

B.E.C.E BOOSTER  
BASIC DESIGN AND  
TECHNOLOGY (PRE – TECHNICAL SKILLS)  
Essay and Objective  
1 hour 50 minutes

**2&1**

Name: .....

Index number: .....

## **B.E.C.E PERFORMANCE BOOSTER**

### **BASIC EDUCATION CERTIFICATE MOCK**

BASIC DESIGN AND TECHNOLOGY  
(PRE TECHNICAL SKILLS 2&1)  
[100 marks]

1 hour 50 minutes

*Write your **name** and **index number** in **ink** in the spaces provided above*

*This booklet consists of two papers. Paper 2 is in two sections: **A** and **B**. Answer all questions section **A** and Two questions in section **B**.*

*Answer paper 2 on the question paper.*

*Paper 2 will last 1 hr. 15 minutes after which the drawing sheets will be collected*

*Answer paper 1 on your objective test answer sheet*

*Do not start paper 1 until you are told to do so. Paper 1 will last 45 minutes*



Mr. Right Examinations  
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PAPER 2

SECTION A: CORE SKILLS [20 MARKS]

1) a. Briefly explain the following terms

i. Food spoilage

1 mark

ii. Food preservation

1 mark

b) List and explain three traditional methods of preserving food commodities

3 marks

c) Provide the meaning of the colours below

3 marks

Colour	Meaning
White	
Yellow	
Violet	
black	
Silver	
Brown	

d) i. Differentiate between element and principle of design

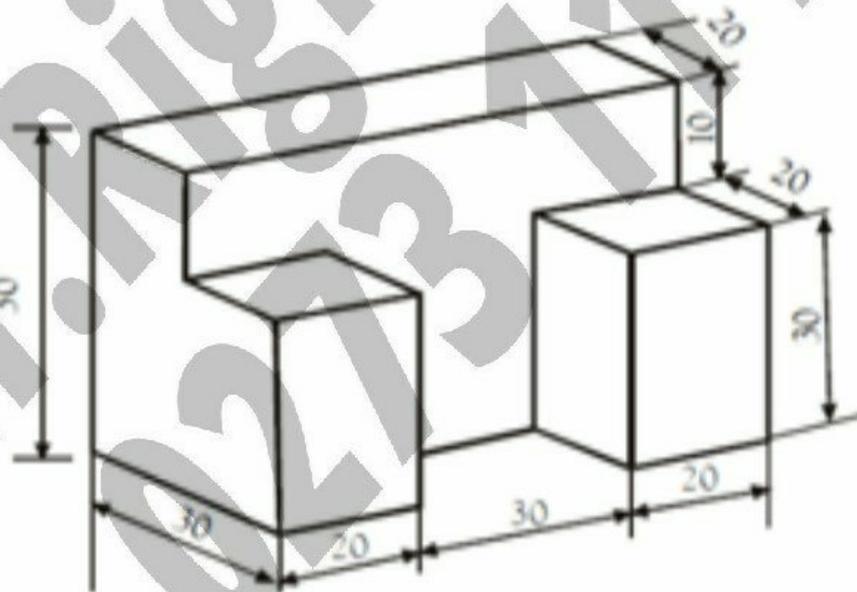
3 marks

ii. State two principles of design

2 mark

e) Draw the figure below to full size in oblique using drawing instruments

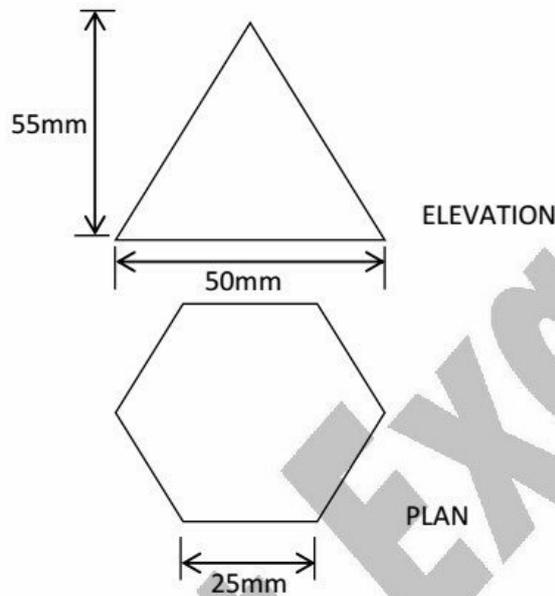
7 marks



**SECTION B**  
**[50 MARKS]**

Answer two questions only from this section  
All questions carry equal marks

2) a) The figure below shows the elevation and the plan of a hexagonal pyramid



Draw the following

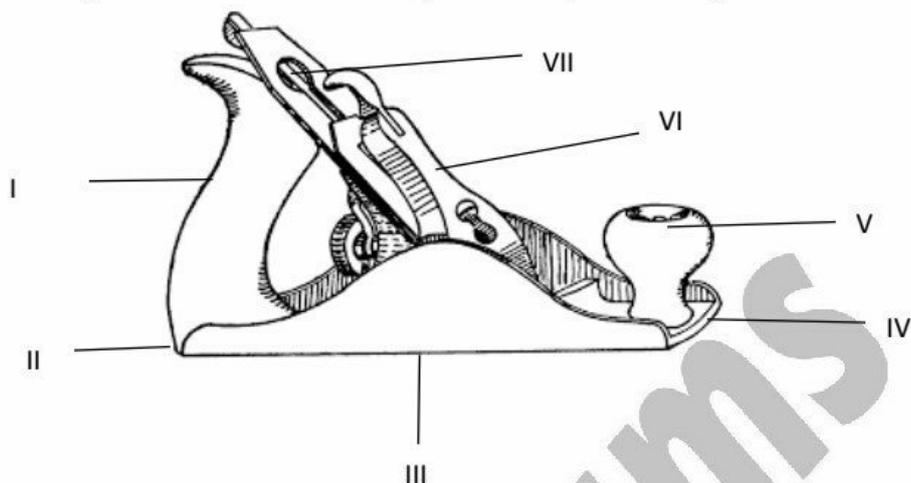
- i. Front elevation 5marks
  - ii. Plan 5marks
  - iii. Surface development 5marks
  - b) State two importance of surface development of an object 2 mark
  - c) Make a free hand pictorial sketch of a spirit level 6 marks
  - ii) Give the use of the tool sketched in (ci) 2 marks
- 3) a) Copy and copy the table below 8 marks

Material	One Property	One Use
Cat iron	_____	_____
Laterite	_____	_____
Adhesive	_____	_____
Cement	_____	_____

b) Explain the following terms

- i. Batching 2 marks
- ii. Aggregate 2 marks
- iii. Sandcrete 2 marks
- c) Make a neat and a freehand pictorial sketch of a brick and label two parts 6 marks
- d i) what is paring? 3marks
- ii) Mention two major tools for paring 2 marks

4.(a) The diagram above represents a tool for a work piece. Study it carefully and answer the questions below.



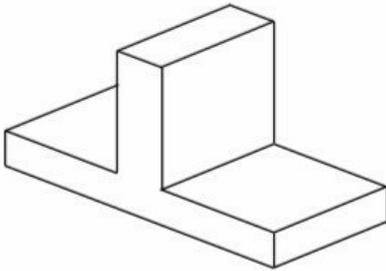
- |      |   |        |
|------|---|--------|
| i.   | What does the diagram represents                              | 1mark  |
| ii.  | Name the parts labelled I to VII                              | 7marks |
| iii. | State two uses of the device                                  | 2marks |
| iv.  | Sate three ways of caring for the tool                        | 3marks |
| v.   | List one device that can be used in place of the device above | 1mark  |
- (b) i. Differentiate between marking out and setting out 2marks  
 ii. List three tools each of marking out and setting out 3marks
- (c) Below are steps for moulding brick, rearranges the steps in correct order
1. Lift and put the brick on its edge for drying
  2. Tamp it
  3. Place the mould box on a pallet
  4. Clean and water the inside faces of the mould box
  5. Lift the mould box gently
  6. Continue the process till it is full and level it
  7. Allow the brick to dry in about ten days
  8. Fill the mould box to one-third with laterite
  9. Fill in more laterite and tamp
- 6marks

PAPER 1 (35 MINUTES)

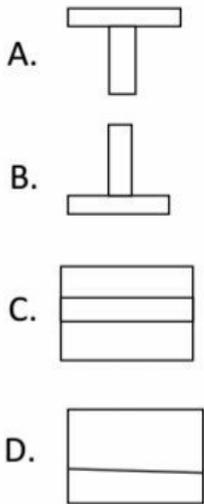
Answer all questions in this section

- 1) The reflection of a particular ray when light falls on an object produces a sensation on the eye called ...
  - A. Shade
  - B. Tone
  - C. Colour
  - D. Shadow
- 2) Which of the colours below symbolizes vision and creativity?
  - A. Blue
  - B. Gold
  - C. Violet
  - D. Silver
- 3) A pair of primary colours mixed together in equal proportion produces
  - A. Tertiary colours
  - B. Secondary colours
  - C. Cool colours
  - D. Complementary colours
- 4) The following are kinds of meal services except....
  - A. Tray service
  - B. Panty service
  - C. Kitchen service
  - D. Table service
- 5) A fuse breaks when there is a/an ...
  - A. High voltage
  - B. Low voltage
  - C. Excess current
  - D. Low current
- 6) The most important tool used for conveying ideas very quickly by drawing and sketching on paper is--
  - A. Felt pen
  - B. Crayon
  - C. Pencil
  - D. Rule
- 7) In oblique drawing one side is projected on the .....
  - A. 60° axis
  - B. 45° axis
  - C. 90° axis
  - D. 30° axis
- 8) In setting up a small scale enterprise consider all except .....
  - A. Market
  - B. Capital
  - C. Location
  - D. Bank manager
- 9) Formal training takes place in .....
  - A. An institution
  - B. A workshop
  - C. A training camp
  - D. A school
- 10) To prevent electrical shocks, wires are covered with .....
  - A. Cables
  - B. Insulators
  - C. Covered cables
  - D. Quality wires
- 11) Choice of material used for packaging depends on the .....
  - A. Buyer
  - B. Price of product
  - C. Types of products
  - D. Factory
- 12) Which of the following is not a step in the management process?
  - A. Planning
  - B. Marketing
  - C. Organizing
  - D. Directing
- 13) What vitamin is associated with sunlight?
  - A. Vitamin K
  - B. Vitamin A
  - C. Vitamin D
  - D. Vitamin B
- 14) Which of the following is a conspicuous seam?
  - A. Open seam
  - B. French seam
  - C. Plain seam
  - D. Over laid seam

- 15) Running oversewing and machine stitches are all examples of .....
- Temporary stitches
  - Decorative stitches
  - Joining stitches
  - Neat stitches



- 16) Which of the figures below is the plan of the block?



- 17) Which of the following metals can best be used to manufacture the engine block of cars?
- Cast iron
  - Aluminium
  - Lead
  - Copper

- 18) The type of plastic that cannot be reshaped by further heat and pressure is known as .....
- Thermoplastic
  - Thermocast
  - Thermocreat
  - Thermoset

- 19) Coarse aggregate is used in making
- Blocks
  - Slurry
  - Concrete
  - Clinker

- 20) Another name for gauge box is
- Mould box
  - Batch box
  - Wood box
  - Metal box

- 21) Line and pin is a .....
- Setting – out tool
  - Measuring tool
  - Cutting tool
  - Holding tool

- 22) Sandcrete brick is a mixture of .
- Cement and laterite
  - Cement and lime
  - Cement and sand
  - Cement and clay

- 23) Which of the plane figures below is the surface development of a cube?

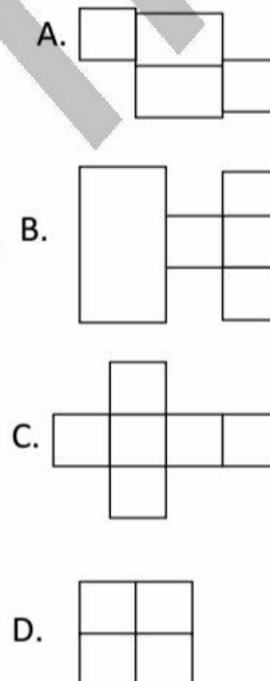


Figure 2 is a block. Use it to answer question 24 and 25

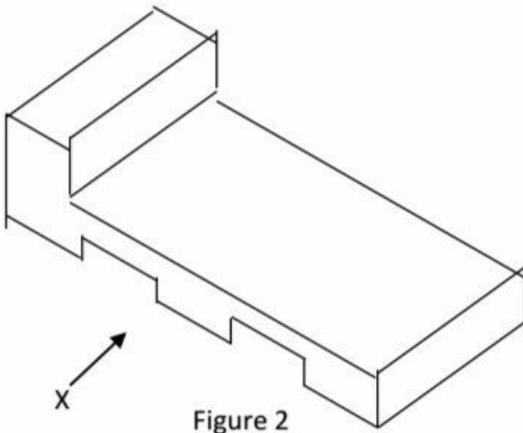


Figure 2

24) Which of the following represents the front elevation in the direction of the arrow X?

- A.
- B.
- C.
- D.

25) The plan is represented by

- A.
- B.
- C.
- D.

26) Polyvinyl acetate is a type of a/an  
 A. Aggregate  
 B. Adhesive  
 C. Abrasive  
 D. Finish

27) Files are cleaned by using the ..  
 A. File card  
 B. Hack saw blade  
 C. Scriber  
 D. Chisel

28) Which of the following types of line is used to indicate the size of a drawing?  
 A. Hidden line  
 B. Center line  
 C. Construction line  
 D. Dimension line

29) The soft solder is an alloy of ...  
 A. Copper and lead  
 B. Copper and tin  
 C. Lead and tin  
 D. Lead and aluminium



30) The tool showed in figure 3 above is .....  
 a) Gauge rod  
 b) Straight edge  
 c) Mortar board  
 d) Float boards

**END OF PAPER**