

GB ASSESSMENT TEST

VIRTUAL MOCK EXAMINATION (5) PRE-TECHNICAL SKILLS, MAY 2020 MARKING SCHEME - OBJECTIVE TEST

[30 marks]

1.C	6.D	11.A	16.B	21.B	26.C
2.B	7.B	12.C	17.A	22.B	27.D
3.C	8.D	13.D	18.C	23.B	28.C
4.A	9.D	14.C	19.D	24.C	29.C
5.C	10.B	15.C	20.D	25.A	30.A

SECTION B

PRACTICAL

CORE SKILLS [20 marks]

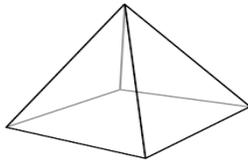
1. (a) i. Food commodities are the food items used in the preparation of meals. Eg fish, milk, rice, etc [1 mark]

ii. Reasons why overcooking food should be avoided.

- To prevent loss of nutrient.
- To prevent loss of flavor/ texture.
- To avoid burning of food.
- To avoid food breakages.
- To make food attractive.

[Any 3 x 1/2 = 1.5 marks]

(b) i. square pyramid



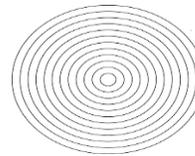
[1.5 marks]

ii. Four technical equipment

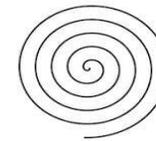
- drawing board
- compass
- protractors
- set squares
- dividers
- tee- squares

[4 x 1/2 = 2 marks]

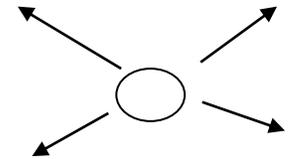
(c) i. concentric



spiral



diverging [3 marks]



ii. Four principles of design

- rhythm
- dominance
- harmony
- repetition
- variety
- balance

[4 x 1/2 = 2 marks]

iii. Four methods of shading

- cross hatching
- silhouette
- smudging
- hatching
- pointillism/ stippling

[4 x 1/2 = 2 marks]

(d) i. Types of line

- Zigzag
- Spiral
- Horizontal
- Vertical
- Converging
- Diverging
- Diagonal
- Concentric
- Wavy

[4 x 1/2 = 2 marks]

ii. Types of colour

- Primary- eg red, yellow, blue.
- Secondary- eg orange, green, violet.
- Tertiary- eg red-orange, yellow – green, blue-violet [2 x 1 = 2 marks]

(e) i. An entrepreneur is a person who has established an enterprise for the purpose of making money / profit. [1 mark]

ii. Factors to keep in mind when locating an enterprise;

- Consider market niche.
- Location of business.

- Your interest and strength
- Nearness to market
- Supplies and suppliers
- Equipment needed.

[4 x 1/2 = 2 marks]

SECTION B [50 marks]

2(a). i. Fastening is the method of joining components together temporary or permanently with a fastener, while fasteners are the device's used to joint components together [3 marks]

ii. screws, rivet, bolt and nut, nail [2 x 1 mark = 2marks]

iii. Riveting is the process of joining component together with a rivet [2 x 1 mark = 2marks]

iv. - type of joint
- type of work
- thickness of the pieces
- pieces to be joined [2 x 1 mark = 2marks]

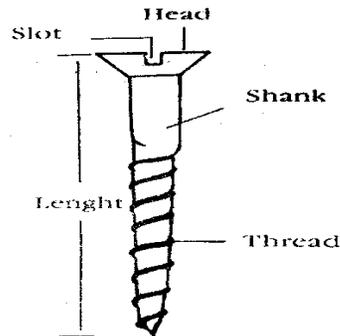
(b). i. Sheet metalwork is a method of making article by forming and joining thin metal sheets [3 marks]

ii. oil cans, cake pan, bread pans, dust pan, watering can [2 x 1 mark = 2marks]

iii. folding bar, funnel stake, pair of snips/shear [2 x 1 mark = 2marks]

iv. butt joint, lap joint, grooved joint [3 x 1 mark = 3 marks]

(c) .i.



[3 marks]

[2 x 0.5 mark = 1 mark]

ii. shank, head, thread, slot

(d) - to maintain their accuracy

- to prevent them from rusting

- to make them last longer
- to keep their appearance
- to keep their cutting edge sharp

[2 x 1 mark = 2marks]

3.(a) i. **Aggregate** is term used to describe crushed stones and sand used for building and constructional purposes. [2 marks]

ii. - *Fine aggregate*-is made up of small particles which can pass through a standard square mesh sieve.it is also referred to as sand.

- *Coarse aggregate*- particles of aggregate retain on a standard square mesh sieve and are graded for use in specific situations according to the structural design. It is also called stones, gravels

[2 x 1 mark = 2marks]

iii. *fine aggregates*-rivers or drains, crushed stones, flood truck, coastal areas, pit

coarse aggregates- broken rocks, crushed rocks, gravels, broken blocks/brick

[2 x 1 mark = 2marks]

(b) i. Finishes are materials applied on the surface of an artefact as the final work to complete the desired artefact or article [2 marks]

- ii. - Opaque finishes
- Transparent finishes
- Penetration finishes

[3 x 1 mark = 3 marks]

iii. 1. to protect the article against handling, dirt, dust corrosion

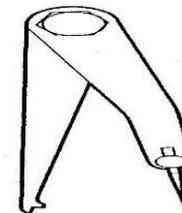
2. for beautification of the artefact

3. to provide surface texture

4. to prevent decay

[2 x 1 mark = 2marks]

(c) i.



[4 marks]

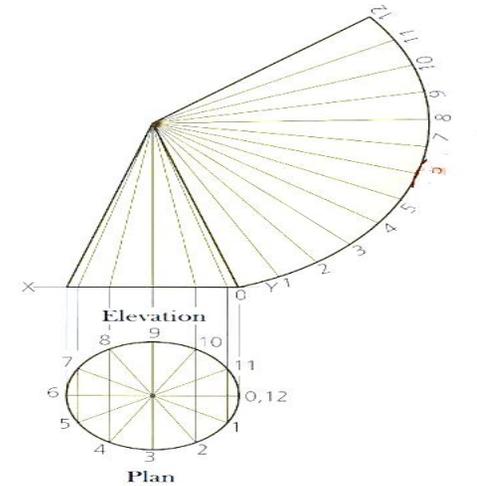
ii. it is used for marking out lines parallel to the finished edges
it can also be used for finding centers of round bars [1 mark]

iii. It should be handled well against misuse
care should be taken to keep the legs and joints in shape
it should be cleaned and oiled after use [1mark]

(d) [6 marks]

Tool	One use	One care and maintenance
Spoke shave	For planing curved surfaces of work pieces	i. parts should be oiled after use ii. It should be stored in a tool box after use
Trowel	Picking and spreading mortar Picking and filling mortar gaps For screeding For plastering	i. Wash and clean after use ii. It should not be used for cutting bricks iii. The blade should be oiled after use to prevent rusting
Round file	For enlarging circular holes For filing curved surface of metals	i. Keep file teeth from clogging by coating them with talcum powder and chalk ii. Keep files in tool box after use iii. It should be properly handled against misuse

- 4 (a) α i. front elevation [5 marks]
ii. Plan [5 marks]
iii. Surface development [5 marks]



- β Cone [3marks]
(b) i ductile, malleable, good conductor of heat and electricity, light in weight [2 x 1 mark = 2marks]
ii. For making cooking utensils
For making roofing sheets
For making engine parts
For making aircraft bodies [3 x 1 mark = 3marks]

(c) [2 marks]

Material	One property
Cement	It is grey in colour It is available in fine powder form
Cast iron	It brittle It is weak in tension but strong in compression It cannot be forged easily It can easily be cast into various shapes