

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 007: ENGLISH LANGUAGE

ASSIGNMENT TWO : 2009

INSTRUCTIONS:

- **Answer only TWO questions out of FOUR provided.**
 - **Good language use and referencing will be rewarded.**
 - **Write your registered name, registration number and full address.**
 - **The assignment should be submitted not later than 20th August, 2009**
-

1. With clear examples, explain onomatopoeic sounds.
 2. Using any poem you know, demonstrate the concept of “poetic license”.
 3. A noun is said to be singular when it refers to one thing, and the majority of nouns form their plurals by adding a—s to the singular form. Give five exceptions of plural showing forms.
 4. Provided bellow are the forms of sentence pattern. For each pattern, write one sentence to demonstrate it (do not copy from the book).
 - i. SVO
 - ii. SVOC_o
 - iii. SVOC
 - iv. SVCs
 - v. SVA
-

CHUO KIKUU HURIA CHA TANZANIA

TAASISI YA ELIMU ENDELEZI KITENGO CHA KOZI YA MAANDALIZI

OFC 008: KISWAHILI

JARIBIO LA PILI - 2009

MAELEKEZO

- Jibu maswali mawili tu.
 - Usisahau kuandika majina namba yako ya kusajiliwa na anwani yako mahali panapotakiwa.
 - Majibu yako yawe yametufikia ifikapo **20 Agosti 2009**
-

1. Unaelewa nini juu ya neno Rejesta ?Elezea mambo yanayosababisha kutokea kwa Rejesta hizo.
2. Huku ukitoa mifano bayana, eleza dhana ya Alomofu.
3. “Inasemekana kuwa Kiswahili kilienea kwa urahisi zaidi Tanganyika ukilinganisha na Kenya na Uganda” Nini maoni yako juu ya dai hili ?
4. “Maneno ya Kiswahili huundwa kiholela bila utaratibu” Toa maoni yako.

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 009: MATHEMATICS

ASSIGNMENT TWO 2009

INSTRUCTIONS

- **Attempt All questions.**
 - **All working must be shown clearly**
 - **Write your registered names, registration number and full address.**
 - **The assignment should be submitted not later than August 20th, 2009**
-

Q 1. (a) Write the first Six (6) terms of the Sequence $\frac{2n}{2n+1}$

(b) Insert Three Arithmetic means between 19 and 11

(c) Prove by Induction that $1 + 5 + 9 + \dots + (4n - 3) = n(2n - 1)$

Q 2.(a) Solve for x and y

$$3x + 2xy - 4y = 6$$

$$x + xy - y = 5$$

(b) Solve for x and y and make a comment on it.

$$x + y = -6$$

$$y = -x + 4$$

Q3. (a) Express the vectors $\underline{u} = (1, k, -3)$ $\underline{b} = \begin{pmatrix} 2 \\ -5 \\ 4 \end{pmatrix}$. Determine k so that $\underline{a} \cdot \underline{b} = 0$

(b) Prove that $\underline{a} = \left(\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}} \right)$ is a unit vector in R^2 Where $R = \text{Real Number}$.

(c) Show that the Matrix $A = \begin{pmatrix} 1 & 1 \\ 1 & 1 \end{pmatrix}$ does not have an inverse

Q4. Evaluate $\lim_{x \rightarrow a} \left(\frac{x^8 - a^8}{x^{10} - a^{10}} \right)$

(b) Differentiate from the First Principles $y = \ln x$

(c) Find the area between the y -axis, the curve $y = 4x^3$ and the line $y = 32$.

Q5. The speeds (In Km. per hour) of the first cars passing a point on a dual carriageway after 1pm were recorded on Friday and Saturday. The Results were:

FRIDAY	72	74	81	84	65	51	52	88	74	69	75	53
SATURDAY	52	54	57	72	55	81	51	56	57	59	61	51

- (i) Compare the Means and Standard Deviations
- (ii) Comment

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 010: PHYSICS

ASSIGNMENT TWO : 2009

INSTRUCTIONS

- Answer only **TWO** questions out of **FOUR** provided.
 - All working must clearly be shown
 - Write your registered names, registration number and full address.
 - The assignment should be submitted not later than **20th August , 2009**
-

Q 1. (a) Can a body possess force ? Explain.

(b) Would it be easier to lift a Toyota Land Cruiser on the earth surface or to lift it on the moon surface ? Explain.

(c) An antiaircraft shell is fired vertically upward with a muzzle velocity of 1600 m/sec . Compute

(i) the maximum height it can reach,

(ii) the time taken to reach this height,

(iii) the instantaneous velocities at the end of 40 and 60 sec .

(iv) the time when its height is $30,000 \text{ metres}$? Neglect air resistance

Q 2.(a) What is **Resistivity**?

(b) State the **Kirchhoff's first and second Laws**

(c) How many 40 ohm resistors are required to carry 15 amps on a 120 Volt line ?
(Given the condition that : the resistors must be in parallel , since the resistance of the circuit is to be decreased)

Q3. (a) Write short notes on the following

- (i) Magnetic forces,
- (ii) A magnetic field,
- (iii) Direction of magnetic field of a current,
- (iv) Magnetic induction,

(b) A direct current of 2 amp in a coil of 400 turns causes a flux of 10^{-4} Weber to link the turns of the coil. Compute :

- (i) the average counter emf induced in the coil if the current is interrupted in 0.8 sec.
- (ii) the inductance of the coil, and
- (iii) the energy stored in a magnetic field.

Q4. (a) Will you measure an increase in the speed of a wave if its source were moving toward you and a decrease in wave speed if it were moving away ? Explain.

(b) What is the meaning of the word **Resonance** ?

(c) A tuning fork makes 284 vibration per second in air. Compute the wavelength of the tone emitted at $25^{\circ}C$. given that the speed of sound in dry air at $0^{\circ}C$ is 331 m/sec . .

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 011: THEMES IN AFRICAN HISTORY

ASSIGNMENT TWO : 2009

INSTRUCTIONS

- **Answer any TWO Questions.**
 - **Write legibly and precisely.**
 - **Give citations and full references. Failure to that will lead to penalty**
 - **Write your registered names, registration number and full address.**
 - **The assignment should be submitted not later than **AUGUST 20th, 2009****
-

1. **‘The claim that the pioneer white settlers at the Cape occupied an empty land is correct.’ Discuss.**
2. **Assess the impact of the British occupation of the Cape at the beginning of the 19th Century.**
3. **Analyse the impact of the mineral revolution on industrial growth, transport and communication in South Africa.**
4. **Discuss the various methods employed to recruit labour for the mining industry in South Africa.**

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 012: GEOGRAPHY

ASSIGNMENT TWO 2009

INSTRUCTIONS

- Answer any TWO Questions.
 - Write legibly and precisely.
 - Give citations and full references. Failure to that will lead to penalty.
 - Write your registered names, registration number and full address.
 - **The assignment should be submitted not later than AUGUST 20th, 2009**
-

1. Distinguish between the term overpopulation and population density, Examine the factors for rapid population growth in Sub Saharan African countries.
2. Discuss problems facing agriculture in developing countries. What lesson can those countries learn from agriculture development in China?
3.
 - i. Use the following table below to draw comparative bar graph.
 - ii. Comment on the graph.
 - iii. Give advantages and disadvantages of comparative bar graphs.

CASH CROPS PRODUCTION IN 2001 – 2003 (TONS)

CROPS / TONS	YEARS		
	2001	2002	2003
Coffee	43,000	44,000	50,000
Cotton (bales)	171,000	178,100	180,000
Cashew nuts	95,000	78,000	85,000
Tobacco	48,000	59,000	62,000
Tea	78,000	81,000	75,000
Sisal	22,000	23,000	25,000
Pyrethrum	10,000	15,000	18,000

Source: National Bureau of Statistics

4. Discuss the major types of soil erosion and explain how sustainable soil management can be attained.

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 013: BIOLOGY

ASSIGNMENT TWO 2009

INSTRUCTIONS

- **Attempt All questions.**
 - **Caution: Assignment questions should seek detailed contents from various sources of information but don't copy highlights from course outlines.**
 - **Marks will be awarded for concise answers and inclusion of examples and diagrams.**
 - **Write your registered names, registration number and full address.**
 - **The assignment should be submitted not later than August 20th, 2009.**
-

- Q1.** In ecological succession each successive community makes the environment more favourable for the establishment of new species. Explain this by using situational examples of a living organism.
- Q2.** With the aid of examples describe the following:
- a) Marine Biome,
 - b) Matter and Energy in the Ecosystem,
 - c) Fresh water Biome.
- Q3.** Write shorts on the following:
- a) Gene interactions,
 - b) Incomplete Dominance,
 - c) Co dominance,
 - d) Multiple Alleles,
 - e) Epistasis.
- Q4.**
- a) What is mutation?
 - b) Describe the possible causes of Mutation.
 - c) Describe the types of mutations.
 - d) Explain the relationship between Mutation and diseases.

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 014: BUSINESS MATHEMATICS

ASSIGNMENT TWO : 2009

INSTRUCTIONS

- Attempt All questions.
 - All working must be shown clearly.
 - Write your registered names, registration number and full address.
 - The assignment should be submitted not later than **August 20th, 2009.**
-

Q 1. (a) Exhibit as a set the real number solutions of the following equations

- (i) $x^2 - 1 = 0$
- (ii) $x^2 + 1 = 0$

(b) Let μ Is a Student of the Higher Institution of Learning
 A Is a Student at the Open University of Tanzania
 B Is a Foundation Course (OFC) Student
Describe the following in words

- (i) A' (ii) B' (iii) $A \cup A'$ (iv) $B \cup B'$
- (v) $A \cup B$ (vi) $(A \cup B)'$ (vii) $A \cap B$ (viii) $A \cup B'$
- (ix) $A \cap B'$ (x) $A \cap A'$

Q 2.(a) Write down the n^{th} term of each sequence suggested by the pattern

- (i) $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \dots$
- (ii) 1, -2, 3, -4, 5, -6,

(b) In an integrated circuit with an initial current of 960 mA., the temperature in the components decreases from 25 % to 22 % to 19 %. Assuming that each temperature decrease is caused by a decrease in the initial current, what is the value of the current at the fifth measurement ?

Q3. (a) Given that Function $h(x) = \begin{cases} 2x & \text{for } x < -1 \\ x+1 & \text{for } x \geq -1 \end{cases}$

- (i) Find $h(8)$
- (ii) Find $h(-8)$

(b) Determine if each function is one to one

- (i) To each person on earth assign the number which correspond to his age.
- (ii) To each book written by only one author assign the author.
- (iii) To each University in the world which has a Chancellor Assign its Chancellor.

(c) If $f(x) = 5x - 1$ and $g(x) = \frac{1}{5}(x + 1)$

Show that f and g “undo” each other in the sense that both $f \circ g$ and $g \circ f$ are the same as the identity function.

Q4. (a) Differentiate $y = (x + 1)\ln(x^2 + 1)$

(b) Differentiate $xy = 30$

(c) Evaluate $\int a^{4x} dx$

Q5. The following table shows the ages (X) and blood pressure (Y) of 8 persons.

X	52	63	45	36	72	65	47	25
Y	62	53	51	25	79	43	60	33

Obtain the Regression equation of Y on X and find the expected blood pressure of a person who is 49 years old

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 015: BUSINESS STUDIES AND ECONOMICS

ASSIGNMENT TWO 2009

INSTRUCTIONS

- **Attempt any TWO questions.**
 - **Quotations and citations of references will improve your work**
 - **Write your registered names, registration number and full address.**
 - **The assignment should be submitted not later than August 20th, 2009.**
-

1. In your own word explain the concept of economic systems in the world of globalization.
2. What is demand theory? Discuss the determinants of quantity demanded.
3. Discuss the sources of Government revenue.
4. Write comprehensive notes on the following:
 - a) Economies of scale,
 - b) National Income accounting,
 - c) Banking,
 - d) Public Finance,
 - e) National Debt.

THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES

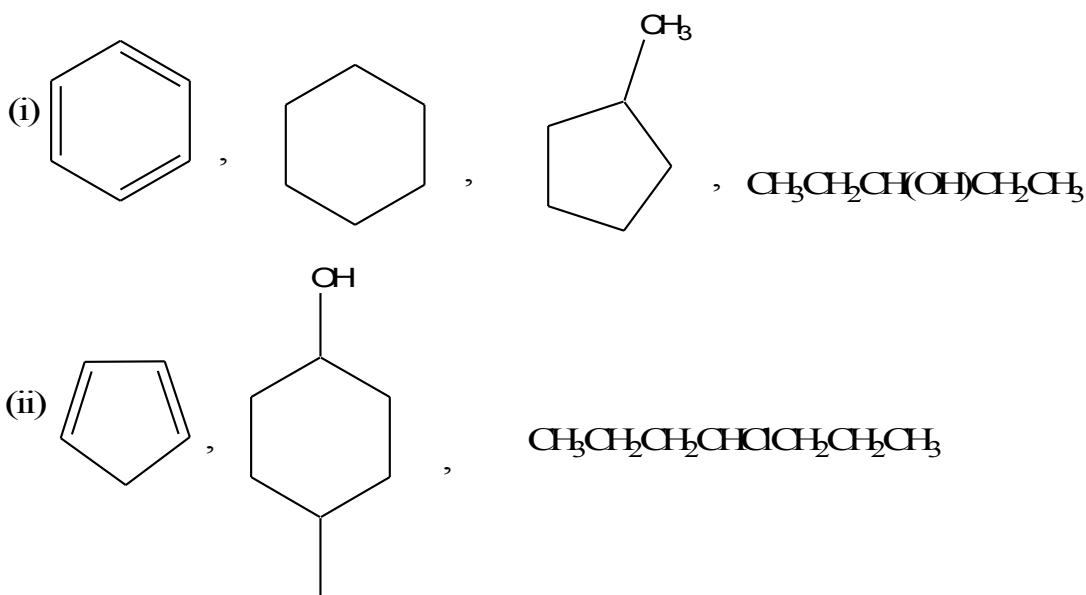
OFC 016: CHEMISTRY

ASSIGNMENT TWO 2009

INSTRUCTIONS

- Attempt All questions.
 - The assignment should be submitted not later than August 20th, 2009
-

1. (a) What do you understand by the term a hydrocarbon?
(b) Which of the following compounds in the following sets is not a hydrocarbon?



2. (a) What is the general formula for an alkene?
(b) What is the general formula for a cycloalkane
(c) What do you note about the answers in (a) and (b)?
3. State the Markovnikov rule for the addition of HX to an unsymmetrical alkene. Give a typical reaction to explain this.

4. (i) Write the structure of the Grignard reagent obtainable when isopropyl bromide reacts with magnesium metal in dry ether.
- (ii) Give the structure of the alcohol obtained when ethyl magnesium bromide reacts with acetone (propanone) followed by hydrolysis using dilute acid.
5. (i) Give a general structure for an ester
- (ii) What name is given to an ester obtained by esterification of benzoic acid with ethanol.
6. (i) What do we mean when we say that the carbonyl group is polar ?
- (ii) When the carbonyl group reacts with a nucleophile such as cyanide ion; which part of the carbonyl group acts as the electrophile?

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 017: COMMUNICATION SKILLS

ASSIGNMENT TWO 2009

INSTRUCTIONS:

- **You are provided with four questions.**
 - **Answer question 4 and any other one question.**
 - **Write legibly and precisely.**
 - **Write your Registered names, Registration number and full adheres.**
 - **The assignments should be submitted not later than 20th August, 2009.**
-

1. Explain in your own words with examples, what the difference is between a sentence in spoken language and a sentence in written language.
2. Give reasons to show why the following groups of words are not sentences and then make them have the standard written pattern of English sentences.
 - (a) Babies with big heads.
 - (b) The lazy teachers at your school.
 - (c) The most intelligent student in the group.
 - (d) Has arrived from the U.K.
 - (e) Got a prize last week.
3. Classify the following sentence as simple, complex, compound or compound – complex.
 - (a) John thought that by studying all the night through, he could easily pass the examination.
 - (b) It is a pity to see able bodied men, who can work, begging for food for their children.
 - (c) After we had walked for an hour, I began to feel tired.
 - (d) President Kikwete will address the nation tonight because it is the end of the month.
 - (e) Amina met Mwajuma in town but she did not tell her what had happened at home.

4. Read the following text and then answer the questions that follow after it.

At around one pound for a large fruit, the pineapple is no longer the special-occasion fruit it was in my childhood. (If there is a pineapple in the fruit bowl, then it must be Christmas) More recently, in the lush, tropical heat of Zanzibar, the fruit became a daily ritual during a beach bum holiday. Armed with a plump pineapple, chosen for **its** ripeness and stripped of **its** inedible skin by the stallholder's fearsome machete, we would wander far along the deserted beach to make the most of the fruit and **its** sticky juice.

Six months later, in the frost-covered gardens of Versailles, the statues and urns wrapped up for the winter, such a fruit seemed even more welcome, cheering **us** up as our teeth chattered and **we** dripped juice into the snow as **we** walked. It is this fruit's impeccable timing, turning up sweet and gold in the depths of winter that probably makes **it** so popular.

1. Identify the antecedents which the highlighted pronouns represent.
2. What type of cohesive ties do the underlined phrases belong to?

**THE OPEN UNIVERSITY OF TANZANIA
INSTITUTE OF CONTINUING EDUCATION
FOUNDATION COURSES**

OFC 018: DEVELOPMENT STUDIES

ASSIGNMENT TWO : 2009

INSTRUCTIONS

- **Attempt any TWO questions.**
 - **Quotations and citations of references will improve your work**
 - **Write your registered names, registration number and full address.**
 - **The assignment should be submitted not later than August 20th, 2009.**
-

1. What do you understand by the term Civil war? Discuss with examples the causes and effects of civil wars.
2. ‘**Poverty is a disease.**’ Do you agree? Give reasons for your answer.
3. Discuss the idea that growth of towns/cities can be one of the sources of pollutions.
4. Discuss the factors that stimulate population growth in most of the developing countries like Tanzania.