

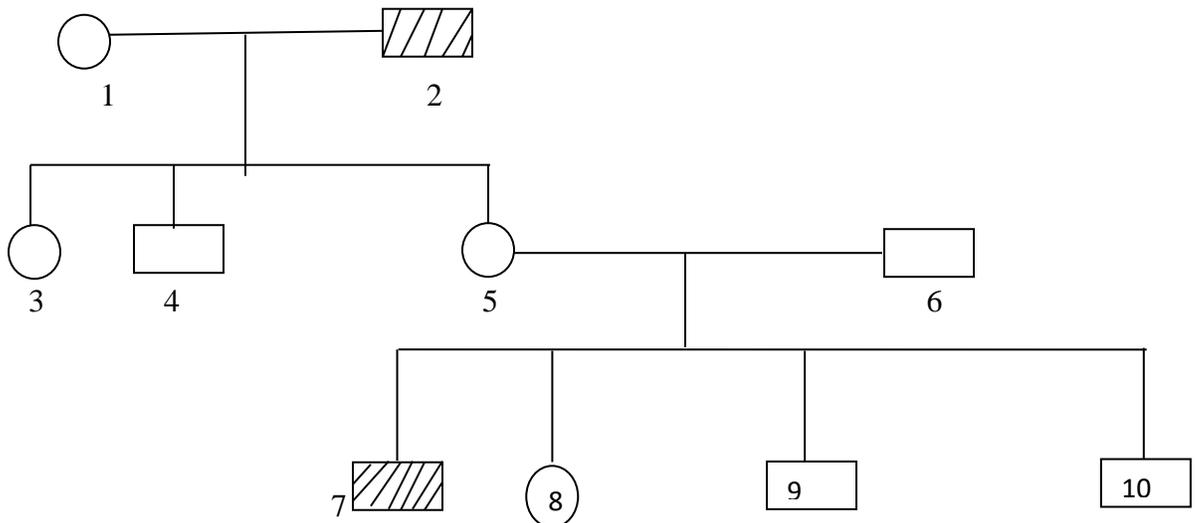
- (x) A group of animals that maintain the body temperature at more or less constant is-
- A. Regulators. C. Cold blood animals.
 B. Warm blood animals. D. Poikilotherms. E. Homoeotherms.

2. Match the phrases in **List A** with the responses in **List B** by writing the letter of the correct response from **List B** beside the item number of **List A** in your answer sheet provided.

List A	List B
(i) A hard outer cover of animals such as crustaceans and arachnids.	A. Flagella movement. B. Ciliary movement. C. Tendon. D. Ligament. E. Hinge joint. F. Exoskeleton. G. Cardiac muscle. H. Skeletal muscle. I. Tropical movement. J. Nastic movement. K. Bones. L. Joints. M. Endoskeleton. N. Ball and socket. O. Joint. P. Hydrotropism. Q. Skeletal movement. R. Muscle.
(ii) Found at the elbow and knee and work like a hinge if door to allow movement in one plane.	
(iii) Found in the heart and are special in that they contract and relax without getting fatigue.	
(iv) Movement of plant towards or away from an environment stimulus.	
(v) Type of movement exhibited by the organisms such as euglena.	
(vi) Rigid structure made of calcium deposits and living cells.	
(vii) Is a location where bones meet.	
(viii) A strong bundle of fibres which attaches muscle to bone.	
(ix) Bundle of fibres around a joint in the skeleton which hold the bone in place and help to prevent dislocation.	
(x) Bundles of fibrous tissue in animals which has the ability to contract thereby producing movement.	

3. (a) State four (4) Precautions for proper use of a Microscope.
 (b) Differentiate a test experiment from a control experiment.
4. (a) (i) What is gaseous exchange?
 (ii) Arrange the following in the correct order:
 Bronchi, pharynx, bronchioles, nasal passages, alveoli, trachea.
- (b) Name the structure concerned with gaseous exchange in
- A mammal
 - A young tadpole.
 - An insects.
 - An earth worm
 - Spider.

5. (a) (i) What is a reflex action?
(ii) Give four (4) examples of reflex actions.
(iii) Explain the importance of reflex action to animals.
(b) (i) State two (2) differences between Nervous control and hormonal control.
(ii) Why a person manages to climb a big tree when suddenly see a big lion.
6. (a) Explain the two (2) types of mutation in living organisms.
(b) Give four (4) examples of genetic disorders caused by gene mutation.
7. (a) Explain the meaning of the following terms.
i. Transportation of Materials. ii. Mass flow.
(b) Explain what would happen when a plant cell is placed in hypertonic solution.
8. Define the following terms as used in reproduction.
i. Fertilization. ii. Ovulation.
(b) Name and explain how the two (2) types of twins occurs.
9. Study the following list of substances:
Water, Urea, Glucose, Calcium, Potassium and Sodium.
(a) Which of the substance will be excreted by a Mammal in a greater amount under each of the following?
i. Low temperature of the environment.
ii. Insufficient secretion of insulin.
iii. Consumption of large amount of proteins.
(b). Explain why one does not urinate frequently on a hot day.
10. (a) Define the following.
i. Genotype. ii. Variation. iii. Phenotype.
(b) Study the pedigree below and then answer the questions that follow.



KEY

○ = Females

□ = Males

Open figure indicate normal phenotype; black figure indicate haemophilia individuals.

- i. What is the probable genotype of 1?
 - ii. Is the answer to (i) above 100% certain? Explain.
 - iii. What is the genotype of 5 and 9?
 - iv. Justify your answer in (iii) above
 - v. If 3 marries normal man, what are the chances that will have a haemophilic son?
Illustrate your answer.
11. Elaborate any three (3) traditional and three (3) modern methods used in food processing, preservation and storage.
 12. Explain six (6) factors that affect the body immunity in human being.
 13. Explain the functions of the major components of the human skeleton and their adaptations.

BOOK KEEPING

1. For each of the items (i) – (x) choose the correct answer from among the given alternatives and write its letter beside the item number in the answer booklet/sheet(s) provided.
 - i. Given the cost of goods sold is shs.800, 000/= and margin of 20%, what is the percentage of mark up?
A. 40 B. 25 C. 50 D. 75
 - ii. The manufacturing account seeks to arrive at.
A. Production costs paid in the year. D. Cost of goods produced.
B. Cost of goods sold. E. Gross profits of goods sold.
C. Net profit of goods produced.
 - iii. Where there is no partnership agreement, profits and losses must be shared.
A. In the same proportion as capital.
B. Equally D. In the same proportions to current accounts
C. Equally after adjusting capital balances
D. As required by law of the country.
 - iv. A provision for bad debts is created when.
A. Debtors becomes bankrupt. D. Debtors cease to be in business.
B. In need of creating bad debts. E. In need of writing off bad debts.
C. Debtors becomes absolute.
 - v. Which of the following is nominal account?
A. Bank A/C B. Furniture and fittings.
C. Motor vehicles A/C. D. Motor vehicles running expenses.
E. Bank overdraft.

- vi. Which document is raised when goods are received from debtor?
 - A. Debtor note C. Credit note D. Goods received note
 - B. Sales invoice. E. Purchases invoice.
- vii. Which of the following should be charged to profits and losses A/C?
 - A. Work in progress C. Direct materials costs
 - B. Carriage on raw materials D. Office rent E. Indirect labour.
- viii. Receipts and payments account does not show.
 - A. Cheque paid out during the year D. Accumulated fund
 - B. Receipts from sales of fixed assets E. Bank balance
 - C. Cash balance.
- ix. Which of the following is correct?
 - A. Drawing increases capital. D. Profits decreases capital.
 - B. Loss increases capital. E. Drawings are added in capital
 - C. Profits increases capital.
- x. Which of the following is not an asset?
 - A. Loan to somebody. C. Bank balances D. Bank overdraft
 - B. Cash borrowed from somebody. E. Furniture bought on credit.

2. Match the responses in **list A** with the statements in **list B** by writing the letter of the correct response beside the item number.

LIST A	LIST B
(i) Is the revenue received in advance.	A. Error of omission.
(ii) Is when a transaction is completely forgotten form the books of accounts.	B. Error of commission.
(iii) Is when the double entry observe the incorrect figures.	C. Error of principle.
(iv) Is a temporary account used to make the trial balance totals equal.	D. Compensating error
(v) Is when the correct amount is entered in the wrong class of account.	E. Error of original error
(vi) Is the revenue which is not yet received.	F. Error of completely reversal of entries.
(vii) Is when the correct amount is entered in the wrong personal accounts	G. Correction of errors.
(viii) Is the process by which mistakes committed in the books of accounts are corrected.	H. Suspense account.
(ix) Is when the error cancel out each other.	I. Accrued revenue.
(x) Is when the transactions are shown in wrong side of the account.	J. Unearned revenue.

3. From the following you are to draw up the trading account for Fine's Department Store for the year ended 30 June 2016.

Stocks:	1.7.2015	30.6.2016
	Tshs.	Tshs.
Carpet Department	16,100	18,410
White Goods Department	37,916	35,119
Music Department	31,222	40,216
Sales for the year:		Tshs.
Carpet Department		62,400
White Goods Department		151,300
Music Department		94,820
Purchases for the year:		
Carpet Department		43,600
White Goods Department		118,260
Music Department		55,924

4. (a) Give out five (5) factors that can cause a difference in balance between cash book and bank statement.
 (b) List three purposes of a cash book.
5. (a) As a business student with basic knowledge of Accounting identify possible mistakes from the following statements and correct them via Journal Entries.
- Cash sales of Tshs. 30,000 were debited Bank.
 - Cash paid for expenses were debited to Expenses.
 - An amount of debtors balance Tshs. 10,000 was not included in Debtors Account.
 - Purchases of Building Tshs. 40,000 were recorded to Buildings Account.
 - Discount allowed was undercasted by Tshs. 200.
- (b) Prepare Partners Appropriation Account from the following information extracted from Abdul-aziz & Alex Partnership who shares Profits and Losses equally:

Gross income less expenses of the business		13000
Salaries of the partners:	Abdul-aziz	1000
	Alex	1000
Commissions:	Abdul-aziz	1500
	Alex	Nil
Bonuses to partners:	Abdul-aziz	Nil
	Alex	1500
Interest on Capital:	Abdul-aziz	30000
	Alex	29000
Interest on Drawings:	Abdul-aziz	1000
	Alex	600

6. At the beginning of the financial year on 1 April 2015, a company had a balance on plant account of Tshs.372, 000 and on provision for depreciation of plant account of Tshs.205, 400.

The company's policy is to provide depreciation using the reducing balance method applied to the fixed assets held at the end of the financial year at the rate of 20% per annum.

On 1 September 2005 the company sold for Tshs.13, 700 some plant which it had acquired on 31 October 2001 at a cost of Tshs.36, 000?

The company acquired new replacement plant on 30 November 2005 at a cost of Tshs.96, 000, inclusive of installation charges of Tshs.7, 000.

Required:

Calculate:

- (a) The balance of plant at cost at 31 March 2016
 (b) The provision for depreciation of plant at 31 March 2016
 (c) The profit or loss on disposal of the plant.
7. (a) Use your comprehensiveness ability from single entry to calculate a Gross Profit for the year ending 2015, data below were made available:

Account Name	Balance (Shs.)	
	2017	2018
Stock	35000	28000
Debtors	400000	650000
Creditors	350000	470000
Cash Transactions		Shs.
Sales		300000
Purchases		195000

- (b) Stanley and Barclay enter a joint venture to share profits or losses equally resulting from dealings in second hand digital TVs. Both parties take an active part in the business, each recording his own transactions. They have no joint banking account or separate set of books.

2018

- July 1 Stanley purchased four TVs for a total of Shs.1, 100.
 3 Stanley pays for repairs Shs.840.
 4 Barclay pays office rent Shs.300 and advertising expenses Shs.90.
 6 Barclay pays for packaging materials Shs.34.
 7 Barclay purchases a TV in excellent condition for Shs.600.
 31 Stanley sells the five TVs to various customers, the sales being completed on this date, and totaling Shs.3, 100.

Show the relevant accounts in the books of both joint ventures and memorandum joint venture account.

CIVICS

1. For each of the items (i) – (x), choose the correct answer among the given alternatives and write its letter beside the item number in the answer booklet(s) provided.

- (i) Tanganyika became a republic on
A 9th December 1961 B 9th December 1962 C 26th April 1964
D 12th January 1964 E 14th October 1963
- (ii) Which one of the following is a characteristics of formal sector in Tanzania
A Employees wages are often low
B Lack of permanent business places
C Employees lack social security protection
D Low capital investment
E Business activities are regulated by taxation law
- (iii) The current constitution of the United Republic of Tanzania was enacted in
A 1977 B 1961 C 1964 D 1964 E 1965
- (iv) Which of the following is the second step in problem solving process?
A Initiating mediation B. Agree in solution
C Gathering information D. Defining the problem
E Generating alternatives
- (v) The ability of a person to think and come up with new idea is known as
A Creative thinking B. Critical thinking C. Decision making
D Problem solving E. Deep thinking
- (vi) The major driving force of globalization is
A. Rapid population growth
B Revolution in communication and information technology
C Improvement of transport and communication
D Development of multi-lateral co-operation
E Colonialism
- (vii) The way male and female are portrayed in the society is referred to as
A Gender Blind B Gender discrimination C Gender role
D Gender stereotyping E Gender balance
- (viii) The parliament of the United Republic of Tanzania is divided into ;
A The prime minister and the National Assembly
B The president and the National Assembly
C The speaker and the National Assembly
D The National Assembly and the Parliament
E The Clerk and the National Assembly

- (ix) The following are indicators of poverty except
 A low per capita income
 B Low level of science and technology
 C Low rate of infant mortality rate
 D Low life expectance
 E High illiteracy rate
- (x) Aspect of culture which involves the tangible things
 A Non-material culture B Traditions C Customs
 D Language E Material culture

2. Match the items in List A with the correct response in List B by wring the letter of the corresponding response beside the item number in the answer booklet(s) provided.

List A	List B
(i) The exercise of fairness and justice to all sexes without discrimination.	Gender analysis
(ii) The situation where one sex is treated either better or worse than the other.	B. Gender blindness
(iii)The way men and women are shown in the society.	C. Sexuality
(iv)Inability to know that there are different gender roles	D. Female Genital Mutilation
(v) The systematic effort to identify and understand the roles of women and men within a given society.	E. Gender equity
(vi)A globally accepted strategy for promoting gender equality.	F. Gender discrimination
(vii) Social relationship between male and female.	G. Gender balance
(viii) Biological different between male and female.	H. Gender equality
(ix)Situation where by women are treated badly compared to men.	I. Widow inheritance
(x) The removal of the outer part of the sexual organ of a women	J. Gender stereotyping
	K. Bride price
	L. Sexual intercourse
	M. Women discrimination
	N. Gender oppression
	O. Women empowerment
	P. Sex
	Q. Gender
	R. Gender mainstreaming
	S. Polygamism

3. Read the following passage and answer the questions that follow.

Many people participate in wealth production in our country. Tanzania is endowed with many resources. It has fertile land and favorable climate. However, labour is needed in order to benefit from these favorable factors. In our country labour sources include; peasants, small scale farmers, livestock keepers, traders, workers in crafts, and industrial workers in general. Most of working force is employed in agriculture about 75-80 percent of Tanzania working force is employed in agriculture. This is because our agriculture is not mechanized. The majority of agricultural producers in our country are peasants. They still use simple tools such as hoes.

In addition to farming, our country is rich in livestock consist of cattle, goats, sheep, poultry and pigs. Livestock keepers provide Tanzania with meat, milk and eggs which are very important a source of protein. They are also source of government revenue, for example hides and skins are exported to earn foreign currency. They are also used locally in making shoes for people.

Another important activity and source of employment and income is fishing. Much labour is used in fishing especially for those living near lakes and oceans. Unfortunately, the fish industry is seriously affected by lack of experts and efficient modern fishing technology. Some fishermen use dangerous and destructive methods such as explosive in fishing.

Questions

- (a) Identify the suitable title of this passage.
 - (b) According to the passage, what are four main sources of labour in Tanzania?
 - (c) With reference to the passage, how can Tanzania benefit from livestock keeping sector?
 - (d) List down two problems that hinder fishing industry in Tanzania.
 - (e) In your own words, what can be done in order to improve the agriculture sector in Tanzania? (Give four points).
4. (a) (i) What is local government?
 - (ii) List down four sources of local government revenue.
 - (b) Outline five importance of national constitution.
5. Examine six cause root of improper behavior in a society.
 6. "Globalization is blessing to Tanzania." Defend this statement by using six points.
 7. Examine six advantages of the private sector to the economy of Tanzania.
 8. "Failure to apply life skills can lead to problems." Identify six consequences of not applying life skills.
 9. Tanzania is credited for promoting and broadening the scope of democracy. Give six points to show the validity of this statement.
 10. "To a great extent, the road accidents in Tanzania are manmade." Justify this statement by giving six points.

COMMERCE

1. For each of the items (i) – (ii), choose the correct answer from among the given alternatives and write its letter beside the item number in your answer sheet.

- (i) Which of the following document must be completed by an importer when clearing goods before custom officer?
- A. Bill of sale
 - B. Bill of lading
 - C. Bill of entry
 - D. Bill of sight
 - E. Warehouse warrant
- (ii) In hire purchase buying:
- A. Hired cars are bought
 - B. Sellers remains the owner of the goods until payments of the last installment.
 - C. Buyers own the goods on paying the first installment
 - D. Purchases are made from hire premises
 - E. Seller remains the owner of the goods regardless the payment of all installment
- (iii) The basic commercial activities are:
- A. Advertising, banking and transport
 - B. Export trade, import trade and retail trade
 - C. Warehousing, insurance and transport
 - D. Retail trade and wholesale trade
 - E. Home trade and foreign trade
- (iv) PAYE is a tax:
- A. Imposed on incomes of individuals
 - B. Imposed on income of employees
 - C. Levied on profits of limited companies
 - D. Imposed on expensive imported goods
 - E. Imposed on the sale of stocks
- (v) If goods were listed at 20,000/= how much would be paid by customer if he was allowed 10% trade discount and 2% cash discount?
- A. 17,650/=
 - B. 17,460/=
 - C. 17,640/=
 - D. 17,560/=
 - E. 17,820/=
- (vi) Marketing of imported and locally manufactured goods in Tanzania is largely under:
- A. National Distribution Limited (NDL)
 - B. Board of External Trade (BET)
 - C. Board of Internal Trade (BIT)
 - D. Cooperative societies
 - E. Board of Directors

- (vii) The main objective of commerce is to:
- Enable consumers to buy goods
 - Enable traders to earn profit
 - Bridge the gap between producers and consumers
 - Help manufacturers to produce goods for use
 - Satisfy human needs
- (viii) A favourable balance of trade means:
- A country's value of exports exceed its value of imports within a specific year.
 - A country's value of imports exceed the value of exports within a specific year.
 - Excess of the growth of the value of goods produced in a specific year compared with the previous year
 - More traders have moved in the country in the specific year compared with the previous year.
 - More goods were registered to be exported in the specific year than in the previous year.
- (ix) Profoma invoice is:
- An inquiry
 - An order
 - A quotation
 - A receipt
 - A cheque
- (x) Which of the following items does not appear in the memorandum of an association
- Power of directors
 - Type and amount of capital
 - Objects of a company
 - Name of company
 - Liability clouse

2. Match the responses in LIST B with statements in LIST A by writing the letters of the correct response beside the item number.

LIST A	LIST B
(i) Is the whole process of putting or arranging goods manufactured by a firm	A. Advertising variables
(ii) The exclusive legal rights to reproduce, publish and sell the product in the form of literacy, musical or artistic work	B. Markerting mix
(iii) Market structure with few suppliers and many buyers	C. Variable grading
(iv) This is the part of brand which can be pronounced when a buyer order for the product	D. Fixed grading
(v) Set of controllable variables that the firm can use to influence the buyers response.	E. Marketing research
	F. Product investigation
	G. Export merchants
	H. Board of External Trade
	I. Monopolistic market
	J. Oligopoly

(vi) A situation under which rival firms undertake a series of price reduction with the aim of capturing a greater market.	K. Perfect competition market
(vii) Refers to the process whereby the same standards are used year after year.	L. Brand mark
(viii) An investigative activity which is carried out to establish the consumers demand for a product	M. Brand name
(ix) Undertaking marketing goods for exports	N. Price freedom
A market structure where there is many buyers and sellers with homegeneous product sold in the market	O. Price war
	P. Packaging
	Q. packing
	R. Producer's right
	S. Copy rights

3. Write is meant by the following insurance terms
- Double insurance
 - Re-insurance
 - Cover note
 - Assessors
 - Premium
4. (a) Outline five features of a good tax system
(b) In briefly analyze five merits of direct taxes
5. Differentiate the following terms
- Direct production and indirect production
 - Chain store and departmental stores
 - Bill of lading and charter party
 - Share and debenture
6. Study the schedule below:
- | | | | | | |
|---------------------|------|-----|-----|-----|------|
| Demand in kg | 200 | 400 | 600 | 800 | 1000 |
| Price in shs per kg | 100 | 80 | 60 | 40 | 20 |
| Supply in kg | 1000 | 800 | 600 | 200 | 100 |
- From the above information calculate the price elasticity of demand when price changes from shs. 40 per kg to shs. 20 per kg.
 - State whether the price elasticity of demand is elastic or inelastic or unitary. Give reasons.
7. (a) Explain five features of a private limited company.
(b) What is a partnership deed? Outline five contents of a partnership deed.
8. Examine six services offered by Tanzania Postal Office.
9. Discuss current trends in Tanzania banking and financial services.
10. (a) What is containerization?
(b) Explain five advantages and three disadvantage of containerization.

ENGLISH LANGUAGE

COMPREHENSION AND SUMMARY

1. Read the passage below carefully and answer the questions that follow

There are three kinds of education in Africa. There is the old traditional education; there are the remains of the colonial schooling, which varied according to how the European power saw African requirements; and there is the post-independence attempt to find an education suitable for the needs of modern Africa.

The old education grew naturally out of the village and tribal ways of life, and there was much to commend it. A child had to learn how to deal with the dangers of his surroundings and how to treat his fellows. He knew about weather, love and the skills of a spear, axe and hoe from old men. His mother taught him correct speech, behaviour and respect for his elders. Throughout his childhood, it was impressed on him that he could not live alone - he must 'conform', and accept the ways of the tribe. He lived in a world of kinship: his kin gave him security in sickness and old age. Law and ownership of land, too, were based on kinship. So the child learned the rites which kinship would demand throughout his life from birth to maturity, marriage and death.

Much of this education was informal. The home was the child's school, where he learned traditional legends and proverbs. (For example, the reader might like to work out the meaning of these two Baluyia proverbs from Kenya: 'A person running alone thinks he is the fastest runner' and 'a small bird cannot advise a bigger one'). This social education had a great emphasis on correct conduct and confidence. A traveller in Africa in 1930s wrote: 'I have seen three children between four years and six quite competently preparing a meal with no supervision'. But severe tests of endurance were a more formal part of this education. Chagga boys in the old days had to sleep in holes in the ground at night for nine months, often in the cold mountain air. A boy was required to go on a lonely expedition into the forest to kill a leopard with a bow and arrow. Bena girls aged nine to thirteen, were ducked repeatedly in streams, or terrified by women pretending to fall dead at their feet, and by the appearance of monsters.

This traditional form of education had the advantage of preparing a child for life in the community; it did not in general encourage him to be ambitious or independent, or teach him to meet the needs of the modern world. So in the colonial years missions and 'European' schools taught the kinds of things children in Europe were taught. This produced small westernised elite in some colonies, but it was severely criticised for having little to do with African needs. Reading books had European birds and snow scenes in them; arithmetic problems dealt with taps, and wall-paper rolls. Few of these things had anything to do with many African children's environment.

Colonial education too has been criticised because it was, to quote President Nyerere of Tanzania, 'motivated by a desire to inculcate the values of the colonial society and to train individual for the service of the colonial states'. The state interest in education was based on the need for local clerks and junior officials, and there was thus a heavy emphasis on subservient attitudes and white-collar skills.

In the post-independence era, African needs are being rethought. Questions are being asked such as, how many universities should a country have, whilst half of an age group gets no schooling at all? Some highly trained electrical engineers are needed for the power stations; but Africa also needs men skilled in the relatively simple skills of wooden bridge construction, laying late rite roads and building single-story houses. Civil servants especially need a good secondary education if they are to deal with matters ranging from money for a new agricultural scheme to collecting information for government approval of a harbour extension. For this, says one writer, 'a developing continent must clearly learn to be practical'. In Africa parents have become convinced that education is the key to a good job and family prestige too. But it has its drawbacks. In many countries secondary and college education means that children have to leave the rural areas for the towns and later as mean they are not returning to work on the farms and produce the food. The opportunities and leisure attractions of the towns are too tempting.

Questions

- i. From this passage we can tell that colonial education was to
 - A. help Africans acquire their independence
 - B. help Europeans swiftly rule the Africans
 - C. meet the needs of modern African
 - D. replace African tradition and culture
 - E. Civilise the African children.
- ii. The word 'conform' in the second paragraph means
 - A. comply with rules or general custom
 - B. discuss with other members of the society
 - C. respect the elders of the society
 - D. mix with the rest of members of the society
 - E. disagree with the community values.
- iii. 'Elite' in the fourth paragraph means
 - A. a group of 'selected people
 - B. a group of colonialists
 - C. a group of westernised Africans
 - D. a group of rich people
 - E. a disadvantaged group.
- iv. The traveler in East Africa was surprised (in paragraph three) because
 - A. he could not expect such young children to prepare such a delicious meal
 - B. he thought only European children could prepare a meal like that
 - C. the children could prepare a meal without assistance from an older person
 - D. the children were not competently supervised when preparing the meal
 - E. the children were too few to prepare a meal.
- v. We can deduce from paragraphs four and five that colonial education was
 - A. too difficult for the Africans
 - B. irrelevant to the African situation
 - C. showing European birds and snow that did not exist in Africa
 - D. preparing Africans for highly paid jobs
 - E. preparing Africans for leadership in missions

- vi. According to the writer, education in Africa today
 - A. should train electrical engineers
 - B. does not require universities
 - C. should not prepare a western elite.
 - D. should be practical oriented
 - E. should base on secondary school level only

- vii. The writer says that in traditional education “severe tests of endurance were a more formal part of this education’. The aim of the tests was to train
 - A. boys and girls not to fear the sight of monsters
 - B. boys and girls to survive in the cold
 - C. a Chagga boy not to fear a leopard
 - D. Bena girls not to run away from the prêt endingly dead women falling at their feet
 - E. boys and girls to tolerate in extremely difficult conditions.

- viii. Nyerere criticised colonial education because
 - A. it perpetuated the interests of the colonial society
 - B. it prepared local clerks and junior officials
 - C. it encouraged university level only
 - D. it inculcated the values of the colonized society
 - E. he just hated colonialists.

- ix. In the seventh paragraph, the question ‘... how many universities should a country have, when half of an age group gets no schooling at all?’ implies that the writer
 - A. does not support university education
 - B. supports university education for children who got no schooling at all
 - C. encourages more emphasis be put on lower levels of education than the university education
 - D. discourages lower levels of education for children who got no schooling at all
 - E. insists that civil servants should just receive good secondary education.

- x. From the last paragraph the writer observes that education in many African countries is
 - A. preparing young people for rural life
 - B. preparing young people for urban life
 - C. attracting young people to areas which they are reluctant to leave
 - D. trying to prepare young people for rural life, but the urban areas are too tempting
 - E. preparing young people for rural life but they do not like farming.

2. Read and summarize the following passage in two sentences

How can we depend upon gift, loans and investments from foreign countries and foreign companies without endangering our independence? The English people have a saying which says “He who pays the piper calls the tune”

How can we depend upon foreign governments and companies for the major part of our development without giving those governments and countries a great part our freedom and expect them to do as we please? The truth is that we will end up in disappointment.

PATTERNS AND VOCABULARY

3. Fill in the blanks by writing the correct form of the word from the brackets against the item number.

Tanzania (i)_____ (take) a significant step to (ii)_____ (nation) her means of wealth after Arusha declaration of 1967 and therefore (iii)_____ (embrace) socialism. Tanzania (iv)_____ (create) village communities through the (v)_____ (village) policy. People (vi)_____ (settle) in such village communities to provide (vii)_____ (collect) and joint efforts needed to (viii)_____ (maximum) production of wealth.

4. Choose the correct word from the given list below to fill in the blanks in the following sentences: **beg, pursue, managed, ancestors, display, pangaea, mate, similar, pepper, Gondwanaland**

- _____ is a type of friend one is forced to be with in life
- _____ has the same meaning as the word portray
- _____ is the first super continent named by scientists
- _____ are our forefathers and mothers
- _____ means achieved, controlled and or succeeded
- _____ is the same as the English word request
- _____ is to undertake
- _____ is close in meaning with the word resemble

5. In each of these sentences one of the words is wrong. Identify and correct them by writing the correct spelling for each word.

- The furniture's are sold at cheaper price.
- The equipment is needed at workplace today
- We are water the garden now.
- I took a loaf of advice from Juma last week
- Girls has to liberate on their own from boys' traps
- Ali meet me for a discussion last evening.
- Muchin formations about a town is gathered through narrations.
- Both house girls and house boys knows sufferings.

6. Using the words below, complete the following expressions.

Purpose, vision, delegates, sex, gender, congregation, choir, legend, ballad, fans, comrades, audience.

- A final target that drives your undertaking is known as a _____.
- A motive or reason for doing a job or business is named a _____.
- A group of people worshipping at church session is collectively called a _____.
- A story which may not be true is said to be a _____.
- Sent representatives with special mission and interests to negotiate on behalf of a state are called the _____.
- A biological trait which distinguishes man from a woman is a _____.

- g) A poem prepared for dramatization on stage is classified as a _____
- h) People belonging to the same political parties or military grade call themselves _____

7. Rewrite the following sentences according to the instructions given after each:
- Halima is as tall as Asha. (Split the sentence to make two distinctive sentences)
 - Juma likes Ugali. Ali likes Ugali too (Join the two sentences by using neither---nor)
 - “ I will come Tomorrow” Musa promised (Report this statement)
 - The Democratic Republic of Congo invites our country to state celebration (Passivise the sentence)

LANGUAGE USE

8. Rearrange the following five sentences into a logical sequence to make a meaningful paragraph by writing the corresponding letter in the answer booklet provided. Use the following format for your answers.

Sentence number	1	2	3	4	5
Letter					

- They were shouting to the bus driver who caused a serious accident.
- On my way to the market, I met a crowd of people shouting.
- Finally, the bus driver was taken to the nearby police station.
- One day, I was asked to go to the market by my mother.
- Two people who were on the motor bicycle died on the spot.

9. Match each expression in **List A** with the correct word from **List B** by writing its letter beside the item number in the answer booklet(s) provided. Use the following format for your answers.

LIST A	LIST B
(i) Plants (ii) Pupil (iii) A place in boarding school where students/pupils sleep at night. (iv) A place where people buy and sell goods (v) Laboratory	Community A shop A dormitory A place where experiments are conducted A hospital Part of an eye or type of factory Is part of an eye or means learner A factory or a macro organism

Numbers	i	ii	iii	iv	v
Letters					

10. Answer **all** questions from alternatives given A, B, C and D.
- A. Write a story titled A DAY SHE WILL NEVER FORGET (At least 250 words)
 - B. Imagine you are the new appointed Regional Commissioner of Kigoma region. In not less than 200 words write a first speech you would deliver in an official welcoming ceremony at aqua lodge beaches. Focus on your plans as a new president Magufuli' appointee.
 - C. Write an invitation card to request your sisters' friends to attend on your niece's birthday dinner party. Also write telephone messages from those who will call for excuses. Use fictitious names.
 - D. Write a letter to the Editor of Guardian Newspaper on the challenges of democracy in Tanzania. Use fictitious name and address

RESPONSE TO READING

Answer **ALL** questions from this section.

LIST OF READINGS

NOVELS AND SHORT STORIES

A Wreath for Fr. Mayer	- S.N. Ndunguru (1977), Mkuki na Nyota
Unanswered Cries	- Osman Conteh, Macmillan
Passed Like a Shadow	- RM Mapalala (2006), DUP
Spared	- S.N. Ndunguru (2004), Mkuki na Nyota
Weep Not Child	- Ngugi wa Thiong'o (1987); Heinemann
The Interview	- P. Ngugi (2002), Macmillan

PLAYS

Three Suitors: One. Husband	- O.Mbia (1994), Eyre Methuen
The Lion and the Jewel	- W. Soyinka (1963),
This Time Tomorrow	- Ngugi wa Thiong'o (1972), Heinemann
The Black Hermit	- Ngugi wa Thiong'o (1968), Heinemann

POETRY

Songs of Lawino and Ocol	- O.P'Bitek (1979), EAPH
Growing up with Poetry	- D. Rubadiri (ed) (1989), Heinemann
Summons	- R Mahala (1960), TPH

11. How does this poem describe the position and roles of women in our societies? (Give eight points).

Echoes

Me,
 I plead guilty
 That my woman is a tool
 To fulfil my sexual desires,
 That she's the source of sexual pleasure.
 A garden
 Where I plant my deeds
 So as to get children
 Which are mine.
 And not hers,

Who have the right
To inherit my property,
And not her.
I plead guilty
That I have regarded my woman
As my property,
Because I paid the bride price
To her parents.
What did her parents think
When they demanded
The cows
The tank of beer,
The goats,
The money
They knew
That they were making wealth out of me
Because their girl will work for me
Just like a slave.

I plead guilty
That I have inherited the stupidity
Of my slavery age parents,
That I have prolonged inequality.
That I have continued oppression.
Though unknowingly,
I am guilty
For dominating
My woman.
My nation plead guilty
That it has shut an eye
To the rights of women,
That it has kept women
In the kitchen,
In the church,
And at home
To look after children.
My nation pleads guilty
That it has given little room
To the she sex,
That the number of girls at school
Has always been smaller
Than that of boys.

My nation pleads guilty
That it has always given a narrow chance
For women to become
Teachers,
Physicians,
Scientists,
Leaders of the state
And public organizations,

That their percentage
Has always been small.

I agree that
If a woman is to be oppressed
By a man
Who is in turn exploited,
Who is in turn disregarded
By the bourgeoisie,
By the petty bourgeoisie,
Then she's ruined:
She has nothing to live for!

I agree that
To deny them freedom
Means to refuse human equality,
Means to accept capitalism
Deep in our hearts
And also means refusing
The development of the majority

12. Poets compose poems not just for pleasure and entertainment but for addressing human social, political and economic issues. Using Song of Lawino and Ocol present eight points to verify the statement
13. 'Rural life in Africa is itself a separate world, a world with its own life styles and manner'. Using two plays of your choice provide four pieces of evidence from each play to substantiate the said analogy.
14. 'In human society misunderstanding is inevitable and this emanates from the roots of the problem which are evident in many societies'. With reference to two novels discuss the eight major roots of misunderstanding, four roots from each novel.

GEOGRAPHY

PHYSICAL AND MATHEMATICAL GEOGRAPHY

1. For each of the following items i-x choose the correct answer from the given alternative and write its letter beside the item number.
 - (i) The East Africa TV channel is conducting an interview at Alaska $75^{\circ}W$ at 7.30 pm Tuesday. At what time and day will the people in Katavi $45^{\circ}E$ be watching the TV?
A 9.30 p.m Tuesday B 3.30 p.m Wednesday C 11.30 p.m Wednesday
D 12.30 p.m Tuesday E 9.30 am Wednesday
 - (ii) It occur when the earth passes between the moon and the sun;-
A Solar eclipse B Earth eclipse C Lunar eclipse
D Eclipse of the Earth E Umbra eclipse

- (iii) Is the raised part of the ocean floor?
 A Mountain B Isenberg C Oceanic ridge
 D Oceanic trenches E Deep see plain
- (iv) The temperature at Dodoma from mean sea level is 31⁰c what will be the temperature of Karatu 2500 meter above sea level.
 A 16⁰C B 15⁰C C 46⁰C
 D 36⁰C E 30.4⁰C
- (v) An earthquake begins
 A Along the Fault or fissure B At the inner core of the earth
 C At the epicenter D At the focus
 E At the Mantle layer
- (vi) The rock formed from the remain of once living organism
 A Coral B Marble C Gneiss
 D Granite E Humus
- (vii) Among of the following are the characteristics of the Tropical climate EXCEPT
 A It is found at altitude of 3⁰-8⁰ N and S
 B It compose of two season, dry season and Rain season
 C It compose of Tropical forest
 D It is found along the western Morgan of the continental
 E It compose of season swamps
- (viii) The lithosphere of the earth is made up of;-
 A Molten materials called magma B Silica and Magnesium
 C Iron and nickel (nife) D Iron and zinc
 E Silica and Alumina
- (ix) It involve chemical reaction when water react with mineral content on rock
 A Weathering chemical B Biological weathering
 C Chemical weathering D Physical biological weathering
 E Physical chemical reaction
- (x) Which of the following is correct about the concept of folding
 A Formed when two block act against each other on the old sedimentary rock
 B Formed when two block act apart from each on the old sedimentary rock
 C Formed when two crust act against each other on the young sedimentary rock
 D Formed when two crust act against each other on the young igneous rock
 E It compose of block that are exposed on the earth surface

2. Match a phrase in list A with the responses in list B by writing the letter of the correct responses beside the item number

LIST A	LIST B
i. The soil	A. The thin layer of the earth know as regolith
ii. Soil PH	B. The top most part of the earth made up with consolidated materials
iii. Soil Texture	C. Soil catena
iv. Soil organic	D. Is the vertical arrangement of individual particles of soil
v. Soil profile	E. is the amount of Alkaline and acidic in the soil measured by PH value scale
	F. When the acidic is high than Alkaline
	G. Derived from the decomposition of plant and animal dead materials
	H. Compose of Inorganic and Organic matter only
	I. It depend on the size of the individual particles of soil
	J. The vertical and Horizontal arrangement of soil

3. (a) With the aid of well labeled diagram explain the formation of the features

- i. Barchans
- ii. Cliff
- iii. Cave
- iv. Bay land

- (b) Explain three necessary conditions for the formation of Barchans

APPLICATION OF STATISTICS, INTRODUCTION TO RESEARCH AND ELEMENTARY SURVEY

4. Study careful the hypothetical data which show the export of goods in Tanzania from 2010 to 2013 in “000”tones

CROPS	2010	2011	2012	2013
COTTON	65	45	70	80
SISAL	35	40	30	35
COFEE	50	70	55	55

- a) Name statistical way used to present the data above
- b) Present the data above by using a compound bar graph
- c) Comment on the export values.

5. (a) (i) What is hypothesis in research
(ii) Explain two types of hypothesis in research
- (b) Define the following terms
 - (i) Sample
 - (ii) Sampling error
- (c) Explain three ways to avoid sampling error.
6. (a) Define the following terms as used in survey
 - i. Ranging
 - ii. Chaining
 - iii. Booking
- (b) Why the follower direct the leader left, right and center during survey process (3 points)

MAP READING AND PHOTOGRAPH INTERPRETAION

7. Study careful the printed Map extract of Songwe River (Sheet 244/3) then answer the following questions;-
 - a) Calculate the area covered by Ruanda Town in km² by using grid square method.
 - b) Measure the bearing and direction of Muyovinzi to Myavisi station
 - c) Name three ways' used to show relief on the map
 - d) Explain three factors for population distribution on the Map
 - e) Describe the nature of the vegetation shown on the map.
 - f) Name two (02) natural and two (02) artificial content shown on the map.
8. (a). How a person can determine the desert climatic area on the picture.(four points)
- (b) Differentiate aerial oblique from ground oblique photos.
- (c) Identify then name type of photograph which:
 - i. Does not show horizon
 - ii. Taken at slant angle
 - iii. Taken at angle less than 90 degree
 - iv. Only show front view
 - v. Has less scale distortion
 - vi. Taken from the air and show top and sides view

PART I: REGIONAL FOCAL STUDIES

9. Explain six (6) strategies which empowered by Tanzania government in solving problem of Transport and communication sector.
10. “Although Tanzania has many water bodies resources but does not develop in fishing industry” Justify this statement by using six (6) points.

PART II: ENVIRONMENTAL ISSUES, POPULATION AND SETTLEMENTS

11. (a) What is biodiversity ?
(b) Explain four (4) causes for the loss of biodiversity and propose four (4) measure to solve the problem.
12. Examine six (6) factors which leads to the decreasing of mortality rate in Tanzania.

HISTORY

1. For each of the items (i) (x), choose the correct answer from among the given alternatives and write its letter beside the item number in the answer booklet provided.
 - i. There are two levels of looking at history. At the first level history studies man's struggles to obtain fundamental material needs. At the second level history _____
 - A. studies past records and human achievements
 - B. investigates human failures and success in course of production
 - C. searches for information about past societies in order to discover past cultures
 - D. studies relationships that develops between man and man, and between man and the environment in course of material production
 - E. describes the past so that one knows how the present came into being and this gives opportunity to forecast the future.
 - ii. The large state in Central Africa from 1885 to 1908 in personal union with the Kingdom of Belgium under Leopold II was known as _____
 - A. Katayamvo
 - B. Tsonga
 - C. Congo Free State
 - D. AmaZulu
 - iii. Christopher Columba and his crew discovered the present day North America in ____
 - A. 1652
 - B. 1498
 - C. 1492
 - D. 1698
 - E. 1693
 - iv. What was the achievement of man during the late Stone Age?
 - A. Discovered fire and ate cooked food.
 - B. Started walking upright using forelimbs.
 - C. Made and used pebble and chopping tools.
 - D. Started walking on all four limbs
 - E. Domesticated animals and wild fruits.
 - v. Which one among the following places did people extract gold from in West Africa?
 - A. Bure and Wangara
 - B. Meroe and Egypt
 - C. Taghaza and Bilma.
 - D. Axum and Meroe.
 - E. Uvinza and Bure.
 - vi. Which one among the following factors contributed to the rise of states in North Africa?
 - A. Low level of productive forces.
 - B. Hunting and gathering activities.
 - C. Trade across Sahara and Islam.
 - D. Presence of chartered companies.
 - E. Absence of classes among the people.

- vii. _____ is a unifying name for two groups of peoples of Southern Africa who share physical and putative linguistic characteristics distinct from the Bantu majority of the region. Culturally, they are divided into the foraging San, or Bushmen, and the pastoral Khoi, or more specifically Khoikhoi, previously known as Hottentots.
- A. Khoisan peoples B. Herero C. Namaqua D. Ovambo E. Damara.
- viii. The people of African origin in Diaspora supports the development of African development through _____
- A. The East African community D. Organization of African Unity
 B. East African Community E. United Nations Organization
 C. Pan Africanism.
- ix. Which one of the following best explains the reason which made Tanganyika to use constitution means during her struggle for independence?
- A. It was a mandated territory. D. It was a trusteeship territory.
 B. It adopted the Open Door Policy. E. It was a settler colony.
 C. It was under indirect rule policy.
- x. The smallest unit of French political administration in French Colonial Africa was headed by a European officer and consisted of several cantons, each of which in turn consisted of several villages, and was instituted in France's African colonies from 1895 to 1946. This subdivision was named as _____
- A. Circle system C. Assimilation D. Association E. Direct rule
 B. Indirect rule

2. Match the stems in **List A** with the correct responses in **List B** by writing the letter of the correct response beside the item number in the answer booklet provided.

List A		List B
i.	The Kanem Empire	<p>A. The name of the kings (or mai, as they called themselves) of the Kanem-Bornu Empire, centered first in Kanem in western Chad, and then, after 1380, in Borno (today's northeastern Nigeria).</p> <p>B. A Mandé people who descend from the Bafour and are closely related to the Imraguen of Mauritania, founders of the ancient empire of Ghana c. 750–1240 CE. Subgroups include the Maraka and Wangara.</p> <p>C. At its height extended across most of present-day Eritrea, northern Ethiopia, western Yemen, southern Saudi Arabia, and Sudan.</p> <p>D. An ethnic group indigenous to North Africa distributed in an area stretching from the</p>
ii.	The Soninke people	
iii.	Aksumite Empire	
iv.	Berbers	
v.	Herero Wars	
vi.	Sakalava	
vii.	In 1877	
viii.	From 11, October, 1899, to May 31, 1902	
ix.	1602	
x.	1879	

	<p>Atlantic Ocean to the Siwa Oasis in Egypt, and from the Mediterranean Sea to the Niger River.</p> <p>E. A series of colonial wars between the German Empire and the Herero people of German South-West Africa (present-day Namibia, c. 1903–1908).</p> <p>F. An ethnic group of Madagascar that occupies the western edge of the island from Toliara in the south to Sambirano in the north</p> <p>G. The Transvaal Boer republic was forcefully annexed by Britain as part of the attempt to consolidate the states of southern Africa under British rule.</p> <p>H. At its height encompassed an area covering Chad, parts of southern Libya (Fezzan) and eastern Niger, north-eastern Nigeria, and northern Cameroon.</p> <p>I. The Second Boer War started broke out and Great Britain defeated two Boer nations in South Africa: the South African Republic (Republic of Transvaal) and the Orange Free State</p> <p>J. The Dutch East India Company founded</p> <p>K. British settlement at the cape</p> <p>L. The Almoravids invaded Ghana empire</p> <p>M. Mineral revolution in South Africa</p> <p>N. The Boer trek</p> <p>O. Difagine wars</p> <p>P. Ngoni migration</p> <p>Q. Cecil Rhodes arrived in Southern Rhodesia</p> <p>R. The Sahel region</p> <p>S. Nama Herero wars</p>
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3. (a) Draw a sketch map of Africa and locate
- i. The Trans-Atlantic caravan routes
 - ii. The cape colony
 - iii. The land of Northern Rhodesia
 - iv. The city state and country where Fort Jesus was built by the Portuguese
 - v. The two African countries which were not colonized.
- (b) Mention five coastal towns in East Africa which became famous because of the commercial contacts between the people of East Africa, Middle and Far East

4. (a) Arrange the following statements in chronological order by writing number 1 to 5 beside the item number.
- i. Afterwards colonialists established colonial economy and colonial relations of production in a colony
 - ii. By the beginning of 1900's most colonial powers had successfully suppressed all initial African resistances.
 - iii. The Berlin conference of November 1884 to February 1885 paralyzed the scramble for African continent among the imperialist powers
 - iv. Then the colonialists established the colonial state to help impose colonial rule among Africans
 - v. The rise of monopoly stage of capitalism and imperialism in the mid ninetieth century in Europe made Europe unable to meet economic motives within Europe hence began to fight to secure areas of influence outside Europe particularly in Africa.
- (b) The items (i- iv) consist of four sentences which form a complete historical meaning. One of the sentences (A- E) is missing. Identify the missing sentence and write its letter beside the item number.
- (i) 1. In 1652, a century and a half after the discovery of the Cape sea route, Jan van Riebeeck established a refreshment station at the Cape of Good Hope at what would become Cape Town, on behalf of the Dutch East India Company.
2. The Dutch transported slaves from Indonesia, Madagascar, and India as labour for the colonists in Cape Town.
3. _____
4. The Conflicts arose among the Xhosa, Zulu, Sotho, and Boer groups who competed to expand their territories.
- A. The Mali Empire was an empire in West Africa that lasted from 1230 to 1600 and profoundly influenced the culture of the region through the spread of its language, laws, and customs along lands adjacent to the Niger River, as well as other areas consisting of numerous vassal kingdoms and provinces.
- B. The Ghana Empire, called the Wagadou (or Wagadu) Empire by its rulers, was located in what is now southeastern Mauritania, western Mali, and eastern Senegal
- C. The British annexed the Cape Colony in 1806 and continued the frontier wars.
- D. The British took control of Egypt, which at first took the form of indirect and informal rule and later as an official protectorate, began in the 1880s.
- E. Yoruba land was the cultural region of the Yoruba people in West Africa spanning the modern-day countries of Nigeria, Togo, and Benin.

- (ii) 1. The forerunners of colonialism came before the establishment of colonial rule in Africa.
2. These colonial compradors were the travellers, explorers, missionaries and traders.
3. The explorers supplied important information to their mother countries
4. _____
- Missionaries spread Islam throughout the interior of East Africa
 - Missionaries like William Mackinnon and Karl Peters led their Companies to exploit protectorates
 - Trading companies financed the activities of missionaries in scramble for colonies
 - Missionaries learnt native languages hence became useful interpreters when trading companies were signing bogus treaties with indigenous.
 - William Mackinnon was an explorer who headed Imperial British East African Company.
- (iii) 1. West Africans came into contact with European merchants during mercantilism.
2. The early stage of capitalism was the phase of primitive accumulation of capital.
3. _____
4. During this phase commerce was the most important activity.
- The motives of European merchants were to stop slave trade.
 - West African societies benefited much from these early contacts.
 - In Europe it was known as the age of discovery and overseas expansion.
 - The red Indians for the first time came to trade in West Africa.
 - In this trade the European slaves were exchanged for African goods.
- (iv) 1. Assimilation was introduced in Africa by French
2. _____
3. The system was similar to German direct rule
3. The system intensified resistance from the natives.
- Africans used Jumbes and Akidas to represent their problems.
 - Portuguese applied this system in her colonies in Africa.
 - The system improved the living standard of the Africans.
 - The policy banned traditional institutions.
 - The system helped the French to consolidate tribalism.
- (v) 1. Colonial transport network ran perpendicular to the coast.
2. Railroad was the chief means of transport to the coast in many colonies
3. Colonialists used the means of transport to facilitate colonial production
4. _____
- Colonial transportation concentrated in rural areas.
 - Colonial administrators, labourers and soldiers were transported to different parts of colony calling for their need and use.

- C. There was equal distribution of transport services during colonialism.
 - D. Transport services led to the higher population growth in colonies.
 - E. Transportation led to the emergence of civil wars in Africa.
5. Discuss the cause of the Boer trek and its consequences to the people of South Africa. Give three points each side.
 6. Account for the rise and fall of Mali Empire in Western Sudan. Give three points each side
 7. Why did it take too long to end slave trade in East Africa? Give six reasons.
 8. With examples elaborate the six weaknesses of colonial education.
 9. Decolonization in Portuguese colonies in Africa was tough and complicated. The colonies under Portuguese opted armed struggle instead of peaceful means. Why such colonies waged armed struggle? Give six points
 10. Explain six problems facing post-colonial African societies whose rootstrace back to colonial era.

BASIC MATHEMATICS

1. (a) Estimate the value of 4.1×0.083
 (b) Find the fractions of the following
 - i. $0.8\dot{3}$
 - ii. 0.125%
2. (a) Solve (i) $(\frac{1}{3})x = 243 - 1$
 (ii) $288 = 8x2$
 (b) If $\log y + 2 \log x = 3$, express y in term of x.
3. (a) If $a * b = a^2 + b$, find y given that
 $4 * (2 * y) = 25$
 (b) List all subset of $A = \{1, 2, 3\}$.
4. (a) Show that A (-3, 2), B (5, 6) and C (7, 2) are vertices of a right angled triangle.
 (b) Find the unit vector in the direction of vector $U = (12, 5)$
5. Find the radius of a circle which inscribes a regular hexagon with perimeter 50 m.
6. (a) Given that P is inversely proportional
 Q2 When $P = 4$ and $Q = 8$, Find the value of Q if $P = 16$.
 (b) A BOOD BUS consumes a diesel at a rate of litre for every 6 km. If the price of diesel is sh 2500 per litre. Find the cost of diesel used to travel 960km.
7. (a) X, Y and Z are to share 300,000/= in ratio of 6:4:5 respectively. How much will each get.

(b) After reduction of 30% the price of the car become Tsh 490,000. Find its price before reduction.

8. (a) Find the sum of the series

$$-8 - 2 + 4 + 10 + \dots + 82.$$

(b) In a G.P the 5th and 7th terms are - 2 and - 18 respectively. Find

i. Common ratio

ii. If the common ratio is positive find the sum of the first 10 terms of the series.

9. (a) Without using tables, simplify

$$\frac{\cos 135^\circ + \tan 60^\circ \sin 45^\circ}{\sin 135^\circ \cos 60^\circ}$$

(b) Q and R are two pegs on level ground, and both lie due West of a Flagstaff. The angle of elevation of the top of the flagstaff from P is 45° and from R is 60° . If P is 24 m from the foot of the flagstaff, Find QR.

10. (a) Solve the equation $49x^2 - 25 = 0$

(b) Find the value of x that satisfies the equation $\frac{1350}{x} - \frac{1350}{(x+3)} = 5$

11. At Hijra seminary technical section makes tables and chairs which are processed through the assembly and finish departments. For a particular order from a customer only 48 hours of work available in the assembly and 36 hours in the finishing department. To manufacture one table, it requires 34 hours in assembly and 3 hours in finishing, while a chair requires 4 hours in assembly 2 in finishing. If a chair fetches 40 shillings as profit and table 50 shillings, determine the best combination of tables and chairs to produce so as to get maximum profit.

12. The score of 45 pupils in a physics test were recorded as follows

30 65 50 62 40 35 64 32 28 59 60 82 24 35 63 68 46 48 73 92
28 61 71 36 64 80 61 64 35 76 73 70 64 61 30.

a) Construct a frequency distribution table of the given data, taking equal class intervals 21 – 30, 31 – 40, - - -

b) Calculate the mean by assumed mean use class boundary 41 – 50 as a assumed mean.

c) Draw the cumulative frequency polygon and use it to estimate the median.

13. (a) Find the central angled subtended by an arc between the given pair of places below.

i. P (18°N , 52°E) and (78°N , 52°E)

ii. X (44°N , 60°E) and(64°N , 60°E)

14. Record the following transactions below in a cash book, post to ledger and then construct a trial balance to check mathematical accuracy of entries.

On 1st February , Ahmed started business with capital in cash of sh 60,000

February 2 purchased goods for cash sh 50,000

February 3 paid cash for transport sh 10,000

February 10 sold goods for cash sh 90,000

February 20 Bought furniture for cash sh 30,000

February 28 paid cash for carriage sh 5000

15. (a) By using inverse method solve the following simultaneous equation

$$3x + 2y = 12$$

$$4x + 5y = 23$$

- (b) Find the equation of a line $2y = 4x + 10$ after reflection in the line $y = x$
- (c) Find the image of the point $(-1, 6)$ under a rotation of 90° followed by another rotation of 180° anticlock wise.

16. (a) A fraction is written by selecting the numerator from the digits 1, 2, 4, 6 and denominator from 8, 10.

- i. Draw a tree diagram to find possibility set of this experiment.
- ii. Find the probability that the fraction written is less than $\frac{1}{2}$.

- (b) $f(x)$ is defined by:

$$f(x) = \begin{cases} x^2 - 5x + 6 & \text{if } 0 \leq x < 4 \\ 6 & \text{if } x \geq 4 \\ -2 & \text{if } x \geq 4 \end{cases}$$

- i. Sketch the graph of $f(x)$
- ii. State the domain and range $f(x)$.
- iii. Use the graph to find $f(5)$, $f(0)$, $f(-1)$