



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini Prevocational Certificate of Secondary Education

TECHNICAL STUDIES

5925/01

Paper 1 Multiple Choice

October/November 2023

1 hour

Additional Materials: Multiple Choice Answer Sheet
Soft clean eraser
Soft Pencil (Type B or HB is recommended)

READ THESE INSTRUCTIONS FIRST:

Write your centre number, candidate number and name on the answer sheet in the spaces provided, unless this has been done for you.

Write in soft pencil.

Do not use staples, paper clips, glue or correction fluid.

There are **40** questions in this Paper. Answer **all** questions. For each question there are a few possible answers **A, B, C** and **D**. Choose the one you consider correct and record in **soft pencil** on the separate answer sheet.

Read the instructions on the answer sheet.

Each correct answer will score one mark. A mark will not be awarded for a wrong answer.

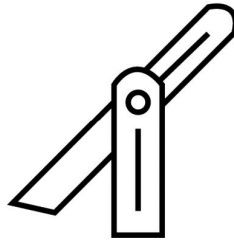
Any rough work should be done in this booklet.

Electronic calculator may be used.

This document consists of **11** printed pages and **1** blank page.

Answer all **forty** questions in this paper. Each question carries **one** mark. Use the letter **X** to show the correct answer on the answer grid provided.

1 What is the name of the tool shown below?



- A sliding bevel
- B mitre square
- C try square
- D combination square

2 Which of the following is a saw for cutting curves?

- A tenon saw
- B rip saw
- C coping saw
- D panel saw

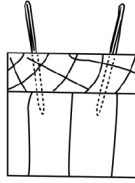
3 Which of the following statements explain the problem of using a pinned file?

- A a pinned file does not last long
- B a pinned file causes more friction
- C a pinned file makes a squeaky sound
- D a pinned file causes scratches

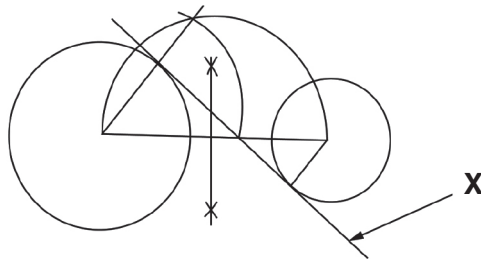
4 What name is given to the thick white liquid adhesive that is **not** waterproof?

- A tensol cement
- B epoxy resin
- C polyvinyl acetate
- D polyvinyl chloride

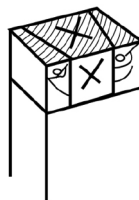
- 5 Name the method of nailing shown in the sketch below.



- A parallel nailing
 B dovetail nailing
 C staggered nailing
 D clinch nailing
- 6 Which of the following statements describe the line indicated by arrow X in the drawing below?



- A a common internal bisector to two unequal circles
 B a common external chord to two unequal circles
 C a common external bisector to two unequal circles
 D a common internal tangent to two unequal circles
- 7 What are the appropriate tools required to remove the waste marked X from the piece of wood shown in the drawing below?

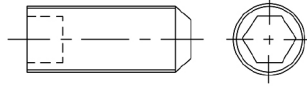


- A tenon saw, paring chisel, bow saw
 B dovetail saw, coping saw, firmer chisel
 C fret saw, dovetail chisel, rip saw
 D bevel edged chisel, dovetail saw, panel saw

8 The process of manufacturing products by means of pouring molten metal is known as:

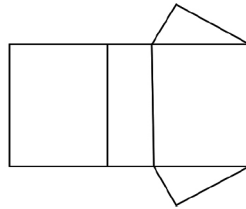
- A moulding
- B casting
- C swaging
- D smelting

9 What is the name of the screw shown below?



- A grub screw
- B cheese head screw
- C hex head screw
- D round head screw

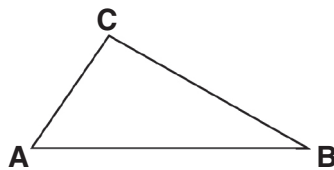
10 What is the name of the geometric solid that could be made from the development below?



- A rectangular pyramid
- B rectangular prism
- C triangular pyramid
- D triangular prism

11 The diagram shows a triangular piece of land with side **AB** being 30 metres long.

Using a scale of 1:100, what would be the scaled length of **AB**?



- A 300 m
- B 30 000 mm
- C 300 mm
- D 30 000 m

12 Which of the following is a finishing process?

- A branding
- B carborising
- C electroplating
- D seasoning

13 Which part of the body needs the most protection when using an angle grinder?

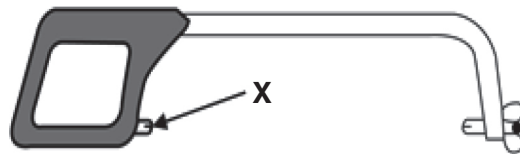
- A eyes
- B fingers
- C ears
- D arms

14 What does a triangular yellow safety sign mean?

- A certain behaviour is not allowed
- B warning about a specific hazard
- C provides information about safe conditions
- D specific behaviour must be undertaken before proceeding

15 The diagram below shows a hacksaw without a blade.

What name is given to the hacksaw part labelled X?



- A frame
- B pin
- C wing nut
- D ferrule

16 The science of designing equipment and a workplace to fit the worker is called:

- A ergonomics
- B anthropometrics
- C economics
- D aesthetics

17 The three key elements to good design are:

- A proportion, balance, symmetry
- B function, harmony, emphasis
- C appearance, sound construction, function
- D sound construction, scale, evaluation

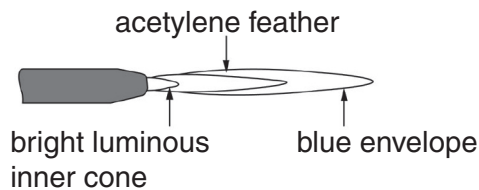
18 What name is given to a non-ferrous metal that is silver grey in colour, light in weight and is used for kitchen utensils?

- A aluminium
- B zinc
- C stainless steel
- D cast steel

19 Which statement describes the term ductility?

- A ability of metal to resist scratching and wear
- B ability of metal to resist shock without breaking
- C ability of metal to be rolled into a sheet without breaking
- D ability of metal to be drawn into a wire without breaking

20 What is the name of the welding flame shown in the diagram below?



- A starter flame
- B oxidising flame
- C carburising flame
- D neutral flame

21 Which of the following statements describe an alloy?

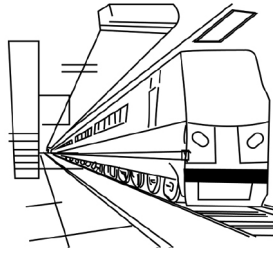
- A a metal containing iron
- B a metal that contains more carbon
- C a mixture of two or more metals
- D a metal containing calcium carbonate

- 22 Why is PVC preferred as a coating for electrical wires?
- A it is a good conductor of electricity
 - B it is resistant to heat
 - C it is tough and rigid
 - D it is a good electrical insulator
- 23 Which of the following statements is true about acetylene gas cylinder fittings?
- A they have left-hand threads
 - B they are self regulatory
 - C they have safety switches
 - D they have right-hand threads
- 24 What makes a rip saw ideal for ripping timber?
- A the size of the teeth
 - B the gauge of teeth
 - C the chisel like teeth
 - D the number of teeth
- 25 What is the name of the piece of equipment shown below?



- A bench hook
- B mitre block
- C shooting board
- D mitre box

26 What is the name of the drawing technique used to produce the drawing below?



- A orthographic projection
- B auxiliary drawing
- C one point perspective
- D oblique projection

27 What is a safe way of holding a piece of metal when drilling?

- A using leather gloves
- B using a hand vice
- C using a pair of pliers
- D using a vice grip

28 What does the BS 308 engineering convention shown below represent?

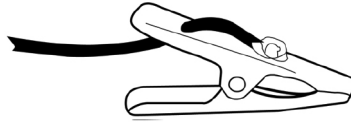


- A internal thread
- B external thread
- C square section
- D hollow bar

29 Hardwood trees are trees that:

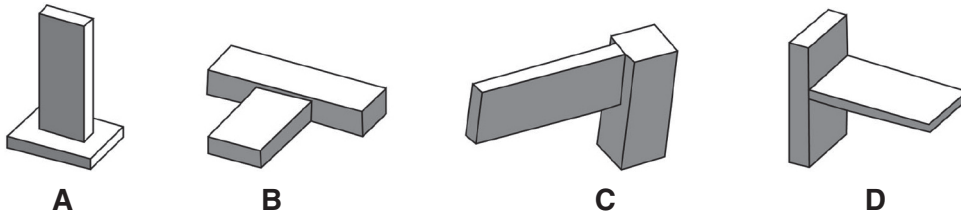
- A have needle shaped leaves
- B are evergreen
- C have broad shaped leaves
- D produce bare cones

30 What is the name of the piece of equipment shown below?

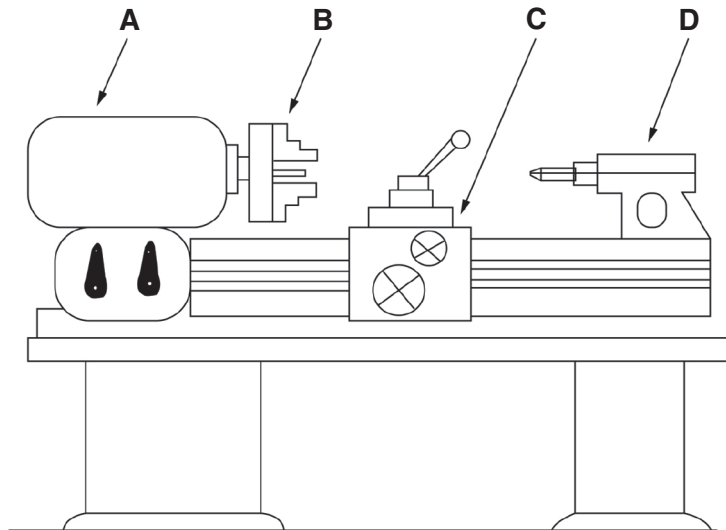


- A electrode holder
 - B electric clamp
 - C ground clamp
 - D close mouth tong
- 31 Which plane would be most suitable for general use?
- A jointer plane
 - B try plane
 - C smoothing plane
 - D jack plane
- 32 Identify **two** methods of product manufacturing that have similar principles of production.
- A vacuum forming and injection moulding
 - B die casting and injection moulding
 - C extrusion and die casting
 - D vacuum forming and extrusion
- 33 When ordering wood screws, which one of the following pieces of information is **not** necessary?
- A type of head
 - B length
 - C weight
 - D material

34 Which of the following constructions would a haunched mortice and tenon joint be most suitable for?



35 Which arrow indicates the tail stock in the diagram of the centre lathe shown below?



36 What is the name of the heat treatment process carried out to soften steel so that it can be easily machined or worked with hand tools?

- A case hardening
- B annealing
- C tempering
- D normalising

37 Which process would be ideal to produce a plastic soft drink bottle?

- A blow moulding
- B injection moulding
- C vacuum forming
- D extrusion moulding

38 Which hinge would be most suitable for use on wardrobe doors?

- A butt hinge
- B bullet hinge
- C piano hinge
- D tee hinge

- 39 What is the purpose of draft angles on a mould?
- A for easy removal of the finished product from the injection moulding unit
 - B to achieve a highly finished surface on injection moulded products
 - C to allow a reasonable amount of air to circulate in the injection chamber
 - D to allow moisture in the injection moulding chambers to escape easily
- 40 Which method of joining metals would you use for joining copper pipes?
- A arc welding
 - B gas welding
 - C brazing
 - D soft soldering

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