

Candidate's Examination Number.....

SMZ

ZANZIBAR EXAMINATIONS COUNCIL

FORM THREE ENTRANCE EXAMINATION

056

WORKSHOP TECHNOLOGY

TIME 2:30 HOURS

MONDAY 09TH DECEMBER, 2019 P.M

INSTRUCTIONS TO CANDIDATES

1. This paper consists of sections A, B and C.
2. Answer all questions in sections A and B and ALL three (3) questions from section C.
3. Answers for each question should be written in the space provided.
4. Calculators and cellular phones are not allowed in the examination room.
5. Write your examination number on every page.
6. Use a blue or black pen in writing and drawing must be in pencil.

FOR EXAMINER'S USE ONLY					
Question number	Marks	Signature	Question number	Marks	Signature
1			9		
2			10		
3			11		
4			12		
5			13		
6			14		
7			15		
8					
TOTAL					

This paper consist of 8 printed pages

SECTION A: (10 Marks)

Answer ALL questions from this section.

1. Choose the letter of the correct answer and write its letter in the table below.

- i) The basic reason of using stainless steel in utensil is
A: Stronger B: Easily washed
C: Corrosion less D: Good in appearance
- ii) What do we use when holding and manipulating hot metals?
A: Puller B: Gloves
C: Vice D: Tongs
- iii) The property of brittle metal is that it
A: Absorbs blows B: Breaks easily
C: Absorbs shock D: Resists screeching
- iv) Elements when added to steel produces stainless steel is
A: Sodium B: Chromium C: Phosphorous D: Titanium
- v) Synthetic materials fall under group of
A: Non metal B: Alloyed metals
C: Metals D: Non ferrous metals
- vi) It is advisable not to start a machine unless you know how to
A: Wash a machine B: Clean the workshop
C: Stop a machine D: None of the above
- vii) The chemical formula for iron oxide is
A: Fe_3O B: Fe_2O C: FeO_2 D: FeO
- viii) The main products obtained from pig iron are
A: Cast iron, Zinc and sulphur
B: Steel, cast iron and wrought iron
C: Coke and iron ore
D: Non metal

- ix) Reduction of friction of a working machine is done by
A: Lubricating oil B: Water
C: Rubbing D: Brushing
- x) A group that contains aluminium, copper, zinc and lead
A: Ferrous metal B: Non metal
C: Non ferrous metal D: Plastic

ANSWERS

i	ii	iii	iv	v	vi	vii	viii	ix	x

SECTION B: (45 Marks)

Answer ALL questions from this section.

2. a) State the importance of using cutting fluid.
b) Give three (3) examples of non metals.

3. Give three (3) mechanical properties of a material.

4. a) How can you define "workshop technology"?
b) Write down the application of micrometer screw gauge.

5. Mention three (3) places where cast iron is used.

6. Identify any five (5) safety rules to be observed in a workshop.

7. a) List down two (2) classes of engineering materials.

b) Give two (2) examples for each class of materials named in 7(a) above.

8. Define the following terms

i) Annealing

(ii) Alloying

iii) Soft welding

9. List any three (3) non-ferrous metals

b) Mention two (2) classes of pig iron on the basis of chemical composition.

10. Mention four (4) different classes of metal working fluids.

SECTION C :(45 Marks)

Answer ALL questions from this section.

11. a) Write short explanation on wrought iron.

- b) Briefly explain five (5) properties of wrought iron.

- c) Write the percentage composition of the following elements contained in wrought iron

i) Carbon

ii) Phosphorous

iii) Silicon

iv) Sulphur

v) Manganese

12. a) Briefly explain any three(3) physical properties of metal.

b) Distinguish between ductile materials and brittle materials.

c) Give one (1) difference between straight oil and soluble oil.

13. a) Explain briefly how cast iron can be obtained.

b) Explain any four (4) applications of grey cast iron.

c) Briefly explain the term "steel".

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