

Candidate Name.....

ST. AUGUSTINE - TAGASTE SECONDARY SCHOOL

FORM SIX HOME ASSIGNMENT- APRIL, 2020

HISTORY

ANSWER ALL QUESTIONS

1. Analyze factors determined the establishment of social services during and after the second World war. Give six points.
2. Why did the colonial government introduce co-operatives and marketing boards in Africa. Provide four points in each case.
3. Analyze four changes that were proposed by the policy of education for self-reliance in Tanganyika education system and show how policy failed to bring fundamental changes in Tanganyika by providing four points.
4. Discuss four objectives and four aims of education policies and development in Tanzania from 1961 to 1967.
5. The constitution of 1977 had several weakness with vivid examples identify six weakness that hinder democratic progress in Tanzania
6. What were the main four advantages and four disadvantages of open field system in most of industry Nations in Europe especially before the rise of private enterprise?.
7. Analyze four circumstances that led to the 1920s economic crisis and explain four effects in Africa.
8. Explain six strategies adopted by Chinese leadership after the death of Mao Tse Tung in 1976
9. What is scientific socialism? Evaluate its four features and four strengths.
10. Analyze the hindrances of Italian unification (use six points)
11. Account for the 1848 revolution in Austria
12. Without Hitler no Nazist state would have risen in Germany . Justify the statement in six points.

ST. AUGUSTINE - TAGASTE SECONDARY SCHOOL
FORM SIX ASSIGNMENT- 2020, APRIL
BIOLOGY

Answer **ALL** questions.

1. (a) Define the following terms:
 - i. Homeostasis
 - ii. Thermoregulation(b) Give a brief explanation on the homeostatic components.
(c) Use an example of how the level of blood glucose is controlled by the hormone insulin to explain negative feedback.
2. Briefly explain and show the steps by which urea is formed and the path it takes to the kidneys.
3. Discuss the adaptation to oxygen uptake shown by:
 - i. Mountain dwellers
 - ii. Divers
 - iii. Mammalian foetus.
4. (a) Suggest why rats living in deserts have longer loops of Henle than rats living in habitats with a plentiful water supply.
(b) The onset of fever is always accompanied by shivering and feeling of cold known as chill. Explain these symptoms in terms of the mechanism of control of body temperature.
5. Describe hormonal control of osmoregulation in man.
6. (a) Point out four adaptations of marine bony fish against dehydration.
(b) Write short notes on how three forms of nitrogenous wastes are related to water conservation in living organisms.
7. (a) Name four organs in a mammal's body which are involved in homeostatic control.
(b) State the main differences between negative and positive feedback.

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GEOGRAPHY

Answer **ALL** questions.

1. With the aid of diagram, describe conditions for the formation of gorge and Canyon.
2. Explain five effects of marine aggradation at the coast.
3. Thoroughly explain complex process of soil formation.
4. Elaborate five causes of air ascending.
5. Describe five factors for coast evolution.
6. In not less than five points, differentiate between zonal and a zonal soil.
7. Describe stages of research proposal.
8. Explain five factors determine qualities of photograph.
9. Differentiate between population policy of Tanzania and China.
10. Describe five population problems likely to be assorted with COVID-19 disease.

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PHYSICS

INSTRUCTIONS

Attempt **all** ten (10) questions

1. Simplify the following expressions using laws and rules of Boolean algebra and implement the results using a logic gate circuit.

(a) $P = XY + \bar{X}Z + YZ$

(b) $Q = X(Y+Z) + Y(Y+Z) + XY$

(c) $Q = (X+Y)(X+Y+Z)$

(d) $Q = XY + XYZ + XY\bar{Z}$

(e) $Q = X\bar{Y}\bar{Z} + X\bar{Y}$

2. (a) A composite bar is made of a bar of copper 10 cm long, a bar of iron 8 cm long and a bar of aluminum 12 cm long all, having the same cross-sectional area. If the extreme ends of the bars are maintained at 100°C and 10°C respectively. Find the temperature at the two junctions. Given that thermal conductivity of copper, iron and aluminum are $400 \text{ Wm}^{-1}\text{K}^{-1}$, $40 \text{ Wm}^{-1}\text{K}^{-1}$ and $20 \text{ Wm}^{-1}\text{K}^{-1}$ respectively.

(b) (i) Describe Searle's experiments to determine thermal conductivity of a good conductor.

(ii) Describe Lee's experiments to determine thermal conductivity of a bad conductor.

3. (a) Explain any four assumptions of Kinetic theory of gases.

(b) Derive the gas equation obeyed by a system consisting of N molecules each of mass, m and root mean speed \bar{c}^2 hence obtain the K.E per molecules in terms of absolute temperature vessel of volume $6.0 \times 10^{-3} \text{ m}^3$ containing nitrogen having pressure of $2.0 \times 10^2 \text{ Pa}$ and temperature of 27°C . Calculate;

(i) The number of nitrogen molecules in the vessel

(ii) The r.m.s speed

ST. AUGUSTINE - TAGASTE SECONDARY SCHOOL
FORM SIX ASSIGNMENT- 2020, APRIL
ADVANCED MATHEMATICS

INSTRUCTIONS

Answer **ALL** questions.

1. Represent the following vectors in 3- dimension space using graphs:

(a) $\vec{A} = 2\vec{i} + 7\vec{j} + 4\vec{k}$

(b) $\vec{B} = 4\vec{i} - 4\vec{j} + 5\vec{k}$

(c) $\vec{C} = 2\vec{i} - 3\vec{j} + 2\vec{k}$

2. (a) Find the unit vector in direction of $\vec{a} = 3\vec{i} - 2\vec{j} + 6\vec{k}$

(b) Find the unit vector in the direction of $(\vec{a} + \vec{b})$ where $\vec{a} = \vec{i} + \vec{j} - \vec{k}$ and

$$\vec{b} = \vec{i} - \vec{j} + 3\vec{k}.$$

3. (a) If the position vector \vec{A} and \vec{B} are $2\vec{i} - 9\vec{j} + 4\vec{k}$ and $6\vec{i} - 3\vec{j} + 8\vec{k}$ respectively

find \vec{AB} and determine its magnitude.

(b) Find the value of t for which $\vec{a} = 2\vec{i} + 2\vec{j} + 9\vec{k}$ and $\vec{b} = \vec{i} + t\vec{j} + 3\vec{k}$ are parallel vectors.

4. (a) Find the value of λ for which the points $A = (2, 1, 3)$, $B = (5, 0, 5)$, and

$C = (-4, \lambda, -1)$, are collinear.

(b) Find the value of λ and μ so that the points $A = (-1, 4, -2)$, $B = (\lambda, \mu, 1)$ and

$C = (0, 2, -1)$, are collinear.

5. Prove that $A = (1, 2, 3)$, $B(4, 7, 8)$, $C(6, 4, 12)$ and $D = (3, -1, 5)$, are the vertices of parallelogram using vector method.

ST.AUGUSTINE TAGASTE SECONDARY SCHOOL

FORM SIX ASSIGNMENT -APRIL, 2020

CHEMISTRY

INSTRUCTIONS

1. Answer all questions.
 2. Write your **name** on every page of your answer sheet(s) provided.
 3. Calculators are allowed in examination room.
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1. 25.0cm³ of solution which contains 5.0g of Fe²⁺ per litre solution on acidification with 25cm³ of 2M H₂SO₄ and dilution with 50cm³ of water required 25cm³ solution of dichromate M₂Cr₂O₇ containing 4.45g of the dichromate per litre solution. Calculate the atomic weight of the metal whose symbol is M.
 2. 25cm³ of solution of a Hydrogen peroxide required 24.0cm³ of 0.02M KM_nO₄ solution. Calculate volume strength of H₂O₂ if its solution was made by diluting 5cm³ to 250cm³ of solution.
 3. A solution of iron ammonium Sulphate (NH₄)₂SO₄.Fe₂(SO₄)₃.24H₂O made by dissolving 12.0g to make 250cm³ of solution was boiled with zinc powder and 25.0cm³ of the resultant solution required 24.8cm³ of 0.05KM_nO₄. Calculate the percentage by weight of iron in the compound.
 4. 10cm³ of a solution A₁ made by dissolving 6.516g of a dichromate Cr₂O₇ in 1dm³. 1cm³ of 1M H₂SO₄ was pipetted and diluted with 25cm³ of water followed by addition of 25cm³ of 10% KI. The liberated iodine was titrated with solution A₂ made by dissolving 20g of Na₂S₂O₃.5H₂O in 1000cm³ solution. Using starch indicator and required 20.2cm³ of A₂. Calculate the atomic mass of the metal whose symbol is L.
 5. When 2M HCl reacted with 2M KOH by mixing 50cm³ of each solution; temperature of the mixture rised from 24.3°C to 34.4°C. Determine enthalpy change of neutralization. Given that $H^+ + OH^- \rightarrow H_2O$: $\Delta H = -57.1 \text{ KJ/Mol}$.

ST. AUGUSTINE - TAGASTE SECONDARY SCHOOL
FORM SIX ASSIGNMENT- 2020, APRIL
BASIC APPLIED MATHEMATICS

INSTRUCTIONS

Answer **ALL** questions.

1. (a) Prove that $\frac{\sin x}{1 + \cos x} + \frac{1 + \cos x}{\sin x} = 2\cos \sec x$
 (b) Eliminate θ from each of the following pair of equations
 - i. $x = \sec\theta + \tan\theta, y = \sec\theta - \tan\theta.$
 - ii. $x = 1 - \sin\theta, y = 1 + \cos\theta.$

2. Prove the following identities:
 - (a) $\frac{1}{\cos A + \sin A} + \frac{1}{\cos A - \sin A} = \tan 2A \csc A$
 - (b) $\operatorname{Cosec} 2x - \cot 2x = \tan x$

3. Find the values of:
 - (a) $\frac{1}{\sqrt{2}} \cos 15^\circ - \frac{1}{\sqrt{2}} \sin 15^\circ$
 - (b) $\frac{\tan 10^\circ + \tan 20^\circ}{1 - \tan 10^\circ \tan 20^\circ}$
 - (c) $\cos 70^\circ \cos 20^\circ - \sin 70^\circ \sin 20^\circ$

4. (a) Find the value of $\tan A$ where $\tan(A - 45^\circ) = \frac{1}{3}$.
 (b) Find the value of $\tan x$ where $\sin(x + 45^\circ) = 2\cos(x + 45^\circ)$.

5. Solve for θ , where $0^\circ \leq \theta \leq 360^\circ$
 - (a) $\sec^2 \theta = 3 \tan \theta - 1$
 - (b) $2 \cot 2\theta + 8 = 7 \operatorname{Cosec} \theta.$

6. A bag contains 5 black and 3 white balls. Two balls are drawn of random. Find the probability of drawing.
 - (a) 2 black balls
 - (b) 2 white balls

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ST.AUGUSTINE TAGASTE SECONDARY SCHOOL

FORM SIX ASSIGNMENT

ENGLISH LANGUAGE

Time: 2: 00 Hours Combination: APRIL, 2020

INSTRUCTIONS

1. This assignment consist of ten (10) questions
 2. Answer ALL questions.
 3. Write your **name** on every page of your answer sheet(s) provided.
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1. Describe four characteristics features for second language (L2).
 2. Explain four factors for the selection of national language.
 3. With examples, describe any five grammatical morphemes.
 4. Describe four uses of reduplication process of word formation.
 5. Explain three characteristics of connotations.
 6. Write an essay on what AID's is and how it can be prevented.
 7. Describe five characteristics features of informal language.
 8. Explain five graphological features of legal language.
 9. Use two plays read to discuss how titles of books reflect the happenings in the society. Provide eight points form each play.
 - 10.Using four poems, show how the poets have manipulated language to give the intended message to the readers.

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FORM SIX HOME ASSIGNMENT – 2020, APRIL

ECONOMICS I &II

INSTRUCTIONS

Answer all questions

Use A4 paper

PART ONE: ECONOMICS ONE

1. Suggest six methods of dealing with market failure in the economy.
2. Show with the help of diagram, shifts in the demand curve and movement along the demand curve.
3. Explain the concept of kinked demand theory (Price rigidity) in the oligopoly market
4. Explain five uses of price index and five problems of measuring price index
5. Write short notes on the following concepts
 - i. Legal tender
 - ii. Value of money
 - iii. Fiat money
 - iv. Intrinsic value of money
 - v. Token money

PART TWO: ECONOMICS II

1. Why per capita income is not a good indicator of standard of living (five points)
 2. To what extent mobile phone is a detrimental to the operation of commercial banks (five points)
 3. Argue for the case of economic planning (five points)
 4. Explain four roles of foreign aid in the economic development of a country and show four problems associated with over relying on foreign aids.
 5. (a) Explain the meaning of the following terms as applied in economics
 - i. Tax base
 - ii. Taxable capacity
 - iii. Tax holiday
 - iv. Debt financing
- (b) Explain five ways which can be used to wipe off the public debts.

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ST.AUGUSTINE-TAGASTE SEONDARY SCHOOL
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GENERAL STUDIES

1. One of the principle of good governance is rule of law .Show how rule of law can be assessed in a given country. (Six points)
2. What are the different between democratic government and non – democratic government.
3. Explain the contribution of science and technology to the development of social services in Tanzania.
4. Why religious tolerance important to a country like Tanzania?
5. Assess the role of UN in promoting international peace and understanding.
6. Conflict in Africa can only be uprooted through military action .Discuss
7. “The speed towards creating the East African Federation is too fast “comment on this contention
8. What do you think are the causes of moral value decay in the society like Tanzania.
9. Explain at least six important events for historical background to the origin and development of human rights.
10. Discuss the challenges facing the multiparty general elections in Tanzania. (Give six points).