Registration No: .....

BSDU

SCHOOL OF CARPENTER SKILLS

III IN - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1103 **Time: 1 Hour**

Course Name: Handy Machine **Max Marks: 20**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries two marks.
- Answer all question from Section C, each question carries three marks.

Section – A

5 × 1 = 05 Marks

Q 1. Which one of the following Machines can make 6mm groove in one time?

(A) Hand Router OF 1400 EBQ (B) Lamello Zeta P2
(C) Hand Router OF 1010 EBQ (D) None of these

Q 2. Which one of the following is Maximum depth of circular saw without a track?

(A) 65 (B) 55 (C) 50 (D) 45

Q 3. Which one of the following sanding machines can be used without Dust collector?

(A) RO 150 FEQ (B) ETS EC 150/5 EQ (C) ETS EC 150/3 EQ (D) OS 400 E

Q 4. Which one of the following lamello biscuits can be used on 12 mm MDF board?

(A) 20 (B) 10 (C) 0(Zero) (D) 40

Q 5. Which one of the following is the length of the Track?

(A)1450 (B) 1300 (C) 1400 (D) 1500

Section – B

3 × 2 = 06 Marks

Q 6. Write Technical Terminology of **CTL – 26 E**. Explain MAIN and AUTO position.

Q 7. Write Technical terminology of **RO 150 FEQ**. Explain Rotex and Orbital motion.

Q 8. Write Technical terminology of **OF 1400 EBQ**. Explain tool changing of machine.

Section – C

3 × 3 = 09 Marks

Q 9. Describe all safety precautions kept in mind during work with handy machine.

Q 10. Explain the whole procedure to cut board with circular saw by using Guide rail.

Q 11. Explain the tool changing procedure of OFK – 500 Q Edge Router and also explain working steps of machine.

Registration No: .....

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SCHOOL OF CARPENTER SKILLS

III IN - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1303 **Time: 1 Hour**

Course Name: Handy Machine **Max Marks: 20**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries two marks.
- Answer all question from Section C, each question carries three marks.

Section – A 5 × 1 = 05 Marks

Q 1. Which one of the following Machines can make 6mm groove in one time?

(A) Hand Router OF 1400 EBQ (B) Lamello Zeta P2
(C) Hand Router OF 1010 EBQ (D) None of these **(A)**

Q 2. Which one of the following is Maximum depth of circular saw without a track?

(A) 65 (B) 55 (C) 50 (D) 45 **(B)**

Q 3. Which one of the following sanding machines can be used without Dust collector?

(A) RO 150 FEQ (B) ETS EC 150/5 EQ (C) ETS EC 150/3 EQ (D) OS 400 E **(A)**

Q 4. Which one of the following lamello biscuits can be used on 12 mm MDF board?

(A) 20 (B) 10 (C) 0(Zero) (D) 40 **(C)**

Q 5. Which one of the following is the length of the Track?

(A)1450 (B) 1300 (C) 1400 (D) 1500 **(C)**

Section – B

3 × 2 = 06 Marks

Q 6. Write Technical Terminology of **CTL – 26 E.** Explain MAIN and AUTO position.

Ans. - CTL= Model no., 26 – Capacity of dust collector, E – Electronic

Main: - In the dust collector this feature is used to remain dust collector on till power supply is on. Generally, we used this to clean something.

Auto: - In dust collector this feature is used to work dust collector automatically. When we work with this feature on machine it will only switch on when machine will on and will off after 3 second of switching off machine.

Q 7. Write Technical terminology of **RO 150 FEQ**. Explain Rotex and Orbital motion.

Ans. - R = Rotex, O = Orbital, 150 = Diameter of pad, Q = Quick plug it

Rotex: - In this feature the machine pad will rotate only on given speed.

Orbital: - In this feature the machine pad will oscillate or vibrate on the diameter of 5mm.

Q 8. Write Technical terminology of **OF 1400 EBQ**. Explain tool changing of machine.

Ans. – OF = Series, 1400 = Motor watt power, EBQ = Electric break quick plug it

Tool changing of Router OF 1400 EBQ – To change the tool in this machine first of all unplug the machine from power supply and then press spindle locking switch and with the help of spanner loose the nut so that the collet will also loose, now replace the tool with which tool we required than again press the spindle lock and tight nut with the help of spanner.

Section – C

3 × 3 = 09 Marks

Q 9. Describe all safety precautions kept in mind during work with handy machine.

Ans. –

1. Always wear safety glass, ear protection and nose mask while working with machines.
2. Make sure you understand instruction before attempting to use any tool or machine, as question if you have any doubt about doing the work safety.
3. Always wear safety shoes while working with machines.
4. Check that key and adjusting wrenches are removed from the machine before turning on the power.
5. Inspect stock for nails and other material before cutting, planning, routing or similar activity.
6. Turn off the power before inspecting, changing, cleaning or adjusting blde or machine.
7. Electric power cords should be above head level or in the floor in such a way that they are not tripping hazards.
8. Do not try to free a stalled blade before turning the power off.
9. Do not distract or startle an operator while he or she is using machine.
10. Do not leave the machine until the power off is turned off.

Q 10. Explain the whole procedure to cut board with circular saw by using Guide rail.

Ans. - To cut the work piece by using guide rail first of all set the guide rail according to the work piece on the line and then set the machine on the rail and remove play. Than connect dust collector to the machine check the required angle and start cutting.

Before start cutting ensure that the machine blade is not cutting any cable, hose pipe or the table, also use all safety precaution during this cutting procedure.

Q 11. Explain the tool changing procedure of OFK – 500 Q Edge Router and also explain working steps of machine.

Ans. – For tool changing of Edge Router OFK 500 Q first of all unplug power supply and then press spindle lock and with the help of screwdriver open bolt which is mounted on top of the machine and replace that tool to the required tool and fasten bolt on the top of the machine. While fasting bolt spindle lock should be pressed.

Working steps: -

1. First of all, set the tool on the machine and connect machine with the dust collector.
2. After all connections set required depth in machine.
3. Work peace should be clamped.
4. after switching on the machine keep it on the edge of work peace and go forward in direction of tool running.
5. By using this machine, we can make chamfers, radius and step radius.

Registration No: .....

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SCHOOL OF CARPENTER SKILLS

III IN - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1004 **Time: 1 Hour**

Course Name: Standard Machine **Max Marks: 20**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries two marks.
- Answer all question from Section C, each question carries three marks.

Section – A

5 × 1 = 05 Marks

Q 1. Which one of the following machines can make mitre cut?

(A) Thicknesser (B) Panel Saw (C) Spindle Moulder (D) None of these

Q 2. Which one of the following machines make roller marks on the work piece when material has to be take out from the work piece is less than 1 mm?

(A) planner (B) Thicknesser (C) Both of these (D) None of these

Q 3. Which one of the following is maximum one-time depth of cut of Thicknesser machine?

(A)4 (B) 5 (C) 3 (D) 6

Q 4. Which one of the following is maximum depth of cut of planer Nova F 520?

(A) 2 (B) 10 (C) 8 (D) 5

Q 5. Which one of the following is Nova F 520 working table width?

(A)450 (B) 520 (C) 1040 (D) 200

Section – B

$3 \times 2 = 06$ Marks

Q 6. Write Technical terminology of **NOVA F 520.** Explain use of Surface fence in this machine.

Q 7. Explain Crosscut fence and Extraction hood in **ALTENDORF A8.**

Q 8. Write down the use of working table and infeed table in **NOVA F 520.**

Section – C

$3 \times 3 = 09$ Marks

Q 9. Differentiate between main saw and scoring saw. why do we need scoring saw in **ALTENDORF A8?**

Q 10. Explain the safety precautions that kept in mind while using panel saw.

Q 11. Explain use of riving knife and its positioning to the cutter in panel saw with a suitable diagram.

Registration No: .....

BSDU

SCHOOL OF CARPENTER SKILLS

III IN - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1004 **Time: 1 Hour**

Course Name: Standard Machine **Max Marks: 20**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries two marks.
- Answer all question from Section C, each question carries three marks.

Section – A

5 × 1 = 05 Marks

Q 1. Which one of the following machines can make mitre cut?

(A) Thicknesser (B) Panel Saw (C) Spindle Moulder (D) None of these **(B)**

Q 2. Which one of the following machines make roller marks on the work piece when material has to be take out from the work piece is less than 1 mm?

(A) planner (B) Thicknesser (C) Both of these (D) None of these **(B)**

Q 3. Which one of the following is maximum one-time depth of cut of Thicknesser machine?

(A)4 (B) 5 (C) 3 (D) 6 **(B)**

Q 4. Which one of the following is maximum depth of cut of planer Nova F 520?

(A) 2 (B) 10 (C) 8 (D) 5 **(C)**

Q 5. Which one of the following is Nova F 520 working table width?

(A)450 (B) 520 (C) 1040 (D) 200 **(B)**

Section – B

3 × 2 = 06 Marks

Q 6. Write Technical terminology of **NOVA F 520.** Explain use of Surface fence in this machine.

Ans. – Nova= Model name, F = Stands for planer, 520 = Working table width

Use of surface fence: After planning one side, we used surface fence to make work piece to be 90^0 or to remove bends from the work piece, so the fence is used as the reference plane. So the planned surface can be put parallel to the fence and below surface can be planned exactly 90^0 to the reference plane.

Q 7. Explain Crosscut fence and Extraction hood in **ALTENDORF A8.**

Ans. – Crosscut fence: - The robustly mounted crosscut fence enables precise cutting of 90° angles. All settings are easy to read off the slanted scales. The flip stops are robust, free of play and are easy to slide individually along the full crosscutting range.

Extraction hood: - The riving knife mounted protection and extraction hood allows a maximum saw blade diameter of 315 mm with a maximum cutting height of 82 mm.

Q 8. Write down the use of working table and infeed table in **NOVA F 520.**

Ans. – Infeed Table: - This is the table through work piece will passed away first to the direction of the cutter. This table can move till 8 mm down; total length of the table is 1.5 meter.

Working Table: - After passing away from infeed table and the cutter work piece came to working table. This table cannot move it is used to provide reference to the work piece. Total working width of the table is 520 mm.

Section – C

3 × 3 = 09 Marks

Q 9. Differentiate between main saw and scoring saw. why do we need scoring saw in **ALTENDORF A8?**

Ans. -

Main saw blade	Scoring saw blade
It is used to cut material.	It prevent chip outs.
Second cut made by main saw.	First cut made by scoring saw
Diameter is 350 mm	Diameter is 120mm.
Teeth thickness 3.5	Teeth thickness 3.7
It rotate in clock wise direction	It rotates in anti-clock wise direction
It will cut entire work piece.	It will cut work piece till certain depth.

We need scoring saw blade to prevent the chip out while cutting pre laminated boards.

Q 10. Explain the safety precautions that kept in mind while using panel saw.

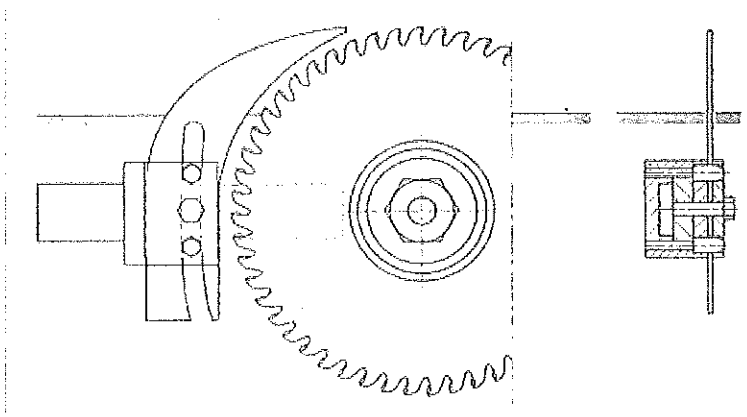
Ans. -

1. Always Wear shoes.
2. Always Wear short sleeves.
3. wear hearing protection, eye protection, Nose protection always.
4. Do not set the blade too high.
5. Know where the emergency 'off' button is located.
6. Do not stand behind the machine while working.
7. Always close extraction hood close while working.
8. Always switch on dust collector while working.
9. Use scoring saw only when required.
10. Always use safety stick when cut small pieces.

Q 11. Explain use of riving knife and its positioning to the cutter in panel saw with a suitable diagram.

Ans. – A riving knife is a splitter that sits behind a panel saw blade. Its job is to prevent kickback that results from stock distortion — a not uncommon event that can occur during ripping operations. While all riving knives are splitters, not all splitters are riving knives. The quintessential riving knife is curved to match the diameter of the saw blade and "hugs" the back of the blade, with a distance of 2mm between top of the blade and knife. The top of the riving knife is held just below the top of the saw blade, so it does not interfere with cuts or grooves formed by the blade. But here is the most important characteristic: It is mounted in such a way that it will rise and lower with the blade as it is adjusted for various cuts.

Riving Knife



Registration No: .....

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SCHOOL OF CARPENTER SKILLS

III IN - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1006 **Time: 1 Hour**

Course Name: Fitting **Max Marks: 20**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries two marks.
- Answer all question from Section C, each question carries three marks.

Section – A

5 × 1 = 5 Marks

Q 1. Which one of the following locker size is used in drawer when front is 16mm MDF?

(A)16mm (B)18mm (C)25mm (D)32mm

Q 2. Which one of the following is opening angle of full overlay hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0

Q 3. Which one of the following is opening angle of half overlay hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0

Q 4. Which one of the following is standard size of ply board?

(A) 8×10 (B) 8×4 (C) 8×5 (D) 8×7

Q 5. Which one of the following is used to mark angles on work piece?

(A) Try square (B)Bevel square (C) Marking gauge (D) None of these

Section – B

3 × 2 = 6 Marks

Q 12. Explain consumables used in Carpentry.

Q 13. Explain Insert hinge with a suitable diagram.

Q 14. Explain Full overlay hinge with a suitable diagram.

Section – C

3 × 3 = 9 Marks

Q 15. Discuss RTA fitting with a section diagram.

Q 16. Explain types of hinges with a block diagram.

Q 11. Explain types of drawer runners.

Registration No: .....

BSDU

SCHOOL OF CARPENTER SKILLS

III IN - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1006 **Time: 1 Hour**

Course Name: Fitting **Max Marks: 20**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries two marks.
- Answer all question from Section C, each question carries three marks.

Section – A

5 × 1 = 5 Marks

Q 1. Which one of the following locker size is used in drawer when front is 16mm MDF?

(A)16mm (B)18mm (C)25mm (D)32mm **(A)**

Q 2. Which one of the following is opening angle of full overlay hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0 **(D)**

Q 3. Which one of the following is opening angle of half overlay hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0 **(C)**

Q 4. Which one of the following is standard size of ply board?

(A) 8×10 (B) 8×4 (C) 8×5 (D) 8×7 **(B)**

Q 5. Which one of the following is used to mark angles on work piece?

(A) Try square (B)Bevel square (C) Marking gauge (D) None of these **(B)**

Section – B

3 × 2 = 6 Marks

Q 12. Explain consumables used in Carpentry.

ANS.- 1. **Nails** - In woodworking and construction, a nail is a pin-shaped object of metal (or wood, called a treenail or "trunnel") which is used as a fastener, as a peg to hang something, or sometimes as a decoration. Generally, nails have a sharp point on one end and a flattened head on the other, but headless nails are available.

2. **Screws** - A screw is a type of fastener, in some ways similar to a bolt, typically made of metal, and characterized by a helical ridge, known as a *male thread* (external thread). Screws are used to fasten materials by digging in and wedging into a material when turned, while the thread cuts grooves in the fastened material that may help pull fastened materials together and prevent pull-out. There are many screws for a variety of materials; those commonly fastened by screws include wood, sheet metal, and plastic.

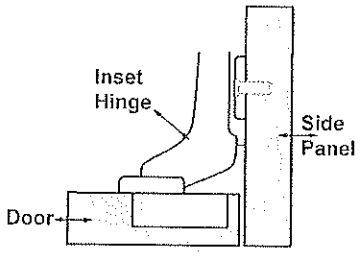
3. **Glue** - Glue is an adhesive used to tightly bond pieces of wood together. Many substances have been used as glues.

4. **Biscuits joiner** - A biscuit joiner is a wood working tool used to join two pieces of wood together. A biscuit joiner uses a small circular saw blade to cut a crescent-shaped hole (called the mouth) in the opposite edges of two pieces of wood or wood composite panels. An oval-shaped, highly dried and compressed wooden biscuit (Beech wood) is covered with glue, or glue is applied in the slot. The biscuit is immediately placed in the slot, and the two boards are clamped together. The wet glue expands the biscuit, further improving the bond.

Q 13. Explain Inset hinge with a suitable diagram.

Ans. -

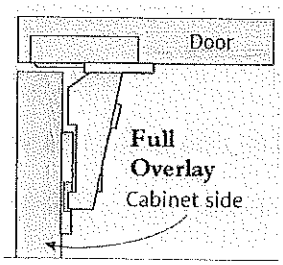
This hinge is the type of Concealed hinge, inset doors fit entirely within the cabinet opening and sit flush with the cabinet sides or face frames when in the closed position



14. Explain Full overlay hinge with a suitable diagram.

Ans. –

This hinge is the type of Concealed hinge, overlay doors do exactly what the name implies: They cover the cabinet opening completely, overlapping the cabinet case or face frame on all sides.



Section – C

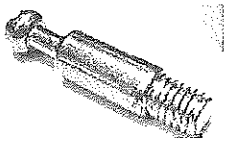
3 × 3 = 9 Marks

Q 15. Discuss RTA fitting with a section diagram.

Ans. – RTA is ready to assemble fitting which is also known as knock down fitting, it become with the assembly of three parts,

1. Cam - The disk fits into a recess in the first side of the cabinet. It rotates by inserting a screwdriver into the slot in its side. The shaft is screwed into the second side of the cabinet. The collar of the shaft is passed through the hole in the second slot in the disk. When the disk rotates the shaft is locked in position. This keeps both sides of the cabinet locked together.

2. Connecting Screw – Connecting screw is a cylindrical screw which one end inserts in the socket and another and inserts in the cam. It is used to connect joint and to give strength to it.

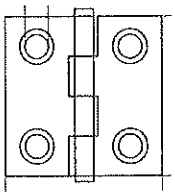


3. Socket – Socket is assembling in second part of assembly. It is used to provide grip to the connecting screw.

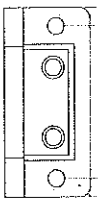
Q 16. Explain types of hinges with a block diagram.

Ans. –

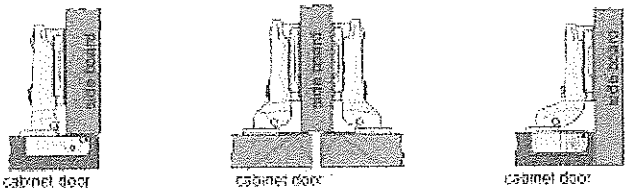
1. **Butt Hinge:** - The hinge is mortised into the edge of the door and the cabinet, Only the knuckle of the hinge is visible when the door is shut. This hinge is Mainly used on inset doors



2. **Flush hinges or non mortis hinge:** - Flush hinges are Used similar to butt hinges, except they are not mortised into the door or cabinet. Easier to fit than the butt hinge but the load capacity of this hinge is less than butt hinge.



3. **Concealed hinges:** - Concealed hinges are fully concealed behind the cabinet door, so they're not visible when the door is closed. They're self-closing and usually easily adjustable. They are the most common used of the cabinet door hinges. The mounting plate is fitted to the cabinet and a special bit is used to drill out the back of the door to take the cup hinge. There are many types to suit most applications, both for frameless cabinets and face-frame cabinets
   1. Full overlay hinge
   2. Half overlay hinge
   3. Inset hinge



Q 11. Explain types of drawer runners.

Ans. - Nylon Roller – These are typically used in conjunction with epoxy-coated steel drawer slide members. They provide a very smooth, quiet movement and are usually less expensive than ball bearing drawer slides.

Steel Ball Bearing – Often called precision ball bearing slides, these slides offer a superior fit and feel compared to standard nylon rollers slides. The outward and inward movement of the slide either telescopic or progressive and will handle much heavier loads than nylon roller slides; even up to 200 lbs. Certain steel ball bearings slides, such as ones used in industrial applications can hold up to 500 lbs. in heavy file drawers.

Soft-Close – Soft-Close is easily the most popular type of drawer slide in the industry. Soft-closing drawer slides do an excellent job of protecting the drawer from damage commonly caused by closing it too fast. Using hydraulic dampeners, these types of slides not only increase the life of cabinets and furniture, but they also help reduce noise. These slides' shock absorbing functionality make them the ideal choice for rooms like kitchens and offices. For more detailed information, check out this year's best-selling soft close drawer slide:

Registration No: .....

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SCHOOL OF CARPENTER SKILLS

END - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1001 + SCS1002 **Time: 3 Hours**

Course Name: Hand Skills + Measurement Transfer **Max Marks: 50 + 50 = 100**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all questions from Section B, each question carries five marks.
- Answer all questions from Section C, each question carries ten marks.

SET – 1 (HAND SKILLS)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following tools is used to sharp Indian saw?

(A) Flat file (B) Round file (C) Triangular file (D) None of these

Q 2. Which one of the following tools is used to sharp chisel?

(A) Flat file (B) Sharpening stone (C) Both of these (D) None of these

Q 3. Which one of the following is used to make particle boards?

(A) Wood dust (B) Wood chips (C) PVC (D) None of these

Q 4. Which one of the following is not used to make Tenon?

(A) Hand machine (B) Hand saw (C) Chisel (D) Mortise gauge

Q 5. Which one of the following is a type of pine wood?

(A)Hard Wood (B) Soft wood (C) Particle wood (D) None of these

Q 6. Which one of the following is the type of steam beach wood?

((A)Hard Wood (B) Soft wood (C) Particle wood (D) None of these

Q 7. Which one of the following wood is used to make biscuits?

(A)Pine wood (B) Steam beach (C) Both of these (D) None of these

Q 8. Which one of the following functioning's does not belong to try square?

(A) Mark straight line (B) Check 90^0 (C) Check flatness (D) make groove

Q 9. Which one of the following is use of marking gauge?

(A) Mark dimension (B) Check 90^0 (C) Both of these (D) None of these

Q 10. Which one of the following is used to check 90^0?

(A) Marking gauge (B) Try square (C) Chisel (D) Hammer

Section – B

4 × 5 = 20 Marks

Q 11. Describe the use of sanding cork.

Q 12. Explain Marking Gauge with a suitable diagram.

Q 13. Explain uses of try square with suitable diagrams.

Q 14. Prepare a work plan and tool list for Dovetail joint.

Section – C

2 × 10 = 20Marks

Q 15. Explain the parts of jack planer with a suitable diagram.

Q 16. Explain any 4 hand tools used in hand skills with a suitable diagram.

SET – 2 (Measurement Transfer)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following processes is used to remove moisture from wood?

(A) Gluing (B) Seasoning (C) Cutting (D) None of these

Q 2. Which one of the following planners is used to plane round wood piece?

(A) Jack planer (B) Spoke shave (C) Both of these (D) None of these

Q 3. How many Rivets are used in double riveted lap joint?

(A) 1 (B) 2 (C) 3 (D) 4

Q 4. Which one of the following signs is helpful in assembly?

(A) zig zag lines (B) tringle (C) snack line (D) cross

Q 5. Which one of the following pencils is used for light measurement?

(A) 7mm (B) 0.7mm (C) 2mm (D) HB

Q 6. Which one of the following is use of marking gauge?

(A) Mark work piece equal (B) To sharp pencil (C) Mark circle (D) None of these

Q 7. Which one of the following is an angle of jack planer blade?

(A) 10 - 20 (B) 30 -35 (C) 35 - 40 (D) 40 - 50

Q 8. Which one of the following joint is used to make drawer?

(A)Butt joint (B) Dovetail joint (C) Both of these (D) None of these

Q 9. Which one of the following side is used to transfer measurement on the work piece?

(A) Length side (B) Width side (C) Thickness side (D) None of these

Q10. Which one of the following is used for measurement transfer?

(A) Roll meter (B) Try square (C) Marking gauge (D) None of these

Section – B

4 × 5 = 20 Marks

Q 11. Explain light measurement and outer measurement.

Q 12. Explain region behind tooth of hand saw are alternative with a suitable diagram of hand saw.

Q 13. Explain the significance of triangle sign with an example.

Q 14. List of hand tools used in carpentry.

Section – C

$2 \times 10 = 20$ Marks

Q 15. Explain Face marking signs in detail.

Q 16. Explain any 3 measuring instruments used in carpentry.

Registration No: .....

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SCHOOL OF CARPENTER SKILLS

END - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1001 + SCS1002 Time: 3 Hours

Course Name: Hand Skills + Measurement Transfer Max Marks: 50 + 50 = 100

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all questions from Section B, each question carries five marks.
- Answer all questions from Section C, each question carries ten marks.

SET – 1 (HAND SKILLS)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following tools is used to sharp Indian saw?

(A) Flat file (B) Round file (C) Triangular file (D) None of these **(C)**

Q 2. Which one of the following tools is used to sharp chisel?

(A) Flat file (B) Sharpening stone (C) Both of these (D) None of these **(B)**

Q 3. Which one of the following is used to make particle boards?

(A) Wood dust (B) Wood chips (C) PVC (D) None of these **(B)**

Q 4. Which one of the following is not used to make Tenon?

(A) Hand machine (B) Hand saw (C) Chisel (D) Mortise gauge **(D)**

Q 5. Which one of the following is a type of pine wood?

(A)Hard Wood (B) Soft wood (C) Particle wood (D) None of these **(B)**

Q 6. Which one of the following is the type of steam beach wood?

((A)Hard Wood (B) Soft wood (C) Particle wood (D) None of these **(A)**

Q 7. Which one of the following wood is used to make biscuits?

(A)Pine wood (B) Steam beach (C) Both of these (D) None of these **(B)**

Q 8. Which one of the following functioning's does not belong to try square?

(A) Mark straight line (B) Check 90^0 (C) Check flatness (D) make groove (D)

Q 9. Which one of the following is use of marking gauge?

(A) Mark dimension (B) Check 90^0 (C) Both of these (D) None of these (A)

Q 10. Which one of the following is used to check 90^0?

(A) Marking gauge (B) Try square (C) Chisel (D) Hammer (B)

Section – B

$4 \times 5 = 20$ Marks

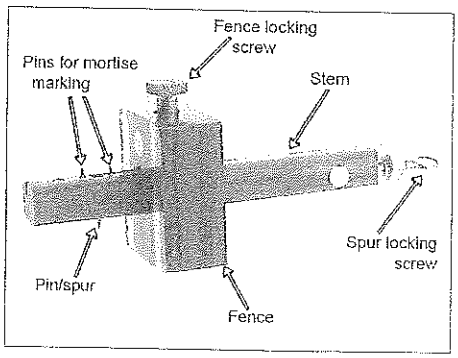
Q 11. Describe the use of sanding cork.

Ans. - A sanding block is a block used to hold sandpaper. In its simplest form, it is a block of wood or cork with one smooth flat side. The user wraps the sandpaper around the block, and holds it in place (by inserting a fitted piece of cardboard under the sandpaper, one can soften the impact on the wood and protect against tears or uneven wear on the sandpaper). Sanding blocks are helpful because they prevent the "waves" created by plain sandpaper.

Fancier versions use clips, teeth or clamps to hold the paper in place. Commercial versions can be constructed of various materials. They are usually sized to hold a quarter or half sheet of sandpaper. Some versions use the sandpaper belts intended for a power belt sander. Construction workers often use commercial one-piece sanding blocks consisting of a foam plastic block with an abrasive coating.

Q 12. Explain Marking Gauge with a suitable diagram.

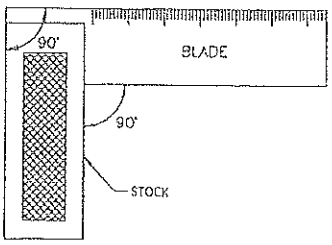
Ans. - A marking gauge, also known as a scratch gauge, it is used in woodworking and metalworking to mark out lines for cutting or other operations. The purpose of the gauge is to scribe a line parallel to a reference edge or surface. It is used in joinery and sheet metal operations.



The gauge consists of a beam, a headstock, and a scribing or marking implement, typically a pin, knife, pen or wheel. The headstock slides along the beam, and is locked in place by various means: a locking screw, cam lever, or a wedge. The marking implement is fixed to one end of the beam.

Q 13. Explain uses of try square with suitable diagrams.

Ans. – Try square is an instrument used to checked the flatness of the surface. The accuracy of measurement by a try square about 0.002 mm per 100 mm length.



Uses: -

1. To check the flatness of the surface.

2. To check squareness of the edges.
3. To check 90^0 of the work piece.

Q 14. Prepare a work plan and tool list for Dovetail joint.

Ans. – Work plan

1. Drawing reading.
2. Material verification.
3. Part identification Triangle sign.
4. Measurement transfer.
5. Sawing operation.
6. Chiselling operation.
7. Measurement transfer to another work piece.
8. Sawing operation.
9. Chiselling operation.
10. Inspection report.
11. Check work piece quality.

Part List: -

1.	Part 1	AB	1	150×100×20
2.	Part 2	AB	1	150×100×20

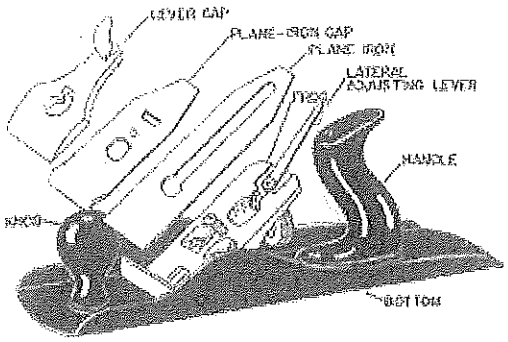
Tool List: -

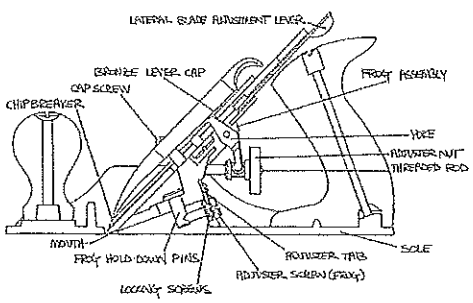
1.	Folding ruler	0 - 2 Meter
2.	Steel ruler	0 – 150 mm
3.	Roll Meter	0 – 3 Meter
4.	Try square	
5.	Marking gauge	
6.	Hammer	Nylon
7.	Clamps	2×
8.	Chisel	12mm, 26mm
9.	Hand saw	

Section – C

2 × 10 = 20Marks

Q 15. Explain the parts of jack planer with a suitable diagram.



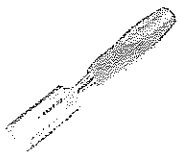


1. Leaver cap: - Leaver cap is used to hold all the assembly of iron cap and cutting blade.
2. Wedge: - Wedge is mainly responsible for the chip breaking while cutting.
3. Blade: - Blade is mounted in between planer and the cap is used to cut the material and this blade is adjustable in depth.
4. Knob: - Knob is mounted in front of the planer it is mainly used to hold the planer properly.
5. Handle: - Handle is mounted at the end of this planer this is to push and pull planer and also to hold it properly.
6. Adjustable lever: - This lever is used adjust blade tilting.
7. Bottom: - This is made of cast iron and used to provide perfect holding on surface.

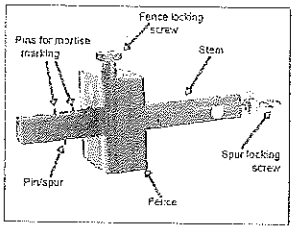
Q 16. Explain any 4 hand tools used in hand skills with a suitable diagram.

Ans. –

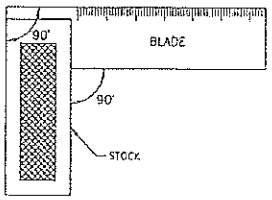
1. **Chisel:** - A chisel is a tool with a characteristically shaped cutting of blade on its end, for carving or cutting a hard material such as wood, stone by hand, struck with a mallet. The handle and blade of some types of chisel are made of metal or of wood with a sharp edge in it.



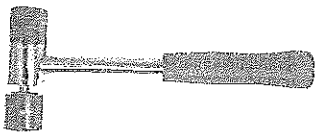
2. A marking gauge, also known as a scratch gauge, it is used in woodworking and metalworking to mark out lines for cutting or other operations. The purpose of the gauge is to scribe a line parallel to a reference edge or surface. It is used in joinery and sheet metal operations.



3. Try square is an instrument used to checked the flatness of the surface. The accuracy of measurement by a try square about 0.002 mm per 100 mm length.



4. Nylon Hammer: - This hammer is used to striking. Due to nylon coting this hammer prevent dents and scratches.



SET – 2 (Measurement Transfer)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following processes is used to remove moisture from wood?

(A) Gluing (B) Seasoning (C) Cutting (D) None of these (B)

Q 2. Which one of the following planners is used to plane round wood piece?

(A) Jack planer (B) Spoke shave (C) Both of these (D) None of these (B)

Q 3. How many Rivets are used in double riveted lap joint?

(A) 1 (B) 2 (C) 3 (D) 4 (B)

Q 4. Which one of the following signs is helpful in assembly?

(A) zig zag lines (B) tringle (C) snack line (D) cross (B)

Q 5. Which one of the following pencils is used for light measurement?

(A) 7mm (B) 0.7mm (C) 2mm (D) HB (B)

Q 6. Which one of the following is use of marking gauge?

(A) Mark work piece equal (B) To sharp pencil (C) Mark circle (D) None of these (A)

Q 7. Which one of the following is an angle of jack planer blade?

(A) 10 - 20 (B) 30 -35 (C) 35 - 40 (D) 40 – 50 (B)

Q 8. Which one of the following joint is used to make drawer?

(A)Butt joint (B) Dovetail joint (C) Both of these (D) None of these (B)

Q 9. Which one of the following side is used to transfer measurement on the work piece?

(A) Length side (B) Width side (C) Thickness side (D) None of these (B)

Q10. Which one of the following is used for measurement transfer?

(A) Roll meter (B) Try square (C) Marking gauge (D) None of these (A)

Section – B

4 × 5 = 20 Marks

Q 11. Explain light measurement and outer measurement.

Ans. – Light measurement: - Light measurement is also known as inner measurement. This measurement is always done after outer measurement. During this measurement we used 0.7 mm pencil.

Outer measurement: - this measurement is out to out measurement this is done with the use of 2mm pencil.

Q 12. Explain region behind tooth of hand saw are alternative with a suitable diagram of hand saw.

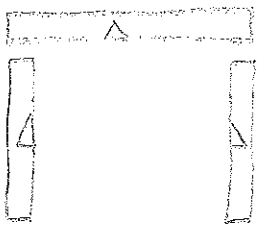
Ans. – If the tooth of hand saw is same as the thickness of the blade than during the cutting it will stuck in to the work piece due to leak of clearance. That is only the reason that tooth of circular saw always having alternate shape so that they can make proper clearance to the saw to move freely on the work piece.

Q 13. Explain the significance of triangle sign with an example.

Ans. - Tringle sign is used for assembly purpose. We used this sign as an identification of the part. This tringle making process follows some following points:

1. We always make tringle according to front view of the drawing.
2. If it is not possible to make tringle sign on all parts in front view than only we go for top or side view.
3. This is not necessary to complete the tringle sign always. (in case of less no. of component)
4. Tringle sign should always come on the corners of work piece.

EXAMPLE:



Q 14. List of hand tools used in carpentry.

Ans. –

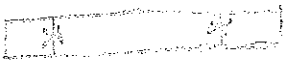
1.	Folding ruler	0 - 2 Meter
2.	Steel ruler	0 – 150 mm
3.	Roll Meter	0 – 3 Meter
4.	Try square	
5.	Marking gauge	
6.	Hammer	Nylon, Iron
7.	Clamps	
8.	Chisel	8mm,12mm,16mm,26mm,32mm
9.	Hand saw	
10.	Sanding Cork	
11.	Jack planer	

Section – C

2 × 10 = 20 Marks

Q 15. Explain Face marking signs in detail.

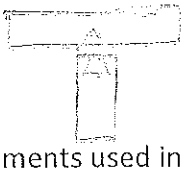
Ans. – 1. Cross - This sign is used from were material has to be out and cut will go through out. These mark will stay on width side during face marking.



2. **Cross with depth:** - This mark is used were we need to take out material to the certain given depth.

3. **Snack line:** - These lines are used from were material has to be taken out only.

4. **Triangle sign:** - This sign is used to mark triangle which is helpful in assembly..



Q 16. Explain any 3 measuring instruments used in carpentry.

Ans. – 1. **Roll Meter:** - Roll meter is very precise measuring instrument, this is mainly used to measure long work pieces and also to transfer measurement one time on the work piece.

2. Double Meter: - Double meter is used to measure short pieces till 2 meter. This can use both of the side. Due to its stick property it is easy to handle or measure.

3. Steel Ruler: - Steel ruler is mainly use when we need any measuring instrument having least count half mm. and also it is used to set marking instruments like marking gauge and use to take measurement of Nero spaces were other instrument cannot reach.

Registration No: .....

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SCHOOL OF CARPENTER SKILLS

END - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1003 + SCS1005 **Time: 3 Hours**

Course Name: Handy Machine + Assembly **Max Marks: 50 + 50 = 100**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries five marks.
- Answer all question from Section C, each question carries ten marks.

SET – 1 (HANDY MACHINE)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following is maximum depth of hand router OF 1400 EBQ?

(A) 6 (B) 70 (C) 60 (D) None of these

Q 2. Which one of the following is Maximum depth of circular saw without track?

(A) 65 (B) 55 (C) 50 (D) 45

Q 3. Which one of the following sanding machine can be used without Dust collector?

(A) RO 150 FEQ (B) ETS EC 150/5 EQ (C) ETS EC 150/3 EQ (D) OS 400 E

Q 4. Which one of the following machine that can be used to make Rebate?

(A) Sander (B) Hand planer (C) Lamello (D) Circular Saw

Q 5. Which one of the following is the capacity of CTH 26 E Dust collector?

(A)36 (B) 10 (C) 26 (D) 16

Q 6. Which one of the following is the capacity of CTL MINI Dust collector?

(A)36 (B) 10 (C) 26 (D) 16

Q 7. Which one of the following accessories is used while working on an angular work piece with lamella machine?

(A)Angular support (B) Spacer (C) Guide rail (D) None of these

Q 8. Which one of the following is used for rough sanding?

(A)P180 (B) P80 (C) P280 (D) P120

Q 9. Which one of the following machines used for fine sanding?

(A) RO 150 FEQ (B) ETS EC 150/5 EQ (C) Both of these (D) None of these

Q 10. Which one of the following is standard distance between centre of two drill holes?

(A) 22 (B) 32 (C) 12 (D) 42

Section – B

4 × 5 = 20 Marks

Q 11. Describe the colour coding of Saw blade.

Q 12. Explain System accessories of circular saw TS 55 REBQ Plus.

Q 13. Explain uses and functioning of guide rail.

Q 14. Explain system accessories of Router OF 1010 EBQ.

Section – C

2 × 10 = 20Marks

Q 15. Explain Technical data of the circular saw and also explain technical specification of circular saw blade with a suitable diagram.

Q 16. Explain all specifications and tool changing of Hand Router OF 1400 EBQ.

SET – 2 (ASSEMBLY)

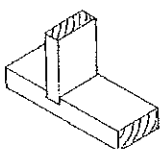
Section – A

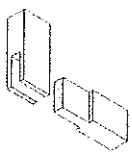
10 × 1 = 10 Marks

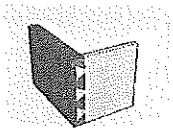
Q 1. Which one of the following is the shape of lamello biscuit?

(A) Circular (B) Elliptical (C) oval (D) Rectangle

Q 2. Which one of the following is "Housing joint"?

(A) 

(B) 

(C) 

(D) None of these

Q 3. How many Rivets are used in double riveted lap joint?

(A) 1 (B) 2 (C) 3 (D) 4

Q 4. Which one of the following signs is helpful in assembly?

(A) zig zag lines (B) tringle (C) snack line (D) cross

Q 5. Which one of the following lamello biscuits can be used on 8 mm MDF board?

(A) 20 (B) 10 (C) 0(Zero) (D) 40

Q 6. Which one of the following machines used for lamello biscuit 20?

(A) Classic X (B) zeta P2 (C) Domino (D) Circular saw

Q 7. How many heads are there in a Rivet?

(A) 1 (B) 2 (C) 3 (D) 4

Q 8. Which one of the following joints is not used in Carpenter Assembly?

(A)Half lap joint (B) Bridle joint (C) Diamond joint (D) Dovetail joint

Q 9. Which one of the following is permanent assembly?

(A) Lamello joints (B) fastening screw (C) Lamello Joints with glue (D) Dowel

Q10. Which one of the following wood used to make lamello biscuit?

(A) Tick wood (B) Steam Beach wood(C) Mango wood (D) Pine wood

Section – B

4 × 5 = 20 Marks

Q 11. Explain the significance of triangle sign with an example.

Q 12. Explain dovetail joint with a suitable diagram.

Q 13. What is dry gluing process? Explain the gluing process by using lamello in carpenter assembly.

Q 14. Explain Mortise and Tenon joint with suitable diagrams.

Section – C

2 × 10 = 20 Marks

Q 15. Explain various types of joints used in carpentry. (Minimum 10 joints)

Q 16. Find out the measurements of the dovetail where length of board is 150mm, width is 100mm thickness is 20 mm and dovetail teeth length is X = 20 mm, find out the following.

(A) No. of teeth

(B) Equal distance between teeth

P.T.O.

(C) Thickness of first teeth.

Registration No: .....

BSDU

SCHOOL OF CARPENTER SKILLS

END - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1003 + SCS1005 Time: 3 Hours

Course Name: Handy Machine + Assembly Max Marks: 50 + 50 = 100

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries five marks.
- Answer all question from Section C, each question carries ten marks.

SET – 1 (HANDY MACHINE)

Section – A 10 × 1 = 10 Marks

Q 1. Which one of the following is maximum depth of hand router OF 1400 EBQ?

(A) 6 (B) 70 (C) 60 (D) None of these (A)

Q 2. Which one of the following is Maximum depth of circular saw without track?

(A) 65 (B) 55 (C) 50 (D) 45 (B)

Q 3. Which one of the following sanding machine can be used without Dust collector?

(A) RO 150 FEQ (B) ETS EC 150/5 EQ (C) ETS EC 150/3 EQ (D) OS 400 E (A)

Q 4. Which one of the following machine that can be used to make Rebate?

(A) Sander (B) Hand planer (C) Lamello (D) Circular Saw (B)

Q 5. Which one of the following is the capacity of CTH 26 E Dust collector?

(A)36 (B) 10 (C) 26 (D) 16 (C)

Q 6. Which one of the following is the capacity of CTL MINI Dust collector?

(A)36 (B) 10 (C) 26 (D) 16 (B)

Q 7. Which one of the following accessories is used while working on an angular work piece with lamello machine?

(A)Angular support (B) Spacer (C) Guide rail (D) None of these (B)

Q 8. Which one of the following is used for rough sanding?

(A)P180 (B) P80 (C) P280 (D) P120 (B)

Q 9. Which one of the following machines used for fine sanding?

(A) RO 150 FEQ (B) ETS EC 150/5 EQ (C) Both of these (D) None of these (C)

Q 10. Which one of the following is standard distance between centre of two drill holes?

(A) 22 (B) 32 (C) 12 (D) 42 (B)

Section – B

4 × 5 = 20 Marks

Q 11. Describe the colour coding of Saw blade.

Ans. -

COLOUR CODE	MATERIAL	SPEED RANGE
Red	Plastic and Mineral bonded fibres	3 – 5
Yellow	Wood, Soft plastic	3 – 6
Blue	Aluminium, Steel and Sandwich panel (Fe), (Al)	2 – 4 3 - 6
Green	Hard, Abrasive building panels, Cement bonded chipboards, MDF and plaster board	4 - 6

Q 12. Explain System accessories of circular saw TS 55 REBQ Plus.

Ans. –

1. Parallel side fence: - This accessory is used to provide the parallelity to the machine while cutting work piece.
2. Splinter guard: - This is used to prevent chip outs and to stop dust to come out while working with machine.
3. Kickback stop: - This is used as a rear and front stop position on guide rail and can also be used as guide stop.
4. Guide rail: - Guide rail is used to provide proper clamping on the work piece, and also it is used to cut straight as per requirement.
5. Dust collector or Chip collection bag: - This bag or dust collector is used to collect dust while cutting by circular saw.

Q 13. Explain uses and functioning of guide rail.

Ans. – The guide rail is used to provide straight path to the cutting. It is used to provide precise cut.

Functioning of guide rail: -

1. Zero play guidance: - We can adjust the guidance jaw on circular saw to fit the guide rail without using tools.
2. Splinter free cuts: - The splinter guards positioned directly on the scribe line prevent the edge from splintering even on the angled cut.
3. Precision results: - The router guide stop was designed for precision grooves.
4. Quick for diagonal cuts: - With guide rails and combination bevel, angles are easy to transfer from work piece or wall.

Q 14. Explain system accessories of Router OF 1010 EBQ.

Ans. – System accessory of router 1010 EBQ

1. Collet: - This is also known as locking nut, inset service display pack (diameter 6 – 8)
2. Centring Mandrel: - For all festool routers, for shank support diameter 6.35 and 8 mm, for cantering the copying ring, in self-service display pack.
3. Copying ring: - This ring is use to follow the path which we make according to requirement.
4. Parallel side fence: -This fence is use to run router parallel to the edge at certain dimension.
5. Dust extraction attachment: - This is used to suck dust during cutting so environment will be dust free.

Section – C

$2 \times 10 = 20$ Marks

Q 15. Explain Technical data of the circular saw and also explain technical specification of circular saw blade with a suitable diagram.

Ans. – Technical data of circular saw:

1. Power consumption (W): 1200
2. Idle engine speed (min^{-1}): 2000 – 5200
3. Saw blade diameter (mm): 160
4. Cutting depth(mm): 0 – 55
5. Angular range: (-1 -47^0)
6. Cutting depth (45^0): 43
7. Dust extraction connection diameter(mm): 27136
8. Weight (KG): 4.5

Technical specification of saw blade:

160 × 2.2 × 20 W48
Diameter – 160 mm
Cutting width – 2.2 mm
Hole – 20 mm
No. of teeth - 48
Chip angle – 5^0
Tooth shape - W

Q 16. Explain all specifications and tool changing of Hand Router OF 1400 EBQ.

Ans. –

1. Knob: - This knob is used to lock & unlock the movement of router to the up and down direction and also used to handle it.
2. Gear system: - In this machine speed can be maintained 1 – 6 steps.
3. Spindle lock: - This is used to lock the spindle while changing tool.
4. Triger: - This is used to trigger machine of help start running tool.
5. Depth adjuster: - This is used to set depth in the machine.

Tool changing of machine: - To change tool in machine press the spindle lock switch and use spanner to open the tool from the collet. Take tool which we required to set in to machine and tight it with the help of spanner.

During fastening and removing tool machine should be unplugged and spindle lock ha to be pressed.

SET – 2 (ASSEMBLY)

Section – A

10 × 1 = 10 Marks

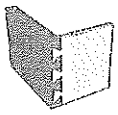
Q 1. Which one of the following is the shape of lamello biscuit?

(A) Circular (B) Elliptical (C) oval (D) Rectangle **(C)**

Q 2. Which one of the following is "Housing joint"?

(A)

(B)

(C) 

(D) None of these **(A)**

Q 3. How many Rivets are used in double riveted lap joint?

(A) 1 (B) 2 (C) 3 (D) 4 **(B)**

Q 4. Which one of the following signs is helpful in assembly?

(A) zig zag lines (B) tringle (C) snack line (D) cross **(B)**

Q 5. Which one of the following lamello biscuits can be used on 8 mm MDF board?

(A) 20 (B) 10 (C) 0(Zero) (D) 40 **(C)**

Q 6. Which one of the following machines used for lamello biscuit 20?

(A) Classic X (B) zeta P2 (C) Domino (D) Circular saw (A)

Q 7. How many heads are there in a Rivet?

(A) 1 (B) 2 (C) 3 (D) 4 (B)

Q 8. Which one of the following joints is not used in Carpenter Assembly?

(A)Half lap joint (B) Bridle joint (C) Diamond joint (D) Dovetail joint (C)

Q 9. Which one of the following is permanent assembly?

(A) Lamello joints (B) fastening screw (C) Lamello Joints with glue (D) Dowel (C)

Q10. Which one of the following wood used to make lamello biscuit?

(A) Tick wood (B) Steam Beach wood(C) Mango wood (D) Pine wood (B)

Section – B

4 × 5 = 20 Marks

Q 11. Explain the significance of triangle sign with an example.

Ans. - Tringle sign is used for assembly purpose. We used this sign as an identification of the part. This tringle making process follows some following points:

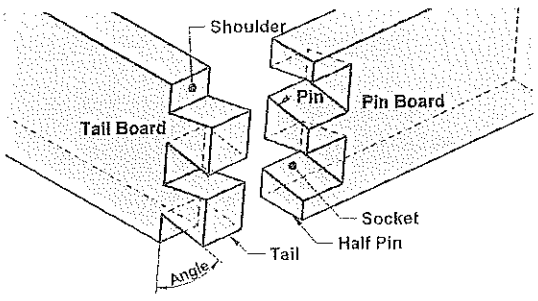
1. We always make tringle according to front view of the drawing.
2. If it is not possible to make tringle sign on all parts in front view than only we go for top or side view.
3. This is not necessary to complete the tringle sign always. (in case of less no. of component)
4. Tringle sign should always come on the corners of work piece.

EXAMPLE:

Q 12. Explain dovetail joint with a suitable diagram.

Ans. – Dovetail joint: - A form of box joint where the figure is locked together by diagonal cuts. More secure than a figure joint.

the dovetail joint is commonly used to join the sides of a drawer to the front. A series of 'pins' cut to extend from the end of one board interlock with a series of 'tails' cut into the end of another board. The pins and tails have a trapezoidal shape. Once glued, a wooden dovetail joint requires no mechanical fasteners.



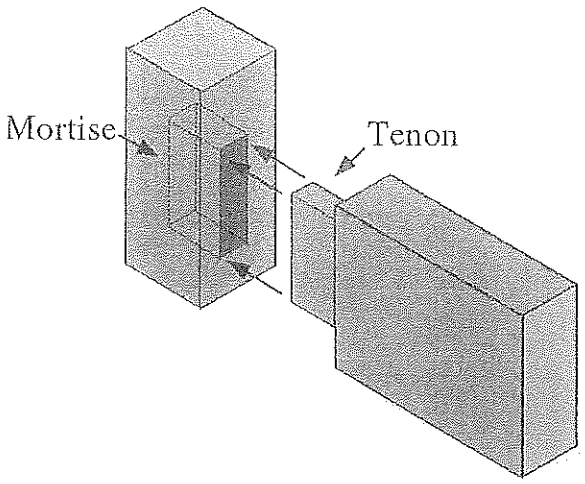
Q 13. What is dry gluing process? Explain the gluing process by using lamello in carpenter assembly.

Ans. - process in which we follow whole gluing process without using glue in it is called gluing process.

In the gluing process by using lamello in assembly, after making groove in all pieces first we will glue all the biscuits on the thickness side of the pieces and then we glued all the side pieces on the bottom of the box and will clamp it for 3 to 4 hours. During the clamping we will use some waste pieces between final piece and clamp which will prevent final piece to damages and also remove all the extra glue from inside of the box with wet cotton.

Q 14. Explain Mortise and Tenon joint with suitable diagrams.

Ans.- A mortise (or mortice) and Tenon joint is a type of joint that connects two pieces of wood or other material. Woodworkers around the world have used it for thousands of years to join pieces of wood, mainly when the adjoining pieces connect at an angle of 90°. In its basic form, it is both simple and strong. There are many variations of this type of joint, but the basic mortise and Tenon comprises two components: the mortise hole and the Tenon tongue. The Tenon, formed on the end of a member generally referred to as a rail, fits into a square or rectangular hole cut into the corresponding member. The Tenon is cut to fit the mortise hole exactly and usually has shoulders that seat when the joint fully enters the mortise hole. The joint may be glued, pinned, or wedged to lock it in place.



Section – C

2 × 10 = 20 Marks

Q 15. Explain various types of joints used in carpentry. (Minimum 10 joints)

Ans. - 1. Bridle joint: This joint is also called Tenon joint. This joint is where the through mortise is open on one side and forms a fork shapes.

2. Mitre joint: This joint is similar to butt joint, but both pieces have been bevelled (usually at a 45-degree angle)

3. Dovetail joint: A form of box joint where the finger are locked together by diagonal cuts.

4. Housing joint: A slot Is cut across the grain in one piece for another piece to cut in to.

5. Groove joint: This joint is also like the housing joint except that the slot is cut with the grains.

6. Mortise and Tenon joint: A stub will fit tightly in to a hole cut to it. This is a traditional method to joint frame and panel members in door.

7. Dowel joint: The end of a piece of wood is butted against another piece of wood. This is rain forced with dowel pins. This joint is quick to make with production line machinery and so is a very common joint in factory made furniture.

8. Biscuit: A wooden oval is glued in to two crescent shaped hole.

9. Cross lap joint: A joint in which two members are joined by removing material from each of the point of intersection so that they overlap.

10. Tongue and groove: Each piece has groove cut all along one edge, and thin, deep ridge on the opposite edge. If the tongue is unattached, it is considered a spline joint.

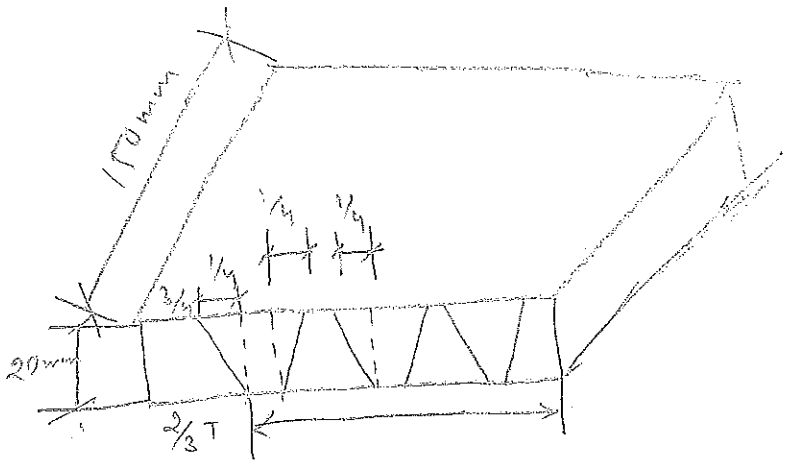
Q 16. Find out the measurements of the dovetail where length of board is 150mm, width is 100mm thickness is 20 mm and dovetail teeth length is X = 20 mm, find out the following.

(A) No. of teeth

(B) Equal distance between teeth

(C) Thickness of first teeth.

Ans. -



(A) Thickness of First teeth = 2×T/3 = 2×20/3 = 13.3

(B) No. of teeth = Rest Distance /2T = 87/2×20 = 2.175 = 3 teeth

(C) Equal distance between teeth = 87/3 = 29mm

Registration No: .....

BSDU

SCHOOL OF CARPENTER SKILLS

END - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1007 + SCS1006 **Time: 3 Hour**

Course Name: Carpenter Mathematics + Fittings **Max Marks: 50 + 50 = 100**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries five marks.
- Answer all question from Section C, each question carries ten marks.

SET – 1 (Carpenter Mathematics)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following is the Volume of Sphere?

(A) $\frac{b(a+h)}{2}$ (B) $\frac{h(a-b)}{2}$ (C) $\frac{h(a+b)}{2}$ (D) None of these

Q 2. Which one of the following is the Area of cylinder, were "r" is radius and "h" is height of the cylinder?

(A) $V = 2\pi r(r + h)$ (B) $V = \pi R^2 h$ (C) $V = \pi r^2 h2$ (D) $V = \pi r^2 h$

Q 3. How many inches are there in 2.5 meter?

(A)60.80 inch (B)58.9 inch (C) 98.42 inch (D)61 inch

Q 4. Which thickness is not available in case of MDF board?

(A)18 mm (B) 36 mm (C) 26 mm (D) 21 mm

Q 5. Which one of the following is the Conversion Scientific notation conversion of 0.0001?

(A)10^5 (B)10^{-5} (C)10^4 (D)10^{-4}

Q 6. Which thickness is available in case of MDF board?

(A)19 mm (B) 36 mm (C) 25 mm (D) 29 mm

Q 7. Which one of the following is 7% of 50?

(A) 3.5 (B) 7.5 (C) 3 (D) 7

Q 8. Which one of the following is equal to density?

(A) mv (B) $\frac{m}{v}$ (C) m + v (D) None of these

Q 9. Which one of the following is Area of Cube?

(A) $2\pi r(r+h)$ (B) $6L^2$ (C) $\frac{h(a+b)}{2}$ (D) None of these

Q 10. Which one of the following is the value of $10^2/10^4$?

(A) 0.01 (B) 0.001 (C) 0.0001 (D)None of these

Section – B

4 × 5 = 20 Marks

Q 11. Calculate the surface area of a cube having length of face 60 mm.

Q 12. 3 carpenters work 10 hours daily for 6 days to complete a cabinet, if the same work is assigned to 5 carpenters with same working hours then how many days they will take to complete same the cabinet.

Q 13. A door having length 5 feet and height 75 inch is going to be laminated on both the side. Calculate the lamination area in millimetre.

Q 14. If the circumference of the tree timber is 628 mm, calculate how many flat boards of 20 mm thickness can be prepared.

Section – C

2 × 10 = 20 Marks

Q 15. Mr. Bajarang purchased a table in 3800 Rs and sold it with 20% profit. find out the selling price, if Mr. Bajarang wants to earn double of its profit by keeping selling prise same what should be the purchasing price.

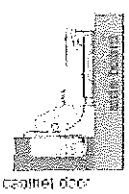
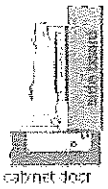
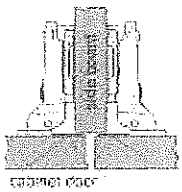
Q 10. A cabinet having total height of 2000mm having 3 shelfs inside with equal space. Calculate distance between shelfs when whole cabinet is made by 18 mm thickness MDF board.

SET – 2 (Fitting)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following is full overlay hinge?

(A)  (B)  (C)  (D) None of these

Q 2. Which one of the following locker size is used in drawer when front is 18mm MDF?

(A)16mm (B)18mm (C)25mm (D)32mm

Q 3. Which one of the following size of handle used in kitchen furniture?

(A) 99mm (B) 90mm (C) 100mm (D) None of these

Q 4. Which one of the following is opening angle of full overlay hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0

Q 5. Which one of the following is opening angle of half overlay hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0

Q 6. Which one of the following is opening angle of inset hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0

Q 7. Which one of the following is standard size of ply board?

(A) 8×10 (B) 8×4 (C) 8×5 (D) 8×7

Q 8. Which one of the following is used to mark 45^0 on work piece?

(A) Try square (B)Bevel square (C) Marking gauge (D) None of these

Q 9. Which one of the following is diameter of the circle having 3mm radius?

(A) 15 (B) 6 (C) 5 (D) 3

Q 10. Q 9. Which one of the following is used to make MDF boards?

(A) Wood dust (B) Wood chips (C) PVC (D) None of these

Section – B

4 × 5 = 20 Marks

Q 11. Explain types of drawer runners.

Q 12. Explain consumables used in furniture.

Q 13. Explain Half overlay hinge with a suitable diagram.

Q 14. Explain Full overlay hinge with a suitable diagram

Section – C

2 × 10 = 20 Marks

Q 15. Discuss RTA fitting with a section diagram.

Q 16. Explain types of hinges with a block diagram.

Registration No: .....

SCHOOL OF CARPENTER SKILLS

END - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1007 + SCS1006 Time: 3 Hour

Course Name: Carpenter Mathematics + Fittings Max Marks: 50 + 50 = 100

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries five marks.
- Answer all question from Section C, each question carries ten marks.

SET – 1 (Carpenter Mathematics)

Section – A 10 × 1 = 10 Marks

Q 1. Which one of the following is the Volume of Sphere?

(A) $\frac{b(a+h)}{2}$ (B) $\frac{h(a-b)}{2}$ (C) $\frac{h(a+b)}{2}$ (D) None of these **(C)**

Q 2. Which one of the following is the Area of cylinder, were "r" is radius and "h" is height of the cylinder?

(A) $V = 2\pi r(r + h)$ (B)$V = \pi R^2 h$ (C)$V = \pi r^2 h2$ (D) $V = \pi r^2 h$ **(A)**

Q 3. How many inches are there in 2.5 meter?

(A)60.80 inch (B)58.9 inch (C) 98.42 inch (D)61 inch **(C)**

Q 4. Which thickness is not available in case of MDF board?

(A)18 mm (B) 36 mm (C) 26 mm (D) 21 mm **(D)**

Q 5. Which one of the following is the Conversion Scientific notation conversion of 0.0001?

(A)10^5 (B)10^{-5} (C)10^4 (D)10^{-4} **(D)**

Q 6. Which thickness is available in case of MDF board?

(A)19 mm (B) 36 mm (C) 25 mm (D) 29 mm **()**

Q 7. Which one of the following is 7% of 50?

(A) 3.5 (B) 7.5 (C) 3 (D) 7 **(A)**

Q 8. Which one of the following is equal to density?

(A) mv (B) $\frac{m}{v}$ (C) m + v (D) None of these **(B)**

Q 9. Which one of the following is Area of Cube?

(A) $2\pi r(r + h)$ (B) $6L^2$ (C) $\frac{h(a+b)}{2}$ (D) None of these **(B)**

Q 10. Which one of the following is the value of $10^2/10^4$?

(A) 0.01 (B) 0.001 (C) 0.0001 (D)None of these **(A)**

Section – B

4 × 5 = 20 Marks

Q 11. Calculate the surface area of a cube having length of face 60 mm.

Ans. - Surface Area of one face = $60 \times 60 = 3600$ mm

Total No of faces in a Cube = 6

Total Area = $2500 \times 6 = 1500$ mm $= 15 \times 10^3$ m

Q 12. 3 carpenters work 10 hours daily for 6 days to complete a cabinet, if the same work is assigned to 5 carpenters with same working hours then how many days they will take to complete same the cabinet.

Ans. - Total working hours required for object

$= 3 \times 10 \times 6 = 180$ hours

for carpenters 10 hours daily, let say = x days required

$\Rightarrow 6 \times 10 \times x = 180 \Rightarrow x = 3 \Rightarrow$ 3 days req

Q 13. A door having length 5 feet and height 75 inch is going to be laminated on both the side. Calculate the lamination area in millimetre.

Ans. –

5 feet = 1524 mm

75 Inch = 1905.0 mm

Area = $L \times W = 1524 \times 1905 = 2903220$ mm^2

for two Side lemination = $2 \times 2903220 = 5806440$ mm

Q 14. If the circumference of the tree timber is 628 mm, calculate how many flat boards of 20 mm thickness can be prepared.

Ans. –

Circumference $= 2\pi r$

$628 = 2\pi r$

$r = \frac{628}{2\pi} = 100$ mm

Diameter of tree timber = $100 \times 2 = 200$ mm

for flat board of 20 mm thickness

$\Rightarrow 200/20 = 10$

upper layer and Lower layer need to remove due to maintain thickness)

Total flate parts = 9

Section – C **2 × 10 = 20 Marks**

Q 15. Mr. Bajarang purchased a table in 3800 Rs and sold it with 20% profit. find out the selling price, if Mr. Bajarang wants to earn double of its profit by keeping selling prise same what should be the purchasing price.

Ans. – 20% of $3800 = 3800 \times \frac{20}{100} = 760$ Rs

So Selling price would be = $760 + 3800 = 4560$ Rs

let the purchasing price = x

So, $x + x \times \frac{90}{100} = 4560$

$x\left(1 + \frac{90}{100}\right) = 4560$

$x = 3257.14$

So the purchasing price will be

= 3257.14 Rs

Ans

Q 10. A cabinet having total height of 2000mm having 3 shelfs inside with equal space. Calculate distance between shelfs when whole cabinet is made by 18 mm thickness MDF board.

Total thickness Covered by 3 shelf + Top + Bottom

= $18 \times 5 = 90$ mm

Total height = 2000 mm − 90 mm

= 1910 mm

Cabinet with 3 shelf having 4 equal Space in it.

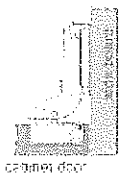
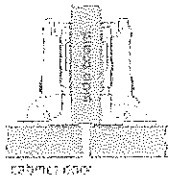
$\Rightarrow \frac{1910}{4} = 477.5$ mm Ans

SET – 2 (Fitting)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following is full overlay hinge?

(A)  (B)  (C)  (D) None of these **(B)**

Q 2. Which one of the following locker size is used in drawer when front is 18mm MDF?

(A)16mm (B)18mm (C)25mm (D)32mm **(B)**

Q 3. Which one of the following size of handle used in kitchen furniture?

(A) 99mm (B) 90mm (C) 100mm (D) None of these **()**

Q 4. Which one of the following is opening angle of full overlay hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0 **(D)**

Q 5. Which one of the following is opening angle of half overlay hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0 **(C)**

Q 6. Which one of the following is opening angle of inset hinge?

(A) 2^0 (B) 16^0 (C) 8^0 (D) 0^0 **(B)**

Q 7. Which one of the following is standard size of ply board?

(A) 8×10 (B) 8×4 (C) 8×5 (D) 8×7 **(B)**

Q 8. Which one of the following is used to mark 45^0 on work piece?

(A) Try square (B)Bevel square (C) Marking gauge (D) None of these **(B)**

Q 9. Which one of the following is diameter of the circle having 3mm radius?

(A) 15 (B) 6 (C) 5 (D) 3 **(B)**

Q 10.Which one of the following is used to make MDF boards?

(A) Wood dust (B) Wood chips (C) PVC (D) None of these **(A)**

Section – B

4 × 5 = 20 Marks

Q 11. Explain types of drawer runners.

Ans. - **Nylon Roller** – These are typically used in conjunction with epoxy-coated steel drawer slide members. They provide a very smooth, quiet movement and are usually less expensive than ball bearing drawer slides.

Steel Ball Bearing – Often called precision ball bearing slides, these slides offer a superior fit and feel compared to standard nylon rollers slides. The outward and inward movement of the slide either telescopic or progressive and will handle much heavier loads than nylon roller slides; even up to 200 lbs. Certain steel ball bearings slides, such as ones used in industrial applications can hold up to 500 lbs. in heavy file drawers.

Soft-Close – Soft-Close is easily the most popular type of drawer slide in the industry. Soft-closing drawer slides do an excellent job of protecting the drawer from damage commonly caused by closing it too fast. Using hydraulic dampeners, these types of slides not only increase the life of cabinets and furniture, but they also help reduce noise. These slides' shock absorbing functionality make them the ideal choice for rooms like kitchens and offices. For more detailed information, check out this year's best-selling soft close drawer slide:

Q 12. Explain consumables used in furniture.

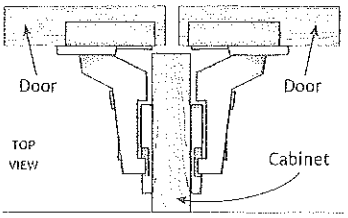
Ans. - 1. Nails - In woodworking and construction, a nail is a pin-shaped object of metal (or wood, called a treenail or "trunnel") which is used as a fastener, as a peg to hang something, or sometimes as a decoration. Generally, nails have a sharp point on one end and a flattened head on the other, but headless nails are available.

2. Screws - A screw is a type of fastener, in some ways similar to a bolt, typically made of metal, and characterized by a helical ridge, known as a *male thread* (external thread). Screws are used to fasten materials by digging in and wedging into a material when turned, while the thread cuts grooves in the fastened material that may help pull fastened materials together and prevent pull-out. There are many screws for a variety of materials; those commonly fastened by screws include wood, sheet metal, and plastic.

3. Glue - Glue is an adhesive used to tightly bond pieces of wood together. Many substances have been used as glues.

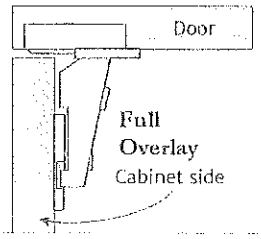
4. Biscuits joiner - A biscuit joiner is a wood working tool used to join two pieces of wood together. A biscuit joiner uses a small circular saw blade to cut a crescent-shaped hole (called the mouth) in the opposite edges of two pieces of wood or wood composite panels. An oval-shaped, highly dried and compressed wooden biscuit (Beech wood) is covered with glue, or glue is applied in the slot. The biscuit is immediately placed in the slot, and the two boards are clamped together. The wet glue expands the biscuit, further improving the bond.

Q 13. Explain Half overlay hinge with a suitable diagram.



Ans. - Half overlay hinges are intended for pairs of doors in the middle of a run of cabinets, where two doors have their hinges mounted on opposite sides of a shared middle partition.

Q 14. Explain Full overlay hinge with a suitable diagram.



Ans. - This hinge is the type of Concealed hinge, overlay doors do exactly what the name implies: They cover the cabinet opening completely, overlapping the cabinet case or face frame on all sides

Section – C

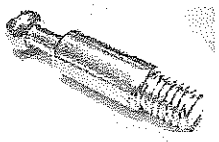
2 × 10 = 20 Marks

Q 15. Discuss RTA fitting with a section diagram.

Ans. - – RTA is ready to assemble fitting which is also known as knock down fitting, it become with the assembly of three parts,

1. Cam - The disk fits into a recess in the first side of the cabinet. It rotates by inserting a screwdriver into the slot in its side. The shaft is screwed into the second side of the cabinet. The collar of the shaft is passed through the hole in the second slot in the disk. When the disk rotates the shaft is locked in position. This keeps both sides of the cabinet locked together.

2. Connecting Screw – Connecting screw is a cylindrical screw which one end inserts in the socket and another and inserts in the cam. It is used to connect joint and to give strength to it.

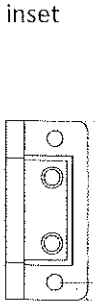


3. Socket – Socket is assembling in second part of assembly. It is used to provide grip to the connecting screw.

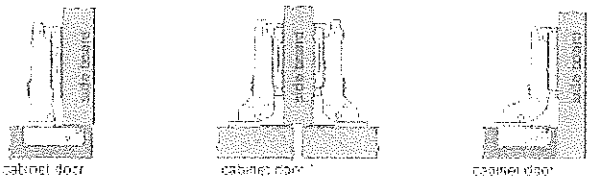
Q 16. Explain types of hinges with a block diagram.

1. Ans. - **Butt Hinge:** - The hinge is mortised into the edge of the door and the cabinet, Only the knuckle of the hinge is visible when the door is shut. This hinge is Mainly used on inset doors

2. **Flush hinges or non mortis hinge:** - Flush hinges are Used similar to butt hinges, except they are not mortised into the door or cabinet. Easier to fit than the butt hinge but the load capacity of this hinge is less than butt hinge.



3. Concealed hinges: - Concealed hinges are fully concealed behind the cabinet door, so they're not visible when the door is closed. They're self-closing and usually easily adjustable. They are the most common used of the cabinet door hinges. The mounting plate is fitted to the cabinet and a special bit is used to drill out the back of the door to take the cup hinge. There are many types to suit most applications, both for frameless cabinets and face-frame cabinets
    1. Full overlay hinge
    2. Half overlay hinge
    3. Inset hinge



Registration No: ....

SCHOOL OF CARPENTER SKILLS

END - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1008 + SCS1004 | **Time: 3 Hours**

Course Name: Hand Drawing + Standard Machine | **Max Marks: 50 + 50 = 100**

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries five marks.
- Answer all question from Section C, each question carries ten marks.

<u>SET – 1</u> (Hand Drawing)

<u>Section – A</u> **10 × 1 = 10 Marks**

Q 1. How many units can be calculated by plain scale?

(A) 1 (B) 2 (C) 3 (D) 4

Q 2. Which one of the following is the centre line?

(A) (B)

(C) (C)

Q 3. Which one of the following projection is used in projection method?

(A) First angle (B) Second angle (C) Fourth angle (D) None of these

Q 4. Original dimension of the object is 500 mm and it is in drawing of 250. What will be the scale ratio?

(A) 1:1 (B) 1:2 (C) 2:1 (D) None of these

Q 5. Which one of the following angle of projection follows sequence of Observer - plan of projection – object?

(A) First angle of projection (B) Second angle of projection

(C) third angle of projection (D) Fourth angle of projection

Q 6. How many units can be calculated by a diagonal scale?

(A) 1 (B) 2 (C) 3 (D) 4

Q 7. Which one of the following is the dash line?

(A) (B)

(C) (C)

Q 8. Which one of the following projection is not used in projection method?

(A) First angle (B) Second angle (C) third angle (D) None of these

Q 9. Original dimension of the object is 400 mm and it is in drawing of 800. What will be the scale ratio?

(A) 1:1 (B) 1:2 (C) 2:1 (D) None of these

Q 10. Which one of the following angle of projection follows sequence of object - plan of projection – Observer?

(A) First angle of projection (B) Second angle of projection

(C) third angle of projection (D) Fourth angle of projection

Section – B

4 × 5 = 20 Marks

Q 11. Describe various types of scales used in hand drawing with a neat sketch.

Q 12. What is projection of points? Draw points (2,4), (3,6), (-5,5) on coordinate axis.

Q 13. Define projection in hand drawing, Differentiate between first angle projection and third angle projection.

Q 14. Describe types of section views used in hand drawing with a suitable diagram.

Section – C

2 × 10 = 20 Marks

Q 15. Explain the importance of hand drawing in carpentry. How is it related to quality of product?

Q 16. Make a hand drawing with all three views for Corner Bridle joint with a suitable title block.

SET – 2 (Standard Machine)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following is distance between riving knife and saw blade of panel saw?

(A) 3 (B) 6 (C) 2 (D) None of these

Q 2. Which one of the following machines make roller marks on the work piece when material has to be taken out from the work piece is less than 1 mm?

(A) planner (B) Thicknesser (C) Both of these (D) None of these

Q 3. Which one of the following is maximum one-time depth of cut of Hand Router OF 1010 EBQ?

(A)4 (B) 5 (C) 3 (D) 6

Q 4. Which one of the following is maximum depth of cut of planer Nova F 520?

(A) 2 (B) 10 (C) 8 (D) 5

Q 5. Which one of the following is Planer Nova F 520 working table width?

(A)450 (B) 520 (C) 1040 (D) 200

Q 6. Which one of the following saws is used to prevent chip out from boards while working with panel saw?

(A) Main saw blade (B) Scoring saw blade (C) Both of these (D) None of these

Q 7. Which one of the following is maximum one-time depth of Thicknesser machine?

(A) 6 (B) 4 (C) 5 (D) 3

Q 8. Which one of the following is Surface fence tilting in Planer Nova F 520?

(A) $0 - 45^0$ (B) $0 - 90^0$ (C) $45 - 90^0$ (D) None of these

Q 9. Which one of the following is height of saw blade at vertical position having 300 diameter in panel saw?

(A) 150 (B) 75 (C) 50 (D) 300

Q 10. Q 9. Which one of the following is height of saw blade at 45^0 position having 300 diameter in panel saw?

(A) 150 (B) 75 (C) 50 (D) 300

Section – B

4 × 5 = 20 Marks

Q 11. Explain Technical Terminology of Planer **NOVA F 520** and also explain use of Surface Fence in this machine.

Q 12. Explain Rip fence and Crosscut fence in Panel Saw **ALTENDORF A8**.

Q 13. Explain all safety precautions that kept in mind while using Planer machine.

Q 14. Explain uses of riving knife and its positioning to the cutter in panel saw with a suitable diagram.

Section – C

2 × 10 = 20 Marks

Q 15. Discuss various standard machines with their functions and limitations.

Q 16. Make a Tool list, Part list and Work plain for trestle work by using Standard machine only.

Registration No: ....

SCHOOL OF CARPENTER SKILLS

END - SEMESTER EXAMINATION – 2018

I & II SEMESTER, WINTER SEMESTER

Course Code: SCS1008 + SCS1004 | Time: 3 Hours

Course Name: Hand Drawing + Standard Machine | Max Marks: 50 + 50 = 100

Instructions:

- Answer all questions from Section A, each question carries one mark.
- Answer all question from Section B, each question carries five marks.
- Answer all question from Section C, each question carries ten marks.

SET – 1 (Hand Drawing)

Section – A   10 × 1 = 10 Marks

Q 1. How many units can be calculated by plain scale?

(A) 1   (B) 2   (C) 3   (D) 4   **(B)**

Q 2. Which one of the following is the centre line?

(A)   (B)

(C)   (C)   **(C)**

Q 3. Which one of the following projection is used in projection method?

(A) First angle   (B) Second angle   (C) Fourth angle   (D) None of these   **(A)**

Q 4. Original dimension of the object is 500 mm and it is in drawing of 250. What will be the scale ratio?

(A) 1:1   (B) 1:2   (C) 2:1   (D) None of these   **(B)**

Q 5. Which one of the following angle of projection follows sequence of Observer - plan of projection – object?

(A) First angle of projection   (B) Second angle of projection

(C) third angle of projection   (D) Fourth angle of projection   **(C)**

Q 6. How many units can be calculated by a diagonal scale?

(A) 1 (B) 2 (C) 3 (D) 4 **(C)**

Q 7. Which one of the following is the dash line?

(A) (B)

(C) (C) **(B)**

Q 8. Which one of the following projection is not used in projection method?

(A) First angle (B) Second angle (C) third angle (D) None of these **(B)**

Q 9. Original dimension of the object is 400 mm and it is in drawing of 800. What will be the scale ratio?

(A) 1:1 (B) 1:2 (C) 2:1 (D) None of these **(C)**

Q 10. Which one of the following angle of projection follows sequence of object - plan of projection – Observer?

(A) First angle of projection (B) Second angle of projection

(C) third angle of projection (D) Fourth angle of projection **(C)**

Section – B 4 × 5 = 20 Marks

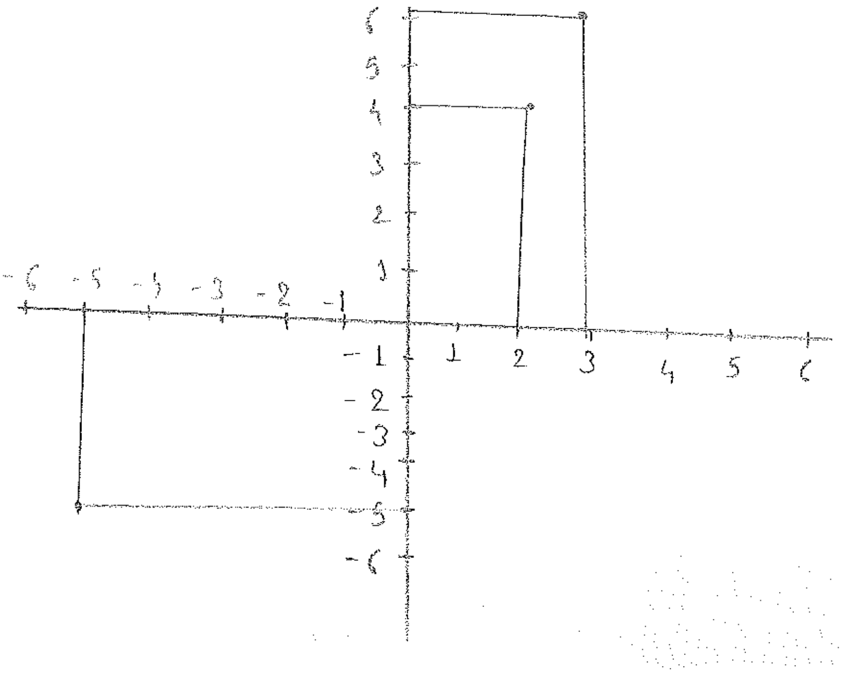
Q 11. Describe various types of scales used in hand drawing with a neat sketch.

Ans.-

1. Plain scale: A scale which is used to measure maximum two units and miimum one.
2. Diagonal scale: A scale which is used to measure maximum 3 units and minimum two units.
3. Scale of chord: It is used to measured angle on large field area were protector is not possible to measure angle.

Q 12. What is projection of points? Draw points (2,4), (3,6), (-5,5) on coordinate axis.

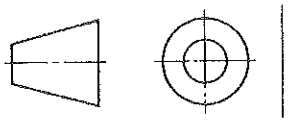
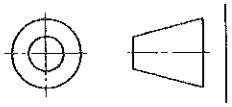
Ans. –



Q 13. Define projection in hand drawing, Differentiate between first angle projection and third angle projection.

Ans. - Universally either the 1st angle projection or the third angle projection methods is followed for obtaining engineering drawings. The principal projection planes and quadrants used to create drawings. The object can be considered to be in any of the four quadrant.

Difference between first angle projection and third angle projection.

FIRST ANGLE PROJECTION	THIRD ANGLE PROJECTION
Observer – object – plan of projection	Observer – plan of projection – object
View stays in first quadrant .	View stays in third quadrant.
This is used in India.	This is used in European country.
	
Dimensions are drawn up to the axis line.	Dimension are drawn below to the axis line.

Q 14. Describe types of section views used in hand drawing with a suitable diagram.

Ans. –

Full Section

If the imaginary cutting plane passes through the entire object, splitting the drawn object in two with the interior of the object revealed, this is called a "full section." A full section is the most widely-used sectional view.

Half View

In this view, the cutting plane is assumed to bend at a right angle and cuts through only half of the represented object, not the full length. When the quarter of the object that was cut is removed, the remainder is called a "half section." A half section view is effective only on symmetrical objects, and its main purpose is to show an object's internal and external construction in the same drawing.

Offset View

When specific features of an object that need highlighting are not located on the straight line of the cutting plane, an irregular-shaped cutting plane is imagined cutting the object, revealing the desired components. This is called an "offset view," and is effective on complex objects. The bends in the imaginary cutting pane are always 90 degrees.

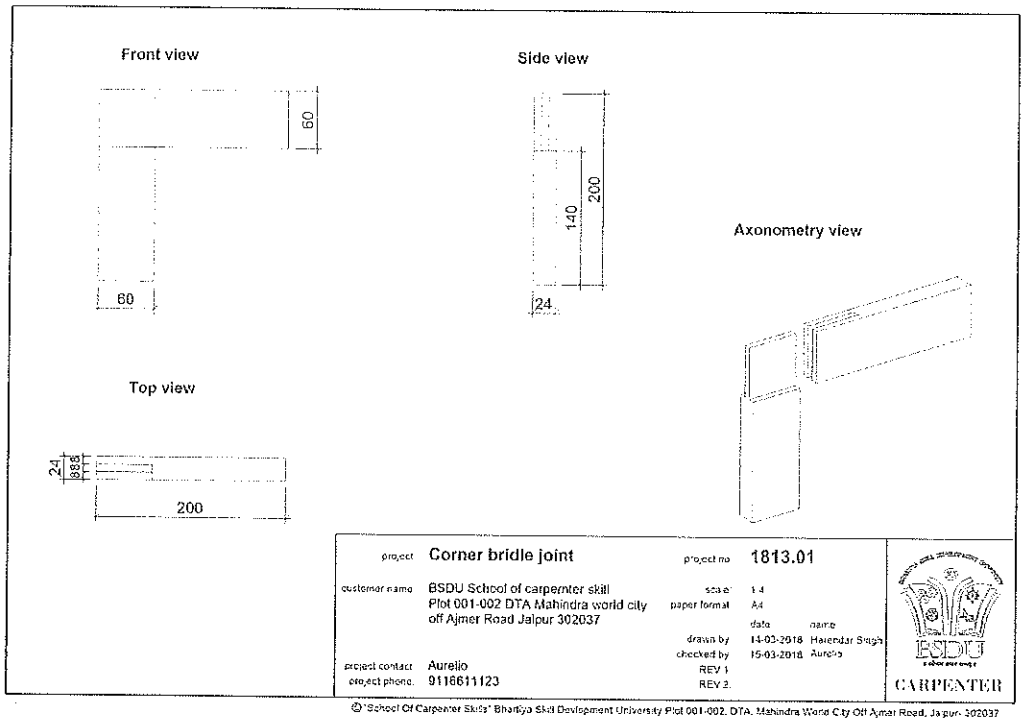
Section – C

2 × 10 = 20 Marks

Q 15. Explain the importance of hand drawing in carpentry. How is it related to quality of product?

Q 16. Make a hand drawing with all three views for Corner Bridle joint with a suitable title block.

Ans. -



SET – 2 (Standard Machine)

Section – A

10 × 1 = 10 Marks

Q 1. Which one of the following is distance between riving knife and saw blade of panel saw?

(A) 3 (B) 6 (C) 2 (D) None of these **(C)**

Q 2. Which one of the following machines make roller marks on the work piece when material has to be taken out from the work piece is less than 1 mm?

(A) planner (B) Thicknesser (C) Both of these (D) None of these **(B)**

Q 3. Which one of the following is maximum one-time depth of cut of Hand Router OF 1010 EBQ?

(A)4 (B) 5 (C) 3 (D) 6 **(A)**

Q 4. Which one of the following is maximum depth of cut of planer Nova F 520?

(A) 2 (B) 10 (C) 8 (D) 5 **(C)**

Q 5. Which one of the following is Planer Nova F 520 working table width?

(A)450 (B) 520 (C) 1040 (D) 200 **(B)**

Q 6. Which one of the following saws is used to prevent chip out from boards while working with panel saw?

(A) Main saw blade (B) Scoring saw blade (C) Both of these (D) None of these **(B)**

Q 7. Which one of the following is maximum one-time depth of Thicknesser machine?

(A) 6 (B) 4 (C) 5 (D) 3 **(C)**

Q 8. Which one of the following is Surface fence tilting in Planer Nova F 520?

(A) $0-45^0$ (B) $0-90^0$ (C) $45-90^0$ (D) None of these **(A)**

Q 9. Which one of the following is height of saw blade at vertical position having 300 diameter in panel saw?

(A) 150 (B) 75 (C) 50 (D) 300 **(B)**

Q 10. Q 9. Which one of the following is height of saw blade at 45^0 position having 300 diameter in panel saw?

(A) 150 (B) 75 (C) 50 (D) 300 **(C)**

Section – B

4 × 5 = 20 Marks

Q 11. Explain Technical Terminology of Planer **NOVA F 520** and also explain use of Surface Fence in this machine.

Ans. –

1. Nova – model
2. F - For Planer
3. 520 - working table width

Use of surface fence: - this fence is used to give support to the work piece and also used as reference plan in this machine. This fence can be tilt on the angle of $0-45^0$.

Q 12. Explain Rip fence and Crosscut fence in Panel Saw **ALTENDORF A8.**

Ans. - Rip Fence: The rip fence is smooth and precise to adjust. The hard chrome plated round bar ensures the fence moves smoothly. If you need to divide large panels, you can swing the rip fence away under the level of the machine table.

Crosscut fence: The robustly mounted crosscut fence enables precise cutting of 90° angles. All settings are easy to read off the slanted scales. The flip stops are robust, free of play and are easy to slide individually along the full crosscutting range.

Q 13. Explain all safety precautions that kept in mind while using Planer machine.

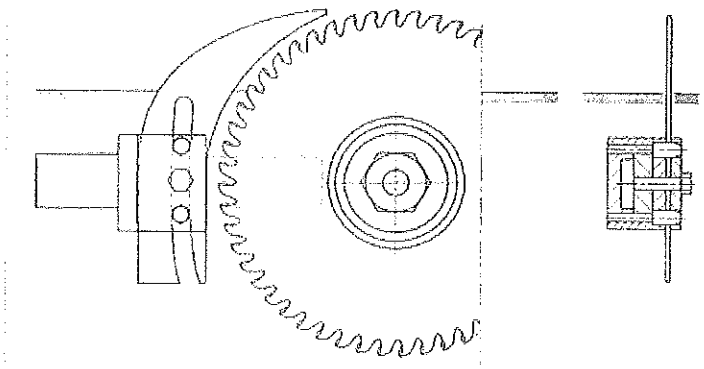
Ans. -

1. Always Wear shoes.
2. Always Wear short sleeves.
3. wear hearing protection, eye protection, Nose protection always.
4. Know where the emergency 'off' button is located.
5. Do not stand behind the machine while working.
6. Always switch on dust collector while working.
7. Always use safety stick when planning short and small pieces.

Q 14. Explain uses of riving knife and its positioning to the cutter in panel saw with a suitable diagram.

Ans. - A riving knife is a splitter that sits behind a panel saw blade. Its job is to prevent kickback that results from stock distortion — a not uncommon event that can occur during ripping operations. While all riving knives are splitters, not all splitters are riving knives. The quintessential riving knife is curved to match the diameter of the saw blade and "hugs" the back of the blade, with a distance of 2mm between top of the blade and knife. The top of the riving knife is held just below the top of the saw blade, so it does not interfere with cuts or grooves formed by the blade. But here is the most important characteristic: It is mounted in such a way that it will rise and lower with the blade as it is adjusted for various cuts.

Riving Knife



Section – C

2 × 10 = 20 Marks

Q 15. Discuss various standard machines with their functions and limitations.

Ans. –

1. Bend saw
2. Panel saw
3. Planer
4. Thicknesser

Q 16. Make a Tool list, Part list and Work plain for trestle work by using Standard machine only.

Ans. - Work plan:

1. Drawing reading
2. Material verification
3. Part identification triangle mark
4. Measurement transfer
5. Cutting by panel saw
6. Slots by mortise
7. Pocket
8. Radius
9. Sanding
10. Assembly
11. Inspection Report
12. Chamfer

Tool list

1. Panel saw
2. Surface planer
3. Thicknesser
4. Mortiser
5. Band saw
6. Edge router
7. Sander
8. Roll meter
9. Pencil
10. Steel ruler
11. Marking gauge
12. Chisel

Part list

1. Top	PI	A-B	1	800×110×35
2. Top support	PI	A-B	1	700×100×35
3. Leg	PI	A-B	2	845×100×35
4. Middle support	PI	A-B	1	600×75×35
5. Feet	PI	A-B	2	400×180×55