VIVA COLLEGE SCHOOL
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HOLIDY WORK TERM TWO, 2019
GREAT MINDS SHAPE THE WORLD

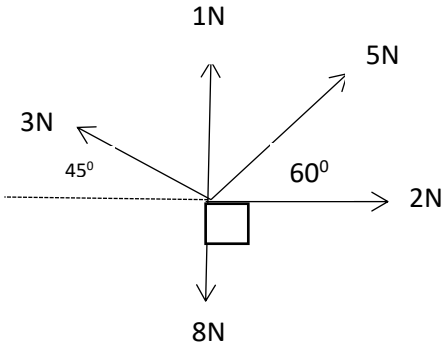
Academics Dept
27nd APRIL, 2019

SENIOR FIVE

INSTRUCTIONS

1. **For classes 1 to 2 all questions in all subjects are compulsory**
2. **For senior 3 students, please attempt all questions for the compulsory subjects and only those for your options**
3. **For classes 5 students, please attempt all questions in your subject combination**
4. **For better marks, you must present and explain thoroughly well all the attempted challenges**
5. **For each of your study subject done, it must be put in a separate 96 exercise book**
6. **Holiday work must be done before reporting back to school and the respective class teacher shall receive your work on reporting**

SUBJECT	CHALLENGE	MKS
GP.	**1** Explain the role of non-government organisations in your country.	**50mks**
SUB ICT	**1** 1. You have completed your **UACE** examinations and you are interested in using your computer skills to earn a living. (a) Explain **five** computer based opportunities one can take up to get income in your community. (b) Describe six problems associated with the continuous use of computers in your society.	**30mks**
SUB MATH	**1** 1. The table below shows the cumulative frequency distribution of marks of 800 candidates who sat a national mathematics contest. **Mark(%)** | **1-10** | **11-20** | **21-30** | **31-40** | **41-50** | **51-60** | **61-70** | **71-80** | **81-90** | **91-100** **F** | **30** | **80** | **180** | **330** | **480** | **610** | **700** | **760** | **790** | **800** (b) Calculate the **mean** and **standard deviation** (08marks) (c) Construct an **Ogive** for the data and use it to estimate the; (i) Median mark (04marks) (ii) Inter quartile range (02marks) (d) Proportion of candidates that failed if the pass mark was 50% (01mark)	
PRINCIPLE MATHEMATICS	**1** 1. Evaluate for the value(s) of y which satisfy each of the following equations; (a) $\sqrt{(3x+4)} - \sqrt{(x-3)} = 3$ (5marks) (b) $5^{2x} + 125 = -6(5)^{x+1}$ (5marks) 2.Solve for x and y in the following simultaneous equations. (a) $2\log_x y = 1$, $xy = 64$ (5marks) (b) $5^{x+2} + 7^{y+1} = 3468$, $7^y - 5^x = -76$ (5marks)	**2omks**
	2 1. Events x and y are such that; (a) $P(\bar{x}) = \frac{3}{5}$, $P\left(\frac{\bar{y}}{x}\right) = \frac{1}{4}$ and $P\left(\frac{y}{\bar{x}}\right) = \frac{1}{3}$. Find; (i) $P(y)$ (ii) $P(x\ n\ y)$ (4marks) (b)Given that events A and B are independent and P (A) = $\frac{2}{5}$, P (AUB) = $\frac{4}{5}$ .Find:(i)P(B) (ii) $P(\bar{A}U\bar{B})$ (4mks) 2.The heights in cm of S.5 students in a certain school were recorded as shown below (a)Estimate the(i)**Modal height** (ii)**Median height** (iii)**standard deviation** (b) Represent the above data on a **histogram.** Use it to estimate the **modal height** (c) Plot an **Ogive** and use it to estimate the (i) **70th percentile**(ii)**Median** (iii)**Semi interquartile** (ii) Interval of the height of the middle 60% of the students' **Height** | **No. of students** **149 – 152** | **5** **153 – 156** | **17** **157 – 160** | **20** **161 – 164** | **25** **165 – 168** | **15** **169 – 172** | **6** **173 – 176** | **2**	**50mks**
CHEMISTRY	**ORGANIC** (first revise through handouts 1 and 2 before answering) (a) Define **stereo isomerism**. (b)Explain the meaning of **geometric isomerism** with clear examples (04 mks) (c)With clear examples, give the difference between the following: (i)***Nucleophile*** and ***electrophile*** (03 mks) (ii)***Nucleophilic*** substitution reaction and ***electrophilic*** substitution reaction. (04 marks) (iii)***Addition*** reaction and an ***elimination*** reaction (04 marks) (iv)Hemolytic bond fission and heterolytic bond fission (03 marks) **INORGANIC** (a)Define the following terms (1mk each) (i)***Ionization energy*** (ii) ***Electronegativity*** (iii) ***Electron affinity*** (iv)***Polarizing power***. (b)Explain; (i) The trend in **ionization energy** across period three. (04 marks) (ii) The trend in **electronegativity** down group (IV) elements) (03 marks) (iii)The trend in **electron affinity** down group (VII) elements (04 marks) (iv)The trend in **polarizing power** of the cations of group (II) elements (03 marks) (v) Why the first **electron affinities** of group (VII) elements have negative values (02 marks) **PHYSICAL CHEMISTRY** (a) Define the following terms (i) Relative molecular mass (02 mks) Colligative property (02 mks) (b) Describe how a mass spectrometer can be used to determine the relative molecular mass of chlorine.(9 mks) (c) Explain the suitability of a mass spectrum for determination of molecular masses compared to freezing point elevation method. (04 marks) (d) Compound X was found to contain an element M which emits α particles and has half- life of 5720 years. Calculate the percentage of M that would be remaining in X after 22,880 years. *(3 marks)*	**50mks**

BIOLOGY	**1**	Paper 1 (a)Differentiate between **autolysis** and **autophagy**(**2marks**)b)describe the structure of lysosome**(4 mks)** (b)Explain the different functions of **lysosome** in the life of an organism **(6marks)**	**32mks**
	2	Paper 2 (a)Outline the unique features of a **bacterium.(4marks)** (b) Discuss the diversity of different bacteria in relationship to their mode of living. **(10 marks)** (c) Outline the **economic importance** of kingdom **monera(06 marks)**	
	3	Paper 3 You are required to obtain a **cockroach** and label it specimen R (a)Examine the **external features**, state the features you can use to classify the specimen according to following taxa (i) **class** (ii) **phylum(3marks)** **(b)** i)state the sex of the specimen(**1mark)** (ii)Describe the features you based on to determine the sex **(2 marks)** (a) Observe the left lateral view of the abdomen. Draw and label the observed features.(**7marks)** (d)Cut off the legs, antennae, and the wings. With the ventral facing the dissecting board, cut along the right lateral, open the cuticle and pin on the other side. Stretch out the alimentary canal and pin it on your right. Draw and label the **circulatory system** and structures used for food digestion and absorption only on the same drawing**. (17 mark)**	**30mks**
PHYSICS	**1**	(a) Use a speed-time graph to show that $S = ut + {}^{1}/_{2}\,at^2$, where S is distance covered. In a time, interval, t, acceleration, a, and u is initial velocity of the body. (4marks) (b) Apply the dimensional argument on the equation in 1(a) above to check whether its Dimensionally consistent or not. (2marks) (c) The period of vibration of a liquid drop is given by $T = K\emptyset^x\beta^y\Omega^z$ where K is a dimensionless constant, $\emptyset$ is the radius of the drop, β is the density of the liquid drop and Ω is the surface tension of the liquid drop whose dimensions are MT^{-2}. Use the Dimensional analysis to find the values of x, y and z .Hence rewrite the equation above and simplify it algebraically. (4marks) (d)  A block of mass 200g is acted upon by a series of forces as shown below: Find the resultant force and hence the acceleration of the block.	**20mks**
	2	1. (i)State the law of **electrostatics** (ii) Explain how a **gold leaf electroscope** can be charged negatively by induction. (iii) State four uses of a **gold leaf electroscope.** (iv) Describe how a lightening conductor can prevent a house from lightening (v) Define an **electric field.** (vi) State three properties of **electric field** lines. (vii) State **coulombs law** of **electrostatics.** (viii) Two-point charges A and B of $47.0\mu C$ and $24.0\mu C$ respectively placed in a vacuum at a distance of 30cm apart. When a third charge C of $-35.0\mu C$ is placed between A and B at a distance of 20cm from A, Find the net force on C	**30mks**
ECONOMICS	**1**	1.a) Differentiate between a command and **laissez faire** economy (02mark) (b) Give the salient features of the command economy. (06marks) (c) Explain the implication of command Economy. (12 mark)	**24mks**
	2	2.Discuss the benefits and costs of economic growth.	**20mks**
HISTORY	**1**	How did Egyptian revolution contribute to the development of **African Nationalism**?	**25mks**
	3	1. Examine the causes and consequences of the 1793 reign of terror in **France.** *(25mks)* 2. Assess the achievements of the National Assembly in the history of France between 1789-1792. .*(25mks)*	**50mks**

SUBJECT		CHALLENGE	MKS
ENTREPRENEURSHIP	1	(a) Discuss the features of ***entrepreneurial*** motivation.(8mks) (b) Explain the factors that ***hinder entrepreneurial*** motivation (14marks) (c) Discuss the classical concepts of entrepreneurial motivation (08mks)	**30mks**
	2	You are planning to start a carpentry workshop in your hometown (a) Identify the requirements for the business start-up (5mks) (b) Explain the benefits of the business to the community (8mks) (c) What challenges are likely to be faced during business operation? (6mks) (d) How can self employment be promoted in Uganda? (6mks)	**25mks**
	3	Visit any business in your home area (a) Give the general description of the business (4mks) (b) How does the business promote its products? (8mks) (c) What challenges are faced by the business? (7mks) (d) Explain the benefits the business derives from the society 6mks)	**25mks**
FINE ART	1	*Task I*- Research and make Notes on the ELEMENTS and PRINCIPLES of Art and Design. Use illustrations where possible. *Task II*- Paint an original imaginative composition in colour based on the subject given below. Bear in mind the quality of composition, imagination, feeling, drama, and originality rather than a literal interpretation, are the main objectives of this paper. Topic: ***"What a Day!"***	**40mks**
DIVINITY	1	1 (a) Discuss the Burning Bush incident (the call of Moses) 13 marks (b)What was the relevance of the incident to the israelities? 12 marks	**25mks**
	2	1.(a)Examine the format of the Early church oral proclamation by the Apostles. (13 marks) (b) Explain the effects of the above message to the early church believers. (12 marks)	**25mks**
	3	1 (a) Account for the fact that preaching the gospel is becoming more expensive today? 13 mks (b) Explain reasons why the gospel is less productive today ? 12 mks	**25mks**
LITERATURE	1	Read the following poem carefully and answer the questions that follow: ***THE WOMAN I MARRIED*** ***The woman I married*** ***Is an out-right bone-shaker*** ***For a full decade*** ***She had banged a typewriter*** ***And now in substitution*** ***Bangs the crockery*** ***Until my house sounds like a factory.*** ***The noise keeps her sane,*** ***They say.*** ***Edwin Waiyaki*** QUESTIONS: 1. Briefly explain the subject matter and theme of the poem. (4marks) 2. What is the attitude of the persona towards the woman? (4marks) 3. Describe the character of the: a)Persona (3marks) b)Woman (3marks) 4. Identify and discuss major poetic techniques that the poet uses and show their effectiveness in poem. (12marks) 5. The persona refers to the woman as "the woman I married" instead of "my wife" What does this suggest about their relationship? (2marks) 6. What does the persona mean by "she had banged the typewriter" (2marks) 7. What are your feelings towards the: a)The woman ((2marks) (b)The persona (2marks)	**20mks**
	2.	1. Do you like the ending of the play; **Oedipus The king?** Explain your reasons clearly basing on the play.	**20mks**
	3.	Write the plot and story of part 3-5 in the moon also sets.	**20mks**
GEOGRAPHY	1	1.(a) Account for the occurrence of faulting in east Africa? (b) Describe the formation of any one land form resulting from faulting in east Africa?	
	2	Examine the impact of forest destruction to the environments of Tropical African states.	**25mks**
	3	1. Describe the processes for the formation of drainage features (LAKES) in Uganda (25marks) 2. Explain the contributions of lakes to the development of Uganda (25marks)	**50mks**

Assessment Percentage rank for term two

	Holiday work	Mid-term exam	End of term exam	FINAL MARK
Mid-term report	**20%**	**80%**	**…….**	**100%**
End of term repot	**10%**	**30%**	**60%**	**100%**