shall be divided into 12 compartments as shown on the attached figure.
- Two longitudinal metal partitions 0.8 mm thick shall be installed along the cabinet with a distance of 26 cm between them
- Compartments shall be separated by installing 9 fixed shelves 0.8 mm thick inside the cabinet.

### 13.5 Doors

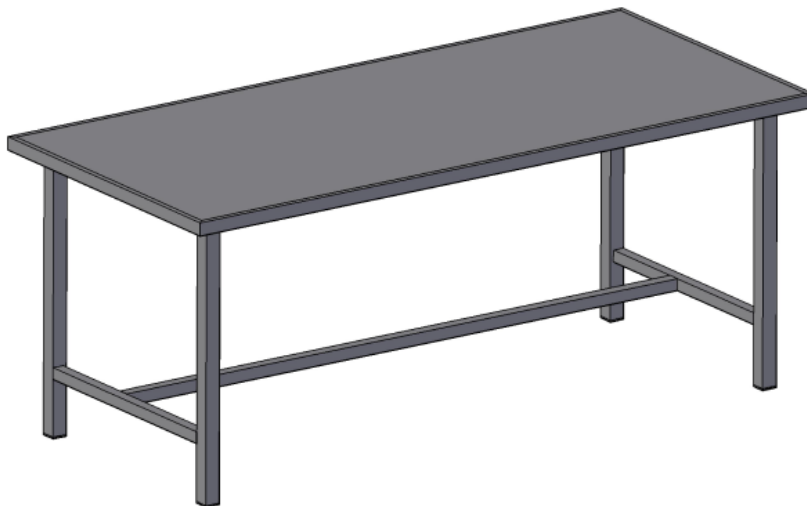
- Twelve doors for the cabinet shall be installed with properly movable hinge pillars all over the side length of the door.
- A cylindrical lock shall be installed to each door made of high quality to lock the door properly.

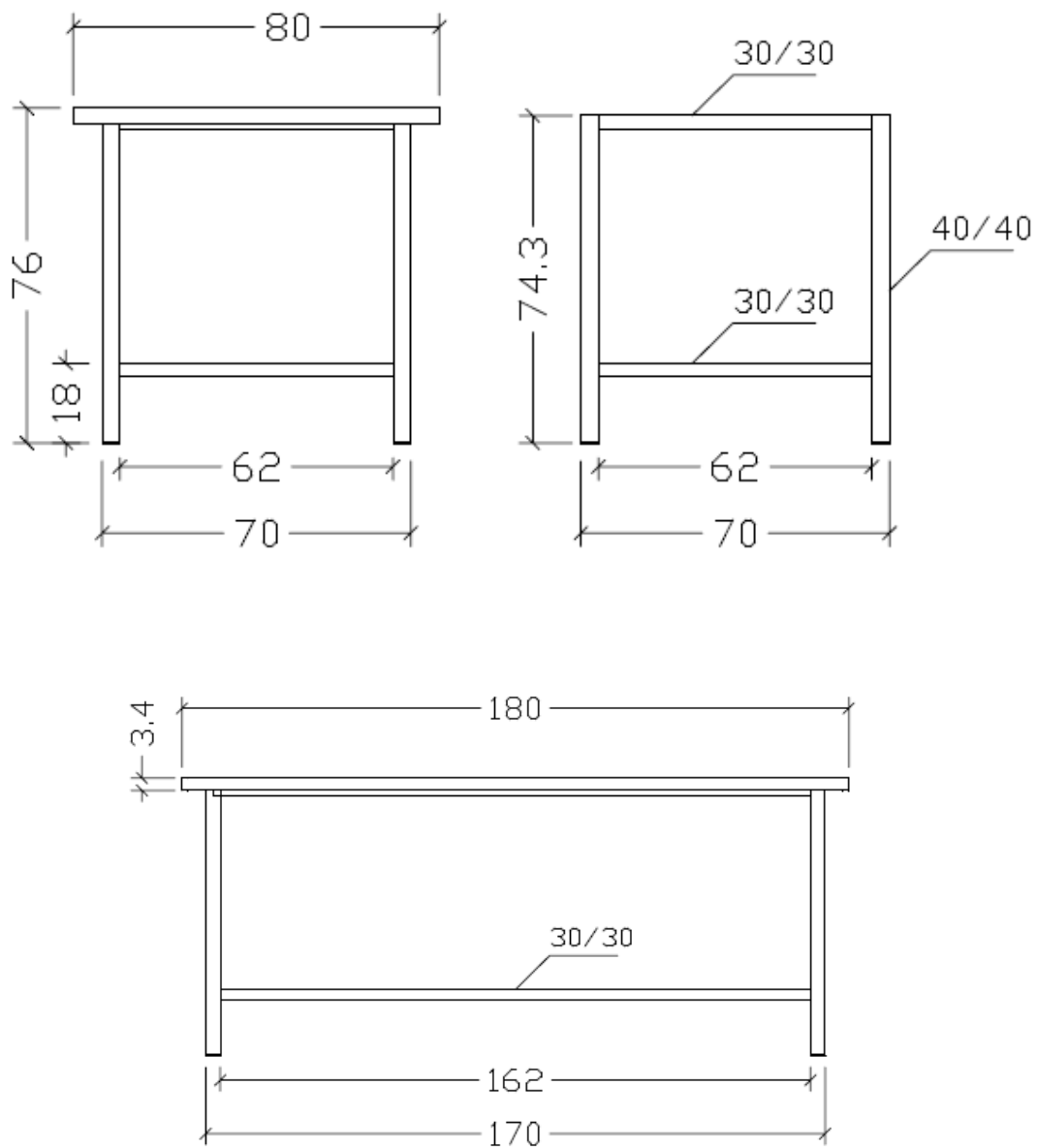
### 13.6 . Painting colour

(Epoxy polyester powder) paint should be used, colour: beige مېزر (3010) and brown مېزر (6418).

## 14 Item 17: Reading Table

### 14.1 Drawings





## 14.2 Metal framework

- The metal framework shall be made from square steel profile tubes 30 x 30 mm and 40 x 40 mm and 2 mm thick.
- The bottom edge of the metal frame shall be covered with plastic heels.
- All metal pieces are to be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.
- Ten angles (20/20) mm. (5cm length) shall be fixed on top of framework to fix the table board.
- Plastic heels are to be installed under the legs to elevate the iron parts from the ground.



### 14.3 Table board

- The table board shall be made of plywood “sandwich” board, best quality.
- Thickness of plywood is 17 mm. Dimensions: 180X80 cm
- It shall be covered with stretched laminated plastic sheet (Formica MATT) 0.8 mm thick. Colour: Grey (3130).
- The table board shall be thickened by using strips of plywood (sandwich) wood 17 x 50 mm around the backside edges of the table’s board.
- Beech wood shall be used in belting the edges of the table board 15 mm thick and 34 mm wide.
- The beech belt shall be painted with three coats of lacquer paint in addition to prime coat and to be fixed by using adhesive materials with no nailing. Fixing of the beech belt shall be done after the lamination with the plastic sheets.
- The table board shall be fixed on the metal framework using metal screws (1.5cm).

## 15 Item 18: Middle Table

### 15.1 Drawings



120x60x38H



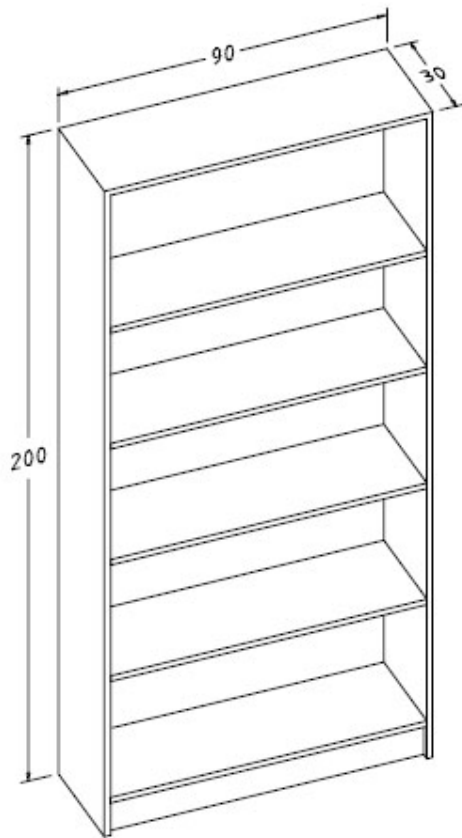
60x60x38H

### 15.2 Technical Specifications

- Table shall be made as shown by attached figure.
- Table shall be made of (MDF) of best quality and with thickness of 28 mm and covered with a layer of melamine. Colour: Beech wood.
- The edges of top board (faced) should be rounded as quarter circle and painted with at least 3 layers of base and transparent lacquer paint.
- All edges should be covered by plastic belt, thickness (2mm), colour: black.
- All parts of the table shall be assembled by using metal angles and galvanized metal screws, special for wooden furniture.
- Plastic angle heels (quantity: 4) are to be installed under the table.

## 16 Item 19: Bookshelf

### 16.1 Drawings



### 16.2 Technical Specifications

- Dimensions: Length; 200 cm, Width; 90 cm, Depth 30 cm
- The bookshelves shall be made of plywood (sandwich board) with a minimum thickness of 17 mm, best quality.
- The back shall be covered with a plate made of mosonite wood 5 mm thick, color: white.
- The shelves which are made of plywood shall be fixed using glue and 4 cm long pins.
- Distance between shelves shall be equal.
- The wooden parts shall be covered with stretched laminating plastic sheet (Formica) 0.8 mm thick, best quality. Colour: grey (3130).
- All edges should be cover by hardened plastic belt thickness (1.5-2mm) colour: black.
- The back shall be fixed using metal screws 1.5 cm long.
- Plastic heels are to be installed under the legs to elevate the wooden parts from the ground.

## 17 Item 20: Headmaster / Officer Chair

### 17.1 Drawings



### 17.2 Metal framework

- A swivel chair with 5 rolling wheels.
- Adjustable armrest shall be made of reinforced plastic and covered with rubber.
- The seat shall be connected to the base by a chromium rod not less than 30 cm long and 5 cm in diameter.

### 17.3 Chair back

- Made of special material (plastic) for chair back to be comfortable.
- Special, good quality net type cloth shall be used for covering the chair back.
- The colour shall be black.
- Provided with adjustable cushion specially for chair back to be comfortable and adjustable a neck rest at the top of chair back.

### 17.4 Chair seat

- Shall be made of pre-cut wood (sandwich)(15mm thickness) grade A.
- Shall be upholstered using sponge (5cm thickness) strong pressure type.
- Covered with special good quality of cloth (black colour).
- Provided with special nuns fixed in wooden seat to fix it with metal framework (propeller) chair back.
- A device (propeller) shall be installed at to control the inclination process forwards and backwards and a jack for elevation adjustment.

## 18 Item 21: Multipurpose Chair

### 18.1 Drawings:



### 18.2 Metal framework

- The metal framework shall be made from iron pipes painted by using electrostatic process.
- Diameter: 25 mm, thickness: 2 mm.
- Bending: as shown in the figure.
- The metal ends shall be covered with plastic covers.
- Plastic heels are to be installed under the chair.

### 18.3 Chair back and seat

- Seat measurement: 50 x 45 cm approx.
- Chair back measurements 50 x 22 cm approx.
- The back and the seat shall be made of plywood (sandwich) with a minimum thickness of 17 mm, best quality.
- The chair back and seat shall be upholstered press sponge (33/35).
- The thickness of sponge for the chair back should not be less than 4 cm and for the seat 6 cm.
- Special, good quality cloth shall be used for covering the chair back and seat.
- The chair' seat and back shall be fixed using metal screws. Number of screws: 8.

### 18.4 Painting colour

Aboxpolyster powder paint should be used, color: black

## 19 Item 22: Visitor chair (wood /chrome)

### 19.1 Drawings:

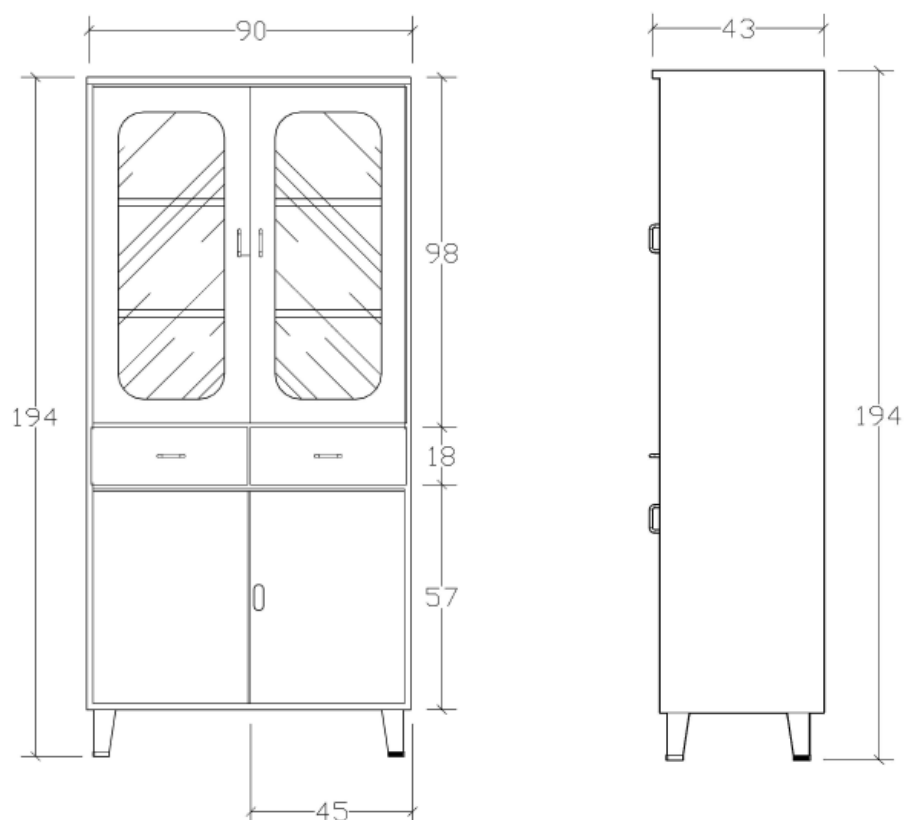
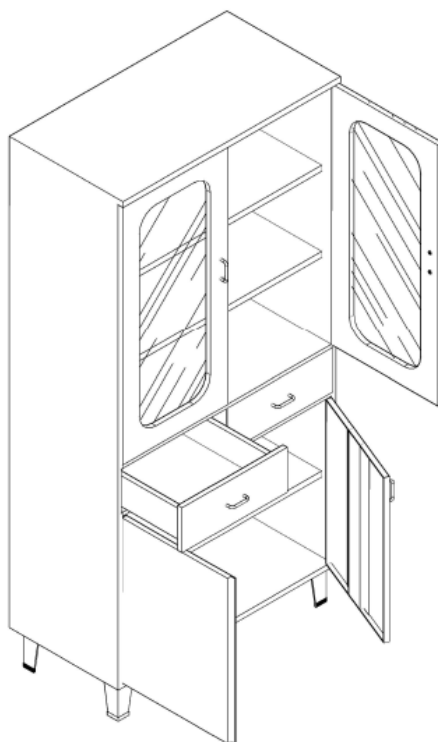


### 19.2 Technical specifications.

- As shown on figure.
- Arms and legs of chair shall be made of beach wood best quality /OR Chrome high quality.
- The chair back and seat shall be upholstered using sponge (33/35).
- The thickness of sponge for the chair back should not be less than (8 cm) and for the seat not less than (10 cm).
- Good quality leather special for office furniture shall be used for covering the chair back and seat. Colour: black.
- The offer shall contain catalogues and/or illustration figures.

## 20 Item 23: Laboratory Locker

### 20.1 Drawings:



## 20.2 Metal framework

- The whole metal framework shall be made of metal sheets.
- Thickness: 0.8 mm including the back of the locker.
- All metal pieces are to be welded together properly, strongly and in conformity with regulations by using CO2 and point welding.
- Plastic heels are to be installed at the bottom of the locker.

## 20.3 Dimensions

Length: 194 cm, Width: 90 cm, Depth: 43 cm.

## 20.4 Internal division

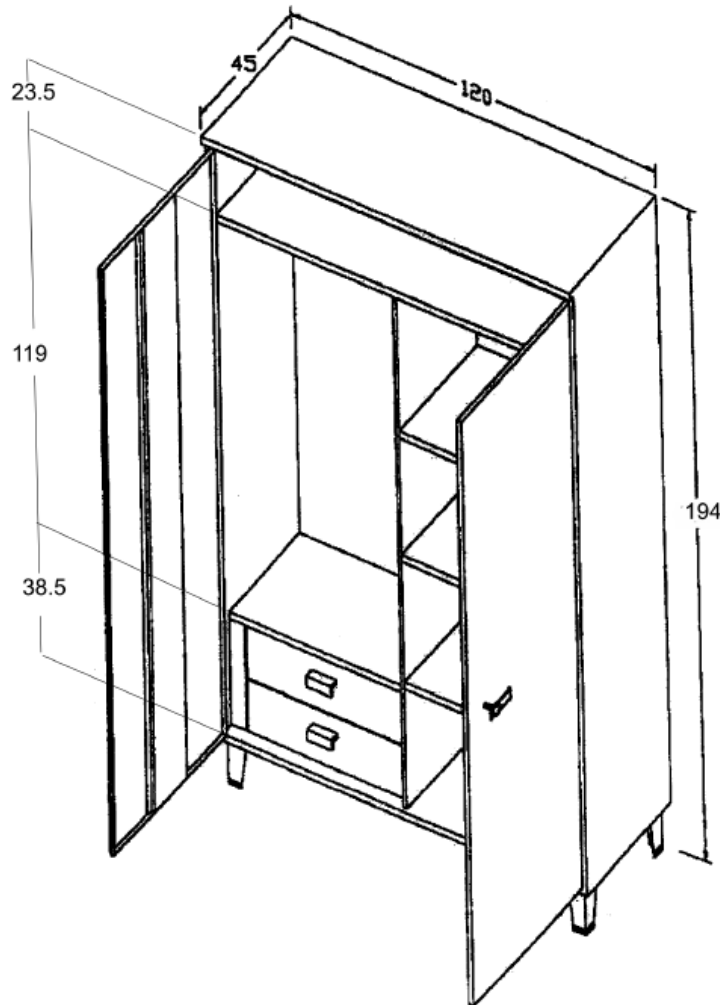
- The locker shall be divided into three parts.
- The upper part shall be consisting of two door leaves 96 cm long, with a glass inlet 3 mm thick to be installed on metallic frame this part should have 2 movable shelves as shown on figure.
- The middle part consists of 2 metal drawers with plastic pulleys and iron rails 1.25 mm thick for the drawers to slide upon to be installed on both sides.
- Drawer's height: 18 cm.
- The third part consists of two doors 57 cm long, with one movable shelf.
- The doors for the locker shall be installed with properly movable hinge pillars.
- A cylinder shall be installed made of chrome to be closed from three sides.

## 20.5 Painting color

Epoxy polyester powder paint should be used, colour: white.

## 21 Item 24: Sports Cabinet

### 21.1 Drawings:



### 21.2 Metal framework

- The whole metal framework shall be made of metal sheets with a minimum thickness of 0.8 mm including the back of the wardrobe.
- All metal pieces are to be welded together properly, strongly and in conformity with regulations by using CO<sub>2</sub> and point welding.
- Plastic heels are to be installed at the bottom of the wardrobe.

### 21.3 Dimensions


Length: 194 cm, Width: 120 cm, Depth: 45 cm



## 21.4 Internal division

- Two (2) movable shelves and partition 145 cm long shall be installed with a thickness of 0.8 mm and as deep as the wardrobe.
- Two drawers and a cloth-hanging bar shall be installed as shown on attached figures.
- Rigid plastic knobs shall be installed for the drawers.
- Steel rails and wheels shall be installed for smooth movement of the drawers.
- A vertical shelf at the bottom of the cabinet with dimensions of 45 x 45 cm shall be installed as shown in the drawings so that it forms a kind of a box with the sides of the cabinet and the internal partition.

## 21.5 Doors

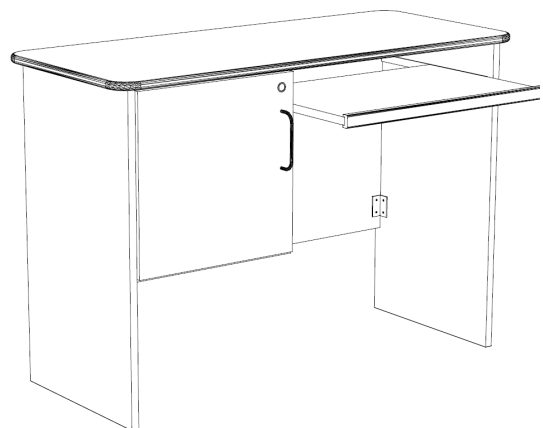
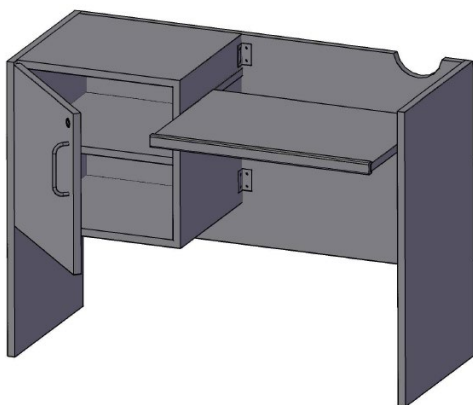
- Two doors for the cabinet shall be installed with properly movable hinge pillars.
- A cylinder shall be installed made of chrome to be closed from three sides.
- All materials used for shelves, partitions, drawers and bars are from metal sheets of thickness 0.8 mm.
- Metal sheets shall be installed in the middle of the doors to strengthen them with a minimum width of 20 cm having 

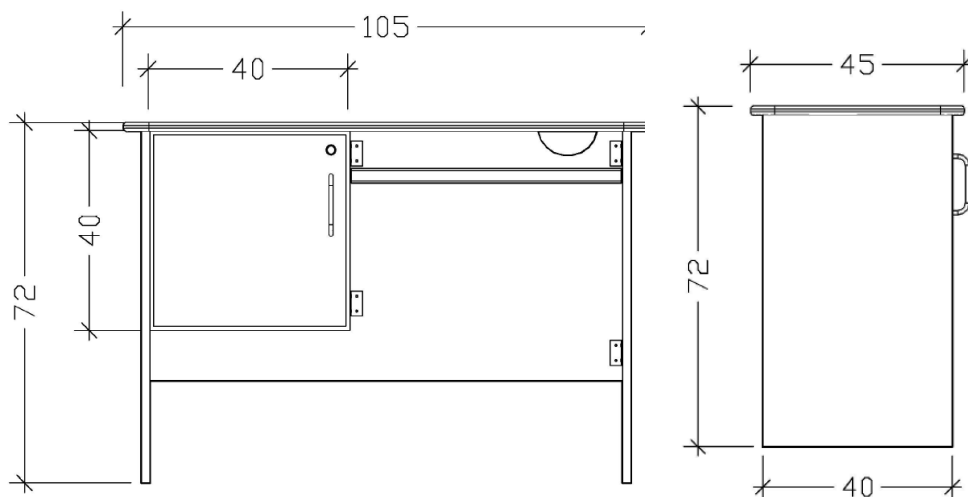
## 21.6 Painting color

Epoxy polyester powder) paint should be used, colour: beige ميزر (3010) and brown ميزر (6418)

## 22 Item 25: Wooden Computer Table

### 22.1 Drawings:



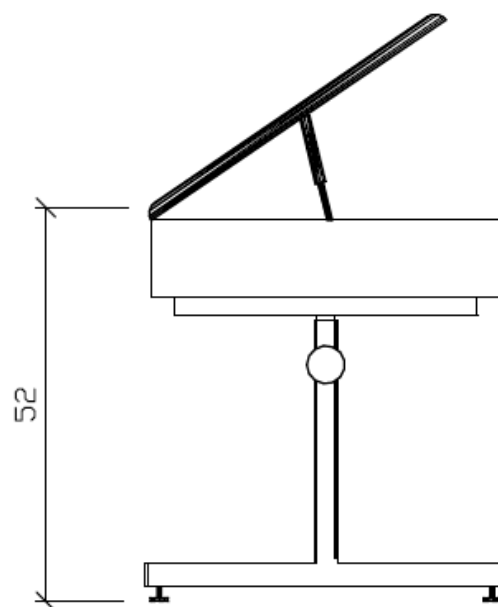
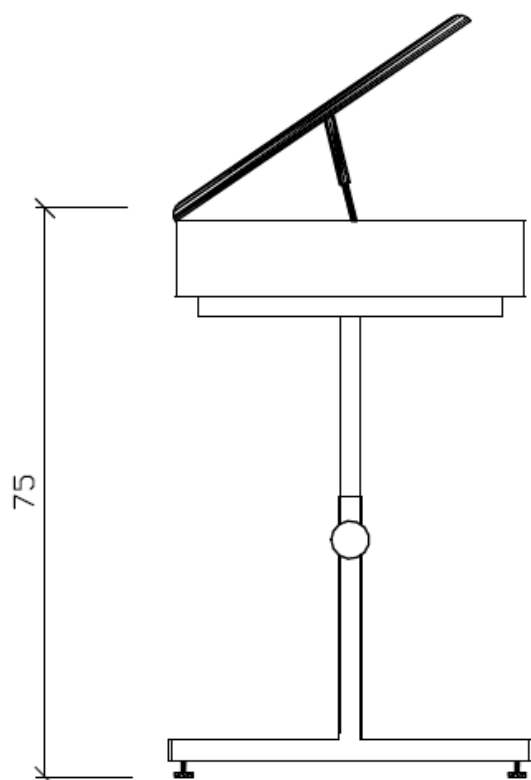
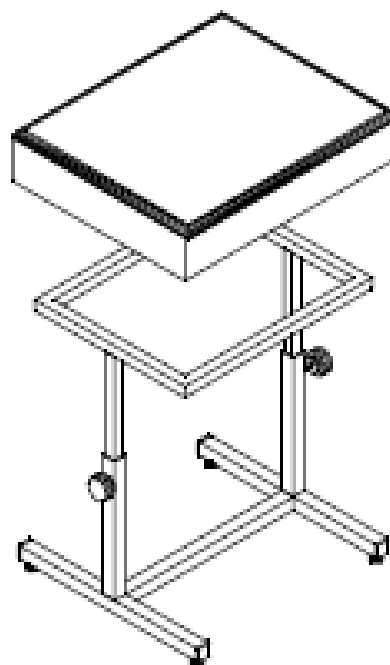
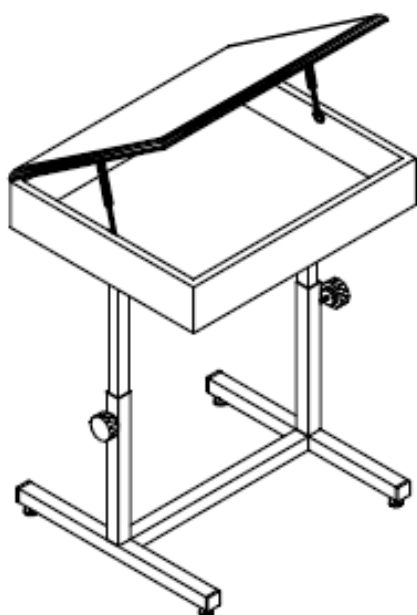


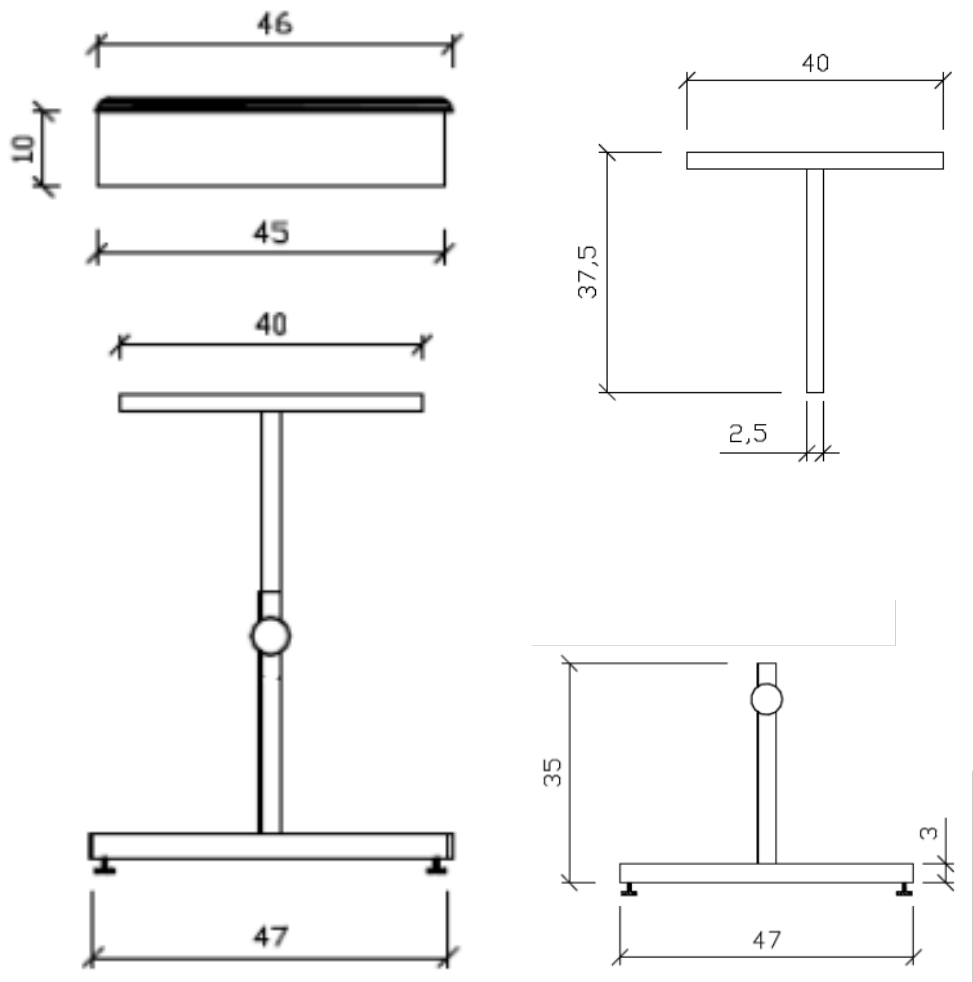
## 22.2 Technical specifications.

- Dimensions: Height: 72 cm. Width: 105 cm. Depth: 45 cm.
- Table shall be made as shown on attached figure.
- Shall be made of plywood (sandwich) best quality, with a thickness of (17 mm).
- Top board of the table (face) shall be made of (MDF) of best quality with thickness of 17 mm. with rounded as a  $\frac{1}{2}$  circle for all edges, the four edges shall be painted with at least 3 layers of base and transparent lacquer paint, as shown on attached figure.
- Wooden board (for keyboard) shall slide on steel rails 1.25 mm thickness with weels to ensure smooth movement, Natural Wooden (U) shape piece shall be fixed on front side of this board.
- The edges of top board (face) should be rounded as quarter circle and painted with at least 3 layers of base and transparent lacquer paint.
- All parts of the table shall be covered with a layer of melamine. Colour Beech wood.
- All edges should be covered by plastic belt, thickness (2mm), colour black.
- Plastic angle heels (quantity: 4) are to be installed under the table.
- The door of the compartment shall be fixed with chrome plated metal hinge (Yugoslavian type) of best quality, (quantity:2).
- The compartment door shall have a cylindrical lock of best quality, to be locked firmly.
- Metallic handle shall be fixed on this compartment door.
- all part of the table shall be assembled by using metal angles and galvanized metal screws, special for wooden furniture.

## 23 Item 26: Student Desk /Resource room

### 23.1 Drawings:





## 23.2 Metal framework

- Adjustable height, For 1 pupil.
- The metal frame shall be made from square steel profile tubes.
- 25 x 25 mm and 30 x 30 mm, thickness: 1.25 mm.
- All metal pieces shall be welded together properly, strongly and in conformity with regulations.
- CO2 welding shall be used.
- Four angles (25\*25) mm. (5cm length) shall be fixed on top of framework to fix the wooden box.
- The framework shall be provided by two screws with handles to adjust the height smoothly and firmly.
- All ends of the metal squares must be covered with black plastic covers.
- Plastic heels are to be installed under the legs to elevate the iron parts from the ground.

## 23.3 Table wood Box

- The table box shall be made of pre-cut plywood (SANDWICH), best quality, thickness.
- 17 mm, Dimensions: 56 x 46x10cm. It shall be covered with coloured plastic FORMICA on both sides.

- Top Formica thickness: 0.8mm. Colour: blue.
- All edges of shell be covered with plastic belt, thickness (2mm).
- The box shall have top door fixed with 2 chromium plated metal hinges (Yugoslavian) of best quality and 2 jacks to help keep the top door. open (as shown by figure).
- The edges of top door shall be rounded as a quarter circle and painted to be smooth as needed.
- The table box shall be fixed on the metal framework using galvanized metal screws, number (8), length (2) cm, and the installation process is done from the bottom.



### 23.4 Painting colour

Box polyester powder paint should be used, colour: blue 5007.