

COMPETENCE BASED EDUCATION

SENIOR SCHOOL GRADE 10

WOOD TECHNOLOGY

TOPICAL REVISION BOOK



SENFICALLAUOH CAPRE



TIMBER SEASONING



WOOD ENGINEER



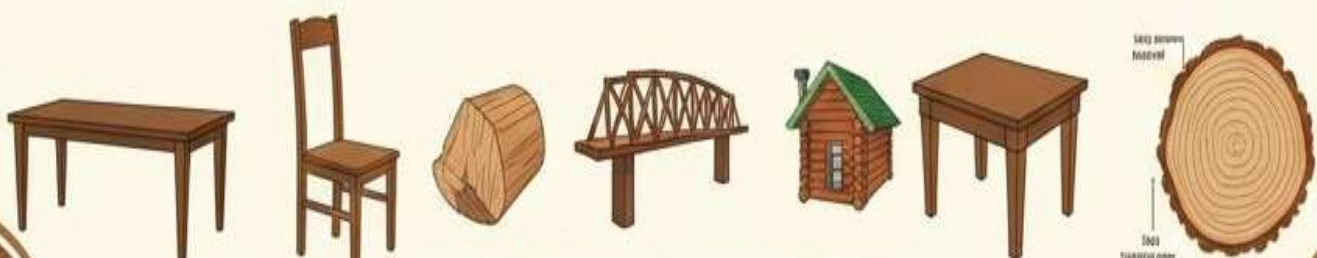
WOOD ADHESIVES



GRADE 10 WOOD TECHNOLOGY CLASS



SAFETY EQUIPMENT & GEAR



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SENIOR SCHOOL – GRADE 10

WOOD TECHNOLOGY

TOPICAL REVISION QUESTIONS

STRAND 1.0: FOUNDATIONS OF WOODWORK

SUB-STRAND 1.1: OVERVIEW OF WOODWORK

Time: 1½ Hours | Total: 100 Marks

INSTRUCTIONS

1. Answer **ALL** questions.
2. Use diagrams and illustrations where necessary.
3. Write answers clearly.

SECTION A: LOW ORDER QUESTIONS (25 MARKS)

1. Define Woodwork as an area of study. (2 marks)

2. List three functions of Wood. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

3. Name two types of wood commonly used in Woodwork. (2 marks)

- i. _____.
- ii. _____.

4. State **three benefits** of studying Woodwork. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

5. List **two careers** related to Woodwork. (2 marks)

- i. _____.
- ii. _____.

6. Name **two materials** used in Woodwork apart from timber. (2 marks)

- i. _____.
- ii. _____.

7. Give **two tools** used in shaping timber. (2 marks)

i. _____.

ii. _____.

8. State **two roles of Woodwork in economic development**. (2 marks)

i. _____.

ii. _____.

9. List **two sectors** where Woodwork skills are applied. (2 marks)

i. _____.

ii. _____.

10. Name **two instruments** used to measure timber before cutting. (2 marks)

i. _____.

ii. _____.

SECTION B: (50 MARKS)

11. Explain **three ways Woodwork contributes to self-development and career growth**. (6 marks)

i. _____.

ii. _____.

iii. _____.

12. Describe **four steps in the evolution of Woodwork as a subject** from traditional craft to modern technology. (8 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

13. Explain **three benefits of Woodwork to the economy**. (6 marks)

i. _____.

ii. _____.

iii. _____.

14. (6 marks)

A student visits a furniture factory and observes:

i. Use of different types of timber

ii. Carpentry tools like saws and chisels

iii. Wood finishing processes

a) Identify **two careers** associated with this factory. (2 marks)

i. _____.

ii. _____.

b) State **two economic roles** of such factories in Kenya. (2 marks)

i. _____.

ii. _____.

c) Name **two tools** the student observed. (2 marks)

i. _____.

ii. _____.

15. (6 marks)

Outline two examples **woodwork tools used in** :

- i. Traditional craft
- ii. Industrial wood processing
- iii. Modern wood technology

Label each stage clearly. (6 marks)

Traditional craft	Industrial wood processing	Modern wood technology

16. Explain three ways in which studying Woodwork can enhance problem-solving skills. (6 marks)

i. _____.

ii. _____.

iii. _____.

17. Describe two materials and two tools that are essential for a Woodwork student to carry out basic projects. (4 marks)

Materials	Tools

18. Explain four ways Woodwork careers support the construction and furniture industry. (8 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

19. Compare Woodwork as a traditional skill and Woodwork as a modern technology subject using THREE points. (6 marks)

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____

20. State three safety practices a Woodwork student should follow in the workshop. (4 marks)

- i. _____
- ii. _____
- iii. _____

SECTION C: (25 MARKS)

21. (6 marks)

A school wants to introduce Woodwork as a career subject.

a) Identify **three benefits** to learners. (3 marks)

- i. _____
- ii. _____
- iii. _____

b) Explain **two ways it will support local industries**. (2 marks)

- i. _____
- ii. _____

c) Suggest **one challenge** the school may face. (1 mark)

- i. _____
- ii. _____
- iii. _____

22. (6 marks)

A student wants to construct a wooden shelf using limited tools.

a) Identify **three essential tools** needed. (3 marks)

- i. _____
- ii. _____
- iii. _____

b) Suggest **two materials** suitable for this project. (2 marks)

i. _____.

ii. _____.

c) State **one economic benefit** of producing wooden shelves. (1 mark)

i. _____.

ii. _____.

iii. _____.

SUB-STRAND 1.2: WOOD WORKSHOP

SECTION A: LOW ORDER QUESTIONS (25 MARKS)

1. Define a **wood workshop**. (2 marks)

2. List **four features** commonly found in a wood workshop. (4 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

3. Name **three types of personal protective equipment (PPE)** used in a wood workshop. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

4. State **two reasons for maintaining safety in a wood workshop**. (2 marks)

- i. _____.
- ii. _____.

5. Name **two tools** that are usually fixed in a wood workshop. (2 marks)

- i. _____.
- ii. _____.

6. List **two sections** you would expect in a typical wood workshop layout. (2 marks)

- i. _____.
- ii. _____.

7. Give **two materials** stored in a wood workshop. (2 marks)

- i. _____.
- ii. _____.

8. State **two benefits** of using PPE in the workshop. (2 marks)

- i. _____.
- ii. _____.

9. Name **two types of machines** that may be found in a wood workshop. (2 marks)

- i. _____.
- ii. _____.

10. List two ways of ensuring safety on workshop roads. (2 marks)

i. _____.

ii. _____.

SECTION B: (50 MARKS)

11. Explain three features of a wood workshop that promote efficiency. (6 marks)

i. _____.

ii. _____.

iii. _____.

12. Sketch and label a simple layout of a wood workshop, showing:

- Tool section
- Timber storage
- Work benches
- Machine section

(6 marks)

13. Explain **four reasons why safety should be observed in a wood workshop.** (8 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

14. (6 marks)

A student visits a school wood workshop and observes:

- i. Tool storage racks
- ii. Safety signs
- iii. Dust collection system
- iv. PPE in use

a) Identify **two safety features** in the workshop. (2 marks)

- i. _____.
- ii. _____.

b) State **two benefits** of using a dust collection system. (2 marks)

- i. _____.
- ii. _____.

c) Name **two types of PPE** observed. (2 marks)

- i. _____.
- ii. _____.

15. Explain **three reasons why layout is important** in a wood workshop. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

16. Describe **four personal protective equipment (PPE)** and their uses in a wood workshop. (8 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

17. (6 marks) (a) Grade 7 learners saw pictures with symbols shown below. Identify the meaning of the symbols. (2 mks)

(a)



(b)



(b) Look at the pictures below and interpret the hazards symbols. (2 marks)

(A)



(B)



18. Explain **three potential hazards** in a wood workshop and how they can be prevented. (6 marks)

- i. _____
- ii. _____
- iii. _____

19. Compare a **modern wood workshop** and a **traditional wood workshop** using **THREE** features. (6 marks)

Modern workshop	Traditional workshop

20. Explain **two reasons why a wood workshop should have good ventilation and lighting**. (4 marks)

- i. _____
- ii. _____

SECTION C: (25 MARKS)

21. (6 marks)

A school plans to build a new wood workshop.

a) Identify **three features** they should include for safety. (3 marks)

- i. _____
- ii. _____
- iii. _____

b) Explain **two ways** the layout can enhance workflow. (2 marks)

i. _____.

ii. _____.

c) Suggest **one challenge** in managing a wood workshop. (1 mark)

22.: (6 marks)

During practical work, a student accidentally cuts their hand.

a) State **three first aid steps** the student should take. (3 marks)

i. _____.

ii. _____.

iii. _____.

b) Suggest **two preventive measures** to avoid cuts. (2 marks)

i. _____.

ii. _____.

c) State **one type of PPE** that could have prevented the accident. (1 mark)

23. (6 marks)

A teacher wants students to practice workshop organization.

a) List **five items** that must be arranged for safety. (3 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

v. _____.

b) Explain **two benefits** of maintaining an organized workshop. (3 marks)

i. _____.

ii. _____.

24. (7 marks) Discuss the importance of **observing safety in a wood workshop** for:

i. _____.

ii. _____.

- iii. _____.
- iv. _____.
- v. _____.
- vi. _____.

25. (6 marks) A new student joins a wood workshop.

a) Identify **three key safety instructions** they must follow. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) Suggest **two ways of using PPE effectively**. (2 marks)

- i. _____.
- ii. _____.

c) State **one role of supervision in workshop safety**. (1 mark)

_____.

_____.

STRAND 2.0: HAND TOOLS AND EQUIPMENT – WOOD TECHNOLOGY

TOPICAL REVISION QUESTIONS

STRAND 2.0: HAND TOOLS AND EQUIPMENT

SECTION A: (25 MARKS)

1. Define a **hand tool** in Wood Technology. (2 marks)

2. List **four classes of hand tools** used in a wood workshop. (4 marks)

- i. _____
- ii. _____
- iii. _____
- iv. _____

3. Name **three cutting tools** used in woodworking. (3 marks)

- i. _____
- ii. _____
- iii. _____

4. List **two measuring and marking tools** in a wood workshop. (2 marks)

- i. _____
- ii. _____

5. Name **two holding/clamping tools** commonly used. (2 marks)

- i. _____
- ii. _____

6. State **two equipment items** found in a wood workshop. (2 marks)

- i. _____
- ii. _____

7. List **two tools used for shaping timber**. (2 marks)

- i. _____
- ii. _____

8. Give **two reasons for using the correct hand tool** for a given task. (2 marks)

i. _____.

ii. _____.

9. Name **two sharpening tools** in a wood workshop. (2 marks)

i. _____.

ii. _____.

10. List **two types of planing tools** used in a workshop. (2 marks)

i. _____.

ii. _____.

SECTION B: (50 MARKS)

11. Explain **three safety practices** when using hand tools in a wood workshop. (6 marks)

i. _____.

ii. _____.

iii. _____.

12. Sketch and label **five hand tools** from the following categories:

i. Measuring and marking

ii. Cutting

iii. Planing

iv. Boring

v. Holding/clamping
(6 marks)

13. Explain four ways of maintaining hand tools after use. (8 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.
- v. _____.

14. (6 marks)

A student observes a wood workshop:

- Uses a try square, saw, and chisel
- Bench hook and portable stand are available

- Tools are cleaned after each session

a) Identify **two measuring tools** observed. (2 marks)

- i. _____.
- ii. _____.

b) State **two cutting tools** observed. (2 marks)

- i. _____.
- ii. _____.

c) Give **two reasons for maintaining tools after use**. (2 marks)

- i. _____.
- ii. _____.

15. Describe **three types of hand tools for boring and impelling** in woodworking. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

16.: (6 marks) Draw and label **three holding/clamping tools** used in a wood workshop. (6 marks)

17. Explain **three benefits of using the correct hand tools** for a given task. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

18. Compare **a sharp chisel** and **a blunt chisel** in terms of:

- Efficiency
- Safety
- Quality of work

(6 marks)

- i. _____.
- ii. _____.

- iii. _____.
- iv. _____.
- v. _____.
- vi. _____.

19. Explain **four types of equipment** in a wood workshop and their uses (6 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

20. State **four factors to consider** when choosing the correct hand tool for a woodworking task. (4 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

SECTION C: (25 MARKS)

21. **Practical Scenario:** (6 marks)

A student is tasked to prepare a wooden frame using hand tools.

a) List **five essential hand tools** for this task. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.
- v. _____.
- vi. _____.

b) Explain **two safety measures** to follow while using the tools. (2 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.
- v. _____.

c) State **one reason why using the correct tool improves the final product.** (1 mark)

- i. _____.
- ii. _____.
- iii. _____.

22. Problem Solving: (6 marks)

During a project, a hand plane is producing rough surfaces.

a) Identify **two possible causes.** (2 marks)

- i. _____.
- ii. _____.

b) Suggest **three maintenance actions** to correct the problem. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

c) State **one effect** of using a blunt plane on timber quality. (1 mark)

- i. _____.
- ii. _____.
- iii. _____.

23. Practical Application: (6 marks)

A workshop supervisor wants students to safely use hand tools.

a) List **five tasks** requiring supervision. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.
- v. _____.

b) Explain **two ways supervision improves safety.** (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

24.: (7 marks)

Discuss the importance of **safe use, care, and maintenance of hand tools** in a wood workshop. Include:

- Safety benefits
- Longevity of tools
- Quality of work
- Efficiency

- _____.
- _____.
- _____.
- _____.
- _____.
- _____.
- _____.
- _____.
- _____.
- _____.

25. (6 marks)

A student misuses a marking gauge and damages timber.

a) Identify **two reasons for the damage**. (2 marks)

- i. _____.
- ii. _____.

b) Suggest **three measures** to prevent similar mistakes. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

c) State **one hand tool** that could replace the marking gauge safely. (1 mark)

- i. _____.
- ii. _____.
- iii. _____.

d). Figure 3 shows a tool used in woodwork.



i. Name the tool:

ii. Name the parts labelled W, X, Y and Z.

W: _____

X: _____

Y: _____

Z: _____

iii. State one function of each of the parts labelled W, X, Y and Z. (9 marks)

i. _____

ii. _____

iii. _____

b. List four areas of study in woodwork after studying woodwork in high school. (2 marks)

i. _____

ii. _____

iii. _____

iv. _____

STRAND 2.0: MATERIALS

SUB-STRAND 2.1: GROWTH OF TIMBER TREES

SECTION A: (25 MARKS)

1. Define timber trees. (2 marks)

- i. _____

2. List four stages in the growth of a timber tree. (4 marks)

- i. _____
- ii. _____
- iii. _____
- iv. _____

3. Name two physical features used to classify timber trees. (2 marks)

- i. _____
- ii. _____

4. List two types of timber trees based on their physical features. (2 marks)

- i. _____
- ii. _____

5. State two dangers of planting timber trees near roads. (2 marks)

- i. _____
- ii. _____

6. Name two environmental benefits of growing timber trees. (2 marks)

- i. _____
- ii. _____

7. List two factors affecting the growth of timber trees. (2 marks)

- i. _____
- ii. _____

8. Give two uses of timber from mature trees. (2 marks)

- i. _____
- ii. _____

9. Name two methods of propagating timber trees. (2 marks)

i. _____.

ii. _____.

10. List two types of cross sections of a tree trunk commonly used in studies. (2 marks)

i. _____.

ii. _____.

SECTION B: (50 MARKS)

11. Explain three steps in growing a timber tree from seed to maturity. (6 marks)

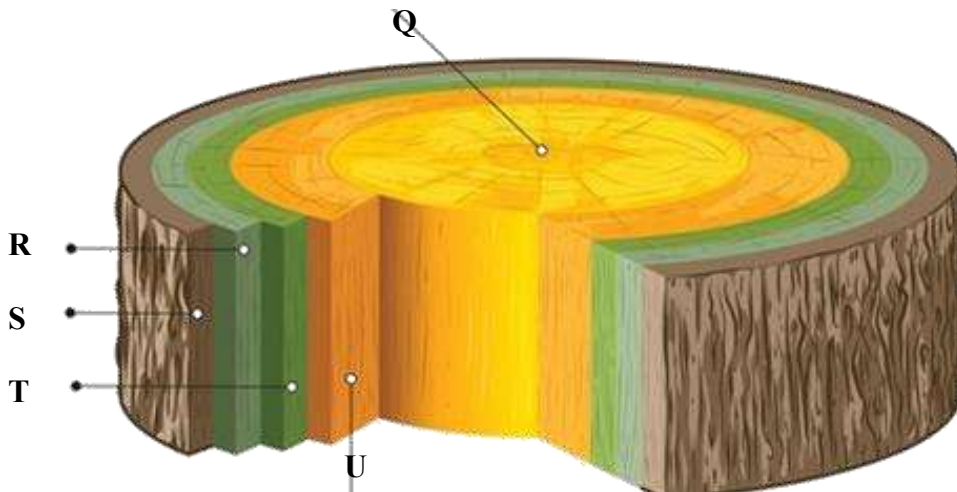
i. _____.

ii. _____.

iii. _____.

12. (6 marks)

The diagram below illustrate a **cross-section of a tree trunk**



Name the parts marked

Q: _____.

R: _____.

S: _____.

T: _____.

13. Explain **three differences between softwood and hardwood trees**. (6 marks)

Soft wood trees	Hard wood trees

14. (6 marks)

A farmer plants trees along the farm boundary.

a) Identify **two benefits** of growing these trees. (2 marks)

- i. _____.
- ii. _____.

b) State **two risks** of planting trees too close to the road. (2 marks)

- i. _____.
- ii. _____.

c) Give **two types of timber trees** suitable for boundary planting. (2 marks)

- i. _____.
- ii. _____.

15. Describe **four environmental benefits** of growing timber trees in the community. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

16. Explain **three factors that affect the growth rate of timber trees**. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

17. Sketch **two types of tree trunks** showing the differences between heartwood and sapwood. (6 marks)

18. Explain **three reasons why timber trees are classified according to their physical features**. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

19. Compare **softwood and hardwood trees** in terms of:

- Growth rate
- Uses
- Appearance

(6 marks)

20. Explain **two ways technology can be used to monitor timber tree growth**. (4 marks)

i. _____.

ii. _____.

SECTION C: (25 MARKS)

21. (6 marks)

A school plans to grow a timber tree nursery.

a) Identify **three types of trees** suitable for the nursery. (3 marks)

i. _____.

ii. _____.

iii. _____.

b) Suggest **two locations on the school grounds** where trees can be safely grown. (2 marks)

i. _____.

ii. _____.

c) State **one method of protecting seedlings from environmental hazards**. (1 mark)

i. _____.

ii. _____.

iii. _____.

22. (6 marks)

A timber tree is growing slowly.

a) Suggest **three possible reasons** for slow growth. (3 marks)

i. _____.

ii. _____.

iii. _____.

b) Recommend **two interventions** to improve growth rate. (2 marks)

i. _____.

ii. _____.

c) State **one long-term benefit** of healthy timber tree growth. (1 mark)

i. _____.

ii. _____.

iii. _____.

23. (6 marks)

A student wants to classify trees in a local forest.

a) List **five physical features** to observe. (3 marks)

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____

b) Explain **two benefits** of proper classification. (3 marks)

- i. _____
- ii. _____
- iii. _____

24. (7 marks)

Discuss the importance of **growing timber trees for wood production**,

25. (6 marks)

A group of students observes timber trees near a road and a water body.

a) Identify **three potential dangers** to the trees. (3 marks)

- i. _____
- ii. _____
- iii. _____

b) Suggest **two measures** to mitigate these dangers. (2 marks)

- i. _____
- ii. _____

c) State **one benefit** of planting trees near water bodies safely. (1 mark)

- i. _____

STRAND 2.0: MATERIALS

SUB-STRAND 2.2: TIMBER CONVERSION AND SEASONING

SECTION A: (25 MARKS)

1. Define timber conversion. (2 marks)

2. List two reasons for timber seasoning. (2 marks)

- i. _____
- ii. _____

3. Name two methods of transporting timber logs to sawmills. (2 marks)

- i. _____
- ii. _____

4. State two types of timber conversion methods. (2 marks)

- i. _____
- ii. _____

5. Give two examples of tangential sawing and quarter sawing. (2 marks)

- i. _____
- ii. _____

6. List two tools or equipment used during timber conversion. (2 marks)

- i. _____
- ii. _____

7. Name two types of seasoning methods. (2 marks)

- i. _____
- ii. _____

8. State two benefits of timber conversion in woodwork. (2 marks)

- i. _____
- ii. _____

9. List two types of timber stacks used for seasoning. (2 marks)

- i. _____
- ii. _____
- iii. _____

10. Identify two signs that timber is properly seasoned. (2 marks)

i. _____.

ii. _____.

SECTION B: (50 MARKS)

11. Explain three factors to consider when transporting timber logs from the forest to the sawmill. (6 marks)

i. _____.

ii. _____.

iii. _____.

12. Diagram/Illustration: (6 marks)

Draw and label a **tangential sawn timber section** and a **quarter sawn timber section**. (6 marks)

13. Explain three advantages of proper timber conversion for woodwork. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

14. (6 marks)

A sawmill receives timber logs from different regions:

a) Identify **two safe timber transportation methods** used in Kenya. (2 marks).

- i. _____.
- ii. _____.

b) Suggest **two precautions** during loading and unloading of timber. (2 marks)

- i. _____.
- ii. _____.
- iii. _____.

c) State **two reasons for observing road classification** when transporting timber. (2 marks)

- i. _____.
- ii. _____.

15. Describe three methods of timber conversion: through and through, quarter sawing, tangential sawing. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

16. Explain three methods of seasoning timber used in Kenya. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

17. (6 marks)

Sketch a **timber stack showing proper spacing and stacking for air seasoning**. Label:

- Timber pieces
- Stickers
- Airflow direction

18. Explain **three consequences of poor timber seasoning** on wood products. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

19. Compare **air seasoning** and **kiln seasoning** in terms of:

- Duration
- Cost
- Quality of timber

(6 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.
- v. _____.
- vi. _____.

20. State **four safety precautions** during timber conversion in a sawmill. (4 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.
- v. _____.
- vi. _____.

SECTION C: (25 MARKS)

21. **Scenario:** (6 marks)

A student is tasked to convert a 6-meter log into boards.

a) Suggest **three conversion methods** suitable for the log. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) Explain **two factors that influence the choice of method**. (2 marks)

i. _____.

ii. _____.

c) State **one reason why correct conversion is important for woodwork quality**. (1 mark)

i. _____.

ii. _____.

22. (6 marks)

A batch of timber is warping after seasoning.

a) Identify **three possible causes**. (3 marks)

i. _____.

ii. _____.

iii. _____.

b) Suggest **two measures** to prevent warping in the future. (2 marks)

i. _____.

ii. _____.

c) State **one sign of poorly seasoned timber**. (1 mark)

i. _____.

ii. _____.

23. (6 marks)

A student visits a sawmill:

a) List **five pieces of equipment or tools** observed during timber conversion. (3 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

v. _____.

vi. _____.

b) Explain **two benefits of observing correct timber stacking techniques**. (3 marks)

i. _____.

ii. _____.

iii. _____.

24. (7 marks)

Discuss the importance of **timber conversion and seasoning in woodwork**,

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.
- v. _____.
- vi. _____.

25. (6 marks)

During a project, a student uses unseasoned timber for furniture:

a) Identify **three possible problems** with the furniture. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) Suggest **two measures** to ensure timber is well-seasoned before use. (2 marks)

- i. _____.
- ii. _____.

c) State **one method of checking moisture content in timber**. (1 mark)

- i. _____.
- ii. _____.

STRAND 2.0: MATERIALS

SUB-STRAND 2.3: ADHESIVES

SECTION A: (25 MARKS)

1. Define the term adhesive. (2 marks)

2. List four types of adhesives commonly used in Woodwork. (4 marks)

i. _____

ii. _____

iii. _____

iv. _____

3. Name two characteristics of wood adhesives for internal use. (2 marks)

i. _____

ii. _____

4. Name two characteristics of adhesives for external use. (2 marks)

i. _____

ii. _____

5. List two purposes of using adhesives in Woodwork. (2 marks)

i. _____

ii. _____

6. Identify two safety precautions when using adhesives. (2 marks)

i. _____

ii. _____

7. State two ways adhesives can be applied on a surface. (2 marks)

i. _____

ii. _____

8. List two tools used for spreading adhesives. (2 marks)

i. _____

ii. _____

9. Name two types of bonding surfaces suitable for adhesives. (2 marks)

i. _____

ii. _____.

iii. _____.

10. State two signs that an adhesive joint is properly bonded. (2 marks)

i. _____.

ii. _____.

iii. _____.

SECTION B: (50 MARKS)

11. Explain three characteristics of a good wood adhesive. (6 marks)

i. _____.

ii. _____.

iii. _____.

12. Diagram/Illustration: (6 marks)

Draw and label a **diagram showing two pieces of timber being bonded using adhesive**. Include:

- Bonding surface
- Adhesive layer
- Clamping method

13. Explain three differences between adhesives for internal and external use. (6 marks)

i. _____.

ii. _____.

iii. _____.

14. (6 marks)

A student wants to make a small shelf.

a) Identify **two suitable adhesives** to use. (2 marks)

i. _____.

ii. _____.

b) State **two precautions to take during application**. (2 marks)

i. _____.

ii. _____.

c) Give **two reasons for clamping after applying adhesive**. (2 marks)

i. _____.

ii. _____.

15. Describe three methods of applying adhesives in Woodwork. (6 marks)

i. _____.

ii. _____.

iii. _____.

16. Explain three consequences of improper adhesive use in woodwork. (6 marks)

i. _____.

ii. _____.

iii. _____.

17. Diagram/Illustration Question: (6 marks)

Sketch **two types of adhesive joints used in woodworking**:

- Butt joint with adhesive
- Lap joint with adhesive

Label clearly.

18. Describe three ways to prepare timber surfaces before applying adhesives. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

19. Explain two advantages of using adhesives over mechanical fasteners. (4 marks)

- i. _____.
- ii. _____.

20. State four safety measures to observe when disposing of adhesives. (4 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

SECTION C: (25 MARKS)

21. (6 marks)

A student needs to bond two irregular pieces of timber for a model.

a) Suggest **two types of adhesive** suitable for this task. (2 marks)

- i. _____.
- ii. _____.

b) Explain **two steps to ensure a strong bond**. (2 marks)

- i. _____.
- ii. _____.

c) State **one factor that may weaken the bond if ignored**. (2 marks)

- i. _____.
- ii. _____.
- iii. _____.

22. (6 marks)

During a workshop, a wooden joint failed after drying:

a) Identify **three possible causes**. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) Suggest **two corrective measures** to prevent failure. (2 marks)

- i. _____
- ii. _____
- iii. _____

c) State **one method to check adhesive readiness before bonding**. (1 mark)

- i. _____
- ii. _____
- iii. _____

23. (6 marks)

A student is asked to make a small wooden box using adhesives:

a) List **five steps involved in bonding wood pieces**. (3 marks)

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____

b) Explain **two benefits of proper adhesive application** in this project. (3 marks)

- i. _____
- ii. _____

24. (7 marks)

Discuss the importance of **adhesives in woodwork**, including:

- Quality and durability of products
- Safety in woodworking
- Efficiency and economic benefits

25. (6 marks)

During a workshop, a student is using epoxy resin:

a) Identify **three hazards associated with epoxy**. (3 marks)

i. _____.

ii. _____.

iii. _____.

b) Suggest **two precautions** to prevent accidents. (2 marks)

i. _____.

ii. _____.

c) State **one feature of a high-quality adhesive** suitable for furniture making. (1 mark)

_____.

_____.

STRAND 3.0: WOOD PROCESSES AND PRODUCTS

SUB-STRAND 3.1: PREPARATION OF WOOD AND PRODUCTS

SECTION A: (25 MARKS)

1. Define **wood preparation**. (2 marks)

2. List **four hand tools used in wood preparation**. (4 marks)

- i. _____
- ii. _____
- iii. _____
- iv. _____

3. Name **two measuring and marking tools** used in wood preparation. (2 marks)

- i. _____
- ii. _____

4. Identify **two processes involved in truing up a timber stock**. (2 marks)

- i. _____
- ii. _____

5. State **two purposes of preparing wood before working**. (2 marks)

- i. _____
- ii. _____

6. List **two operations done on prepared wood**. (2 marks)

- i. _____
- ii. _____

7. Name **two safety precautions** when preparing wood. (2 marks)

- i. _____
- ii. _____

8. Identify **two features of properly prepared wood**. (2 marks)

- i. _____
- ii. _____
- iii. _____

9. List two types of saws used in wood preparation. (2 marks)

i. _____.

ii. _____.

10. State two reasons why a marking gauge is important in wood preparation. (2 marks)

i. _____.

ii. _____.

SECTION B: (50 MARKS)

11. Explain three processes involved in preparing timber for woodwork. (6 marks)

i. _____.

ii. _____.

iii. _____.

12. Diagram/Illustration: (6 marks)

Draw and label a **timber stock showing the following during truing up:**

- Face side
- Face edge
- Width/thickness
- Length

13. Explain three reasons for using a try square in timber preparation. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

14. (6 marks)

A student is preparing a timber piece for a project:

a) Identify **three hand tools** suitable for truing up stock. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) State **two safety precautions** to observe. (2 marks)

- i. _____.
- ii. _____.

c) Give **one reason for choosing correct tool for the task.** (1 mark)

- i. _____.
- ii. _____.

15. Describe three operations performed on prepared wood, e.g., chamfering, beveling, rebating. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

16. Explain three differences between shaping and boring operations. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

17. Diagram/Illustration Question: (6 marks)

Sketch and label a **rebate and groove joint** used in wood preparation.

18. Describe three factors to consider when selecting tools for wood preparation. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

19. Explain two benefits of proper wood preparation before final assembly. (4 marks)

- i. _____.
- ii. _____.

20. State four safety measures when carrying out operations on prepared wood. (4 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

SECTION C: (25 MARKS)

21. (6 marks)

A student needs to prepare a timber piece for making a small chair:

a) Suggest **three operations to be done** before assembly. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) Explain **two factors that determine the sequence of operations**. (2 marks)

- i. _____.
- ii. _____.

c) State **one consequence of skipping the preparation stage**. (1 mark)

- i. _____.
- ii. _____.

22. (6 marks)

A piece of timber is warped and uneven:

a) Identify **three methods of correcting the timber**. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) Suggest **two tools suitable for each method.** (2 marks)

i. _____.

ii. _____.

c) State **one precaution to prevent further warping.** (1 mark)

i. _____.

ii. _____.

iii. _____.

23. (6 marks)

During a workshop, a student is carrying out multiple operations: chamfering, grooving, and mitring:

a) List **five steps to ensure accuracy** in these operations. (3 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

v. _____.

b) Explain **two benefits of following these steps.** (3 marks)

i. _____.

ii. _____.

iii. _____.

24. (7 marks)

Discuss the importance of **wood preparation in woodworking**, including:

- Quality and precision of finished products
- Ease of joining and assembly
- Durability and aesthetics
- Safety and efficiency

_____.

_____.

_____.

_____.

_____.

_____.

25. (6 marks)

During a woodwork project, a student used incorrectly trued timber:

a) Identify **three possible problems in the final product**. (3 marks)

i. _____.

ii. _____.

iii. _____.

b) Suggest **two corrective actions** before starting assembly. (2 marks)

i. _____.

ii. _____.

c) State **one tool to check trueness of timber**. (1 mark)

i. _____.

ii. _____.

STRAND 3.0: WOOD PROCESSES AND PRODUCTS

SUB-STRAND 3.2: WOODWORKING JOINTS

SECTION A: (25 MARKS)

1. Define a **woodworking joint**. (2 marks)

2. List **four types of joints used in woodwork**. (4 marks)

- i. _____
- ii. _____
- iii. _____
- iv. _____

3. Identify **two framing joints** used in woodworking. (2 marks)

- i. _____
- ii. _____

4. Name **two fasteners used to strengthen joints**. (2 marks)

- i. _____
- ii. _____

5. List **two purposes of using woodworking joints**. (2 marks)

- i. _____
- ii. _____

6. Name **two lengthening joints** used in woodwork. (2 marks)

- i. _____
- ii. _____

7. Identify **two widening joints** used in woodworking. (2 marks)

- i. _____
- ii. _____

8. State **two advantages of using screws over nails** in joint construction. (2 marks)

- i. _____
- ii. _____

9. List **two tools used in preparing woodworking joints**. (2 marks)

- i. _____

ii. _____.

10. Name two characteristics of a well-prepared joint. (2 marks)

i. _____.

ii. _____.

SECTION B: (50 MARKS)

11. Explain three differences between lengthening and widening joints. (6 marks)

Lengthening joints	Widening joints

12. Diagram/Illustration: (6 marks)

Sketch and label a lap joint and a mortise and tenon joint. Include:

- Timber pieces
- Joint faces
- Fasteners (if any)

13. Explain three reasons why framing joints are important in woodworking. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

14. (6 marks)

A student wants to make a small cabinet:

a) Identify **three joints suitable** for assembling the cabinet. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) State **two fasteners** that can be used to strengthen these joints. (2 marks)

- i. _____.
- ii. _____.

c) Give **one reason for choosing correct joints**. (1 mark)

- i. _____.
- ii. _____.
- iii. _____.

15. Describe three steps in preparing a dovetail joint. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

16. Explain two precautions to observe when assembling joints using glue. (4 marks)

- i. _____.
- ii. _____.

17. Diagram/Illustration Question: (6 marks)

Sketch a **butt joint** and a **lap joint** and label the joint type and fasteners.

18. Explain three differences between nailed and screwed joints. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

19. Describe three practical applications of lengthening joints in woodworking. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

20. State four safety measures to observe when preparing and assembling joints. (4 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

SECTION C: (25 MARKS)

21. (6 marks)

A student is tasked with joining two wooden boards for a tabletop:

a) Suggest **two suitable lengthening joints**. (2 marks)

- i. _____.
- ii. _____.

b) Explain **two steps to ensure a strong and durable joint**. (2 marks)

- i. _____.
- ii. _____.

c) State **one factor that could cause joint failure**. (2 marks)

- i. _____.
- ii. _____.

22. Problem Solving: (6 marks)

During a workshop, a cabinet frame is unstable:

a) Identify **three possible causes related to joints**. (3 marks)

- i. _____.
- ii. _____.

iii. _____.

b) Suggest **two corrective actions**. (2 marks)

i. _____.

ii. _____.

iii. _____.

c) State **one method to test joint strength**. (1 mark)

i. _____.

ii. _____.

iii. _____.

23. 6 marks)

A student is assembling a drawer:

a) List **five steps in preparing and assembling the joints**. (3 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

v. _____.

b) Explain **two benefits of accurate joint preparation**. (3 marks)

i. _____.

ii. _____.

24. (7 marks)

Discuss the importance of **woodworking joints** in making wood products, including:

- Strength and durability

- Aesthetics and finishing

- Efficiency in assembly

- Cost-effectiveness

i. _____.

ii. _____.

iii. _____.

iv. _____.

v. _____.

25. (6 marks)

While making a wooden chair, the student uses dowels incorrectly:

a) Identify **three problems caused by incorrect dowel use.** (3 marks)

- i. _____
- ii. _____
- iii. _____

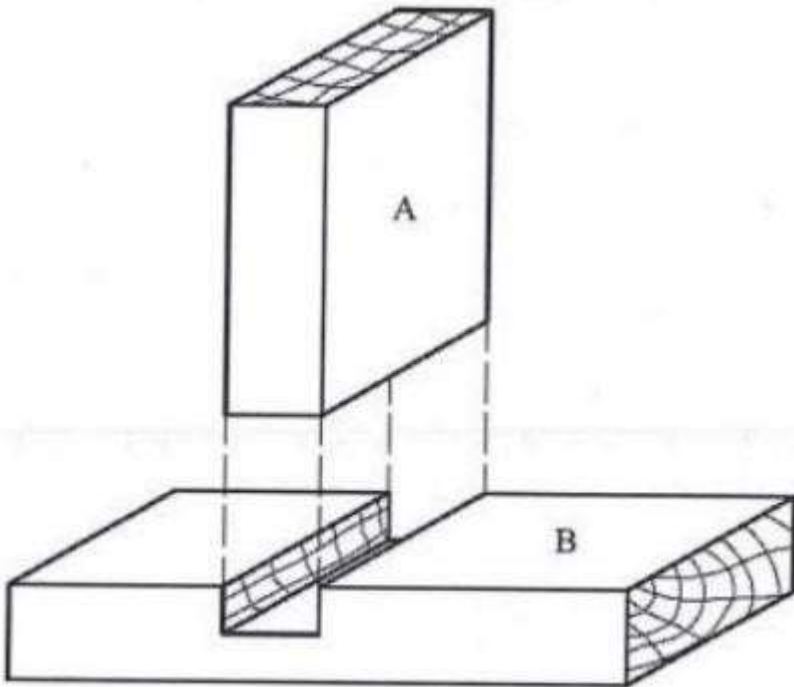
b) Suggest **two solutions to prevent these problems.** (2 marks)

- i. _____
- ii. _____

c) State **one tool used to ensure dowel alignment.** (1 mark)

26) The figure below shows an exploded view of a housing joint.

Outline the procedure of marking and making the joint using hand tools (9 marks)



(b) Outline the steps followed in wood lamination (6 marks)

STRAND 3.0: WOOD PROCESSES AND PRODUCTS

SUB-STRAND 3.3: SURFACE PREPARATION

SECTION A: (25 MARKS)

1. Define **surface preparation** in woodworking. (2 marks)

2. List **four reasons for finishing a wood product**. (4 marks)

- i. _____
- ii. _____
- iii. _____
- iv. _____

3. Name **two tools used in surface preparation**. (2 marks)

- i. _____
- ii. _____

4. Identify **two materials used to prepare wood before finishing**. (2 marks)

- i. _____
- ii. _____

5. State **two purposes of applying clear varnish on wood**. (2 marks)

- i. _____
- ii. _____

6. Name **two abrasives used in sanding wood surfaces**. (2 marks)

- i. _____
- ii. _____

7. List **two methods of preparing wood surfaces**. (2 marks)

- i. _____
- ii. _____

8. Identify **two safety precautions when preparing wood surfaces**. (2 marks)

- i. _____
- ii. _____

9. Name two types of files used in wood surface preparation. (2 marks)

i. _____.

ii. _____.

10. State two signs that a wood surface is ready for finishing. (2 marks)

i. _____.

ii. _____.

SECTION B: (50 MARKS)

11. Explain three reasons why a wood surface must be prepared before applying a finish. (6 marks)

i. _____.

ii. _____.

iii. _____.

12. **Diagram/Illustration:** (6 marks)

Draw and label a **sanded wood surface** showing:

- Scraper marks removed
- Raised grain smoothed
- Areas ready for varnish

13. Explain **three differences between hand sanding and scraping.** (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

14. (6 marks) A student is preparing a table for clear varnish:

a) Identify **three tools suitable** for surface preparation. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) State **two materials** required for the finishing process. (2 marks)

- i. _____.
- ii. _____.

c) Give **one reason for raising the grain before sanding.** (1 mark)

- i. _____.

15. Describe **three steps in hand sanding a wooden panel.** (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

16. Explain **two precautions to observe when using hot iron or cloth for surface preparation.** (4 marks)

- i. _____.
- ii. _____.

17. **Diagram/Illustration Question:** (6 marks)

Sketch a **stepwise preparation of a wood surface before varnishing**, including:

- Scraping
- Sanding
- Ready-to-finish surface

18. Explain **three practical factors to consider when selecting abrasives for wood surfaces.** (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

19. Describe **three methods of applying clear varnish on prepared wood surfaces.** (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

20. State **four safety measures** to observe when finishing a wood product. (4 marks)

- i. _____.
- ii. _____.
- iii. _____.
- iv. _____.

SECTION C: (25 MARKS)

21.: (6 marks)

A student applies varnish on a table without proper surface preparation:

a) Identify **three possible problems** in the finish. (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) Suggest **two corrective actions** to fix the surface. (2 marks)

- i. _____.
- ii. _____.

c) State **one factor affecting the drying of varnish.** (1 mark)

- i. _____.

22.: (6 marks)

During workshop practice, a student notices the varnish does not adhere properly:

a) Identify **three likely causes related to surface preparation.** (3 marks)

- i. _____.
- ii. _____.
- iii. _____.

b) Suggest **two remedies to improve adhesion**. (2 marks)

i. _____.

ii. _____.

c) State **one tool to check smoothness of surface**. (1 mark)

i. _____.

23. (6 marks)

A student wants a glossy finish on a chair:

a) List **five steps to prepare the surface and apply varnish**. (3 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

v. _____.

b) Explain **two benefits of following these steps correctly**. (3 marks)

i. _____.

ii. _____.

24. (7 marks)

Discuss the importance of **surface preparation in woodworking**, including:

- Quality and appearance of finish
- Durability and protection of wood
- Safety and ease of application
- Economic benefits and efficiency

i. _____.

ii. _____.

iii. _____.

iv. _____.

v. _____.

vi. _____.

vii. _____.

viii. _____.

ix. _____.

25. (6 marks)

While preparing a bookshelf for varnish, a student skips sanding:

a) Identify **three potential problems in the finished product**. (3 marks)

i. _____.

ii. _____.

iii. _____.

b) Suggest **two solutions to fix the surface before varnishing**. (2 marks)

i. _____.

ii. _____.

iii. _____.

c) State **one tool to ensure uniform surface smoothness**. (1 mark)

i. _____.

ii. _____.

iii. _____.

WOOD TECHNOLOGY

PROJECT CONSTRUCTION

SECTION A – (25 MARKS)

1. Define a woodwork project. (2 marks)

2. List four hand tools used in constructing furniture. (4 marks)

3. Name two finishing materials used after assembly. (2 marks)

4. Identify two purposes of marking out wood before cutting. (2 marks)

5. List two types of joints that can be used in furniture construction. (2 marks)

6. State two safety precautions to observe when using hand tools. (2 marks)

7. Name two methods of assembling furniture parts. (2 marks)

8. Identify two benefits of planning before cutting wood. (2 marks)

9. List two skills learned from completing a woodwork project. (2 marks)

10. Name two types of wood suitable for furniture construction. (2 marks)

SECTION B – (50 MARKS)

11. Explain three reasons for preparing materials to the required sizes before construction. (6 marks)

12. A student is preparing to assemble a stool.

a) Describe three key steps in trial assembly before final joining. (3 marks)

b) Explain the importance of checking the fit of all parts before gluing or nailing. (3 marks)

13. Explain three differences between dry assembly and final assembly in a furniture project. (6 marks)

14. A student is constructing a coffee table:

a) Identify three hand tools suitable for cutting and planing. (3 marks)

b) State two reasons for sanding after assembly. (2 marks)

c) Give one precaution when applying glue. (1 mark)

15. Describe three steps in marking and cutting joints for a book rack. (6 marks)

16. Explain two practical factors to consider when selecting wood for a bedside cabinet. (4 marks)

17. A student is assembling a chair frame.

a) List the steps to ensure joints are properly aligned and secured. (3 marks)

b) State three factors that affect the strength of joints during assembly. (3 marks)

18. Explain three differences between cutting, planing, and shaping during furniture construction. (6 marks)

19. Describe three benefits of completing a full woodwork project using hand tools. (6 marks)

20. State four safety measures to observe while finishing a furniture project. (4 marks)

SECTION C – (25 MARKS)

21. A student makes a shoe rack, but it wobbles after assembly:

a) Identify three possible causes related to joints and assembly. (3 marks)

b) Suggest two corrective actions to improve stability. (2 marks)

c) State one factor affecting stability of the furniture. (1 mark)

22. During workshop practice, a chair's legs are uneven:

a) Identify three mistakes in material preparation or cutting. (3 marks)

b) Suggest two ways to prevent these mistakes in future projects. (2 marks)

c) State one tool used to check evenness of legs. (1 mark)

23. A student wants to construct a bedside cabinet:

a) List five steps from marking to finishing. (3 marks)

b) Explain two advantages of following the correct sequence during construction. (3 marks)

24. Discuss the importance of constructing a woodwork project using hand tools, including:

- Skills acquired
- Product quality
- Time and material management
- Practical and economic benefits (7 marks)

25. A coffee table project breaks after use:

a) Identify three factors during construction that could have caused this. (3 marks)

b) Suggest two remedies to ensure stronger construction. (2 marks)

c) State one tool used to verify the accuracy of dimensions. (1 mark)

WOOD TECHNOLOGY
STRAND 4.0: RELATED DRAWINGS AND SKETCHING
SECTION A (25 Marks)

1. Define pictorial drawing in Woodwork. (2 marks)

2. List three types of pictorial drawings used in Woodwork. (3 marks)

- i.

- ii.

- iii.

3. State two reasons why drawing is important in woodwork production. (2 marks)

- i.

- ii.

4. Identify two drawing instruments used for making isometric projections. (2 marks)

- i.

- ii.

5. Name two items in the workshop that can be designed using isometric drawing. (2 marks)

- i.

- ii.

6. State two differences between freehand sketching and instrumented drawing. (2 marks)

- i.

- ii.

7. List two orthographic views that can be derived from an isometric projection. (2 marks)

- i.

- ii.

8. Identify two benefits of using drawings before actual woodwork production. (2 marks)

- i.

- ii.

9. Name two types of lines used in woodwork drawings. (2 marks)

- i.

- ii.

10. State two safety precautions to observe while making drawings in the workshop. (2 marks)

- i.

- ii.

SECTION B – (50 Marks)

11. Explain three differences between oblique, isometric, and perspective drawings. (6 marks)

- i. _____
- ii. _____
- iii. _____

12. A student is planning to make a stool.

a) Describe the key features that should be included in an isometric drawing of the stool. (3 marks)

- i. _____
- ii. _____
- iii. _____

b) Explain how these features help in producing the stool accurately. (3 marks)

- i. _____
- ii. _____
- iii. _____

13. From an isometric drawing of a stool, explain the orthographic views that can be obtained and the purpose of each view. (6 marks)

_____.

_____.

_____.

14. Explain three reasons for using freehand sketches in woodwork design. (6 marks)

- i. _____.
- ii. _____.
- iii. _____.

15. A student is planning a coffee table.

a) List the components that must be labeled in the drawing for clarity. (2 marks)

- i. _____.
- ii. _____.

b) Explain why dimensions should be included in the table's sketch. (2 marks)

16. Identify three drawing instruments used in making precise orthographic drawings and describe their use. (3 marks)

17. A student wants to design a shoe rack.

a) Identify two pictorial drawings suitable for initial design. (2 marks)

b) Explain how the chosen drawing helps in planning the shoe rack. (4 marks)

18. Explain two methods of converting an isometric view into orthographic views. (4 marks)

19. A workshop bench is to be produced.

a) Describe the orthographic views needed to produce the bench. (3 marks)

b) Explain how these views assist the woodworker during production. (3 marks)

20. Explain three benefits of using drawings before cutting and assembling wood. (6 marks)

SECTION C – (25 Marks)

21. A student is designing a bedside cabinet.

a) Identify the key features that must appear in an isometric sketch of the cabinet. (3 marks)

b) Explain how these features are represented in orthographic views. (3 marks)

22. A designer needs to modify a chair design for stability.

a) Describe two modifications that can improve stability. (3 marks)

b) Explain how each modification affects the parts of the chair. (3 marks)

23. A workshop supervisor instructs students to make a book rack.

a) List the key details that must be included in a plan view to show the placement of shelves. (3 marks)

b) Explain the information a side view provides to the woodworker. (3 marks)

24. Explain how accurate drawings reduce:

a) Material wastage (2 marks)

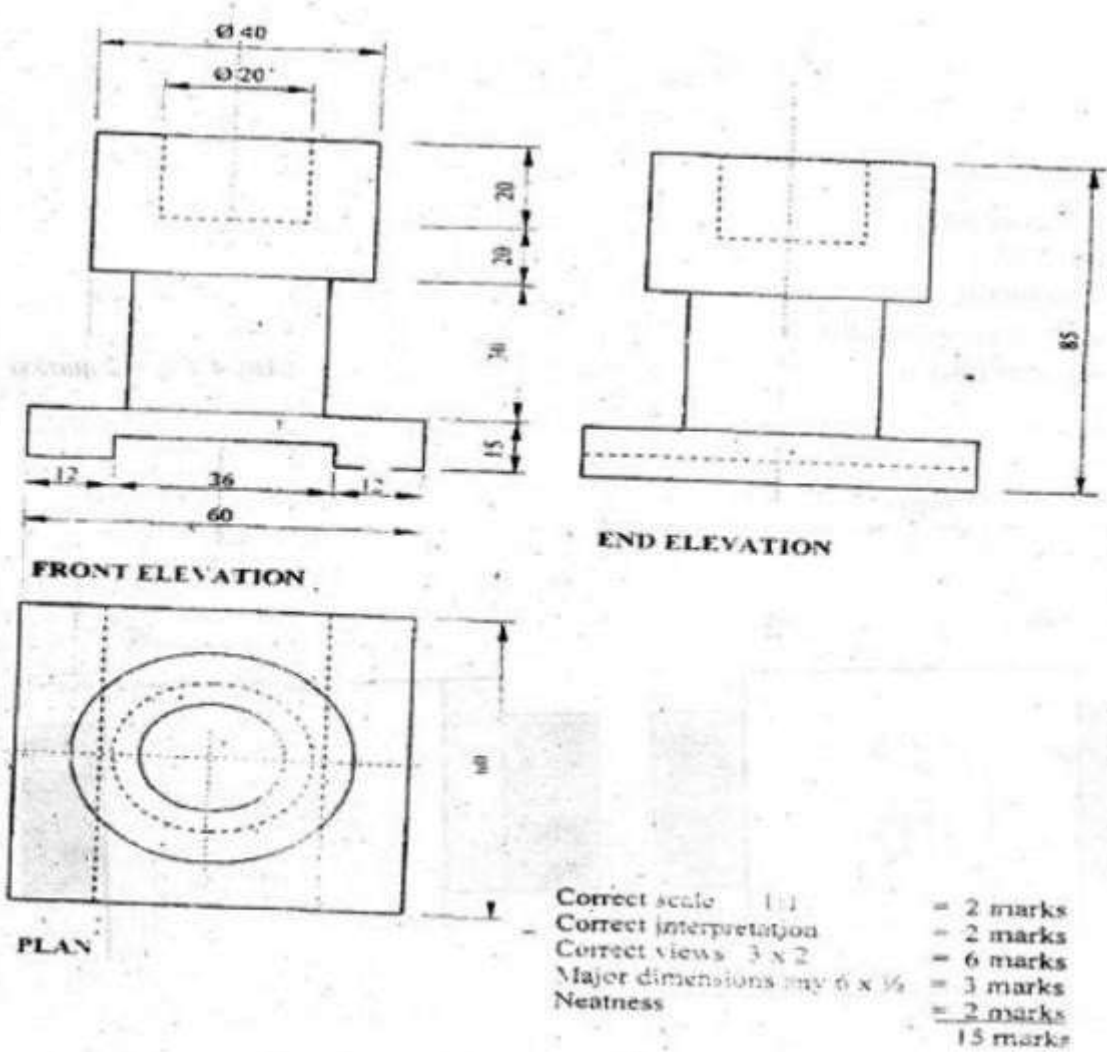
b) Construction errors (2 marks)

25. A student is asked to plan a new stool or chair.

a) List the parts that should be labeled in the drawing. (2 marks)

b) Explain why labeling is important in production. (1 mark)

26. The Figure below shows an isometric view of a candle stand. Draw full size, in first angle projection, the three orthographic views of the stand. (15 marks)



a) Outline the steps involved in the topping process in the reconditioning of the saw teeth (3 marks)

(b) Name two types of saw sets (2 marks)

(c) Figure 4 shows a wooden tray made of cypress and a 3 mm thick plywood bottom. Make a cutting list for the finished sizes of the tray (10 marks)

27. The figure below shows an isometric view of a shaped block .Draw FULL size the three views of the object in 1st angle projection [15mks]

