



EXAMINATIONS COUNCIL OF ESWATINI  
Eswatini Prevocational Certificate of Secondary Education

---

**TECHNICAL STUDIES**

5925/01

Paper 1 Multiple Choice

October/November 2022

1 hour

Additional Materials: Multiple Choice Answer Sheet

**Total: 40 Marks**

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 **forty** questions in this Paper. Answer **all** questions. For each question there are four 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.

Any rough work should be done in this booklet.

Electronic calculator may be used.

---

This document consists of **8** printed pages.

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 Which one of the following statements is true about brass?

- A an alloy of copper and lead
- B an alloy of copper and tin
- C an alloy of copper and zinc
- D an alloy of copper and bronze

2 What is the difference between drilling on a lathe and on a pillar drill?

- A lathe chuck holds the drill bit more firmly than the pillar drill chuck
- B the work piece is in rotary motion when drilling on the lathe whereas it is fixed when drilling on the pillar drill
- C the lathe motor has a high torque which makes it suitable for heavy drilling compared to the pillar drill
- D lathe drilling is specifically for precision work, while pillar drilling is for general purposes

3 Which **one** of the following safety signs would you find on flammable materials?



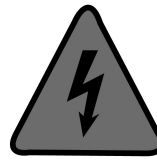
A



B



C



D

4 A floor plan of a house measuring 19 000 mm by 12 000 mm is to be drawn on an A3 paper.

Select the most appropriate scale that can be used to draw the floor plan.

- A 1:10
- B 10:1
- C 100:1
- D 1:100

5 Name the tool shown below.



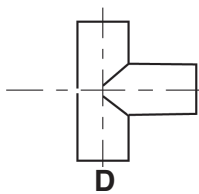
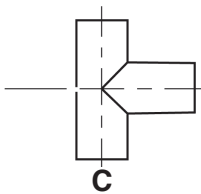
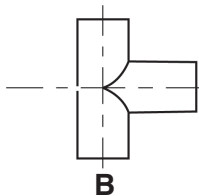
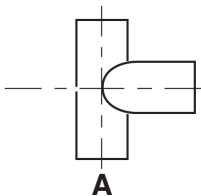
- A micrometre gauge
- B centre square
- C vernier callipers
- D combination square

6 Which of the following angles is used in oblique projection?

- A 25°
- B 50°
- C 45°
- D 90°

- 7 Which of the statements below describes a hand file?
- A it has double cuts on both edges and it is used for general bench work
  - B its blade tapers throughout the last third of its length
  - C the faces are double cut but the edges are only single cut
  - D its blade is constant in width and it has a safe edge
- 8 Which one of the following is a non-ferrous metal?
- A steel
  - B cast iron
  - C wrought iron
  - D tin
- 9 What is the name given to a metal that is reddish brown in colour, extremely ductile and malleable?
- A brass
  - B copper
  - C mild steel
  - D aluminium
- 10 A pinned file is reconditioned by:
- A using a sharpened brass rod to clean the teeth
  - B rubbing the teeth of the file with chalk before you start filing
  - C brushing the teeth with a file card
  - D applying oil to the file teeth

- 11 Which of the following views correctly show two similar pipes joined at right angles?



- 12 Which one of the following statements distinguishes an acetylene gas cylinder from an oxygen gas cylinder?
- A acetylene cylinders are painted black and are fitted with left-hand screw threads
  - B acetylene cylinders are painted black and are fitted with right-hand screw threads
  - C acetylene cylinders are taller than oxygen gas cylinders
  - D acetylene cylinders are painted maroon and are fitted with left-hand screw threads

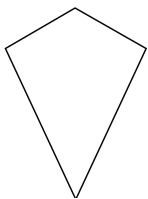
- 13 What is the advantage of louvres over the other types of windows?
- A louvres are cheaper
  - B can keep out rain even when open
  - C can be locked
  - D cannot be easily broken
- 14 What is the parting-off tool in lathe work used for?
- A cutting threads
  - B enlarging holes
  - C cutting a piece of work to length
  - D forming and fishing conical shapes
- 15 Which one of the following is the process used to reduce brittleness on a hardened punch?
- A normalising
  - B quenching
  - C tempering
  - D annealing
- 16 Select the appropriate joint that could be used to join the top rail to the stile of a framed battened door.
- A haunched mortice and tenon
  - B through mortice and tenon
  - C barefaced mortice and tenon
  - D pinned mortice and tenon
- 17 What does the term core refer to in manufactured boards?
- A the centre layer of plywood
  - B a wood product made of veneers
  - C wood chips broken into individual fibres
  - D very thin pieces of wood bonded together
- 18 What is the appropriate solvent for sanding sealer?
- A lacquer thinners
  - B mineral turpentine
  - C mineral thinners
  - D lacquer turpentine
- 19 What does the abbreviation PVC stand for?
- A polyprovynyl compound
  - B polyvinyl compound
  - C polyvister chloride
  - D polyvinyl chloride
- 20 What is the name given to the property of metal which allows it to be stretched or changed in shape without breaking?
- A ductility
  - B elasticity
  - C malleability
  - D conductivity

- 21 The diagram below shows a picture of protective equipment used in the workshop.

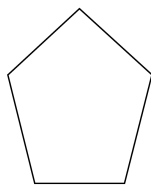


When would you use this equipment?

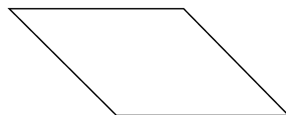
- A for eye protection during arc welding
  - B for protection against head injuries
  - C for eye protection when using a grinder
  - D for face protection during arc welding
- 22 In the design process, the brief can be best defined as:
- A the stage in which the problem to be solved is discussed
  - B the stage where you collect all possible ideas
  - C the statement giving the general outline of intent
  - D the brief analysis of the design situation
- 23 Which of the following is an example of a thermoplastic?
- A polystyrene
  - B polyester resin
  - C silicone
  - D GRP
- 24 The science that deals with designing and arranging things so that people can use them easily and safely is known as:
- A aesthetics
  - B ergonomics
  - C economics
  - D manufacturing
- 25 Which one of the following shapes is not a quadrilateral?



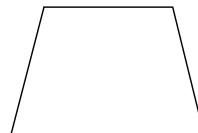
A



B

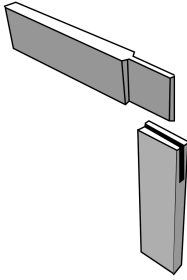


C



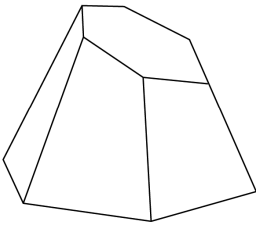
D

26 What name is given to the joint shown in the diagram below?



- A mortice and tenon
- B corner bridle
- C tee bridle
- D cross halving

27 What is the correct name of the geometrical solid shown below?



- A truncated hexagonal prism
- B truncated hexagonal pyramid
- C truncated octagonal prism
- D truncated octagonal pyramid

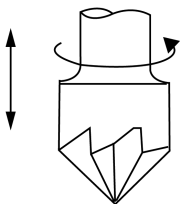
28 What name is given to the filler metal used in arc welding?

- A spelter
- B electrode
- C element
- D solder

29 What is the function of a tail stock in a centre lathe?

- A it holds the cutting tool
- B it feeds the cutting tool to the work piece
- C it supports work when turning between centres
- D it supports work when facing off

30 What name is given to the drill bit shown in the diagram below?



- A countersink drill bit
- B centre drill bit
- C counterbore drill bit
- D milling drill bit

31 Which of the following is **not** a measuring tool?

- A micrometer gauge
- B sliding bevel
- C centre square
- D vernier calipers

32 Which of the following does **not** classify a file?

- A length
- B weight
- C section
- D cut

33 Which of the following power tools is ideal for cutting a curve?

- A jig saw
- B radial arm saw
- C portable circular saw
- D table saw

34 What is the function of a mitre box?

To guide a hand saw when cutting timber at:

- A 30°
- B 60°
- C 45°
- D 90°

35 What does the abbreviation MDF stand for?

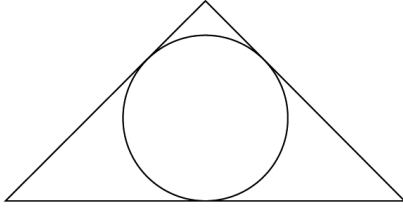
- A medium dry fibreboard
- B medium density fibreboard
- C medium density fireboard
- D medium dry fireboard

36 A certain class of trees has needle shaped leaves and its seeds are enclosed in cones.

What is the name given to this class of trees?

- A tropical trees
- B hardwoods
- C indigenous trees
- D softwoods

37 What is the name given to the circle in the figure below?



- A escribed circle
  - B circumscribed circle
  - C inscribed circle
  - D prescribed circle
- 38 A particular saw blade has a specification of 24 T.P.I.
- Which of the following statements defines the given specification?
- A the blade has 24 teeth per 25.4 mm
  - B the blade has 24 teeth per 24 cm
  - C the blade has 24 teeth per 20.5 mm
  - D the blade has 24 teeth per 15 cm
- 39 How would you distinguish a cutting disc from a grinding disc?
- A cutting disc is thinner than a grinding disc
  - B grinding disc is thinner than a cutting disc
  - C cutting disc is larger in diameter than a grinding disc
  - D grinding disc is larger in diameter than a cutting disc
- 40 What are the key things that you have to consider when selecting a finish?
- A environment, aesthetics, safety and material
  - B cost, functionality, production method and aesthetics
  - C user specification, environment, durability and market demand
  - D material, production method, cost and functionality