## FORM 1 SET 3 EXAMS

# **ALL SUBJECTS**

## **Dear students, Attempt these exams!**

## FOR MARKING SCHEMES CALL 0705525657



## FORM ONE SET 3 EXAMS 2020

#### ENGLISH

#### INSTRUCTIONS

- A. This paper consists of six sections as follows:-SECTION A: WRITING (20mks)
  SECTION B: CLOZE TEST (10mks)
  SECTION C: ORAL SKILLS (15mks)
  SECTION D: READING SKILLS (20mks)
  SECTION E: GRAMMAR (20mks)
  SECTION F: ORAL LITERATURE (15mks)
  TOTAL (100mks)
- B. Ensure that you answer all questions in the spaces provided

#### SECTION A: WRITING (20MKS)

Your friend in primary school is in form one in Bidii Secondary of P.O Box 341, Kisimani. She has written to you telling you about her new school. She has also requested you to carry your end of term one examinations for comparative analysis. Write your reply to her.

#### SECTION B: CLOSE TEST (10MKS)

A neighbor had left (1)	store un attended (2)	she
heeded the cries of her	(3) baby. Her kitchen car	ught fire, and the flames
(4)	_ to the neighbouring shacks in (5)	There was no
(6)	available and no fire (7)	for
the people to call. (8)_	that the assembled cr	rowd of hundreds
(9)	do was gather buckets of sand and (10)	
into the flame.		

#### SECTION C: ORAL SKILLS (15MKS)

1.	In the	following sets of words, identify the underlin	ed speech sound that is odd from the rest and
	write i	it down.	(5mks)
	For exa	ample:	
	<u>C</u> up, <u>C</u>	Queen, <u>K</u> ettle, <u>C</u> ease – Cease	
	i.	<u>G</u> ene, <u>J</u> udge, <u>J</u> une, <u>G</u> ap	
	ii.	<u>Ch</u> air, <u>Ch</u> ord, <u>Ch</u> ore, <u>Ch</u> ain	
	iii.	Phase, Plight, Fame, Freight	
	iv.	<u>Th</u> ink, <u>Th</u> an, <u>Th</u> eatre, <u>Th</u> ought	
	v.	<u>Cynic, C</u> ensus, <u>S</u> ugar, <u>S</u> ample	
2.	For eac	ch of the following words, write a word that	is pronounced the same way (5mks)
	i.	Principle	
	ii.	Dye	
	iii.	Weak	
	iv.	Stationery	
	v.	Sent	

3. You have noted that your deskmate Vivian has a poor handwriting. State two factors that might have contributed to this (2mks)
4. In Form One, one makes new friends. Write three things that you can do when introducing yourself to a new person, so as to appear friendly (3mks)

#### SECTION D: READING COMPREHENSION (20MKS)

#### Read the passage and answer the questions that follow:-

#### The communicative power of the English language

Once it used to be said that "the sun never sets on the British Empire". This meant that the British Empire covered all the time zones, so that when the sun was setting on one part of the Empire, it was rising on another.

The same thing can be said about the English language today. English is spoken as a first language in the United Kingdom, Ireland, the United States of America, Canada, New Zealand and Australia. It is also spoken in the Caribbean countries like Jamaica, Trinidad and Tobago, and Guyana among others. In addition to this, English is used as a second language in over fifty countries spread across Africa and Asia. This means that when you have a good command of English you can enjoy the writings of people from all over the world, and you can communicate your ideas beyond the borders of this continent.

We in East Africa embraced the English language accidentally through the colonial experience. English came in as a welcome addition to our already rich language situation of over forty local languages and Kiswahili. In fact the majority of Kenyans today are <u>multilingual</u>. They use at least three languages: a

local language, Kiswahili and English. A good number of others speak a fourth language which may be either French, Spanish, German, Japanese or Arabic among others.

The local or ethnic language bonds a person to the history, culture and religious traditions of his or her people. If you speak one of the ethnic languages, for example, you are able to enjoy the songs, dances, stories, proverbs and riddles in that language. It also helps you to communicate with the older folks who may not understand English or Kiswahili.

Kiswahili is the national language in Kenya and is used by people from all the ethnic groups. When one speaks and understands Kiswahili, one can communicate with people from all over Kenya. Kiswahili is in fact a "regional language", because it is spoken in a number of countries in East and Central Africa. Lately, Kiswahili was indeed <u>adopted</u> as one of the working languages at African Union meetings. Kiswahili, therefore, opens opportunities beyond the borders of Kenya.

After Kenya attained independence, English was retained as the official language because it was, and still is, a great advantage for many of our operations. Though the original speakers of English were the people living in the British Isles, English is now spoken as a first language in two other continents, North America and Australia. It is also the second language for millions of people living all over the world. Therefore, with English you can be at home anywhere in the world. English provides us with a powerful link to the global village.

Recent developments in modern technology have enhanced our ability to speak, read, write and understand English well. Many of the computer programmes available, for example, are made to respond to instruction given in English.

English is also important for participation at the international level. Many reports and records on recent developments, science and other special research are in English. There is much more written literature in English than there is in any other language. Therefore, a student who can read and write English well is at an advantage.

In international news broadcasting, users of English are greatly advantaged. The <u>prominent</u> international news networks broadcast in English. English thus enjoys a prestigious position in the communication of events taking place in the world.

For those who want to be part of what is happening in the world, English is a very important tool. What does this mean for those of us in Africa and Asia, where English is learned mainly in school? There is need to put a lot of effort in the teaching and learning of this language so that we can be part of the <u>vast</u> changes taking place in the world today.

#### Questions

1.	What is the meaning of the clause "the sun never sets on the British Empire?"	(2mks)
2.	In which region is English spoken as a second language, according to the passage?	(1mk)
3.	State two advantages that a person who has a good command of the English language has	(2mks)
4.	How did English come to East Africa?	(1mk)
5.	Why is East Africa and particularly Kenya refered to as having a rich language situation?	(2mks)
	·····	

6.	What is the benefit of being able to speak one of the ethnic languages in East Africa?	(2mks)
7.	What is the official language in Kenya?	(1mk)
8.	How is English useful in modern developments in technology?	(2mks)
9.	What makes a student who knows English to be at an advantage over one who doesn't kn	ow?(2mks)
10.	. What can speakers of English in Africa and Asia do to avoid missing out in what is happe world today?	ning in the (1mk)
		(TIIIK)
11.	<ul><li>What is the meaning of the following words according to the passage?</li><li>a) Multilingual</li></ul>	
	<ul><li>b) Adopted</li><li>c) Prominent</li></ul>	

- d) Vast.....
  - .....

#### **SECTION E: GRAMMAR (20MKS)**

I. Fill in the blank spaces in the following passage with the most appropriate article (4mks)

\_\_\_\_\_banana tree is \_\_\_\_\_strange looking plant. It grows very quickly and in less than \_\_\_\_\_year will reach a hight of seven metres or more. Usually, prunning needs to be done and one can take more than \_\_\_\_\_\_hour to finish an acre.

- II. Choose the correct word from the ones in bracket and use it to fill in the blank spaces (4mks)
  - a) "I am sorry for the \_\_\_\_\_\_," said my friend. (loose, loss)
  - b) Why have you \_\_\_\_\_\_ to eat raw bananas while we have ripe ones in the store? (chose, chosen)
  - c) We \_\_\_\_\_\_ for our president each time we get an opportunity. (pray, prays)
  - d) Who \_\_\_\_\_\_ the bell this morning? (rang, rung)

III. Complete the sentences below using appropriate reflexive pronouns. (4mks)

- a) The boy was beside\_\_\_\_\_\_ with fury for missing the penalty.
- b) Let us not deceive \_\_\_\_\_\_ that life is a bed of roses.
- c) When one faces challenges, one has to encourage \_\_\_\_\_\_ that things will just be fine.
- d) A house devided against \_\_\_\_\_ cannot stand.
- IV. Use the plural forms of the words in brackets to fill in the blank spaces. (4mks)
  - a) You surely do not need three \_\_\_\_\_\_. (radio)
  - b) Remember to buy grandmother some \_\_\_\_\_\_.(potato)
  - c) The two \_\_\_\_\_\_ met so that they could make strategic plans for their locations. (Chief).
  - d) The two \_\_\_\_\_\_ disappeared into the nearby bush. (deer)
- V. Use the most appropriate word to fill in the blank spaces so as to form questions. (4mks)
  - a) \_\_\_\_\_\_ is your mother? Is she a nurse or a teacher?
  - b) \_\_\_\_\_ did you find at the shop? Tom or Mary?
  - c) \_\_\_\_\_\_ of these bags is yours? The red one or the green one?
  - d) \_\_\_\_\_ pen is this? Is it Wilson's or Kennedy's?.

8 | Page

#### For more Eresources Call: 0705 525657

#### SECTION F: ORAL LITERATURE (20MKS)

#### Read the following story and answer the questions that follow

#### The Monkey and The Crocodile

A long long time ago. Monkey and Crocodile were very good friends. The Monkey's house was close to a river and there were many fruit trees on the banks of this river.

Usually monkey would sit on the branches of the fruit trees and chat with his friend Crocodile who would be basking on the banks of the river. Their friendship continued for a long time until they decided it was time to introduce their wives to this friendship. "We have been friends for a long time and you don't even know my house, Crocodile began.

"Neither do you know mine," Monkey replied. "It is easier for you to come to my-house that it is for me to visit you since I cannot swim and your house is beyond the water."

"That is not a problem. I can always carry you on my back," responded crocodile. "Let us visit my house first. My wife is a very good cook," Monkey argued. "No" replied Crocodile "My wife has had a baby and there is plenty to eat in the house."

"Let us not argue about this," Monkey said."If we go to my house first, my wife will not be anxious when I tell her I am going across the waters to visit you." They agreed that they would visit Monkey's house first. Though at first Monkey's wife was afraid of crocodile, she later realized that Crocodile was very friendly. She did not have problems with her husband visiting him. In fact she wished she would join him.

Monkey was very excited the following day when he got to the banks of the river and found Crocodile waiting for him. This was going to be Monkey's first trip across the waters and he could not hide his excitement. He jumped onto Crocodile's back and Crocodile swiftly swam towards the deep waters.

When they were in the middle of the river, crocodile slowed down and began, laughing.

"Why are you laughing?" Monkey asked in surprise "You fool. Did you think I would take you to my house? I have waited for that heart of yours for a long time. Today I have it." Immediately Monkey knew he was in deep trouble. He started thinking of a way out of his predicament. "Poor you, my friend: Why didn't you tell me this earlier?" Monkey calmly asked. "What do you mean?" asked Crocodile in surprise "It is not difficult for me to give you my heart. If you had asked when we were at my house. I would even have given you my wife's heart too," Monkey replied. Crocodile was confused.

"Then why don't you give it to me now?" Crocodile asked.

You see my friend; Monkeys have a tradition of leaving their hearts at home when they are going for a long journey. I therefore left mine on my favourite tree." Crocodile was even more confused.

"We can go and visit your wife first, and then I will give you my heart when you take me back," Monkey suggested.

"No," cried crocodile "I will take you back first. When 1 have your heart, we can then visit my wife."

Quickly, Crocodile headed back to the bank of the river. When they got there, monkey jumped from Crocodile's back onto his favourite tree. He asked crocodile to open is mouth wide to receive the heart. Monkey then picked the biggest of the mangoes on the tree and threw it into Crocodile's open mouth. It fell in with a thud, breaking four of Crocodile's teeth. Crocodile was so upset but there was nothing he could do as Monkey jumped from tree to tree insulting him.

From that day Monkey and Crocodile have remained enemies. And that is the end of my story and may I not end like it.

#### Questions

A
1. Classify this narrative and give reasons for your classification (3mks)

#### For more Eresources Call: 0705 525657

2.	Name two characters found in this story	(2mks)
3.	a) Using an adjective, describe monkey's character trait that enabled him save his life from crocodile	the (1mk)
	b) Illustrate your answer	(2mks)
4.	What <u>economic</u> activity is practiced by the people from whom this narrative was collected?	(2mks)
5.	Write a proverbs that summarizes the narrative and explain how this proverb applies to the	narrative (3mks)
	·····	·····
6.	Apart from your answer in A1 above, name two other types of narratives that you know of	(3mks)

## FORM ONE SET 3 EXAMS 2020

#### KISWAHILI

#### KIDATO CHA KWANZA

JINA .....

ADM ..... CLASS .....

#### UFAHAMU (ALAMA 15)

Soma kifungu kifuatacho kasha ujibu maswali yanayofuata

#### <u>Madhara ya sigara</u>

Chimbuko la kuonekana kwa madhara ya tumbaku ilikuwa mwaka 1598 A.D. Madhara yake yaligundulika wakati ambapo makala ya kwanza ya kiafya iliandikwa nchini Uingereza ikieleza madhara ya sigara. Baada ya hapo zilifuatia tafiti mbalimbali zilizoendelea kugundua na kuelezea madhara yatokanayo na matumizi ya bidhaa za tumbaku kwa binadamu. Matokeo ya tafiti hizo yaliwezesha baadhi ya nchi kama vile Denmark, Uholanzi na Sweden kutunga sheria zinazozuia matumizi ya sigara. Katika sura ya pili, baadhi ya serikali zilikwazwa kiuchumi kwa kukosa pato la kodi zitokanazo na sigara na bidhaa zingine za tumbaku.

Mashirika na kampuni zinazojishughulisha na uzalishaji na uuzaji wa sigara hutenga fungu kubwa la fedha kwa ajili ya kutangaza bidhaa hiyo hatari kwa afya ya mwanadamu. Kila mwaka, Shirika la Afya Ulimwenguni hutenga siku maalumu ya kuelimisha jamii kuhusu athari za kiafya na madhara yatokanayo na matumizi ya tumbaku. **Maadhimisho** hayo hufanyika kila Mei 30 ya mwaka na kauli mbiu ya mwaka huu ilikuwa "Mkinge mwanamke kuwa mteja au kutumiwa kama mhamasishaji wa bidhaa zingine za tumbaku'.

Takwimu za shirika hilo zinabainisha kuwa asilimia 90 ya wavutaji sigara wameanzia umri wa miaka 18. Pia zimebainisha kuwa, kwa kila sekunde ipitayo, wastani wa mtu mmoja anafariki kutokana na madhara ya tumbaku. Inakadiriwa kuwa ifikapo mwaka 2025, vifo vitaongezeka kwa asilimia 70. Utafiti umebainisha ifikapo mwaka 2030, watu milioni 10 watakuwa wamefariki kutokana na kuvuta sigara.

Uvutaji sigara unasababisha magonjwa mengi kama vile saratani ya mapafu, wendawazimu, **kupooza**, matatizo ya mfumo wa hewa, kutoboka utumbo, kunyonyoka nywele, kupungua kwa nguvu za kiume, maradhi ya ngozi na kadhalika. Madhara ya tumbaku hayajitokezi mara moja. Huchukua kipindi kirefu hata miaka 30, hali inayowafanya wengi kufumbia macho tahadhari iliyopo, wakiendelea kuteketezwa na uvutaji sigara. Anayevuta sigara huathirika mapafu kutokana na moshi na tindikali – aina ya kaboni iliyomo kwenye tumbaku inayomzuia kupumua na mapafu yake huanza kutunga usaha. Hali hiyo huchangia mtu kupata athari nyinginezo kama vile kichomi, kifua kikuu na saratani. Chembechembe ya nikotini iliyomo katika tumbaku ni hatari kwa mvutaji kwani humpotezea mtu hamu ya kula na anapata maumivu makali ya tumbo.

Wakati wote, mvutaji sigara hutoa harufu mbaya mdomoni, hali ambayo haipendezi katika maisha ya mwanadamu, na pia, huwa anawadhuru wengine. Mtu huyo anapopumua huchafua mazingira kwa kupumua hewa chafu na mbaya zaidi ambayo huwadhuru watu walio karibu naye kama vile mwenza katika ndoa (mke au mume), watoto au marafiki.

Inaelezwa kuwa sigara huathiri akili ya mwanadamu kutokana na kuwepo kwa chembechembe za ulevi. Hali hiyo ipo zaidi mtu anapotumia sigara kwa mara ya kwanza kabisa. Utafiti wa kitaalamu umethibitisha watoto wanaolelewa katika mazingira ya wazazi wanaotumia sigara kuathirika mishipa inayosafirisha damu kwenda katika moyo. Hali hiyo husababisha kuharibika kwa mfumo wa usafirishaji damu mwilini kwa watoto hao na mwishowe wanakuwa wahanga wa maradhi tofautitofauti.

Katika sura ya pili ya kisaikolojia, watoto wanaokaa na wazazi wanaovuta sigara huishia kuifuata tabia hiyo na huo ndio huwa mwanzo wa kudhoofika kwa maadili. Kwa wajawazito, sigara ina madhara kama vile kuathiri ukuaji wa mimba na kondo la nyuma au *placenta* kwa Kiingereza na kushindwa kusafirisha chakula vizuri kutoka kwa mama kwenda kwa moto. Madhara mengine ni moto kuzaliwa na uzito pungufu, hivyo kuathiri ukuaji wake. Kwa hivyo, ni vyema kufahamu kuwa ingawa sigara ni bidhaa inayotumiwa kama uraibu wakati wa kuivuta, madhara yake ni janga kubwa linalopaswa kupigwa vita bila kuchoka.

#### <u>Maswali</u>

(a) Madhara ya sigara yalionekana mwaka gani?

(alama 1)

(b) Ni nchi gani zilizokuwa za kwanza kubuni sheria mpya kuhusu uvutaji wa sigara ? (alama 1)

(c) Uvutaji wa sigara una athari gani kwa anayevuta? (alama 5)

(d) Watoto wanaathiriwa vipi na sigara ? (alama 4)

(e) Thibitisha kwamba uvutaji sigara hugharimu pesa nyingi. (alama 2)

- (f) Eleza maana ya msamiati ufuatayo kama ulivyotumiwa katika kifungu. (alama 2)
  - (i) Kupooza
  - (ii) Maadhimisho

#### LUGHA - SEHEMU B

- (a) Kwa kuzingatia jinsi ya kutamka sauti za kswahili ni nini tofauti kati ya
   (i) Irabu
  - (ii) Konsonanti
- (b) Eleza maana ya dhana hizi ( alama 2)
  - (i) Kiimbo
  - (ii) Shadda

(c) Taja vipashio vine vya lugha (alama 4)

- (d) Andika sentensi zifuatazo katika hali timilifu (alama 2)
  - (a) Mabati yananunuliwa
  - (b) Baba atakwenda dukani

#### (e) Kanusha sentensi zifuatazo (alama 3)

- (i) Nchi za Afrika mashariki zalemewa na madeni.
- (ii) Mbu amemuuma mtoto.
- (iii) Baba ameandika barua ndefu.
- (f) Zigeuze sentensi zifuatazo ziwe katika wakati uliopita (alama 2)
  - (i) Unapendelea kula nyama siku hizi.

- (ii) Opiyo alipenda kujiingiza katikati kama mchuzi wa ugali.
- (g) Andika kwa wingi (alama 2)(i)Maziwa ya mtoto yalimwagwa na paka yule.

(ii)Uvivu wa Juma unakera.

(h) Akifisha sentensi zifuatazo (alama 2)(i)nenda sokoni ukaninunulie sukari maziwa na mkate

(ii)Maadam umeshafika tuanze mkutano

#### (i) Kamilisha jedwali lifuatalo kwa kuandika viambishi mwafaka kulingana na kitenzi (alama 5)

Kitenzi	Nafsi	Wakati	Kirejeshi	Kitendwa	Mzizi	kiishio
Aliyelima						
Aliyempiga						
Anaoupanda						
Alipika						
Nitavileta						

(j) Taja vipera vya fasihi simulizi (alama 2)

(k) Onyesha vielezi katika sentensi zifuatazo (alama 2) Mama amepika chai tamu sana

Nitakutembelea kesho jioni

(I) Nyambua vitenzi vifuatavyo katika kauli ya kutendwa (alama 4) Piga -

Jenga –

Fagia –

Chora -

(m) Taja na ueleze dhima ya lugha (alama 2)

#### (n) Andika sentensi zifuatazo katika hali ya mazoea (alama 2)

(i) Mchoraji yule anachora picha nzuri

- (ii) Mpishi atapika chakula kitamu
- (o) Bainisha maneno katika sentensi zifuatazo. (alama 4) Salaala ! Majangili wamewaua ndovu kumi leo asubuhi

Wale watafungwa

#### FASIHI (ALAMA 15)

Taja majukumu matano ya fasihi ya kiswahili (alama 5)

Taja tofauti ya fasihi simulizi na fasihi andishi (alama 10)

#### ISIMU JAMII (ALAMA 10)

Nunua sabuni mpya ya GRESHA. *It is new* ! Harufu yake ni *poa,* inadumu siku yote, inalainisha ngozi. Ng'arisha nguo zako na sabuni ya GRESHA. GRESHA sabuni *poa* ! Bei yake ni nafuu; shilingi 20/= tu. Kila mtu ainunua.

#### <u>Maswali</u>

a) Hii ni lugha gani ?
------------------------

(alama 2)

20 | Page

## For more Eresources Call: 0705 525657

(b) Eleza sifa za lugha hii. (alama 8)

#### Insha (Aalama 20)

Andika insha itakayomalizikia kwa maneno haya ...... "Nilipopokea mezani chakula kitamu nilikumbuka maisha magumu niliyoyapitia, nikatambua kuwa si rahisi kupata chakula kama hicho bila juhudi maishani."

## FORM ONE SET 3 EXAMS 2020

NAME.....ADM. NO.....CLASS.....

## **MATHEMATICS FORM 1**

#### Instructions to candidate

- 1. Write your name and Adm. No in the space provided.
- 2. These papers consist of two sections; Section A and section B.
- 3. Answer all questions in section A and only 5 from section B.
- 4. Write all your working on the space provided.
- 5. Marks are awarded for steps which are correctly worked.
- 6. Calculators must not be used.

Section I

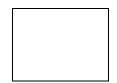
ſ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

Section II

17	18	19	20	21	22	23	24	Total

Time: 2hrs 30 min

Grand Total



#### SECTION 50 MARKS

1. Add one thousand and fourty four to the product of one thousand and six and one hundred

And eighty. (3 marks)

2. The GCD of two numbers is 17 and their LCM is 140. If one of the numbers is 20, find the other number. (3 marks)

3. Find the L.C.M of  $X^2 + X$ ,  $X^2 - 1$ ,  $X^2 - X$ . (3 marks)

4. Evaluate -8÷2+12×9-4×6 (3 marks)

56÷7×2

5. Evaluate  ${}^{3}/_{8}$  of  ${7}^{3}/_{5}{}^{-1}/_{3}(1^{1}/_{4}+3^{1}/_{3}) \times 2^{2}/_{5}$  (3 marks)

6. Evaluate without using calculators or mathematical tables, leaving your answer as a simple fraction.

 $-4(-2) + (-12) \div (+3) + -20+ (+4) + (-6)$  (4 marks) -9-(15) 46-(8+2)-3

7. A number m is such that when it is divided by 30, 36, and 45 the remainder is always 7, find the smallest possible value of m. (3 marks)

8. Which of the following number is divisible by both 3 and 4? (3 marks)

120, 744, 306, 9564, 1504, 192, 86 and 36.

(3 marks)

82604 9 10. If x = -2, y= -6 and z= 4, find the value of 4xy (3 marks) Z 11. Show the following operation on a number line (2 marks)

9. What must be added to the number below to make it divisible by 11,

(-7) + (-2) + (+6)

Hence, evaluate the value of, (-7) + (-2) + (+6) (1 mark)

12. Change the recurring decimal into fraction, 3.256 (3 marks)

13. By how much is the product of  $\frac{9}{5}$  and  $\frac{81}{4}$  greater than 5? (3 marks)

14. Evaluate,  $(\frac{5}{7} \times \frac{2}{3}) + (\frac{5}{6} - \frac{8}{9}) \div \frac{7}{15}$  of  $\frac{5}{6}$  (3 marks)

15. The distance between two schools m and k is 2km. A market is situated between m and k one third of the distance from m and k. How far is the market from k? (3 marks)

16. A square room is covered by a number of whole rectangular slabs of sides 60cm and 42cm.

Calculate the least possible area of the room in square metres. (4 marks)

#### SECTION B 50 MARKS

- 17. Kinyua spent 1/4 of his net January salary on school fees. He spent 1/4 of the remainder on electricity and water bills. He spent 1/9 of what remained on transport. If he finally had sh.3,400, calculate
  - a) His net January salary. (5 marks)

b) Money spent on school fees. (1 mark)

c) Money spent on transport. (2 marks)

d) Money spent on electricity and water bills.

18. A minibus had 23 passengers at the beginning of a journey. Twelve passengers alighted at the first stop while 9 boarded six of those who boarded at the first stop alighted at the second stop and 12 got in. The minibus should not stop again up to the final destination. The charges from the starting point were sh. 50 up to the first stop, sh. 70 up to the second stop and sh. 85 up to the final destination.

a) How many passengers alighted at the final destination? (3 marks)

b) How many passengers were ferried by the minibus through the journey? (3 marks)

c) How much money was collected during the trip? (4 marks)

19. Find all the possible values of the missing digit(s) represented by (\*) (10 marks)

a) 2\*6, 8\*71, 8\*919 are divisible by 11.

b) 396\*5, 48675\*, 349\*\* are divisible by 9.

c) 3\*7, 1\*43, 81\*60 are divisible by 3.

d) 93\*, 85\*2, 90\*4 are divisible by 4.

20. Mr. Kamau wishes to buy some items for his son and daughter. The son's item costs sh. 324 while the daughter item costs sh. 220 each. Mr. Kamau would like to give each of them equal amount of money.

a) What is the least amount of money that he can send to each of them so that the money is

fully utilized for items without remainder. (5 marks)

b) How many items will each person buys. (5 marks)

21. In 2010, Musa got 750 bags of coffee from his shamba. In 2011 his yield dropped by 30% due to drought and in 2012 his yield rose by 15% over that of 2011. A bag of coffee weighs 55kg and Musa was paid sh. 7900 per tone in 2010. Thereafter the price per tone increased each year by 10%. Find his earning from coffee for each of the three years. Hence, find his total income from coffee for three years. (10 marks)

22. a) The Highest Common Factor( HCF) of 182 and x is 26 and the L.C.M of 182 and x is 1092. Determine the value of x. (3 marks)

- a) Muigai had sh. P; Nzau had four times as much as Muigai. Muli had half as much as Nzau.
- i) Write an expression that gives the total amount of money the three people had. (1 mark)
- ii) If p = sh. 1500, how much money did they have altogether? (3 marks)

b) <sup>35° z</sup> y w x

Find the values of x, y, w, and z giving reason. (4 marks)

23. Five companies employed 2340, 3455, 675, 960 and 1350 workers. The first company laid off 1 worker for every 5 workers, while the other three recruited 2 new workers for every 3.

a) What was the total number of workers at the beginning? (2 marks)

- b) How many people:
  - i) Lost job (3 marks)

ii) Got job (3 marks)

c) What was the total number of workers finally? (2 marks)

24. a) The masses in kilograms of 20 bags of maize were; 90, 94, 96, 98, 99, 102, 105, 91, 102, 99, 105, 94, 99, 90, 94, 99, 98, 96, 102, and 105.

i. State the mode. (1mk

ii. Calculate the mean mass per bag (4 marks)

b) A fruit vendor bought 1948 oranges on a Thursday and sold 750 of them on the same day. On Friday, he sold 240 more oranges than on Thursday. On Saturday, he bought 560 more oranges. Later the day, he sold all the oranges he had at a price of Ksh. 8 each. Calculate the amount of money the vendor obtained from the sales of Saturday. (5 marks)

## FORM ONE SET 3 EXAMS 2020

NAME \_\_\_\_\_\_ ADM NO \_\_\_\_\_CLASS \_\_\_\_\_

Answer all the questions in the spaces provided.

#### SECTION A (75 MARKS)

- 1. Define the term agriculture correctly.( 1 mk)
- 2. Give four practices that show that agriculture is an art.( 4 mks)

3. State four area of study that shows that agriculture is a science.( 4 mks)

- 4. State two ways in which agriculture contributes to development of industries in Kenya.(2 mks)
- 5. State three ways by which agriculture contributes to national development. (3 mks)

6. List five branches of agriculture. (5 mks)

7. State four factors considered when identifying a farming system in an area.( 4mks)

8. State four characteristics of large scale farming system.( 4mks)

- 9. State two reasons which make small scale farming common to majority of he farmers in Kenya.( 2 mks)
- 10. Define the term pomology as used in crop production (1 mk)
- 11. State two reasons why nomads move with their livestock from place to place.( 2mks)
- 12. State four climatic factors that influence agricultural production in Kenya.( 4mks)

13. What is agroforestry.( 1mk)

14. State four problems associated with shifting cultivation.( 4mks)

15. State two effects of HIV/AIDs) in agriculture.(2 mks)

16. State three ways how agriculture as an occupation provide employment.( 3mks)

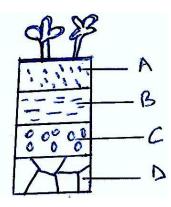
17. State four aspects of rainfall important to a farmer (4mks)

18. State five biotic Factors that affect agricultural production.( 5mks)

- 19. State four advantages of mixed farming.( 4mks)
- 20. a) Give three effects of low temperature in crop production.( 3mks)
  - b) State four harmful effects of wind in crop production. (3 mks)
- 21. Name two categories of crops on the basis of photosynthetic light requirement.( 2mks)

#### SECTION B( 25 MKS)

22. Below is a diagram illustrating a soil profile study it carefully and answer the questions that follow.



- i) Name parts labeled A,B,C and D above( 4mks)
  - A\_\_\_\_\_ B\_\_\_\_\_ C\_\_\_\_\_

D

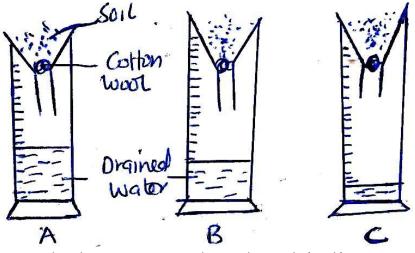
**37** | Page

#### For more Eresources Call: 0705 525657

ii) State three properties of the part labeled A above.( 3mks)

iii) State four factors that influence soil formation (4mks)

23. The diagram below shows an experiment set up using different soil type A,B and C. The observation was made after 24 hours.

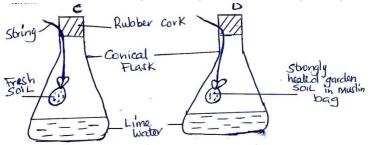


a) State what the experiment was designed to study.( 1mk)

- b) Name the soil type labeled A,B,C (3mks)
  - A\_\_\_\_\_ B\_\_\_\_\_
  - с\_\_\_\_\_
- c) State three ways in which soil structure influences crop production.( 3mks)

d) Distinguish between soil structure and soil texture. (2mks)

24. The diagrams below show a set up of an experiment to study an aspect of soil. The set up was 6



- a) What was the aim of the experiment (1mk)
- b) State one observation that was made in each of the flasks labeled C and D
  - C\_\_\_\_\_( 1mk).
  - D\_\_\_\_\_(1 m k)

**39** | Page

#### For more Eresources Call: 0705 525657

c) Give a reason for each of your answers in(b) above (1 mk)

C\_\_\_\_\_(1 mk)

D\_\_\_\_\_(1 mk)

# FORM ONE SET 3 EXAMS 2020

### **BIOLOGY FORM 1**

#### Answer all the questions in the spaces provided (100mks)

1. a.Name one product of the light stage during photosynthesis(1mk)

b.Name the process by which water molecules are split by light during photosynthesis (1mk)

- 2. What name is given to the process whereby :
  - a. Red blood cells wrinkle after losing their water to a hypertonic solution?(1mk)
  - b. Plant cells become flaccid after losing their water to a hypertonic solution?(1mk)

- Four equal strips A,B,C and D were cut from a potato whose cells had a sugar concentration of 28.5%. The strips were placed in sugar solutions of different concentrations as follows: A:10% B 15% C 25% D 35%
  - i. What changes would you expect in strips A and D?2mks

ii. Account for the change in strip D(3mks)

4. The figure below shows a small piece of visking tubing which is filled with potassium permanganate solution. Its free ends were tied tightly to prevent leakage .It was then dipped in a beaker full of distilled water. The set up was left for 2 hours .Its was observed that the distilled water was coloured purple.



- a. What physiological process was being investigated.(1mk)
- b. Account for the observation made in (a) above.(3mks)

5. a.State three factors that affect enzyme activities.(3mks)

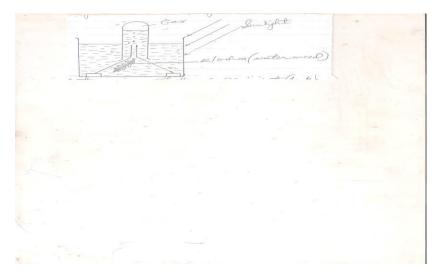
b.Name the structures on an enzyme where substrate molecules fix themselves during an enzyme reaction.(1mk)

c.State what would happen to an enzyme molecule if the temperature is:-

i. Raised above 40°c(1mk)

ii.Lowered below 10°c.(1mk)

6. The diagram below represents a set up that was used to investigate a certain process in a plant.



- a. State the aim of the experiment.(1mk)
- b. State a factor that would affect the process.(1mk)
- 7. State the importance of nucleic acids to an organisms.(1mk)
- State the significance of the following to a leaf: a. Thinness(1mk)
  - b. Presence of air spaces(1mk)

- c. Stomata(1mk)
- 9. What is the role of roof hairs in plants.(1mk)
- 10. What is meant by the term organ systems in organisms?(1mk)
- 11. State three factors that affect the rate of diffusion (3mks)

- 12. What is compensation point.(1mk)
- 13. a.State two properties of monosaccharide .(2mks)
  - b.What is the main function of monosaccharide in organisms?(1mk)
- 14. State the formula for calculating magnification when using the following a. Hand lens/naked eyes (1mk)
  - b. A light microscopic (1mk)

- 15. Explain why a mule, a product of mating between a horse and a donkey is sterile .(1mk)
- 16. State two factors considered while grouping the organisms in the same species. (2mks)
- 17. Describe how you would carry out food tests to test the presence of starch and reducing sugars on a food sample.
  - a. Test for starch.(3mks)

b. Test for reducing sugar (4mks)

18. Explain how surface area to volume ratio idea may be applied to explain rate of diffusion in organisms.(2mks)

#### 19. Which organelles in a cell perform the following functions

- a. Manufacture of ribosomes(1mk)
- b. Package cell secretions(1mk)
- c. Energy production(1mk)
- d. Synthesis of carbohydrates.(1mk)
- 20. Name the taxonomic unit with:
  - a. The greatest number of organism.(1mk)
  - b. The least number of organisms(1mk)
- 21. a.Define the term cell(1mk)

b.When onion epidermal cells were placed and focused along the diameter of the field of view ,10 cells were viewed and counted. Calculate the length of each epidermal cell in micrometers (1mm = 1000micrometers).Assume the diameter of field of view= 3mm(2mks)

- 22. Name the kingdom in which the organisms named below belong.
  - a. Bacteria(1mk)

- b. Paramecium(1mk)
- c. Yeast(1mk)
- 23. State the deficiency disease caused by deficiency of the following vitamins a.Vitamins A(1mk)
  - b.Vitamin D (1mk)
  - c.Vitamin  $B_1$  (1mk)
- 24. a. State and explain how the ileum is adapted to perform its function.(4mks)

- b.State two functions of the colon during digestion.(2mks)
- 25. a.Name two diseases that affect human teeth.(2mks)
  - b.(i) Write the dental formula of an adult human.(1mk)
  - ii)Work out the total number of teeth from the formula above.(1mk)

26. In an experiment to investigate a factor affecting photosynthesis, a leaf of a potted plant which had been kept in the dark overnight was covered with aluminium foil as shown in the diagrams below.



The set up was kept in sunlight for three hours after which a food test was carried out on the leaf.

- a. Which factor was being investigated in the experiment?(1mk)
- b. Which food test was carried out?(1mk)
- c. I)Sate the results of the food test.(2mks)
  - ii) Account for the results in (c) (i) above.2mks
- d. Why was is necessary to keep the plant in darkness before the experiment? 1mk

27. a. Distinguish between the term s homodont and heterodont (2mks)

b.Name the gap between incisors and premolars in some herbivores and state its function.(2mks)

28. State and explain how palisade cells are adapted to perform their function.(3mks)

29. a.Define the term active transport .(2mks)

b.State four factors that affect active transpiration.(4mks)

30. State the function of the following parts of a light microscope.

a. Coarse adjustment knob.(1mk)

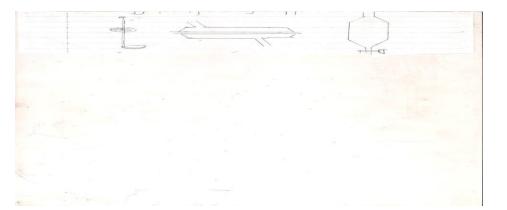
b.Diaphragm(1mk)

c.Condenser(1mk)

31. Name the first four taxa in taxonomy starting from the highest level

### FORM ONE SET 3 EXAMS 2020

1. Identify the following apparatus and their uses.(6mks)



А	В	С
<b>Apparatus</b> A-	uses -	
B-	-	
C-		

6MKS

2. State four preventive measure of drug -abuse.(4mks)

3. a.State under which conditions are the following flame formed in the laboratory. 2mks

i. Luminous.....

ii. Non- luminous.....

b.In an experiment, a form one student at Kiranja Secondary School placed an end of narrow glass tubing in the inner core of non-luminous flame and lit at the tip of the glass tubing as shown below .



State and explain the observation made at the tip of the glass tubing. (2mks)

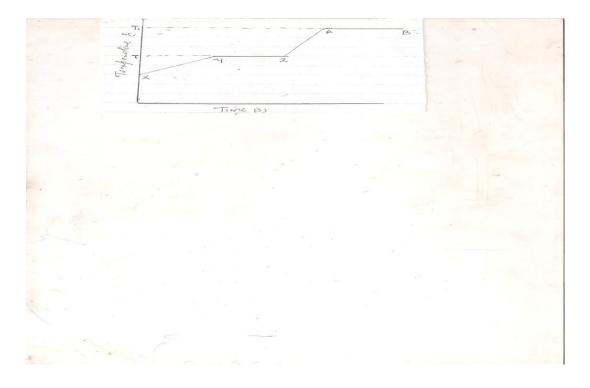
- 4. State one application for each of the following methods of separating mixtures.a. Filtration (1mk)
  - b. Fractional distillation(1mk)
  - c. Solvent extraction.(1mk)

5. a.State two ways for determining the purity of substance.(2mks)

\_

\_

b.The diagram below represents heat curves of a pure surface of solid .Study it and answer the questions that follows.



i. Region YZ and AB have one thing in common .State it and explain.(2mks)

ii.State the physical state of substance at the following region

XY. (2mks)

ZA (1mk)

- 6. Define the following terms.
  - a. Solution 1mks

b. Saturated solution

1mks

7. The following is a set up to prepare oxygen gas .Study it and answer the questions that follows.



- a. Identify the mistake made when setting up the apparatus. (2mks)
- b. If the mistake was corrected, complete the diagram showing how to collect dry oxygen gas. (3mks)

- c. Identify liquid L . (1mk)
- d. Write word equation for reaction at round- bottomed flask. (2mks

e. State two physical properties of oxygen.2mks)

8. Identify the following ways of collecting gases and state the reason.

	CH CH			
B I de to	Fy the foresis	g ways of	collecting 3	30.001
Metto-1	1. A 1	B		
A	11123	Recson	Carl Contraction of Carl	
	the second s			
12	and the first the "	and the state of t		
a gasstate e	acia - base		the sal indice	
Com and			0.	
the The PH AS	A P B C 2 B IZ	- one guier	on Below M	
	5 6			
Carriera a	0 12			
	-			
* Flhich .	The PH inte	id above is		
	(b) Weak i	and _		
	NEX F			0



9. a. State one advantage of the universal indicator over acid- base indicator.(1mk)

b.The pH of the solutions are given as below Solution pH

А	7
В	6
С	2
D	12
E	8

Which of the pH listed above is (5mks)

\_

- i. Strong acid
- ii. Weak base –

iii. Strong base-

iv. Weak acid-

v. Neutral solution-

c.Write a word equations for the reaction between dilute hydrochloric acid and each one of the following

i. Zinc metal (2mks)

ii. Calcium carbonate (2mks)

iii.Magnesium Oxide(2mks)

IV.Sodium hydroxide (2mks)

d.Miriam a form two student at Mutuma Trinity School was stung by wasp.Kanyotu advised her to apply sodium hydrogen carbonate .Explain. (2mks

e.Why is not advisable not to use sodium hydroxide.(1mk)

f.Study the set-up below and answer the questions that follows.

Contraction of	>>	> Line wrote	
		 /	

i. What are the products of the reaction between calcium carbonate and hydrochloric acid(give a word equation for the reaction). (2mks)

ii. What would expect to observe in the limewater? (1mk)

g.i)State two uses of bases.(2mk)

ii)Two uses of acids. (2mks)

10. A student found a colourless liquid at laboratory. Describe two reagents he/she can use to determine the colourless liquid is water.(2mks)

# 11. a.State two differences between permanent change and temporary physical changes.**Permanent changeTemporary physical changes**

(4mks)

b.Stuc	ly the following chemical heat	equations (2mks)	
i.	Zinc oxide (white)	zinc oxide yellow	
ii.	Potassium Manganate(vii)	Potassium + Manganete(vi)	Manganeese (iv) + oxygen oxide
iii.	Hydrated copper(ii) Oxide	Copp	er (ii) oxide + Water
	<i>Identify the changes in</i> Reaction I	(3mks)	
	Reaction II		
	Reaction III		

12. The diagram below represents a paper chromatogram for three brands of juices suspected to contain banned food colourings.



The results showed the presence of banned food colourings in L and M.One the same diagram.

- a. Give the spots which show the banned food colourings.(2mks)
- b. Show solvent front.(1mk)
- c. State two applications of chromatography.(2mks)

13. The apparatus below were used to determine the volume of oxygen in air. About 200cm<sup>3</sup> of air were passed repeatedly and slowly from syringe A to syringe B, over heated copper turnings as shown in the diagram.



Copper turnings

After sometime the volume of air syringe A was 160cm<sup>3</sup> and syringe B 0cm<sup>3</sup>.

- a. Calculate the percentage of oxygen in the initial sample of air.(2mks)
- b. Write down a word equation for the reaction that took place in the combustion tube.(1mk)
- c. What are possible sources of error in the experiment.(2mks)

d. Explain why the air is passed slowly and repeatedly.(1mk)

# FORM ONE SET 3 EXAMS 2020

NAME......ADM. NO.....CLASS......

#### CRE FORM 1

<u>Instructions;</u>

Answer all the questions in the spaces provided below each question.

1a.State 7 reasons for studying CRE (7MKS)

1b. Why is the bible referred to as a library (7mks)

1c. Identify areas where the bible is used in the Christian life today (6mks)

2a. Identify seven literacy forms used in writing the bible (7mks)

2b. Give the eight divisions of the books of the bible (8mks)

2c. Identify the Apocrypha books (5mks)

3a. Identify the Pauline letters in the New Testaments (7mks)

3b. Mention six versions of the bible used in Kenya today (7mks)

3c. Explain the effects of bible translations into African languages (6mks)

4a.Describe the first creation account as given as given in genesis 2:4-25(7mks)

4b. Give seven attribute of God from the first and second creation account(7mks)

4c.Give six responsibilities given to man by God in the creation accounts (6 Marks )

5a.State the consequences of six according to Genesis

5b.Explain the causes of evil in Traditional African society

5c.Identify some evil deeds present in Kenya today

### FORM ONE SET 3 EXAMS 2020

# GEOGRAPHY

# TIME: 2 HOURS

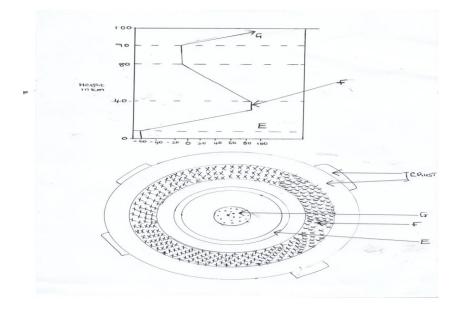
# **INSTRUCTIONS TO CANDIDATES**

1. This paper consist of Sections A and B

2. Answer ALL questions in both section A

1. Define geography	(2mks)
2. Define the term environment.	(2mks)
3. Name two branches of geography.	(2mks)
4. A part from planets name two other heavenly bodies.	(2mks)
5. What is longitude.	(2mks)

6. The diagram below shows the structure of the earth. Use it to answer questions a and b.



a) Name parts marked E, F and G.	(3mks)
E	
F	
G	

a) Name the minerals that make the crust.	(2mks)
---	--------

7. Give two dates in a year when the number of hours of daylight and darkness are equal . (2mks)

8. State two theories that have been put forward to explain the origin of the earth. (2mks)

9. The diagram below shows a set up of two thermometers use it to answer question (i) and (ii).

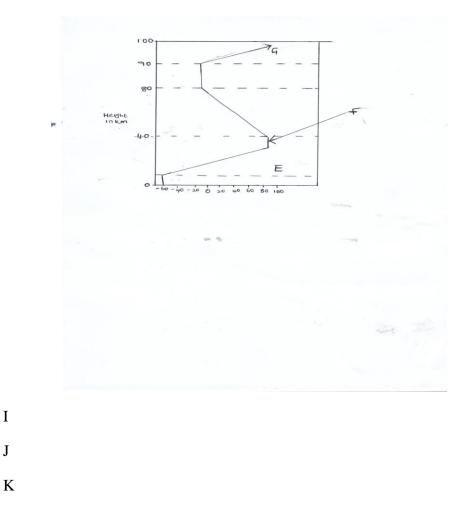
Time two dates when in a year over the number of nours of daylight and darwess are equal Emances 7.-. forward to explain the organ of the earl 8 9. The degram below shows a set we of two these momenters where where an ener queak on (1) analis a. merang must must upon to t Munic Commence (1) Name the Parts labelled F and G (2marcs) 5 G 10 The diagram below represent the structure of the atmosphere wave party laced

i) Which instrument is represented by the two thermometers. (1mk)

ii) Name the parts labeled F and G

(2mks)

10. The diagram below represents the structure of the atmosphere name parts labelled(3mks)



#### **SECTION B 75 MARKS**

Answer all questions in the spaces provided.

11A) Identify three areas studied in human geography. (3mks)

b) Explain four reasons why geography is studied in Kenyan schools. (8mks)

c) Name four subjects that relate with geography. (4mks)

12a) State three effects of earths rotation on its own axis. (3mks)

b) Use a well labeled diagram to show how a lunar eclipse occurs. (6mks)

c) Explain three proofs that earth is spherical. (6mks)

13a) Define weather . 73 | Page (2mks)

b) Name five elements of weather.

(5mks)

c) State three factors to consider when citing a weather station . (3mks)

d) Name three gases that make the earths atmosphere. (3mks)

e) State two reasons why weather forecasting is important. (2mks)

14a) Draw a map of Kenya on the map label the following	
i) River Tana and Athi.	(2mks)
ii) Mt Kenya	(1mk)
<b>74</b>   Page	

iii) The equator

(1mk)

c) Draw a diagram of the globe and label three important line of latitude. (3mks)

d) Draw a well labeled diagram of relief rainfall. (6mks)

75 | Page

15a) State three factors that affect amount of insolation reaching the earths surface.

(3mks)

b) Name three types of clouds'.	(3mks)
c) Name three instruments that are kept in the stevensons screen. (3mks)	

d) The data below shows temperature of Thika town recorded on $24/1/20$	014
Maximum Temperature 20 <sup>0</sup> c	
Minimum Temperature 15 <sup>0</sup>	
Calculate diurnal range of temperature for Thika town.	(2mks)
ii) Calculate the mean daily temperature for Thika town.	(2mks)
<b>76</b>   Page	

e) Name the elements of weather measured by the following instruments

i) Anemometer

(1mk)

ii) Barometer

(1mk)

# FORM ONE SET 3 EXAMS 2020

#### HISTORY AND GOVERNMENT

#### Answer all the questions in the spaces provided.

#### SECTION A

- 1. State three characteristics of government.(3mks)
- 2. Identify two main periods of History. 2mks
- 3. State why archaeology is an expensive source of information of history and government.(2mks)
- 4. State three aspects of oral traditions.3mks
- 5. Identify two ways through which archeologist obtain information on the history of Kenya.(2mks)
- 6. Identify two ways in which early man used stone tools.(2mks)
- 7. In what two ways did the Kenyan communities interact during the pre-colonial period.(2mks)
- 8. Identify two similarities between early agriculture in Mesopotamia and Egypt.(2mks)
- 9. Name the pre- historic sites in Kenya.(2mks)
- 10. Identify the main economic activity of the plain Nilotes during pre-colonial period.(1mk)
- 11. Give two characteristics of Homo Sapiens.(2mks)
- 12.State two ways in which the development of the upright pasture improved the early man's way of life.(2mks)

#### Section B

- 13.a.State four forms of government. 4mksb.Identify five methods of dating.(5mks)c.Outline the disadvantages of written sources of information.(6mks)
- 14.a.Discuss the main theories that explain the origin of man.(6mks)b.State four species of Austropithecus.(4mks)c.What were the uses of fire during the middle Stone Age period?(5mks)
- 15.a. State five causes of food shortages in Africa today.(5mks)b.Explain the characteristics of farming methods in Britain before the Agrarian Revolution.(10mks)

- 16.a.Why did the highland nilotes migrate from their original homeland during the precolonial period? (5MKS)b.Explain five results of the migration and settlement of Bantus in Kenya.(10mks)
- 17.a.State five duties of council of elders among the Miji Kenda.(5mks) b.Why was the office of the Oloibon important among the Maasai?(5mks) c.Discuss the economic organization of the Borana

in the 19th c.(5mks)

# FORM ONE SET 3 EXAMS 2020

NAME.....

ADMISSION NUMBER: .....

CLASS: .....

#### physics

form 1

TERM 1

# **Physics**

PAPER 1

2 HOURS

#### **INSTRUCTIONS TO CANDIDATES**

- I. Answer all questions.
- II. All answers should be written in the space provided in this booklet.
- III. Show all you working

- 1. Explain briefly the first aid measure that should be taken incase of(2mk)
- a) Cut
- b) Poisoning
- 2. Define physics.(2mk)
- 3. State any five branches of physics(5mk)

4. State any five career opportunity in physics (5mk)

5. State any five laboratory safety rules (5mk)

6. Name any 4 items contained in the first Aid kit found in the laboratory(4mk)

- 7. Briefly explain how physics is related to biology(2mk)
- 8. State any three effects of a force (3mk)

- 9. Describe the method you would use to measure the cicrumfrence of a cylinder using a thread and a meter rule(4mk)
- 10.A sphere of diameter 3.0 cm is mounted into a thin uniform wire of diameter 0.2mm calculate the length of the wire in meters(4mk)

11. State any three differences between mass and weight(3mk)

mass	weight
I.	
II.	
III.	

- 12. The mass of 25cm<sup>3</sup> of ivory was found to be 0.045kg. Calaculate the density of ivory in SI units (3mk)
- 13.300 cm<sup>3</sup> of fresh water of density 1000kg/m<sup>3</sup> is mixed with 100cm<sup>3</sup> of sea water density 1030kg/m<sup>3</sup>.calculate the density of mixture (4mk)

- 14.Explain how you would measure the volume of irregularly shaped object using the displacement method. (3mk)
- 15.Distinguish between a fundamental and derived quantity giving an example of each (4mk)

- 16. Define force and state its SI unit (2mk)
- 17. State any 4 types of force (4mk)
- 18. Distinguish between a scalar and vector quantity giving an example of each (4mk)

19. State any 3 applications of capillary action (3mk)

20. State any two factors affecting the surface tension (2mk)

- 21.A man has a mass of 70kg. Calculate
- a) His weight on earth where the gravitational strength is 10 N/kg (2mk)
- b) His weight on moon where the gravitational strength is 1.7 N/kg (2mk)
- 22. Explain briefly why water wets the glass while mercury does not(2mk)
- 23.Complete the table below(7mk)

	Fundermental quality	SI UNIT	SYMBOL
1		meter	М
2	Mass		kg
3	Time		
4			А
5		Kelvin	К

- 24. Differentiate between cohesive and adhesive forces (2mk)
- 25.A body weighs 400N in water. If the up thrust force is 20N.calculate its weight in air (2mk)
- 26.Explain briefly why a razor blade floats in water and when soap solution is carefully added to the water it sinks (3mk)
- 27. Explain the following behavior of molecules.
  - a) When it is raining it is advisable not to touch a canvas tent from inside (2mk)

- b) Water rises up in harrow tubes but Mercury which is also a liquid falls in a narrow tubes to level below the outside surface ?(2mk)
- 28.A eureka can of mass 100g and cross-sectional area 100cm<sup>2</sup> is filled with water of density 1g/cm<sup>3</sup>.A piece of metal of mass 20g and density 8g/cm<sup>3</sup> is lowered carefully into the can as shown

10cm

Calculate

- a) The total mass of water and Eureka can before the metal was lowered (3mk)
- b) The volume of water that overflowed (2mk)
- c) The final mass Eureka can and its content (3mk)