

**KENYA JUNIOR SCHOOL EDUCATION ASSESSMENT****2026****PRE-TECHNICAL STUDIES****Prediction 3****912/1 Time: 1 hour 40 minutes 80 marks**

Name .....

Assessment number .....

School .....

**INSTRUCTIONS TO CANDIDATES**

1. Answer all questions in Sections A and B.
2. Section A carries 30 marks. Choose one answer from A, B, C and D for each question. Shade the corresponding circle on the answer sheet using an HB pencil.
3. Section B carries 50 marks. Write answers and draw in the spaces provided.
4. Use a ruler, a pair of compasses and set squares where required. Leave construction arcs visible.
5. Print on A4 at 100% actual size. Measurements on the construction question depend on correct printing.

Diagrams are not drawn to scale unless otherwise stated.

## SECTION A (30 marks)

Answer all questions. Each question carries 1 mark.

**1.** A worker fits and repairs water-supply pipes in houses. Which occupation is this?

- A. Tailor
- B. Surveyor
- C. Mechanic
- D. Plumber

**2.** A learner has long loose sleeves near a rotating machine. Which action should be taken before work starts?

- A. Increase the machine speed
- B. Secure the sleeves and follow the supervisor's safety instructions
- C. Hold the sleeve close to the rotating part
- D. Ignore the clothing until the task ends

**3.** Why do manufacturers use technical drawings when producing identical parts?

- A. To communicate consistent shapes and dimensions
- B. To show only an artist's feelings
- C. To hide the size of the product
- D. To replace all measurements with colours

**4.** A clear protective window must let users see a display while resisting ordinary handling impacts. Which material is most suitable?

- A. Unseasoned timber
- B. Dry cardboard
- C. Opaque steel sheet
- D. Transparent acrylic sheet

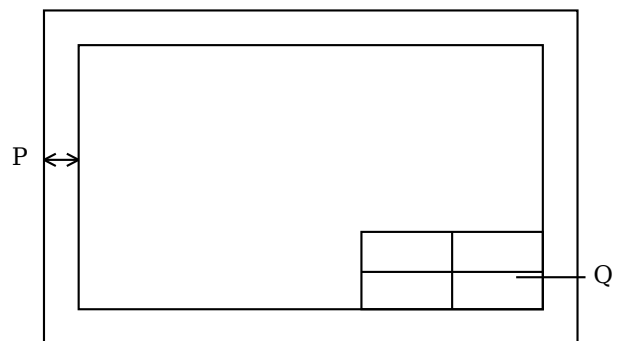
**5.** Which instrument measures the thickness of a thin metal sheet more precisely than an ordinary ruler?

- A. Claw hammer
- B. Micrometer screw gauge
- C. Hand drill
- D. Try square

**6.** A fire is extinguished when its temperature is reduced below that needed for continued burning. Which principle is used?

- A. Starving
- B. Cooling
- C. Adding oxygen
- D. Smothering

**7.** What does P identify on the technical drawing sheet?



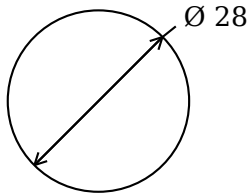
- A. The actual product thickness
- B. An object centre
- C. A cutting edge
- D. The margin

**8.** Which information should be recorded in area Q of the drawing sheet?

- A. The drawing title and scale
- B. The number of chairs in the room
- C. The workshop's daily lunch menu
- D. The colour of the drawing board

**SECTION A (continued)**

**9.** What does the symbol Ø in the dimension shown mean?



- A. Angle
- B. Depth
- C. Diameter
- D. Radius

**10.** A component is 50 mm long. It is drawn 100 mm long. Which scale is used?

- A. 1 : 5
- B. 2 : 1
- C. 1 : 1
- D. 1 : 2

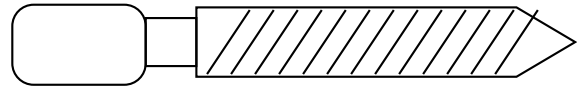
**11.** A learner has to reach a high shelf. Which arrangement is safest?

- A. A chair balanced on a desk
- B. Standing on the edge of a moving trolley
- C. A loose box on a stool
- D. A suitable stable ladder used under supervision

**12.** Which statement describes the front face in an oblique drawing?

- A. It is drawn in its true shape.
- B. It is always drawn as a circle.
- C. It cannot show vertical lines.
- D. It must be drawn at 30° to the horizontal.

**13.** What is the main purpose of the illustrated tool?



Flat file

- A. Holding timber at a right angle
- B. Driving screws into timber
- C. Removing small amounts of metal to smooth or shape it
- D. Measuring internal diameter

**14.** A screw has a cross-shaped recess in its head. Which tool should be selected?

- A. A correctly fitting cross-head screwdriver
- B. A centre punch
- C. A wood rasp
- D. An adjustable spanner

**15.** A milk retailer chooses premises where customers pass regularly and refrigeration is available. Which pair of factors is most relevant?

- A. Mountain height and ocean depth
- B. Rainfall and soil colour
- C. Access to customers and suitable power supply
- D. Timber grain and workshop size

**16.** Residents must travel far to print documents. A learner proposes a local printing service. The idea mainly arises from

- A. an unrelated rumour.
- B. the colour of the learner's uniform.
- C. an unmet community need.
- D. a change in timber seasoning.

**SECTION A (continued)**

**17.** A club expects receipts of Ksh 18,500 and payments of Ksh 16,900. What does the budget show?

- A. A surplus of Ksh 35,400
- B. A surplus of Ksh 1,600
- C. A deficit of Ksh 1,600
- D. A deficit of Ksh 18,500

**18.** Before selling reusable shopping bags, a learner interviews potential buyers. Which information is most useful?

- A. The number of pages in an old textbook
- B. The teacher's favourite song
- C. Preferred sizes and prices customers can afford
- D. The colour of the workshop ceiling

**19.** Which business activity is normally performed by a retailer?

- A. Manufacturing all the goods sold in a country
- B. Issuing currency notes
- C. Selling goods in small quantities to final consumers
- D. Setting every producer's price

**20.** A learner demonstrates skill in repairing simple gadgets. How can the school help develop this talent?

- A. Provide supervised projects and constructive feedback
- B. Require the learner to copy answers only
- C. Discourage further practice
- D. Hide all workshop resources

**21.** An insurance company mainly helps a business to

- A. avoid keeping all records.
- B. manage specified risks through insurance cover.
- C. receive free goods from suppliers.
- D. eliminate every possible loss.

**22.** A buyer receives a defective item and needs evidence of the transaction. Which document is most useful?

- A. A receipt showing the purchase
- B. An unrelated delivery route map
- C. A blank notebook
- D. A weather report

**23.** A learner wants a digital copy of a drawing on paper. Which device is suitable?

- A. Monitor
- B. Scanner
- C. Speaker
- D. Projector

**24.** An email includes a file but no message explaining it. Which field should the sender use to write the explanation?

- A. Recipient address field
- B. Password field
- C. Attachment filename only
- D. Message body

**25.** A computer built into a traffic-light system mainly controls the signal sequence. It is an example of

- A. a hand-operated switch only.
- B. a general office printer.
- C. an embedded computer.
- D. a removable storage drive.

**26.** A school repairs a faulty computer so that learners can continue using it. Which waste-management approach is illustrated?

- A. Extending the useful life of equipment
- B. Disposal into a waterway
- C. Open burning
- D. Dumping

**SECTION A (continued)**

**27.** A person leaves a shared computer without signing out of an email account. What is the main risk?

- A. The keyboard will stop typing numbers.
- B. The monitor will become larger.
- C. The printer will run out of ink immediately.
- D. Another user may access the account.

**28.** Which application is most suitable for creating a letter with paragraphs and a page heading?

- A. Audio player
- B. Word processor
- C. Antivirus utility
- D. Calculator only

**29.** Why should a computer user keep drinks away from the equipment?

- A. Spills can damage equipment and create electrical hazards.
- B. Drinks reduce the number of files.
- C. Every liquid improves keyboard performance.
- D. Drinks change all text to capitals.

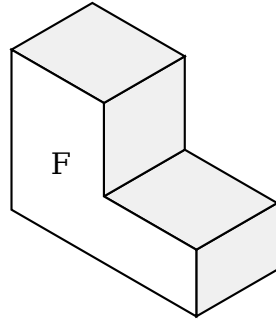
**30.** In visual programming, which category of blocks is used to turn a sprite through an angle?

- A. Variables
- B. Looks
- C. Sound
- D. Motion

**SECTION B (50 marks)**

Answer all questions in the spaces provided.

**31.** The stepped block is shown in isometric projection.



Front face F

Sketch the block in oblique projection. Draw face F in its true shape and use parallel receding lines at  $45^\circ$  to the horizontal. Dimensions are not required. **(3 marks)**

**32.** A workshop selects timber for an indoor storage cabinet.

(a) Name two hardwood species that may be used. **(2 marks)**

(b) State two defects that should be checked for before the timber is purchased. **(2 marks)**

**33.** Freshly cut timber is stacked on raised supports with spacers between the layers.

State two reasons for placing spacers between the layers during air seasoning. **(2 marks)**

**34.** Learners prepare to leave a workshop after using electrical tools.

State two actions that reduce the risk of an electrical fire after work. **(2 marks)**

**35.** Using a ruler and a pair of compasses, construct the perpendicular bisector of line AB. The printed line is 80 mm long. Leave the construction arcs visible.



**(2 marks)**

**36.** A potter fires shaped clay articles in a kiln.

State two changes that make the fired articles useful as household ceramics. **(2 marks)**

**37.** A workshop floor has offcuts, spilled oil and a trailing power cable.

State one safety action for each of these three hazards. **(3 marks)**

**38.** Draw each technical line to a length of 55 mm.

(a) A centre line. **(1 mark)**

(b) A dimension line, including arrowheads. **(1 mark)**

**39.** Learners inspect metallic articles used in a school kitchen.

(a) Name four such articles. **(2 marks)**

(b) Name two non-ferrous metals that may be used to make kitchen articles. **(2 marks)**

**40.** A small business changes from loose paper sales records to organised digital records. State three benefits the business may gain from this change. **(3 marks)**

**41.** A shop owner receives cash daily and pays suppliers in different towns.

Name two commercial-bank services that can help manage these receipts and payments. **(2 marks)**

**42.** A tailor prepares a business plan before opening a repair shop.

State two ways the plan can help the tailor make decisions. **(2 marks)**

**43.** The Imara Enterprise Club has the following balances on 30 September 2026.

| Item         | Ksh    |
|--------------|--------|
| Cash in hand | 12,600 |
| Cash at bank | 22,400 |
| Stock        | 9,000  |
| Furniture    | 16,000 |
| Capital      | 42,000 |
| Loan         | 12,000 |
| Creditors    | 6,000  |

Prepare a statement of financial position for the club as at that date. **(3 marks)**

**44.** A learner receives Ksh 1,200, plans necessary expenses of Ksh 850 and sets aside Ksh 250 as savings.

(a) Calculate the amount left for other spending. **(1 mark)**

(b) State one practical way to avoid spending the savings. **(1 mark)**

**45.** After safety inspection, an empty plastic computer casing is converted into a tray for holding workshop materials.

Name the waste-management practice illustrated. **(1 mark)**

**46.** A school wants its computers to remain reliable.

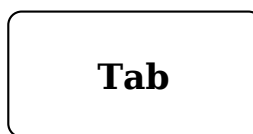
(a) State two routine care practices that help protect computer equipment. **(2 marks)**

(b) Name the computer characteristic shown when correct instructions and data consistently produce correct results. **(1 mark)**

**47.** Study the keyboard keys.



P



Q

(a) State the function of P in a text document. **(1 mark)**

(b) State the usual function of Q when entering text. **(1 mark)**

(c) Name one device used to produce a hard copy of a document. **(1 mark)**

**48.** A supervised timber-sanding activity produces fine dust and small particles.

Name two items of personal protective equipment suitable for protecting the face and breathing system. **(2 marks)**

**49.** A learner formats the notice below in a word processor.

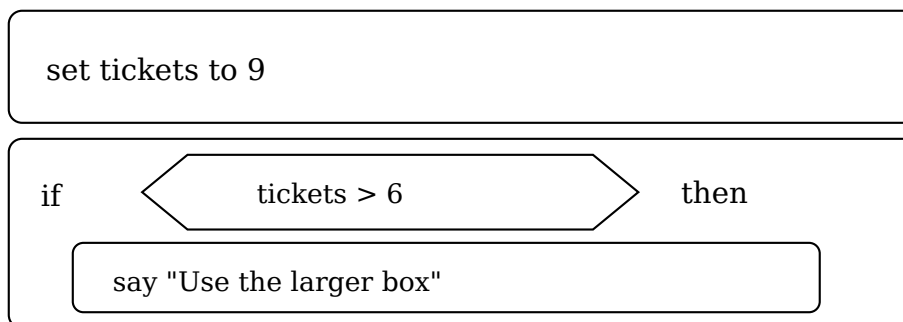
### **WORKSHOP NOTICE**

*Return tools after use.*

Keep the exit clear.

Identify three character-formatting features illustrated in the notice. **(3 marks)**

**50.** Study the visual-programming instructions.



(a) Name the variable used in the instructions. **(1 mark)**

(b) State the message displayed when these instructions are run. **(1 mark)**

**END OF EXAMINATION PAPER**

**PRE-TECHNICAL STUDIES Prediction 3****MULTIPLE-CHOICE ANSWER SHEET**

Name ..... Assessment number .....

Shade one circle for each question.

1.    ☐ A    ☐ B    ☐ C    ☐ D
2.    ☐ A    ☐ B    ☐ C    ☐ D
3.    ☐ A    ☐ B    ☐ C    ☐ D
4.    ☐ A    ☐ B    ☐ C    ☐ D
5.    ☐ A    ☐ B    ☐ C    ☐ D
6.    ☐ A    ☐ B    ☐ C    ☐ D
7.    ☐ A    ☐ B    ☐ C    ☐ D
8.    ☐ A    ☐ B    ☐ C    ☐ D
9.    ☐ A    ☐ B    ☐ C    ☐ D
10.   ☐ A    ☐ B    ☐ C    ☐ D
11.   ☐ A    ☐ B    ☐ C    ☐ D
12.   ☐ A    ☐ B    ☐ C    ☐ D
13.   ☐ A    ☐ B    ☐ C    ☐ D
14.   ☐ A    ☐ B    ☐ C    ☐ D
15.   ☐ A    ☐ B    ☐ C    ☐ D

16.   ☐ A    ☐ B    ☐ C    ☐ D
17.   ☐ A    ☐ B    ☐ C    ☐ D
18.   ☐ A    ☐ B    ☐ C    ☐ D
19.   ☐ A    ☐ B    ☐ C    ☐ D
20.   ☐ A    ☐ B    ☐ C    ☐ D
21.   ☐ A    ☐ B    ☐ C    ☐ D
22.   ☐ A    ☐ B    ☐ C    ☐ D
23.   ☐ A    ☐ B    ☐ C    ☐ D
24.   ☐ A    ☐ B    ☐ C    ☐ D
25.   ☐ A    ☐ B    ☐ C    ☐ D
26.   ☐ A    ☐ B    ☐ C    ☐ D
27.   ☐ A    ☐ B    ☐ C    ☐ D
28.   ☐ A    ☐ B    ☐ C    ☐ D
29.   ☐ A    ☐ B    ☐ C    ☐ D
30.   ☐ A    ☐ B    ☐ C    ☐ D