

1ST ASSIGNMENT
MARCH, 2020
BASIC DESIGN AND
TECHNOLOGY (PRE-TECH. SKILLS)
Essay and Objective
1hour 55 minutes

2 & 1

Name

Index Number

ADDITROM SCHOOL

Basic Education Certificate Examination

March, 2020

BASIC DESIGN AND TECHNOLOGY
(PRE-TECH. SKILLS 2 & 1)
[70marks]

1hour 55 minutes

*Write your **name**, **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 three questions only: **Question 1** in section **A** and **two** questions from section **B**.*

*Answer **Paper 2** which comes first on the A3 drawing sheet provided. Both sides of the A3 drawing sheet may be used. All diagrams or drawings should be in **pencil**. Any other answer should be written in ink.*

All dimensions on the drawing are in millimeters. Credit will be given for clarity of expression and orderly presentation of material.

***Paper 2** will last **1hr. 15minutes** after which the drawing sheet(s) 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 **40 minutes**.*

Paper 2
Essay
SECTION A
CORE SKILLS
[20marks]

1 hour

Answer Question 1
[COMPULSORY]

1. (a) State two permanent stitches that can be for fixing down the facing. (2marks)
- (b) State two reasons why preliminary design or sketches is important in designing and making. (4marks)
- (c) Name two colours which when mixed will give the following colours. (3marks)
- i. Violet
 - ii. Green
 - iii. Orange

(d) Classify the following element into natural and man-made.

Elements: Seed, box, leaf, sand, branch, button, road.

Natural	Man – made
1.	
2.	
3.	
4.	

- (e) i. State two causes of malfunction of an electrical appliance. (2marks)
- ii. Describe two ways of detecting faults on the electrical appliances. (2marks)
- iii. State and explain the two types of enterprise (2marks)
- iv. List one benefit derived from solving a problem. (1mark)

SECTION B

[50 marks]

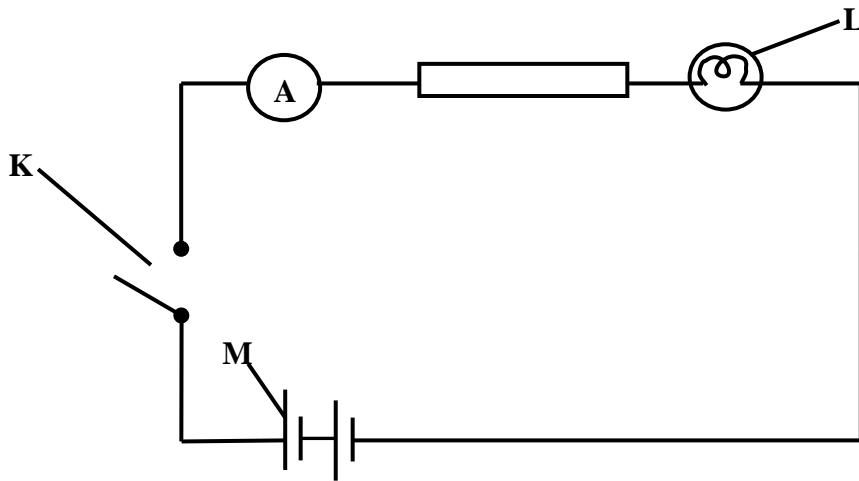
Answer two questions only from this section.

All questions carry equal marks.

2. (a) Provide the suitable materials for used for making each of the artifacts listed below;
- Wheel barrow
 - Socket
 - Soldering bit
 - Canoe
 - Sewing machine body.
- (5marks)

- (b) i. Sketch the triangular file in pictorial. (4marks)
 ii. Label any two parts on the sketch in (a) ii above. (2marks)

(c) Identify the items labeled K, L, M in the circuit diagram below.



(3marks)

- List two examples of electrical conductors. (2marks)
- Define electrical circuit. (3marks)

- (d) i. State two precautions to be taken when cutting with a hacksaw. (3marks)
 ii. List three driving tools. (3marks)

3. (a) i. Make a free hand sketch of an outside calipers. (3marks)
 ii. State one use of the outside calipers. (2marks)
 iii. Explain the term setting out. (2marks)
 iv. State the reason for setting out a straight wall. (2marks)

- (b) Explain the following terms
- Pinning
 - Curing
- (4marks)

- (c) State one use each of the following measuring tools
- Steel rule
 - Tape measure
- (4marks)

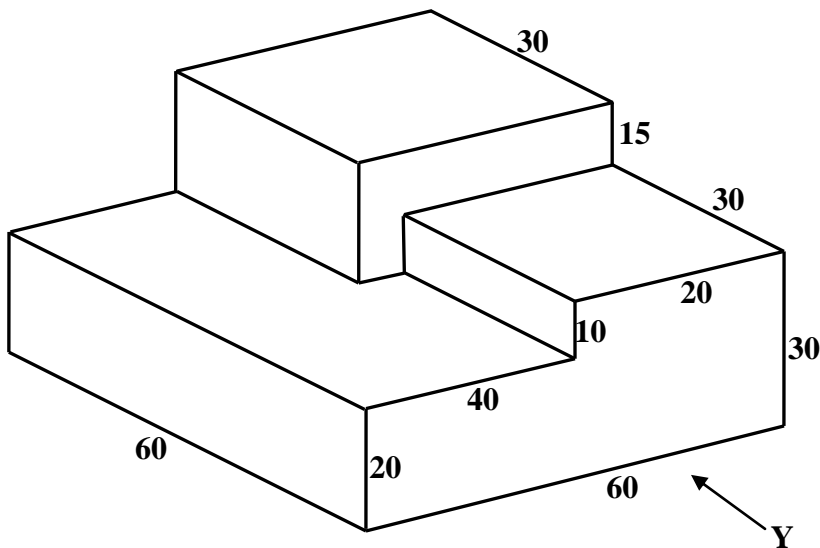
- (d) State one method each for maintaining the tools stated in (c) above. (2marks)

(e) Copy and complete the table below.

PROCESS	ONE TOOL USED
Plumbing a wall	
Checking corners of a wall	
Measuring aggregates	
Checking courses of a wall	
Picking and spreading mortar	
Mixing mortar	

(6marks)

4. (a) The figure below is a wooden block to be prepared at the workshop. Draw to full size in first angle projection in the direction of **Y**;



- i. The front elevation
- ii. The plan

(4marks)

(4marks)

(b) List one specific tool for each of the following processes.

- i. Marking out the wooden block
- ii. Cutting the wooden block.

(2marks)

(2marks)

(c) Sketch to show any two methods of terminating wall temporary.

(4marks)

- i. Make a free hand pictorial sketch of a snips and label two parts. (3marks)
- ii. State the uses of the snips. (2marks)

(3marks)

(2marks)

(d) State one use each of the following electronic components

- i. Capacitor
- ii. Inductor
- iii. Diode

(3marks)

END OF ESSAY

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

**YOU WILL BE PENALIZED SEVERELY IF YOU ARE FOUND
LOOKING AT THE NEXT PAGE BEFORE YOU ARE TOLD TO DO SO.**

PAPER 1
OBJECTIVE TEST

45 minutes

1. Use 2B pencil throughout.
2. on the pre-printed answer sheet, check that the following details are **correctly** printed:
Your **surname** followed by your **other names**, the *Subject Name*, your *Index Number*, *Centre Number* and the *Paper Code*.
3. In the boxes marked *Candidate Number*, *Centre Number* and *Paper Code*, **reshade** each of the shaded spaces.
4. An example is given below. This is a candidate whose name is Ben Kobby ISSAH.
His *index number* is 772384188 and he is writing the examination at *Centre Number* 77234.
He is offering *Pre-Tech Skills* 1 and the *Paper Code* is 0541.

**THE WEST AFRICAN EXAMINATIONS COUNCIL, GHANA
BASIC EDUCATION CERTIFICATE EXAMINATION
OBJECTIVE ANSWER SHEET**

CANDIDATE NAME:					SUBJECT NAME:										
1. Use HB Pencil Press firmly 2. Answer each question by choosing one letter and then, Shade through the letter chosen like this [A] [B] [C] [D] [E] 3. If you want to change an answer, rub out					first mark completely. 4. If only four alternative answers are given for each question, ignore the letter E. 5. Your question paper may have fewer than 60 questions.										
CANDIDATE NUMBER					CENTRE NUMBER					PAPER CODE					For Supervisor only if candidate is absent shade this space
[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]		
[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]		
[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]		
[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]	[3]		
[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]		
[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]		
[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]	[6]		
[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]	[7]		
[8]	[8]	[8]	[8]	[8]	[8]	[8]	[8]	[8]	[8]	[8]	[8]	[8]	[8]		
[9]	[9]	[9]	[9]	[9]	[9]	[9]	[9]	[9]	[9]	[9]	[9]	[9]	[9]		

Answer **all** the questions.

Each question is followed by **four** options lettered A to D. Find the **correct** option for **each** question and shade in **pencil** on your answer sheet the space which bears the same letter as the option you have chosen. Give only **one** answer to **each** question. An example is given below.

Tools are oiled after use to.....

- A. ensure they remain accurate
- B. prevent them from rusting
- C. preserve the cutting edges
- D. maintain their attractiveness

The correct answer is prevent them from rusting, which is lettered B and therefore answer space B would be shaded.

[A]

[B]

[C]

[D]

Think carefully before you shade the answer spaces; erase completely any answer you wish to change.

Do all rough work on this question paper.

Now answer the following questions.

1. Which of the following food should be eaten by an anemic person?

- A. Liver and green beans
- B. Jollof rice and carrots
- C. Fish and tomatoes
- D. Chicken and chips

2. Which of the following is a popular method of preserving food in Ghana?

- A. Canning
- B. Smoking
- C. Salting
- D. Drying

3. Which of the following methods is not suitable for cooking meat?

- A. Stewing
- B. Boiling
- C. Grilling
- D. Steaming

4. The food service which can be conveniently practiced in the school's canteen is

- A. waiter's service
- B. buffet service
- C. plate service

D. cafeteria service

5. Running, over sewing and machine stitches are all examples of

- A. temporary stitches
- B. decorative stitches
- C. joining stitches
- D. neating stitches

6. Which of the following is a conspicuous seam?

- A. Open seam
- B. French seam
- C. Overlaid seam
- D. Plain seam

7. Which of the following is not a step in management process?

- A. Planning
- B. Marketing
- C. organizing
- D. Directing

8. In packaging what symbol is often used to indicate that the content must be handled with care?

- A. Umbrella
- B. An arrow

- C. A wine glass
- D. An angle

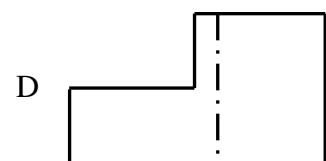
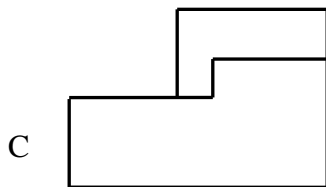
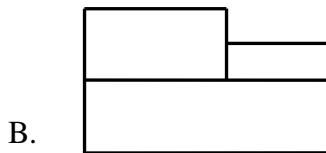
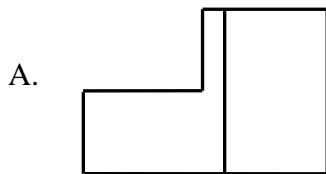
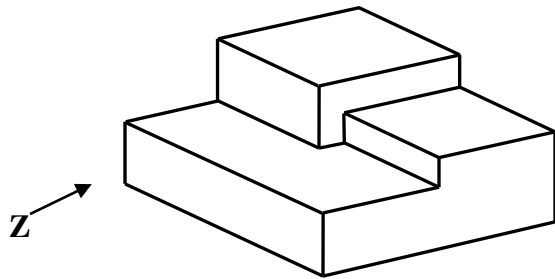
9. When mounting exhibition you should consider the following except

- A. the environment
- B. the cost involved
- C. size, weight and height
- D. balance and colour scheme

10. Which of the following consists of principles of design?

- A. contrast, colour scale
- B. variety balance, rhythm
- C. repletion, unity, form
- D. dominance, texture, line

11. Which of the following views represent the front elevation in the direction of arrow Z?



12. Which of the following colours is used to represent an earth wire?

- A. Blue
- B. Brown
- C. Red
- D. Yellow

13. Weakness of a joint of furniture may be due to

- A. excessive glueing
- B. hammering hard
- C. missing nail
- D. over polishing

14. Which of the following options suggests a dot in nature?

- A. A cube of sugar
- B. A grain of sand
- C. Footpath lane
- D. Veins of a leaf

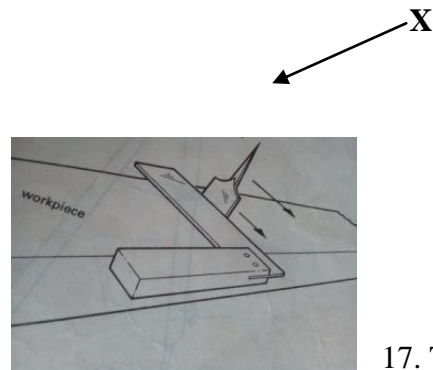
15. The B range of pencils are the

- A. finest
- B. hardest
- C. smoothest
- D. softness

16. Which of the following tools is used for checking alignment of a wall?

- A. Builder's square
- B. Folding rule
- C. Gauge rod
- D. Straight edge

Use the figure below to answer questions 17 to 18



17. The process demonstrated above indicates

- A. Marking out
- B. Cutting out
- C. Setting out
- D. Measuring out

18. The tool marked X is a

- A. chalk
- B. scribe
- C. marking knife
- D. flat chisel

19. Mould boxes are oiled before use to

-
- A. increase the size of the brick
 - B. prevent brick sticking to the box
 - C. smoothen the surface of the brick
 - D. give the brick a shiny surface

20. Which of the following materials is suitable for the production of windscreen?

- A. Polythene
- B. Nylon
- C. Acrylic
- D. Polyvinyl chloride

21. Which of the following is an abrasive?

- A. Oil paint
- B. Emery cloth
- C. Wax polish
- D. Contact glue

22. Which of the following tools is suitable for chopping in wood?

- A. Cross cut chisel
- B. Firmer chisel
- C. Flat chisel
- D. Mortise chisel.

23. The tool used for marking-out the final circular shape on metals is.....

- A. scribe
- B. pair of dividers
- C. dot punch
- D. centre punch

24. Glass paper is used on wood to.....

- A. fill the pores
- B. produce a smooth surface
- C. form beautiful grains
- D. reduce the thickness

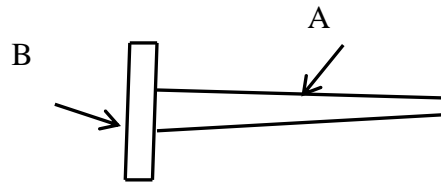
25. Which of the following is not a safety measure when using electrical appliances?

- A. Read all warnings and instructions on the appliance before use
- B. Do not touch electrical appliance with wet hands
- C. Do not plug in too many appliances on a socket at a time
- D. Leave all appliances on after use

26. Striking device is used for all the following processes **except**.....

- A. Planning
- B. Nailing
- C. Mortising
- D. Chiseling

Use the figure below to answer questions 27 to 29



27. The figure is a

- A. rule
- B. tee square
- C. try square
- D. set square

28. The part labeled A is called.....

- A. blade
- B. lead
- C. set
- D. stock

29. The figure is used to

- A. draw horizontal lines
- B. draw vertical lines
- C. set variable angles
- D. measure horizontal lines

30. Glass papering is done in the direction of the grain of the timber in order to

- A. reduce the effect of dust
- B. prevent scratching the surface
- C. enabled the surface to absorb more polish
- D. reduce the quantity of polish to be used.

END OF PAPER