

**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES & SOCIAL SCIENCES**  
**POST GRADUATE**  
**2020/2021 ACADEMIC YEAR**

- DEV 5012 POLITICAL ECONOMY OF CONTEMPORARY ZAMBIA SOCIETY**
- DEV 5131 AGRARIAN CHANGE AND DEVELOPMENT**
- DEV 5132 ECONOMIC GROWTH, ENVIRONMENT & SUSTAINABLE DEVELOPMENT**
- DEV 5142 CIVIL SOCIETY, GOVERNANCE AND DEVELOPMENT**
- ECN 5012 ADVANCED MICROECONOMICS THEORY II**
- ECN 6011 MICROECONOMIC THEORY I**
- ECN 6022 ADVANCED MACROECONOMICS II**
- ECN 6301 STATISTICS FOR ECONOMICS AND ECONOMETRICS**
- ECON 561 ECONOMETRICS THEORIES AND PRACTICE 1**
- EPM 5122 MACROECONOMICS FOR POLICY**
- EPM 5131 APPLIED QUANTITATIVE ANALYSIS**
- EPM 5145 ECONOMETRICS**
- EPM 5211 MANAGEMENT ACCOUNTING FOR POLICY**
- EPM 5232 FINANCIAL MANAGEMENT FOR POLICY**
- EPM 5335 PROJECT MANAGEMENT**
- EPM 5455 MONETARY ECONOMICS**
- EPM 5515 HUMAN RESOURCE MANAGEMENT**
- EPM 5525 ENTREPRENEURSHIP AND SMALL ENTERPRISES**
- EPM 5611 COMPUTER SKILLS**
- EPM 5621 EFFECTIVE POLICY COMMUNICATION**

**LIT 5010 LITERARY RESEARCH METHODS AND PROPOSAL WRITING**

**LIT 5210 COMPARATIVE LITERATURE**

**LIT 5220 LITERARY ONOMASTICS**

**MCD 5251 COMMUNICATION STRATEGIES AND COMMUNITY MOBILISATION**

**MMC 5242 COMMUNICATION POLICY AND PLANNING IN DEVELOPING COUNTRIES**

**MSW5115 ADVANCED SOCIAL WORK PRACTICE WITH CHILDREN, YOUTH &  
FAMILIES**

**MSW5425 PROJECT, PROGRAMME AND POLICY EVALUATION**

**MSW5455 MANAGEMENT OF HUMAN SERVICE ORGANISATIONS**

**MSW5715 ADVANCED COMMUNITY DEVELOPMENT**

**PAM 5110 THE THEORY AND PRACTICE OF PUBLIC ADMINISTRATION AND MGT**

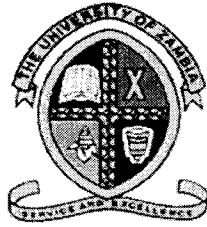
**POL/PAM RESEARCH METHODS AND TECHNIQUES**

**POP 5110 ADVANCED DEMOGRAPHIC ANALYSIS**

**POP 5210 APPLIED DEMOGRAPHY**

**POP 5310 DATA ANALYSIS**

**POP 5410 SOCIAL RESEARCH METHODS**



UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
Department of Development Studies  
**DEV 5012: Political Economy of Contemporary Zambian Society**

2020 END OF ACADEMIC YEAR EXAMS

**Instructions:**

There are three sections. Answer all questions from section one. Answer only one question from section two and only one question from section three.

The Duration of the exam is three hours. Do not spend more than one hour on each of the three sections.

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**Section One:**

- I. Give brief answers to the following questions and mostly in outline form
  - i. Mention the various forms of state formations in pre independent Zambia and the interests they saved
  - ii. Give two reasons to suggest either the continuity or discontinuity with the pursuance of colonial interests by Zambia's immediate post-colonial state
  - iii. Mention at least two aspects of Neo-patrimonialism and how they could be said to impact negatively on national development
  - iv. Mention at least two major aspects of the Zambian economy unsustainable and vulnerable to external shocks
  - v. Mention the ultimate source of Zambia's policy agenda and explain why
  - vi. Mention at least four major actors and stakeholders in Zambia's policy formulation
  - vii. Briefly define the concept of public finance and indicate its relationship to the concept of national development
  - viii. Mention at least four of Zambia's major development dilemmas
  - ix. Mention at least two ways in which the Zambian state authorities and traditional leaders interact with each other
  - x. Give at least two reasons for the suggestion that liberal democracy is or is not a condition for national development

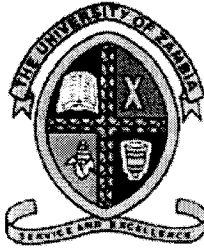
## **Section two**

2. Trace the origins and development of the of the Zambian state under various phases of colonisation and mention and discuss the effects of such origins on the nature, character and interests of Zambia's post-colonial state
3. Give a comprehensive definition of the concept of neo-patrimonialism and discuss how it may or may not be used as a basis for justifying Zambia's post-independence development failures.
4. Present major aspects of Zambia's economic structure and discuss how such aspects have constrained the country's national development

## **Section three**

5. Mention the missing link in Zambia's industrial sector and give an elaborate and comprehensive explanation of how the country's major development dilemmas are ultimately linked to that missing link.
6. Give a detailed description of Zambia's current policy formulation and implementation process, the major stake holders involved and how the entire process can be said to have either contributed to or constrained national development
7. Evaluate the assumed positive link between liberal democracy and development in the light of development trends in Zambia's second and third Republics

END OF EXAM, GO BACK AND CHECK YOUR WORK AGAINST ERRORS



THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
DEPARTMENT OF DEVELOPMENT STUDIES

**DEV 5131 – Agrarian Change and Development**

Exam Instructions:

**Date: 3<sup>rd</sup> December 2020**

- There are FOUR QUESTIONS in this paper. Question ONE is compulsory.
- Answer a total of THREE Questions. A maximum of 3 pages is required per question.
- Time – 3 Hours
- Write legibly

### **Question One: 30 Marks**

The debate on the agrarian question borders on land and labour dynamics and how these can influence sustainable livelihood analysis. In reformulating classic agrarian question, it is important to ask: *who owns what? who does what? who gets what? and what do they do with it?* As a Master of Arts student at the University of Zambia, show your understanding of these questions. Give concrete examples.

### **Question Two: 20 Marks**

Andrew Dorward's simple tripartite schema of '*hanging in,*' '*stepping up*' and '*stepping out*' arguably offers an opportunity to classify the livelihood pathways of rural households into specific categories relevant in informing debates around de-agrarianisation – bridging somewhat microanalytical explanatory SLA-type models framed in terms of the dynamics of capitalism and microanalytical middle-ground approaches foregrounding processes of rural social differentiation. Show your understanding of Dorward's argument with an application to rural Zambia.

### **Question Three: Write short notes on the following (20 Marks)**

- 3.1 Shocks, trends and seasonality as they relate to rural livelihoods
- 3.2 'Win-win' argument for contract farming
- 3.3 Agrarian question
- 3.4 Accumulation from below
- 3.5 State and markets in driving agrarian changes

### **Question Four: 30 Marks**

The United Nations Sustainable Development Goals (SDGs) have brought optimism around the role of agribusinesses in development, enhancing the prominence of agriculture across many of the 17 SDGs (Manda et al. 2018). Yet recent reports such as Matenga and Hichaambwa (2017) argue "*[c]ommercial agriculture has mixed effects – on land access, employment, livelihood patterns and economic linkages*" (Page 589). Critically examine the role and importance of agribusiness expansion in Zambia.

**End**

*"The fishermen know that the sea is dangerous and the storm terrible, but they have never found these dangers sufficient reason for remaining ashore"*



UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF DEVELOPMENT STUDIES

2020 FINAL EXAMINATIONS

DEV 5132: ECONOMIC GROWTH, ENVIRONMENT & SUSTAINABLE  
DEVELOPMENT

DURATION: THREE HOURS

INSTRUCTIONS

- a) Answer **any three (3)** questions.
- b) All questions carry equal marks
- c) Write in legible handwriting

- 
1. Why has '**climate change**' become so topical among policy makers, politicians and scholars? Identify and critically explain how a developing country like Zambia is **impacted** by climate change.
  2. '**Sustainable development**' is still a contested concept, yet it has been deployed by the UN as an analytical lens for the current international development goals called Sustainable Development Goals (SDGs). **How useful** is the concept of 'sustainable development' as a **guiding development tool** for poor countries of the south?
  3. Grossman and Krueger (1991) employed the concept of '**environmental Kuznets Curve**' (EKC) to explain the relationship between economic growth and the environment. Clearly explain the EKC. What are the **weaknesses** of the EKC in explaining this relationship?
  4. **Poverty** and **environmental degradation** are inextricably **linked**. Identify and critically explain the **two broad contending approaches** to the poverty-environment relationship.
  5. Is trade liberalization good or bad for the environment? Explain both the **negative** and **positive** effects of trade on the environment using 'race to the bottom'; 'pollution havens'; and 'gains from trade' hypotheses.

END OF EXAMINATION

**UNIVERSITY OF ZAMBIA**  
**UNIVERSITY EXAMINATIONS**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**2019/2020 ACADEMIC YEAR FINAL EXAMINATIONS**

**DEV 5142: CIVIL SOCIETY, GOVERNANCE AND DEVELOPMENT**

**Instructions:**

- The examination paper has five questions;
  - Choose and answer any three questions;
  - All questions carry equal marks;
  - Duration for the examination is **3 hours**.
- 

1. Critically examine strategies states in developing countries use to engage with civil society. How effective are such strategies in fostering effective interaction between the state and civil society?
2. What is social accountability? Examine some of the key approaches civil society use to hold government accountable to their citizenry.
3. Critically analyse the capacity challenges associated with civil society in influencing good governance and development in developing countries. How can they be resolved?
4. Explore and analyse problems linked to external support in addressing civil society capacity constraints. How can such problems be mitigated in order to promote a more vibrant civil society in developing countries?
5. Critically analyse social investment as an alternative source of funding for CSOs in Zambia. What are some of the potential challenges of using this strategy for CSOs financing in Zambia?

**END OF EXAMINATION**



**AFRICAN ECONOMIC RESEARCH CONSORTIUM**  
**Collaborative Masters Programme in Economics for Anglophone Africa**  
**(Except Nigeria)**

**JOINT FACILITY FOR ELECTIVES (JFE) 2021**  
**AUGUST - NOVEMBER**

**ECON 561: ECONOMETRICS THEORY AND PRACTICE I**

**First Semester: Final Examination**

**Duration: 3 Hours**

**Date: Friday, September 10, 2021**

**INSTRUCTIONS:**

1. This examination consists of two sections: **Section A** and **Section B**.
2. Answer **TWO** questions in **Section A** and **TWO** questions in **Section B**. Note that **Question 1** and **Question 4** are compulsory.
3. All questions carry equal marks.

**Section A:**

**Answer TWO Questions from this Section. Note that Question 1 is Compulsory**

**Question 1 (Compulsory)**

Consider this regression model .

- (a) Prove that the OLS estimator is BLUE. **[4 Marks ]**
- (b) What are the consequences of violating the homoscedasticity assumption? **[2 Marks ]**
- (c) Show that Generalized Least Squares (GLS) is a solution to Heteroscedasticity. **[3 Marks]**
- (d) Suppose that a regression model involves two sets of variables, and . Thus, . Using the Frisch - Waugh (1933) - Lovell (1963) Theorem, find the algebraic solution for . **[3 Marks]**
- (e) Let be a linear regression model, where the disturbance term is normally distributed. Derive the maximum likelihood estimator (MLE) assuming that the probability density function for each , is given by , . **[3 Marks]**

**Question 2**

- (a) Check the stationarity condition of the following process, . **[2 Mark]**



(b) Assume the following AR (1) process with a drift, :

(i) Transform it into an infinite-order moving average (MA) process. **[2 Marks]**

(ii) Compute its mean, variance, the first three autocorrelation functions (ACF) as well as the first three partial autocorrelation functions (PACF). **[5 Marks]**

(c) Use any two economic or financial time-series of your choice to explain the concepts of cointegration and error correction mechanism. **[3 Marks]**

(d) Analyze the following ARMA modelling results for the South African GDP growth, then use the three steps proposed by Box-Jenkins to select the best model characterizing the data generating process of the South African GDP growth. **[3 Marks]**

Date: 08/25/21 Time: 22:43  
 Sample: 1981Q1 2017Q1  
 Included observations: 145

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob	
		1	0.535	0.535	42.436	0.000
		2	0.349	0.087	60.557	0.000
		3	0.115	-0.144	62.542	0.000
		4	-0.002	-0.054	62.543	0.000
		5	-0.077	-0.037	63.456	0.000
		6	0.002	0.124	63.457	0.000
		7	-0.053	-0.099	63.890	0.000
		8	-0.035	-0.022	64.086	0.000
		9	0.063	0.158	64.704	0.000
		10	0.132	0.088	67.440	0.000
		11	0.103	-0.062	69.116	0.000
		12	0.113	0.012	71.169	0.000
		13	-0.007	-0.089	71.177	0.000
		14	-0.104	-0.079	72.935	0.000
		15	-0.065	0.083	73.637	0.000
		16	-0.065	-0.024	74.340	0.000
		17	-0.029	0.030	74.478	0.000
		18	0.018	0.018	74.531	0.000
		19	-0.012	-0.079	74.556	0.000
		20	0.015	0.061	74.596	0.000



. arima y, arima(1,0,0)

(setting optimization to BHHH)  
 Iteration 0: log likelihood = -148.26319  
 Iteration 1: log likelihood = -148.26307  
 Iteration 2: log likelihood = -148.26305  
 Iteration 3: log likelihood = -148.26305

ARIMA regression

Sample: 1981q1 - 2017q1                      Number of obs        =        145  
    Wald chi2(1)        =        71.10  
 Log likelihood = -148.263                    Prob > chi2         =        0.0000

	y	Coef.	OPG Std. Err.	z	P> z	[95% Conf. Interval]
y	_cons	.5293413	.1349891	3.92	0.000	.2647674 .7939151
ARMA	ar					
	L1.	.5373732	.0637274	8.43	0.000	.4124698 .6622766
	/sigma	.6719764	.0300809	22.34	0.000	.613019 .7309338

Note: The test of the variance against zero is one sided, and the two-sided confidence interval is truncated at zero.

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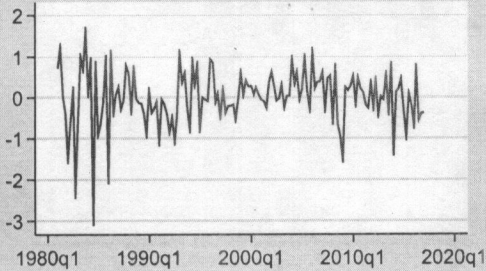
Akaike's information criterion and Bayesian information criterion

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	145		-148.263	3	302.5261	311.4563

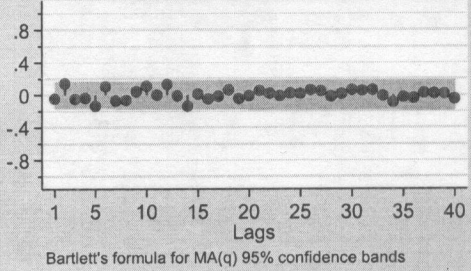
Note: N=Obs used in calculating BIC; see [help] biconst.

## Diagnostics for AR residuals

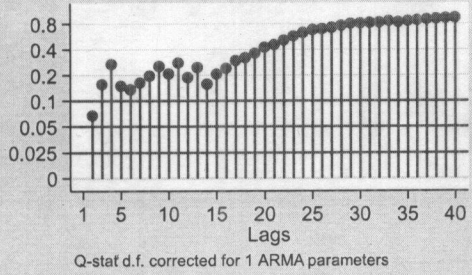
ARMA residuals



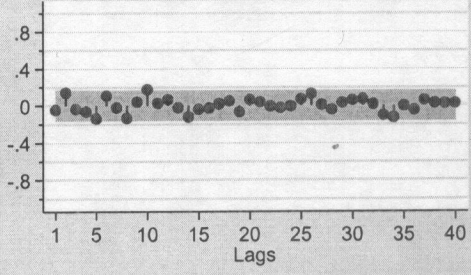
Autocorrelations



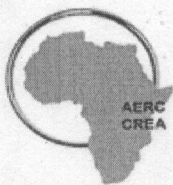
P-values for Q-statistics



Partial Autocorrelations



. arima y, arima(0,0,2)



ARIMA regression

Sample: 1981q1 - 2017q1  
 Log likelihood = -148.7109

Number of obs = 145  
 Wald chi2(2) = 41.44  
 Prob > chi2 = 0.0000

		OPG				[95% Conf. Interval]	
	y	Coef.	Std. Err.	z	P> z		
<b>y</b>							
	_cons	.5288473	.110613	4.78	0.000	.3120498	.7456449
<b>ARMA</b>							
	ma						
	L1.	.445282	.0766938	5.81	0.000	.2949649	.5955991
	L2.	.2902307	.0739317	3.93	0.000	.1453272	.4351341
	/sigma	.6740997	.032119	20.99	0.000	.6111476	.7370517

Note: The test of the variance against zero is one sided, and the two-sided confidence interval is truncated at zero.

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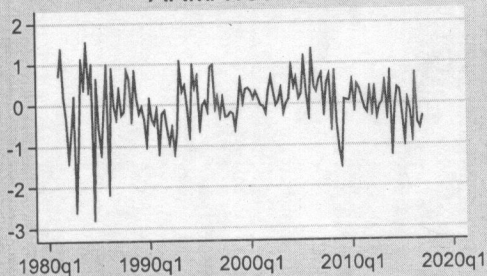
Akaike's information criterion and Bayesian information criterion

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	145		-148.7109	4	305.4219	317.3288

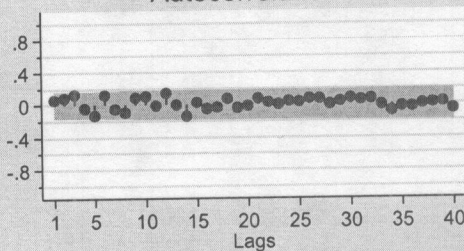
Note: N=Obs used in calculating BIC; see [R] BIC note.

## Diagnostics for MA residuals

ARMA residuals

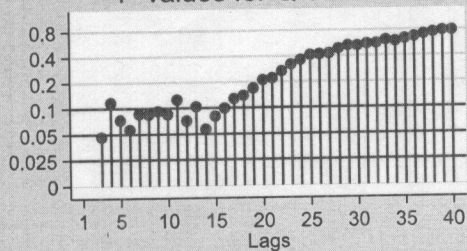


Autocorrelations



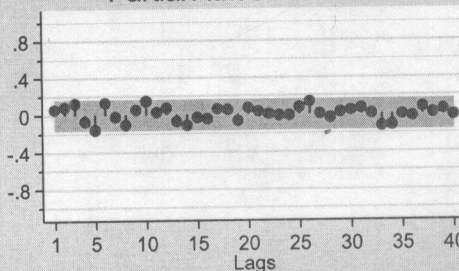
Bartlett's formula for MA(q) 95% confidence bands

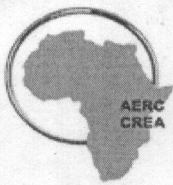
P-values for Q-statistics



Q-stat d.f. corrected for 2 ARMA parameters

Partial Autocorrelations





ARIMA regression

Sample: 1981q1 - 2017q1

Number of obs = 145

Wald chi2(3) = 69.19

Log likelihood = -146.0607

Prob > chi2 = 0.0000

y	OPG		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
<b>y</b>						
_cons	.528714	.1392759	3.80	0.000	.2557383	.8016898
<b>ARMA</b>						
* ar						
L1.	.4388247	.1311014	3.35	0.001	.1818708	.6957787
ma						
L1.	.0414724	.1271337	0.33	0.744	-.2077051	.2906498
L2.	.2206887	.0958505	2.30	0.021	.0328251	.4085523
/sigma	.6615777	.0313315	21.12	0.000	.6001691	.7229864

Note: The test of the variance against zero is one sided, and the two-sided confidence interval is truncated at zero.

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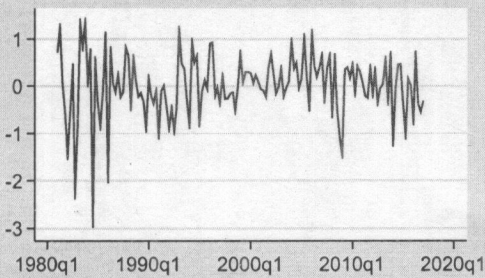
Akaike's information criterion and Bayesian information criterion

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	145		-146.0607	5	302.1214	317.005

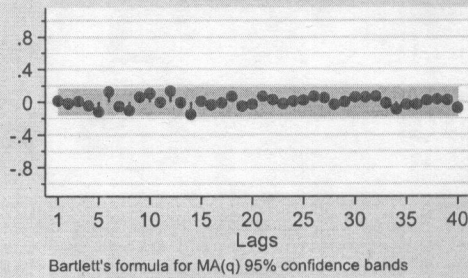
Note: N=Obs used in calculating BIC; see [R] BIC note.

## Diagnostics for ARMA residuals

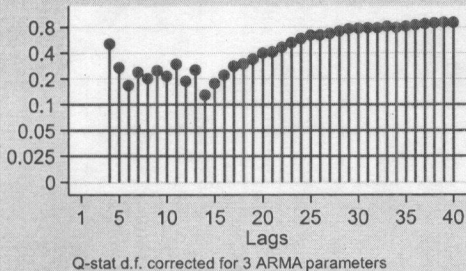
ARMA residuals



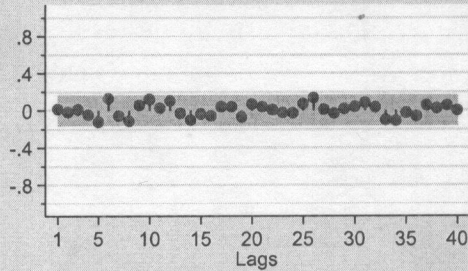
Autocorrelations



P-values for Q-statistics



Partial Autocorrelations





### Question 3

- (a) Show that a TS process with a deterministic trend and a random walk process, are non-stationary. **[3 Marks]**
- (b) Assume a first-order autoregressive model, How would you proceed to test for the presence of a unit root using Dickey-Fuller (DF) test? Justify the null and alternative hypotheses. **[2 Marks]**
- (c) Assume a third-order autoregressive process, AR (3). How would you proceed to test for the presence of a unit root using Augmented Dickey-Fuller (ADF) test? **[2Marks]**
- (d) Assume a first-order autoregressive process,. Transform it into a moving average (MA) process and show that shocks to a stationary variable are only temporary, but for a non-stationary process, shocks have permanent effects. **[2 Marks]**
- (e) Interpret the following ADF unit root test results from R software on Zambian GDP (in logarithm). **[2 Marks]**

Value of test-statistic is: -2.3099 5.5275 3.0179

Critical values for test statistics:

	1pct	5pct	10pct
tau3	-3.99	-3.43	-3.13
phi2	6.22	4.75	4.07
phi3	8.43	6.49	5.47

Value of test-statistic is: -1.1687 5.7866

Critical values for test statistics:

	1pct	5pct	10pct
tau2	-3.46	-2.88	-2.57
phi1	6.52	4.63	3.81

- (f) A researcher modelled the daily rate of return of the NYSE using the EGARCH model and obtained the following results, where between parentheses is the *t*-statistic (Number of observations = 3271). Interpret the estimated conditional variance equation results if we assume that .

**[1.5 Marks]**

- (g) Interpret the following estimation results of a standard GARCH (1, 1) model on the daily rate of return of the sp500, obtained using R software. **[2.5 Marks]**

```

-----*
*   GARCH Model Fit   *
-----*
  
```

Conditional Variance Dynamics

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-----
GARCH Model : sGARCH(1,1)
Mean Model  : ARFIMA(1,0,1)
Distribution : norm
  
```



Optimal Parameters

	Estimate	Std. Error	t value	Pr(> t )
mu	0.000522	0.000087	5.9870	0.00000
ar1	0.870740	0.071788	12.1294	0.00000
ma1	-0.897946	0.064193	-13.9882	0.00000
omega	0.000001	0.000001	1.3891	0.16482
alpha1	0.087715	0.013718	6.3942	0.00000
beta1	0.904945	0.013768	65.7284	0.00000

Weighted Ljung-Box Test on Standardized Residuals

	statistic	p-value
Lag[1]	5.552	1.846e-02
Lag[2*(p+q)+(p+q-1)][5]	6.441	1.242e-05
Lag[4*(p+q)+(p+q-1)][9]	7.193	1.106e-01
d.o.f=2		
H0 : No serial correlation		

Weighted Ljung-Box Test on Standardized Squared Residuals

	statistic	p-value
Lag[1]	1.102	0.2939
Lag[2*(p+q)+(p+q-1)][5]	1.495	0.7412
Lag[4*(p+q)+(p+q-1)][9]	1.954	0.9105
d.o.f=2		

Weighted ARCH LM Tests

	Statistic	Shape	Scale	P-Value
ARCH Lag[3]	0.01955	0.500	2.000	0.8888
ARCH Lag[5]	0.17515	1.440	1.667	0.9713
ARCH Lag[7]	0.53754	2.315	1.543	0.9749

Nyblom stability test

Joint Statistic: 174.712

Individual Statistics:

mu	0.2099
ar1	0.1497
ma1	0.1064
omega	21.3579
alpha1	0.1345
beta1	0.1126

Asymptotic Critical Values (10% 5% 1%)

Joint Statistic:	1.49	1.68	2.12
Individual Statistic:	0.35	0.47	0.75

Sign Bias Test

	t-value	prob sig
Sign Bias	0.4298	6.673e-01
Negative Sign Bias	2.9469	3.223e-03 ***
Positive Sign Bias	2.3934	1.672e-02 **
Joint Effect	28.9766	2.265e-06 ***

## Section B:

**Answer TWO Questions from this Section. Note that Question 4 is Compulsory**

### Question 4 (Compulsory)



(a) Assume the following AR (2) process, , where Compute the mean, the variance, the first three autocorrelation functions (ACF), as well as the first three partial autocorrelation functions (PACF).

**[5 Marks]**

(b) Assume the following ARDL (1,1) model , with . Re-parameterize the above model into an error correction model (ECM). **[2 Marks]**

(c) Assume the following first-order VAR model.

$$\begin{bmatrix} x_t \\ y_t \end{bmatrix} = \begin{bmatrix} 3 \\ 1 \end{bmatrix} + \begin{bmatrix} 0.2 & 0.7 \\ 0.3 & 0.4 \end{bmatrix} \begin{bmatrix} x_{t-1} \\ y_{t-1} \end{bmatrix} + \begin{bmatrix} e_{1t} \\ e_{2t} \end{bmatrix}$$

(i) Check the stationarity condition of the above VAR process. **[2 Marks]**

(ii) Transform the above first-order VAR into a second-order stochastic difference equation in the {} and {} sequences, then determine whether the {} and {} sequences are stationary. **[3 Marks]**

(iii) Explain the concept of “variance decomposition” in VAR modeling. **[3 Marks]**

## Question 5

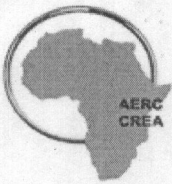
(a) Assume the following first-order VAR model:

(i) Introduce the lag operator and find the solution for and . **[3 Marks]**

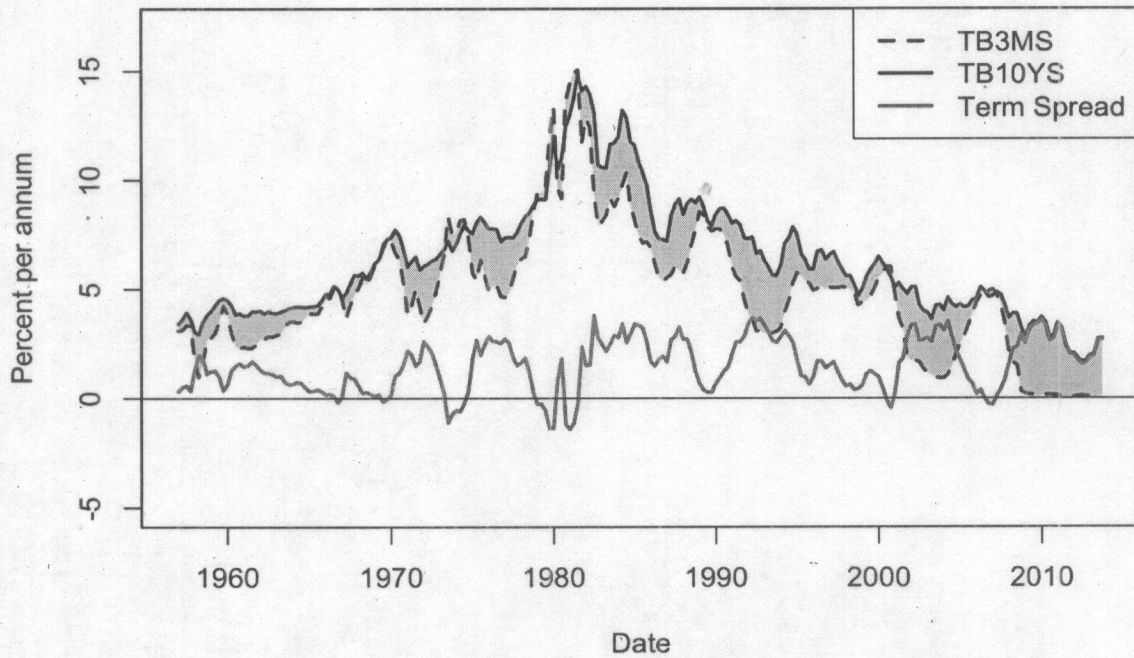
(ii) Find the roots of the characteristic equation and conclude on the order of integration of and . **[2 Marks]**

(iii) Write the given VAR model into a vector error-correcting model. **[2 Marks]**

(b) The theory of the term structure suggests that long-term and short-term interest rates are cointegrated with a cointegration coefficient of one . Comment on the graph below, where is the 10-years treasury bonds rate, is the 3-months treasury bills rate, and Term Spread is **[2 Marks]**



### Interest Rates



(c) Interpret the following estimated equations of the VECM where  $\alpha$  is the error correction term and between brackets are the *p-values*. [2 Marks]

(d) Assume the following VECM, where :

Discuss the different possible cases of the rank of  $\alpha$  matrix, in relation to Johansen cointegration test. Where possible, extract also the equation for  $\alpha$  [4 Marks]



## Question 6

(a) Assume a first-order VAR model, , where and .

(i) Transform this VAR model into a second-order stochastic difference equation in the  $\{ \}$  and  $\{ \}$  sequences. **[4 Marks]**

(ii) Write that VAR model into a vector moving average (VMA). **[3 Marks]**

(iii) From the VMA, explain what is meant by “Impulse Response Function”. **[2.5 Marks]**

(b) A researcher estimated the following wage equation with as an endogenous variable:

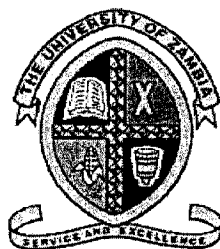
(i) Why would he consider “education” as an endogenous variable in a wage equation? **[1 Mark]**

(ii) The researcher uses mother’s education (*meduc*) and father’s education (*feduc*) as instruments for education. Which main intuition do you get from the following estimation of the reduced-form model (in brackets are the *p-values*)? **[1 Mark]**

(iii) A F-test from the estimated reduced-form model, that the estimated coefficients of and are jointly equal to zero, gives the following results: What does this tell you? **[1 Mark]**

(iv) Which main intuition do you get from the following estimation, where is the estimated residual series from the reduced-form model (in brackets are the *p-values*)? **[1 Mark]**

(v) Give an interpretation of the estimated coefficient of and , in the following 2SLS regression, where if married and 0 otherwise (in brackets are the *p-values*). **[1.5 Marks]**



**UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**ECONOMIC POLICY MANAGEMENT PROGRAMME**  
**DEPARTMENT OF ECONOMICS**

**2020/2021 ACADEMIC YEAR**  
**COURSE: EPM 5122 – MACROECONOMICS FOR POLICY**  
**DIFFERED AND SUPPLEMENTARY EXAMINATIONS**

**THIRD TRIMESTER FINAL EXAMINATIONS**

**TIME ALLOWED: THREE (3) HOURS**

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**INSTRUCTIONS:**                      **Differed Exam takers:** Answer ALL questions in Section A and choose two other questions from Section B

**Supplementary Exam Takers:** Answer any **FOUR** questions from Sections A and B

**DATE:**                                      **MONDAY , 22<sup>nd</sup> SEPTEMBER 2021**

**TIME:**                                        **9 AM**

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**DO NOT TURN OVER UNTIL INSTRUCTED TO**

## SECTION A: Compulsory questions for Differed Examinations takers

### QUESTION 1

- Using the IS-LM-BoP model, graphically illustrate and explain what effect a reduction in taxes will have on a small open domestic economy (assume that tax is lump sum only). In your graphs, clearly label all curves and equilibria (Assume the exchange rate is allowed to fluctuate freely).
- List and explain the key assumptions of the neoclassical investment theory (Jorgenson 1967) about the user cost of capital. Using diagrams, explain how you would determine the optimal stock of capital. Show how an improvement in technology could affect the equilibrium position

### QUESTION 2

- Set up and explain the Baumol-Tobin Model of money demand. Explain how each key determinant of money demand affect the transactions demand for money.
- You are given an economy with the goods market characterized by the following behavioral equations:

$$Y = C + \bar{I} + G \quad \text{Where} \quad C = c_0 + c_1(Y - T)$$

You are given that  $C_0 = 160$ ;  $c_1 = 0.6$ ;  $I = 150$ ;  $G = 150$ ;  $T = 100$

Solve for the following:

- Equilibrium output
- Disposable income
- Consumption
- What if the equilibrium output?
- Compute the new equilibrium if government reduced its spending by 40
- Based on you answer in (v), what is the level of total savings in the economy

## SECTION B

### QUESTION 3

- The banks can facilitate the creation of money through the credit system. Assume you are informed the currency in circulation is at K1000 with zero demand deposits, and consumers to deposit with Xenon Bank and others. Assume the Central bank requires banks to hold 20% in reserved and loan out the rest. Show using the bank's balance sheet the money reition process up to the 5<sup>th</sup> transaction.
- List and explain 3 tools or instruments of monetary policy.

#### QUESTION 4

Write some notes on the following

- a. Motives for holding inventory under the theories of investment
- b. Causes and solutions to poverty traps under the Solow's growth model
- c. Permanent Income hypothesis

#### QUESTION 5

a. Suppose that money demand in an economy is given by the following linear function:

$$\frac{M}{P} = 500 + 0.2Y - 1000i$$

- i. Suppose that  $P = 100$ ,  $Y = 1000$ ,  $i = 0,1$ . Determine the demand for real balances and the velocity of money in this economy.
  - ii. Suppose that now  $P = 200$ , all else equal. Determine the new demand for real balances and the new velocity of money in this economy, assuming that  $M_s$  is adjusted such that there is no change in the interest rate.
- b. The implementation of fiscal and monetary policies is likely to be affected by the inside and outside lags. Explain these lags and how they can affect the effectiveness of the policies

#### QUESTION 6

Write some detailed notes on:

- a. The types and costs of inflation
- b. Currency crises
- c. Impact of an increase in interest rates on borrowers and lenders under intertemporal choice

Question 7

- a. What are the functions and characteristics of money?
- b. Causes of unemployment
- c. The impact of money illusion on employment, growth and prices in the Keynesian model

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END OF THE EXAMINATION



THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

FIRST TRIMESTER  
SUPPLEMENTARY EXAMINATIONS  
2020 ACADEMIC YEAR

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**COURSE:** EPM 5131 (APPLIED QUANTITATIVE ANALYSIS)  
**DURATION:** THREE HOURS  
**INSTRUCTIONS:** ANSWER ALL FIVE (5) QUESTIONS. EACH QUESTION IS WORTH 20%.

1. Consider the following matrices  $A$  and  $B$ :

$$A = \begin{pmatrix} 2 & -6 \\ 7 & 4 \end{pmatrix}$$

$$B = \begin{pmatrix} 1 & 0 & 1 & 0 \\ 0 & 2 & 1 & 0 \end{pmatrix}$$

- State the dimensions of each matrix.
  - Transpose each matrix and state the dimensions of the transposed matrices.
  - Are the two matrices conformable for addition? Explain and show your work if they are conformable for addition.
  - Are the two matrices conformable for multiplication? Explain and show your work if they are conformable for multiplication.
2. Use Cramer's rule to solve for the unknowns in each of the following system of equations:

a)  $5x_1 - 2x_2 + 3x_3 = 16$   
 $2x_1 + 3x_2 - 5x_3 = 2$   
 $4x_1 - 5x_2 + 6x_3 = 7$

b)  $11p_1 - p_2 - p_3 = 31$   
 $-p_1 + 6p_2 - 2p_3 = 26$   
 $-p_1 - 2p_2 + 7p_3 = 16$

3. Consider a consumer with the following Cobb-Douglas utility function  $x^{0.5}y^{0.5}$ , facing the following prices,  $P_x$  and  $P_y$  and has income  $m$ .

- Set up the consumer's utility maximization problem and derive the FOCs.
- Derive the Marshallian demand functions for  $x$  and  $y$  and show that they are homogeneous of degree zero.
- Derive the indirect utility and show that it is homogenous of degree zero.

4. Evaluate the following definite integrals:

a)  $\int_2^6 5dx$

b)  $\int_3^8 3x^2dx$

c)  $\int_5^{10} (x^3 + x + 6)dx$

d)  $\int_1^4 (x^{-0.5} + 3x^{0.5})dx$

5. Consider order size data for twenty-two customers shown in the following table.

Customer ID	Order Size	Customer ID	Order Size
1	31	12	12
2	14	13	28
3	10	14	4
4	3	15	4
5	17	16	10
6	5	17	4
7	1	18	3
8	17	19	9
9	1	20	28
10	2	21	4
11	7	22	3

Using the data, answer the following questions

- Construct a histogram for the order size of the 22 customers
- Describe the distribution shape of the histogram
- What is the average order size? Interpret your answer.
- What is the median order size? Interpret your answer.

----- END OF EXAM-----

**UNIVERSITY OF ZAMBIA**  
**DEPARTMENT OF ECONOMICS**  
**ECONOMIC POLICY MANAGEMENT PROGRAMME**

**EPM 5145: ECONOMETRICS**

**DATE: 21<sup>st</sup> SEPTEMBER 2021**

**TIME: THREE HOURS**

**INSTRUCTIONS:**

- i. Answer any four questions.
- ii. The questions carry equal marks of 20.
- iii. Ensure that you clearly show all your workings.
- iv. Calculator are allowed for this examination

## QUESTION ONE

- i. Given the following regression function:  $Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + u_i$ , derive the first order conditions obtained using the OLS method when the sum of residual square is differentiated with respect to  $\hat{\beta}_1$  and  $\hat{\beta}_0$ .
- ii. Prove that the mean value of the estimated  $Y = \hat{Y}_i$  is equal to the mean value of the actual value  $Y$ .
- iii. List eight (8) of the Classical Linear Regression Model (CLRM) assumptions.

## QUESTION TWO

State whether true or false or uncertain. Justify your answer in a maximum of three sentences or through proofs as the question dictates.

1. If  $r$ , the coefficient of correlation between  $n$  pairs of values  $(X_i, Y_i)$ , is positive, then both the slope coefficients  $\beta_{yx}$  and  $\beta_{xy}$  are positive, where  $\beta_{yx}$  = slope coefficient in the regression of  $Y$  on  $X$  and  $\beta_{xy}$  = slope coefficient in the regression of  $X$  on  $Y$ .
2. If you regress  $Y_i$  on  $\hat{Y}_i$  (i.e., actual  $Y$  on estimated  $Y$ ), the intercept and slope values will be 0 and 1, respectively.
3. Based on the large sample properties of the estimator, an estimator can be asymptotically efficient but not consistent.
4.  $\text{var}(Y_i) = \sigma_u^2$
5. If there is no intercept in the regression model, the estimated  $u_i$  will not sum to zero.
6. Let  $\hat{\beta}_{YX}$  and  $\hat{\beta}_{XY}$  represent the slopes in the regression of  $Y$  on  $X$  and  $X$  on  $Y$ , respectively, then  $\hat{\beta}_{YX} \hat{\beta}_{XY} = r^2$  (where  $r$  is the coefficient of correlation between  $X$  and  $Y$ ).
7. Even though the disturbance term in the CLRM is not normally distributed, the OLS estimators are still unbiased.
8. The higher the value of  $\sigma^2$ , the larger is the variance of  $\hat{\beta}_1$  (the slope coefficient).
9. The sum of the squared deviations of error term is preferred so as to penalize larger deviations relatively more than smaller deviations.
10. If  $r$ , the coefficient of correlation between  $n$  pairs of values  $(X_i, Y_i)$ , is positive, then  $r$  between  $(-X_i, Y_i)$  and that between  $(X_i, -Y_i)$  can be either positive or negative.

### QUESTION THREE

- i. Determine whether each of the following equations is over, under or just identified using the order condition.

$$Y_1 = \alpha_0 + \alpha_1 Y_2 + \alpha_3 Y_3 + \alpha_4 X_1 + \alpha_5 X_2 + u_1$$

$$Y_2 = \beta_0 + \beta_1 Y_3 + \beta_2 X_1 + u_2$$

$$Y_3 = \gamma_0 + \gamma_1 Y_2 + u_3$$

- ii. State with a justification, whether the following statements are true, false, or uncertain:
- Despite perfect multicollinearity, OLS estimators are BLUE.
  - In cases of high multicollinearity, it is not possible to assess the individual significance of one or more partial regression coefficients.
  - Multicollinearity is harmless if the objective of the analysis is prediction only.
  - Ceteris paribus, the higher the Variance Inflating Factor (VIF) is, the larger the variances of OLS estimators.
  - The reduced-form equations of the model express each endogenous variable in the system only as a function of the exogenous variable of the model.

### QUESTION FOUR

- List the 5 types of specification errors that can be encountered when carrying out research
- Consider the following model:  $Y_t = \beta_1 + \beta_2 X_t + u_t$ . Assume that  $u_t$  has an AR (1). Carry out a Generalised Least Squares (GLS) when  $\rho$  is known. Also briefly state what correction (s) have been made to the model to allow you to use Ordinary Least Squares after the transformation.
- Give the decision rule (s) used to determine positive autocorrelation and show that

$$d \approx 2(1 - \hat{\rho})$$

### QUESTION FIVE

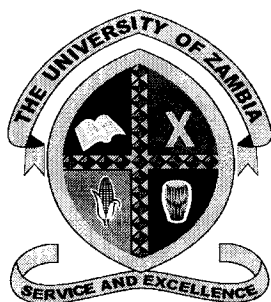
The table below gives the bags of maize produced per acre,  $Y$ , resulting from the use of various amounts of fertilizer in kilograms per acre,  $X$ , as produced on a farm in a period of 10 years.

Year	1	2	3	4	5	6	7	8	9	10
$Y_i$	40	44	46	48	52	58	60	68	74	80
$X_i$	6	10	12	14	16	18	22	24	26	32

Using the above information answer the following questions, clearly showing all formulas and calculations.

- i. Fit an OLS regression to these observations. (Clearly show a table with all your workings)
- ii. One of the large sample properties of an estimator is that it should be consistent, state two requirements for this property to hold.
- iii. Find the coefficient of determination and state two (2) of its properties.

**The End**



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DEPARTMENT OF ECONOMICS  
ECONOMIC POLICY MANAGEMENT  
2020/21 ACADEMIC YEAR**

**SUPPLEMENTARY/DEFERRED EXAMINATION**

**EPM 5211: MANAGEMENT ACCOUNTING FOR POLICY**

**DATE: 17<sup>TH</sup> DECEMBER, 2020**

**EXAM TIME: 09:00 HOURS**

**DURATION: THREE (3) HOURS**

**VENUE: DRGS LECTURE THEATRE I**

**INSTRUCTIONS:**

- 1. The Paper has Two Sections, A and B.**
  - 2. Section A has Two Questions. Answer ALL.**
  - 3. Section B has a Total Number of Four (4) Questions, Answer ANY TWO.**
  - 4. Marks Allocation Indicates the Depth of the Answer Expected**
- 

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## SECTION A - COMPULSORY

### QUESTION ONE

The following information has been extracted from the books of Tubombe, a limited liability company, as at 31 October 2018.

	<i>Dr</i>	<i>Cr</i>
	<i>K'000</i>	<i>K'000</i>
Cash	15	
Insurance	75	
Inventory at 1 November 2017	350	
General expenses	60	
Energy expenses	66	
Marketing expenses	50	
Wages and salaries	675	
Discounts received		50
Share premium account		200
Retained earnings at 1 November 2017		315
Allowance for receivables at 1 November 2017		40
Sales revenue		5,780
Telephone expenses	80	
Property expenses	100	
Bank		94
Returns inward	95	
Trade payables		290
Loan note interest	33	
Trade receivables	900	
Purchases	3,570	
7% loan notes		470
Irrecoverable debts	150	
K1 ordinary shares		1,800
Accumulated depreciation at 1 November 2017		
Buildings		360
Motor Vehicles		80
Furniture and equipment		420
Land at cost	740	
Buildings at cost	1,500	
Motor vehicles at cost	240	
Furniture and equipment at cost	1,200	
	<u>9,899</u>	<u>9,899</u>

You have also been provided with the following information:

- a) Inventory at 31 October 2018 was valued at K275,000 based on its original cost. However, K45,000 of this inventory has been in the warehouse for over two years and the directors have agreed to sell it in November 2018 for a cash price of K20,000.
- b) The marketing expenses include K5,000 which relates to November 2018.
- c) Based on past experience the allowance for receivables is to be increased to 5% of trade receivables.
- d) There are wages and salaries outstanding of K40,000 for the year ended 31 October 2018.
- e) Buildings are depreciated at 5% of cost. At 31 October 2018 the buildings were professionally valued at K1,800,000 and the directors wish this valuation to be incorporated into the accounts.
- f) Depreciation is to be charged as follows:
  - (i) Motor vehicles at 20% of written down value
  - (ii) Furniture and equipment at 20% of cost
- g) No dividends have been paid or declared.
- h) Tax of K150,000 is to be provided for the year.
- i) During October 2018 a bonus issue of one for ten shares was made to ordinary shareholders. This has not been entered into the books. The share premium account was used for this purpose.

**Required**

Prepare the following statements, for internal use:

- A. The statement of profit or loss for the year ended 31 October 2018 **(13 Marks)**
- B. The statement of financial position as at 31 October 2018 **(12 Marks)**

**QUESTION TWO**

Social Enterprises operates in the leisure and entertainment industry and one of its activities is to promote concerts at locations throughout the Zambia. The company is examining the viability of a concert in Livingstone. Estimated fixed costs are K600,000, these include the fees paid to performers, the hire of venue and advertising costs. Variable costs consists of the cost of a pre-packed buffet that will be provided by a firm of caterers at a price, which is currently being negotiated, but it is likely to be in the region of K100 per ticket sold. The proposed price for the sale of the ticket is K200.

**Required**

The management of Social have requested the following information:

- A. The number of tickets that must be sold to break-even. **(5 Marks)**
- B. How many tickets must be sold to earn K300,000 target profit? **(4 Marks)**
- C. What profit would result if 8,000 tickets were sold? **(4 Marks)**
- D. What selling price would have to be charged to give a profit of K300,000 on sales of 8,000 tickets, fixed costs of K600,000 and variable costs of K100 per ticket? **(4 Marks)**
- E. How many additional tickets must be sold to cover the extra cost of television advertising of K80,000? **(4 Marks)**

F. The margin of safety.

(4 Marks)

## SECTION B

### QUESTION THREE

Shown below is an extract from the accountant's working papers for the process cost accounts for October 2020, of the final two operations in a factory producing one particular type of industrial chemical.

<b>Process 4</b>			
	<b>Kg</b>		<b>Kg</b>
Opening stock	3,000	Transfers to process 5	8,000
Transfers from process 3	11,000	Loss	2,000
	14,000	Closing stock	4,000
			14,000

	Materials from process 3	Process 4 materials	Process 4 conversion costs
Costs per equivalent unit	K2.50 per kg	K1.75 per kg	K2.50 per kg
Degree of completion %:			
Opening stocks	100%	70%	60%
Losses	100%	60%	45%
Closing stocks	100%	80%	70%

Normally no losses are expected in Process 4.

The company operates the FIFO method of charging opening stock to production and, at the beginning of October 2020, the value of the opening stock in Process 4 was K16,400.

<b>Process 5</b>			
	<b>Kg</b>		<b>Kg</b>
Opening stock	Nil	Transfers to finished goods	7,400
Transfers from process 4	8,000	Loss	600
	8,000	Closing stock	Nil
			14,000

Process 5 additional costs – Materials K10,175; Conversion costs K18,000. Normal loss on Process 5 is 10% of input; all losses may be sold as scrap at K2 per kg.

### Required

(A) Calculate the total cost of the 8,000 kg of chemical transferred from process 4 to process 5 during October 2020. (10 Marks)

**(B)** Calculate the total cost incurred by process 4 during October 2020 for each of the following;

- |              |                                     |                  |
|--------------|-------------------------------------|------------------|
| <b>(i)</b>   | Material transferred from process 3 | <b>(2 Marks)</b> |
| <b>(ii)</b>  | Process 4 materials                 | <b>(2 Marks)</b> |
| <b>(iii)</b> | Process 4 conversion costs          | <b>(2 Marks)</b> |

**(C)** Prepare the Process 5 account for October 2020 **(9 Marks)**

#### QUESTION FOUR

Muliokela Limited manufactures three products from the same basic components. You are provided with the following information relating to projections for December 2018:

<b>(i)</b>	<b>Sales</b>	<b>A</b>	<b>B</b>	<b>C</b>
	Quantity	21,000	16,000	8,000
	Price	K15	K6	K28
<b>(ii)</b>	<b>Material usage per unit</b>	<b>A</b>	<b>B</b>	<b>C</b>
		<b>K</b>	<b>K</b>	<b>K</b>
	Wood	4	1	10
	Bought in components	3	2	6
	Packing	2	1	2
<b>(iii)</b>	<b>Stocks</b>			
	<b>Finished goods in units</b>	<b>A</b>	<b>B</b>	<b>C</b>
	1 December	7,000	4,000	6,000
	31 December	10,000	3,000	3,000
	<b>Raw materials</b>	<b>Wood</b>	<b>Bought in Components</b>	<b>Parking</b>
		<b>K</b>	<b>K</b>	<b>K</b>
	1 December	32,000	31,800	21,500
	31 December	44,000	41,400	11,200
<b>(iv)</b>	<b>Wages</b>	<b>A</b>	<b>B</b>	<b>C</b>
		<b>K</b>	<b>K</b>	<b>K</b>
	Per unit	3	1	5
<b>(v)</b>	<b>Overhead per unit</b>	<b>A</b>	<b>B</b>	<b>C</b>
		<b>K</b>	<b>K</b>	<b>K</b>
	Variable	2	1	2
	Fixed	1	1	1

### Required

Prepare the following budgets for Muliokela Limited:

- |                             |           |
|-----------------------------|-----------|
| A. Sales budget             | (5 Marks) |
| B. Production budget        | (5 Marks) |
| C. Material usage budget    | (5 Marks) |
| D. Material purchase budget | (5 Marks) |
| E. Production cost budget   | (5 Marks) |

### QUESTION FIVE

Tubelenge Bookstore is attempting to determine the optimal order quantity for a popular book on financial management. The store sells 5,000 copies of this book a year at a retail price of K125, and the cost to the store is 20 percent less, which represents the discount from the publisher. The store figures that it costs K10 per year to carry a book in inventory and K1,000 to prepare an order for new books. Assuming a year of 360 days.

### Required

- |  |           |
|--|-----------|
| A. Calculate the optimal stock order level                     | (5 Marks) |
| B. Calculate the number of orders per year                     | (5 Marks) |
| C. Calculate the stock cycle                                   | (5 Marks) |
| D. Calculate the total variable cost of holding stock per year | (5 Marks) |
| E. Calculate the total annual cost of stock to the Bookstore   | (5 Marks) |

### QUESTION SIX

X Ltd uses a standard absorption cost accounting system. The following details have been extracted from a standard cost card for one of its products.

	K
Direct materials	5.00
Direct labour	7.40
Variable overhead	2.30
Fixed overhead	<u>3.80</u>
	<u>18.20</u>

The fixed overhead cost per unit is based on an estimated production of 1000 units per month. During October 2020 the actual number of units produced was 900 and the following variances arose.

	K
Direct materials	180 favourable
Direct labour	280 adverse
Variable overhead	240 adverse
Fixed overhead	200 adverse

**Required**

Calculate the actual cost of:

- A. Direct materials (6 Marks)
- B. Direct labour (6 Marks)
- C. Variable overhead (7 Marks)
- D. Fixed overhead (6 Marks)

***END OF EXAMINATIONS***



**UNIVERSITY OF ZAMBIA**  
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**ECONOMIC POLICY MANAGEMENT PROGRAMME**  
**DEPARTMENT OF ECONOMICS**

**2020/2021 ACADEMIC YEAR**

**COURSE: EPM 5335: Project Management**

**THIRD TRIMESTER FINAL EXAMINATIONS**

**TIME ALLOWED: THREE (3) HOURS**

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**INSTRUCTIONS:** Answer any **THREE** of the questions below. Take account of practical illustrations and good grammar in your writing style.

**DATE:** TUESDAY, 14<sup>TH</sup> SEPTEMBER, 2021

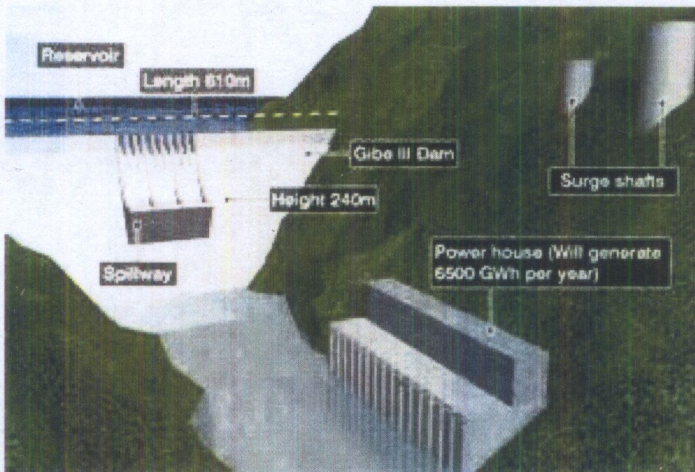
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**DO NOT TURN OVER UNTIL INSTRUCTED TO**

1. Explore the project risk management theory. Identify potential risks that might have been associated with the project whose image you can see in the photo above, and suggest proactive measures that could have been put in place to avert loss of lives and property during the implementation stage.



2. Study the image of the project shown in the photo below and suggest the rationale that could have convinced the planners to locate it where it is to-day.



3. The diagram below is showing a rescue emergency project operation based on the line formal hierarchical structure. What merits are linked to such a formal structure of the project?



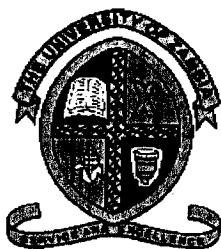
4. Look at the picture below of potential project workers, and distinguish between **recruitment** and **placement** of human resource and defend the assertion that external sourcing of project personnel can lead to the realization of the life-cycle of the project.



5. In the early part of 2020, Canada suggested to the United States under the Trump presidency to arrange a joint-venture project for oil exploration along the border of the two countries. The United States declined the invitation. What hurdles, do you think, are associated with such business partnerships which the United States decided to avoid?

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**END OF EXAMINATION**



**UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**ECONOMIC POLICY MANAGEMENT PROGRAMME**  
**DEPARTMENT OF ECONOMICS**

**2020/2021 ACADEMIC YEAR**

**COURSE: EPM 5455 - MONETARY ECONOMICS**

**THIRD TRIMESTER FINAL EXAMINATIONS**

**TIME ALLOWED: THREE (3) HOURS**

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**INSTRUCTIONS:**                   **ANSWER ANY FOUR QUESTIONS.**  
**ALL QUESTIONS CARRY EQUAL MARKS**

**DATE:**                               **THURSDAY , 16<sup>th</sup> SEPTEMBER 2021**

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**DO NOT TURN OVER UNTIL INSTRUCTED TO**

### Question 1

- a) If BOZ buys \$1 million of bonds from the First National Bank, what will be the total increase in checkable deposits if the required reserve ratio on checkable deposits is 10%? Use T-accounts to show what happens at each step of the multiple expansion process.
- b) What do you understand by the phrase “every loan creates a deposit”?
- c) Outline the monetary aggregates M1 and M2 and indicate which one is more liquid.

### Question 2

- a) Suppose that you are the manager of a bank that has \$15 million of fixed-rate assets, \$30 million of rate-sensitive assets, \$25 million of fixed-rate liabilities, and \$20 million of rate-sensitive liabilities. Conduct a gap analysis for the bank, and show what will happen to bank profits if interest rates rise by 5 percentage points.
- b) What actions could you take to reduce the bank's interest-rate risk?
- c) There are four principles of bank management of which one of them is ‘capital adequacy management’. Use a T-account to illustrate the effect of bank debts when capital is inadequate.

### Question 3

- a) The financial sector always has to contend with the problem of information asymmetry which can manifest in different forms such as moral hazard and adverse selection problem. Explain the moral hazard and adverse selection problems and indicate their similarities and difference.
- b) Discuss at least five categories of bank regulations aimed at reducing the problem of information asymmetry in the banking sector.

### Question 4

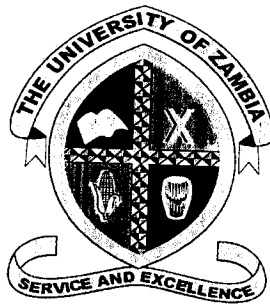
- a) The question of central bank independence is quite central to the success of monetary policy implementation. Discuss the idea of central bank independence. Ensure to indicate at least four indicators we can use to measure the degree of central bank independence.
- b) How is the idea of central bank independence related to the time inconsistency problem?
- c) Using the example of Turkey as discussed in class, illustrate how the lack of central bank independence can affect the implementation of monetary policy in a country.

### Question 5

- a) What is the balance of payments (BoP)?
- b) Explain in detail how a BoP deficit can be resolved using the following approaches to the balance of payments:
  - (i) Absorption approach
  - (ii) Elasticity approach – include Marshal-Lerner condition

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**END OF FINAL EXAMINATION**



**THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
DEPARTMENT OF ECONOMICS  
ECONOMIC POLICY MANAGEMENT  
2020/2021 ACADEMIC YEAR**

**DEFERRED/SUPPLEMENTARY EXAMINATION**

**EPM 5232: FINANCIAL MANAGEMENT FOR POLICY**

**DATE: 20<sup>TH</sup> SEPTEMBER, 2021**

**EXAM TIME: 9:00 HOURS**

**DURATION: THREE (3) HOURS**

**VENUE: DRGS LECTURE ROOM III**

**INSTRUCTIONS:**

- 1. The Paper has a Total Number of SIX (6) Questions Made up of Section A and Section B**
  - 2. Section A is *COMPULSORY*. Attempt ANY TWO (2) Questions from Section B.**
  - 3. Marks Allocation Indicates the Depth of the Answers Expected**
- 

**DO NOT TURN OVER UNTIL YOU ARE TOLD TO DO SO**

## SECTION A - COMPULSORY

### QUESTION ONE

The following were the results for Chikuse Limited for the years 2018, 2019 and 2020

#### Chikuse Limited Balance Sheet: Years Ended December 31, 2018, 2019 and 2020

	2020 K'000	2019 K'000	2018 K'000
<b>Non-Current Assets:</b>			
Property, plant and equipment	209,310	200,010	198,500
Goodwill	<u>7,440</u>	<u>6,500</u>	<u>6,200</u>
	<b><u>216,750</u></b>	<b><u>206,510</u></b>	<b><u>204,700</u></b>
<b>Current Assets:</b>			
Inventory	49,095	40,012	39,022
Receivables	45,030	42,441	40,225
Bank	<u>1,470</u>	<u>1,210</u>	<u>1,100</u>
	<b><u>95,595</u></b>	<b><u>83,663</u></b>	<b><u>80,347</u></b>
<b>Total Assets</b>	<b><u><u>312,345</u></u></b>	<b><u><u>290,173</u></u></b>	<b><u><u>285,047</u></u></b>
<b>Financed by:</b>			
Share capital	143,551	148,425	189,909
Reserves	<u>78,224</u>	<u>72,820</u>	<u>21,048</u>
	<b><u>221,775</u></b>	<b><u>221,245</u></b>	<b><u>210,957</u></b>
<b>Long-term liabilities @ 15% loan:</b>	<b><u>48,000</u></b>	<b><u>28,000</u></b>	<b><u>38,000</u></b>
<b>Current Liabilities:</b>			
Trade payables	27,510	26,908	26,010
Income tax	<u>15,060</u>	<u>14,020</u>	<u>10,080</u>
	<b><u>42,570</u></b>	<b><u>40,928</u></b>	<b><u>36,090</u></b>
<b>Total Capital</b>	<b><u><u>312,345</u></u></b>	<b><u><u>290,173</u></u></b>	<b><u><u>285,047</u></u></b>

#### Chikuse Limited Statement of Income: Years Ended December 31, 2018, 2019 and 2020

	2020 K'000	2019 K'000	2018 K'000
Sales revenue	316,806	294,500	142,548
Cost of sales	<u>140,803</u>	<u>108,250</u>	<u>88,712</u>
Gross profit	<b>176,003</b>	<b>186,250</b>	<b>53,836</b>
Operating expenses	<u>70,401</u>	<u>87,943</u>	<u>25,420</u>
Profit before tax	<b>105,602</b>	<b>98,307</b>	<b>28,416</b>
Income tax	<u>23,467</u>	<u>21,846</u>	<u>6,315</u>
Net income	<b>82,135</b>	<b>76,461</b>	<b>22,101</b>

Dividends	<u>3,911</u>	<u>3,641</u>	<u>1,053</u>
Retained reserves	<u>78,224</u>	<u>72,820</u>	<u>21,048</u>
Retained reserves c/fwd	<u>93,868</u>	<u>21,048</u>	<u>-</u>
Retained reserves c/fwd	<u><u>172,092</u></u>	<u><u>93,868</u></u>	<u><u>21,048</u></u>

### Required

Using the financial statements construct the Cash Conversion Cycle (CCC) for Chikuse Limited for the years 2019 and 2020. (25 Marks)

### QUESTION TWO

A company is considering investing in a project with the following cash flows.

<i>Time</i>	<i>Actual cash flows</i>
	<i>K</i>
0	(15,000)
1	9,000
2	8,000
3	7,000

The company requires a minimum return of 20% under the present and anticipated conditions. Inflation is currently running at 10% a year, and this rate of inflation is expected to continue indefinitely.

### Required

Using the real rate advise the company whether they should go ahead with the project? (25 Marks)

## SECTION B

### QUESTION THREE

Sebenzani plc is a quoted company. Its directors are reviewing the company's long term investment financing strategy. The company has been criticised for being financed largely by equity. It has no significant long term borrowings. The board has asked for some calculations to enable them to decide whether the company should consider borrowing in the future. The next phase of expansion will require the company to raise K200m and will involve a general expansion of the existing lines of business.

The following information has been obtained:

Current risk free rate	4%
Equity risk premium	5%
Current corporation tax rate	30%
Equity capital	K1,000m
Sebenzani plc's Beta	1.4
Probable gross interest rate on debt	7%

### Required

- Calculate Sebenzani plc's expected weighted average cost of capital (WACC). (5 Marks)
- Calculate Sebenzani plc's expected WACC after the new finance has been raised assuming that the finance is raised by borrowing. (10 Marks)
- Explain the concept of CAPM in relation to cost of capital and risk in investment. (5 Marks)
- It has been suggested that company directors are often motivated by a desire to act in their own best interests rather than those of the shareholders. Explain why directors might be reluctant to use the capital asset pricing model (CAPM) as a decision making criterion for financial planning. (5 Marks)

### QUESTION FOUR

Kiriam Kaddi Enterprises currently give credit terms of 30 days. It has K100 million in total sales of which 20 percent are on cash basis, and its average collection period is 45 days. To stimulate demand, the company may give credit terms of 60 days. If it does enforce these terms, credit sales are expected to increase by 15 percent. After the change, the average collection period is expected to be 75 days, with no difference in payment habits between the old and the new customers. Variable costs are K0.80 for every K1.00 of sales, to support extra credit sales, creditors are expected to increase by K4 million and the company's before tax required rate of return on investment in receivables is 20 percent (Assume a 360-day year).

Advise whether the company should extend its credit period?

(25 Marks)

### QUESTION FIVE

- The beta ( $\beta$ ) on common stock shares of Mwiindi PPE Ltd is 1.60. The shares are currently trading at K14.75 and paid a dividend of K0.72 per share last year, a figure that is expected to grow by 3 percent annually for the foreseeable future. Calculate the price you expect the shares of Mwiindi PPE Ltd to be trading at in one year's time, if the risk-free rate of return is 13.5 percent and market price of risk is 5.5 percent. (15 Marks)

Dividends	<u>3,911</u>	<u>3,641</u>	<u>1,053</u>
Retained reserves	<u>78,224</u>	<u>72,820</u>	<u>21,048</u>
Retained reserves c/fwd	<u>93,868</u>	<u>21,048</u>	<u>-</u>
Retained reserves c/fwd	<u><u>172,092</u></u>	<u><u>93,868</u></u>	<u><u>21,048</u></u>

**Required**

Using the financial statements construct the Cash Conversion Cycle (CCC) for Chikuse Limited for the years 2019 and 2020. **(25 Marks)**

**QUESTION TWO**

A company is considering investing in a project with the following cash flows.

<i>Time</i>	<i>Actual cash flows</i>
	<i>K</i>
0	(15,000)
1	9,000
2	8,000
3	7,000

The company requires a minimum return of 20% under the present and anticipated conditions. Inflation is currently running at 10% a year, and this rate of inflation is expected to continue indefinitely.

**Required**

Using the real rate advise the company whether they should go ahead with the project?

**(25 Marks)**

**SECTION B**

**QUESTION THREE**

Sebenzani plc is a quoted company. Its directors are reviewing the company's long term investment financing strategy. The company has been criticised for being financed largely by equity. It has no significant long term borrowings. The board has asked for some calculations to enable them to decide whether the company should consider borrowing in the future. The next phase of expansion will require the company to raise K200m and will involve a general expansion of the existing lines of business.

- B. Mukuba group has a K12 million face value bond issue outstanding. The issue carries a coupon rate of 10% with interest paid quarterly. The issue matures in three (3) years. What is the values of the bond issue if it is priced to provide a yield to maturity of 12%?  
(10 Marks)

**QUESTION SIX**

- A. Shengo Kaweche had bought shares in Guild Limited a company listed at Lusaka Securities Exchange and Soweto Inc. a Johannesburg Stock Exchange listed company. The following data shows the returns earnings of the two companies over a period of five (5) years.

YEAR	GUILD LIMITED	SOWETO INC.
	%	%
1	5	7
2	8	6
3	8	9
4	10	11
5	13	12

**Required**

Calculate the covariance and the correlation coefficient and interpret the two statistics in relation to the two investments  
(13 Marks)

- B. Discuss the role of Primary Capital Markets and briefly explain the Private Placement, Negotiated Transactions, Competitive Bidding and Rights Issues as methods used in the primary market to issue securities.  
(12 Marks)

**END OF EXAMINATION**

Present Value Table

Present value of 1 =  $\frac{1}{(1+r)^n}$

Where  $r$  = discount rate  
 $n$  = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	2
3	0.971	0.947	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	3
4	0.961	0.924	0.885	0.855	0.823	0.792	0.763	0.735	0.708	0.683	4
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	5
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	6
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	7
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	8
9	0.914	0.837	0.765	0.703	0.645	0.592	0.544	0.500	0.460	0.424	9
10	0.905	0.820	0.744	0.675	0.614	0.558	0.508	0.463	0.422	0.386	10
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	11
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	12
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	13
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	14
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	2
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	3
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	4
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402	5
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	6
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	7
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	8
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	9
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	10
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135	11
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112	12
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093	13
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078	14
15	0.209	0.183	0.160	0.140	0.123	0.108	0.096	0.084	0.074	0.065	15

Present Value Table

Present value of 1.00:  $(1 - r)^n$

Where  $r$  = discount rate  
 $n$  = number of periods until payment

Discount rate (r)

Period (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	2
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	3
4	0.961	0.924	0.885	0.855	0.823	0.792	0.763	0.735	0.708	0.683	4
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	5
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	6
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	7
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	8
9	0.914	0.837	0.765	0.703	0.645	0.592	0.544	0.500	0.460	0.424	9
10	0.905	0.820	0.744	0.675	0.614	0.555	0.508	0.463	0.422	0.386	10
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	11
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	12
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	13
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	14
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.890	0.880	0.870	0.860	0.850	0.840	0.830	0.820	0.810	1
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	2
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	3
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	4
5	0.593	0.567	0.542	0.519	0.497	0.476	0.456	0.437	0.419	0.402	5
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	6
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	7
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	8
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	9
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	10
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135	11
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112	12
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093	13
14	0.232	0.204	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078	14
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065	15

### Annuity Table

Present value of an annuity of 1  $P = \frac{1 - (1 + r)^{-n}}{r}$

Where  $r$  = discount rate  
 $n$  = number of periods

Periods (n)	Discount rate (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.032	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.37	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.26	10.58	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.13	11.35	10.63	9.986	9.394	8.853	8.356	7.901	7.487	7.103
14	13.00	12.11	11.30	10.56	9.899	9.295	8.745	8.244	7.786	7.367
15	13.87	12.85	11.94	11.12	10.38	9.712	9.108	8.559	8.061	7.606
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.995	3.884	3.784	3.685	3.589	3.495	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.655	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.792	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675



**UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**ECONOMIC POLICY MANAGEMENT PROGRAMME**  
**DEPARTMENT OF ECONOMICS**

**2020/2021 ACADEMIC YEAR**

**EPM 5515: HUMAN RESOURCE MANAGEMENT**

**THIRD TRIMESTER FINAL EXAMINATIONS**

**TIME ALLOWED: THREE (3) HOURS**

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**INSTRUCTIONS: ANSWER ANY THREE QUESTIONS**

**DATE: WEDNESDAY, 15<sup>th</sup> SEPTEMBER 2021**

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**DO NOT TURN OVER UNTIL INSTRUCTED TO**

### QUESTION 1

- a) With the help of relevant examples, explain three advantages of direct over indirect employee participation in decision-making.
- b) With the help of appropriate examples, explain two circumstances under which it would be justifiable for trade unions to unilaterally make industrial relations decisions.
- c) With the help of relevant examples, describe two industrial relations decisions that can be made unilaterally by trade unions.

(13.3 marks)

### QUESTION 2

- a) Design an interview score card for the position of Primary School Teacher.
- b) With the help of appropriate examples, explain two advantages of assessment centres.
- c) With the help of relevant examples, explain two disadvantages of assessment centres.

(13.3 marks)

### QUESTION 3

- a) Discuss the difference between performance management and performance appraisal.
- b) Explain the problems to avoid in appraising performance.
- c) Discuss the pros and cons of using different raters to appraise an employee's performance.

(13.3 marks)

### QUESTION 4

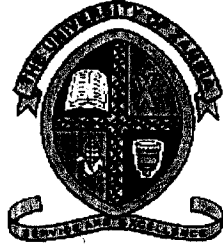
- a) Explain the details of a market-competitive pay plan.
- b) Explain how to price managerial and professional jobs.
- c) Explain the difference between competency-based and traditional pay plans.
- d) List and explain six important trends in compensation management.

(13.3 marks)

[Total = 40 marks]

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**END OF EXAMINATION**



**UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**ECONOMIC POLICY MANAGEMENT PROGRAMME**  
**DEPARTMENT OF ECONOMICS**

**2020/2021 ACADEMIC YEAR**

**COURSE: EPM 5525 ENTREPRENEURSHIP AND SMALL  
ENTERPRISES**

**THIRD TRIMESTER FINAL EXAMINATIONS**

**TIME ALLOWED: THREE (3) HOURS**

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**INSTRUCTIONS : Answer BOTH questions 1 and 2 in Section A, PLUS  
any other two questions of your choice from section B.**  
**TOTAL MARKS : 40**

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**DO NOT TURN OVER UNTIL INSTRUCTED TO**

## SECTION A

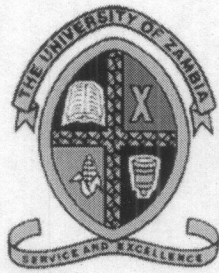
1. What is meant by the term “globalization”, as used in entrepreneurship? Write a comprehensive essay in which you explain, using solid examples of your choice, why entrepreneurs should consider globalizing their business operations. In so doing, outline also and comment briefly on the strategic options that are available to the entrepreneurs. **(10 marks)**
2. The three areas that essentially concern Small Scale Business Enterprises are: (a) the business environment; (b) the individuals who venture into entrepreneurship; and (c) the various functions that must be performed (and performed properly) in order for the SMEs to succeed. Write a concise essay in which you critically address the key issues in each of these areas. **(10 marks)**

## SECTION B

3. What would you say are the primary roles of an entrepreneur in cash management? Write a concise essay in which you identify and explain, using appropriate examples of your choice, the main causes of cash flow problems in entrepreneurship. In so doing, suggest also several measures or practices that an entrepreneur can implement in order to avoid cash flow problems. **(10 marks)**
4. The Bolton Report of 1971, entitled *Committee of Enquiry on Small Firms*, asserted, among other things, that the small business sector worldwide was subject to long-term decline. This assertion has, however, turned out to be incorrect; the small business sector worldwide has actually been growing steadily, generally.
  - (a) What do you think are the factors, both national and personal, that account for the steady growth of small enterprises worldwide, contrary to the assertion of the Bolton Report?
  - (b) What theories, if any, explain the proliferation of small enterprises globally?
  - (c) What practical measures do African governments need to put in place, to accelerate the growth of small business enterprises in their various countries? **(10 marks)**
5. Imagine that you are required to take over a family business that has been in existence for several generations. Write a concise essay in which you outline the kind of opportunities and challenges (real or imagined), that you are likely to face. In so doing, explain also the measures that you would put in place, to ensure that you succeed as the new manager of the business. **(10 marks)**
6. Every business idea is like a hypothesis that must be tested before an entrepreneur can implement it to full scale. Write a concise essay in which you justify the logic behind such testing. In so doing, explain also how the entrepreneur can actually test his or her idea before launching the business. **(10 marks)**

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END OF THE EXAMINATION



**THE UNIVERSITY OF ZAMBIA**  
**School of Humanities and Social**  
**Sciences**

Department of Economics

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**DEFERRED THEORY FINAL**  
**EXAMINATION**

**COMPUTER SKILLS**  
**EPM 5611**

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Date: WEDNESDAY, 16<sup>TH</sup> DECEMBER 2020  
Time: 12:00hrs – 17:00hrs  
Duration: 3 Hours  
Venue: DRGS

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**Instructions**

- a) *There are TWO (2) Sections in this paper, Section A and Section B*
- b) *You are required to answer ALL questions in Section A and Three (3) of the four (4) in Section B.*
- c) *All questions should be answered on a separate sheet.*

**SECTION A: ANSWER ALL QUESTIONS**

**[40 MARKS]**

1. The set of electronic and mechanical devices, which coordinate to execute tasks on the computer, is collectively referred to as \_\_\_\_\_
  - a. Software
  - b. Softbot
  - c. Hardware
  - d. CPU
2. The application that is most appropriate for creating documents is generically referred to as a\_\_\_\_
  - a. Spreadsheet
  - b. Word processor
  - c. DBMS
  - d. Browser
3. The joystick used to play computer games is an example of what computer device component?
  - a. Output
  - b. Input
  - c. Controlling
  - d. Storage
4. A touch screen is a combination of which of the following hardware devices (Choose two)
  - a. Storage
  - b. Processor
  - c. Input
  - d. Output
5. In the IPOSS model, which letter does the flash disk represent?
  - a. I
  - b. P
  - c. O
  - d. S
6. Which of the following functions are performed by the CPU (Choose two)?
  - a. Inputting
  - b. Processing
  - c. Storage
  - d. Controlling
7. What are the two components of the CPU (Choose two)?
  - a. ALU
  - b. CU
  - c. RAM
  - d. ROM
8. Which component of the CPU performs the function of controlling all the other hardware components?
  - a. ALU

- b. CU
  - c. RAM
  - d. Keyboard
9. Which storage device stores the software that runs during the booting of the computer System?
- a. RAM
  - b. ROM
  - c. HDD
  - d. Floppy Disk
10. In which memory location can data and programs be stored permanently?
- a. Secondary storage
  - b. Primary storage
  - c. RAM
  - d. Cache
11. Where are the instructions of a running program loaded into, for execution?
- a. RAM
  - b. ROM
  - c. HDD
  - d. None of the above
12. Which characteristic of computers renders the computer giving wrong output if it is given the wrong input?
- a. Accuracy
  - b. Speed
  - c. Diligence
  - d. Resilient
13. Which application is most appropriate for accessing the worldwide web?
- a. Spreadsheet
  - b. Word processor
  - c. DBMS
  - d. Browser
14. What is the URL?
- a. The address of a website
  - b. The taskbar
  - c. The address bar
  - d. The status bar
15. What do you refer to the set of instructions which are executed by the computer?
- a. Program
  - b. Data
  - c. Information
  - d. RAM
16. Which category of software does the Word processor fall under?
- a. System, resource manager
  - b. System, software developer

- c. Application, General purpose
  - d. Application, specific
17. Which statement below is true?
- a. 1GB = 1024MB
  - b. 1MB = 1024KB
  - c. 1KB=1024KB
  - d. All of the above
18. How many bits are transmitted in 2 seconds on a 54kbps link?
- a.  $54 \times 1000 \times 8 \times 2$
  - b.  $54 \times 1024 \times 8 \times 2$
  - c.  $54 \times 1000 \times 2$
  - d.  $54 \times 1024 \times 2$
19. What is the difference between a software suite and an integrated software package?
- a. A software suite is a collection of full-fledged software application which can share data and objects while an integrated package is a single application with various capabilities
  - b. A software suite is a single application with various capabilities while an integrated package is a collection of full-fledged software application which can share data and objects
  - c. There is no difference
  - d. None of the above
20. What is the difference between object linking and object embedding?
- a. In object linking, the source and the destination are always in sync
  - b. In object embedding, the source and the destination are always in sync
  - c. In object embedding when the source is changed, the destination is updated
  - d. None of the above

**SECTION B: ANSWER THREE (3) OF THE FOUR (4) QUESTIONS. EACH QUESTION HAS 20 MARKS**

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1.
  - a. Describe what a computer is
  - b. Outline the characteristics of a computer
  - c. Draw an illustration of how the various components of a computer interconnect.
2.
  - a. What is software?
  - b. Illustrate using a diagram the different categories of software
  - c. What is an operating system
  - d. Outline the five functions that the operating system performs.
3.
  - a. For each of the statements below, indicate whether it is **TRUE** or **FALSE** about SPSS.
    - a) You can use DESIGN VIEW to create forms
    - b) You can use the ANALYZE command to run FREQUENCIES
    - c) You can use the RECODE command to create new variables
    - d) You can use the Copy and PASTE command to transfer data from EXCEL into SPSS.
    - e) The records are arranged along the rows and the variables are arranged along the columns.
    - f) The records are arranged along the columns and the variables are arranged along the rows.
    - g) The records are arranged along the rows and the variables are arranged along the rows.
    - h) The records are arranged along the columns and the variables are arranged along the columns.
  - b. With very brief explanations here.
    - i. Give two important reasons for constructing a codebook.
    - ii. Explain the difference(s) and similarity(ies) between variable view and design view.
4. Describe the circumstances in SPSS under which you use the commands below.
  - a) For each command, briefly explain what they perform.
    - i. RECODE
    - ii. COMPUTE
    - iii. ANALYZE
    - iv. SELECT
  - b) What is involved data cleaning and verification during data processing?
  - c) Why is data cleaning and verification important?
  - d) Give two common uses of MS-ACCESS software.

\*\*\*\*\***END OF EXAMINATION**\*\*\*\*\*

**THE UNIVERSITY OF ZAMBIA**  
**UNIVERSITY END OF YEAR EXAMINATIONS 2020**

**EPM 5621: EFFECTIVE POLICY COMMUNICATION DEFERRED**  
**EXAMINATION**

**TIME: THREE HOURS**

**INSTRUCTIONS:** ANSWER ANY TWO (2) QUESTIONS IN SECTION A, AND THEN ANY TWO (2) QUESTIONS FROM SECTION B. ANSWERS FOR THE TWO SECTIONS MUST BE IN TWO SEPERATE BOOKLETS CLEARLY MARKED SECTION A OR B.

**Section A (Answer any two)**

**Question One**

The assertion that men and women communicate in different ways, about different things, and for different reasons seems to go un-argued and is accepted as true by a vast majority of people worldwide. Is this true? Argue for or against this assertion. (25 Marks)

**Question Two**

Are men and women really that different in the work environment? If so, are these differences negative and how can they be overcome? (25 Marks)

**Question Three**

Information transferred by media are one of the most pivotal problems of the 21st Century, yet worldwide the rates of media literacy education and numeracy skills have grown rapidly. In your view, how is Zambia fairing in educating her citizens in Media Literacy? (25 Marks)

**Section B (Answer any two)**

**Question Four**

- a) What is a report? (2 marks)
- b) Distinguish between an analytical and informational (4.marks)
- c) A formal report contains an introduction, a main body, and a final section. Describe what information you would find in **each** section. (9marks)
- d) Outline the elements that should be in a formal report (10marks)

**Total 25 marks**

### Question Five

*Levin explains that the academic world' and the 'real world' are not the same, and students need to learn the differences between these worlds.*

- a) What differentiate the two worlds (4marks)
- b) What is the importance of literature review (6marks)
- c) With relevance or practical examples explain the principles of academic essay writing (15marks)

**Total 25 marks**

### Question Six

You are the office manager for Smart System, Inc, a start-up IT firm in Lusaka (22/F, Linkage Building, 188 president Street, Lusaka). Recently you bought 10 modems from Precision Supplies, a computer hardware supplier in Kitwe (12/F, Parkland Building, 276 Independence Road, Kitwe). Two weeks after installing the modems to the computer systems in your office, you discovered that two of the modems could not function properly. Since you have already paid the full amount for the modems, you are entitled to enjoy the two-year warranty that comes with the product including free replacement for any products bought within one month.

You called their customer service department to ask for a replacement last Wednesday and was told that the replacement would be delivered to your office the following Monday. It is now already Wednesday and you still have not heard anything from them. You really need the two modems immediately for your company is working on a major project with an approaching deadline. This is the first time you have ordered from Precision Supplies and may be the last.

#### **Required:**

- a) Write a letter of complaint to demand for an immediate replacement or a full refund. (15marks)
- b) Write a memo to your managing director explaining what has transpired (10 marks)

**Total 25 marks**

**End of Examination**

**THE UNIVERSITY OF ZAMBIA**  
**INSTITUTE OF DISTANCE EDUCATION**  
**2020/2021 ACADEMIC YEAR EXAMINATION**  
**MSW 5115: ADVANCED SOCIAL WORK PRACTICE WITH CHILDREN, YOUTH**  
**AND FAMILIES.**

**TIME - THREE (3) HOURS**

**INSTRUCTIONS:**

Read the following instructions carefully

- i) This exam contributes 50% to the course grade.
- ii) Answer all questions.
- iii) All answers must be written in the official booklets provided.

1. There are several social protection programs and services for children in Zambia.
  - A) Give an operational definition of social protection **[10 Marks]**
  - B) Discuss two (2) direct social protection services for children in Zambia **[10 Marks]**
  - C) Discuss two (2) indirect social protection services for children in Zambia **[10 Marks]**
  - D) Discuss two (2) challenges in the provision of social protection services in Zambia **[10 Marks]**
2. Social Work is one of the leading professions in the dispensation of juvenile justice. Discuss the role of social work profession in the juvenile justice system in Zambia. Give examples to illustrate your answer **[30 Marks]**
3. There are several theoretical models for understanding child development. Discuss the basic assumptions of two (2) child development theories and the implications for social work practice with children and families in Zambia. Give examples to illustrate your answer **[30 Marks]**

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**END OF EXAMINATION**



THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
DEPARTMENT OF SOCIAL WORK & SOCIOLOGY

MASTER OF SOCIAL WORK (MSW)  
MSW 5425: PROJECT, PROGRAMME AND POLICY EVALUATION

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Final Examination

December 2020

**INSTRUCTIONS : Duration 3 hours**

**Choose Two Questions from Section A. Section B is Compulsory.**

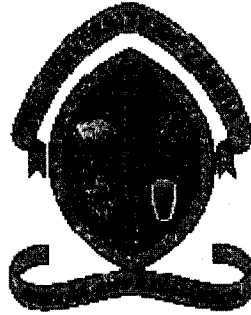
**SECTION A: WRITE BRIEF NOTES ON ANY FIVE OF THE FOLLOWING (30 MARKS)**

1. Discuss the policy process. Why may it be more useful to think of it as cyclic rather than as a staged process?
2. What is a theory of change? Using an intervention of your choice, discuss how theory of changing thinking may be applied to it.
3. With practical examples, discuss how policy evaluation differs from programme evaluation.

**SECTION B: COMPULSORY (20 MARKS).**

4. One health, an organisation focusing on the relationship between animal and human health in Luangwa has been implementing a five year programme to reduce transmission of diseases from animals to humans. With the programme now in its third year of implementation and wants to know what is working and what is not and have, therefore, come to you for expert advice on what to do. Provide a brief on what they must do?

**GOOD LUCK**



THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
DEPARTMENT OF SOCIAL WORK AND SOCIOLOGY

**Management of Human Service Organizations (MSW 5455) 2021  
Examination for Distance Students**

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**INSTRUCTIONS:**

1. Question 1 in section A is compulsory. Choose any other **two questions** from section B
2. Indicate clearly in your answer booklet the questions you have answered
3. Time allowed: Three hours

**SECTION. A: COMPULSORY**

**Question.1**

In critical manner, demonstrate mastery of management of Human Service organizations using management knowledge contained in **any two** of the following sources of knowledge:

1. Managing Human Service Organisations. Thesis by Christian Jacobsson (2001) **(15 Marks)**

2. Organizations: Behavior, Structure and Processes – Fourteenth Edition by James L. Gibson, John M. Ivancevich, James H. Donnelly, Jr. and Robert Konopaske (2009). **(15 Marks)**
  
3. Staff-Management relations in the United Nations specialized agencies and common system by Gérard Biraud (2012). (15 Marks). **TOTAL MARKS = 30 Marks**

## **SECTION B: CHOOSE ANY TWO QUESTIONS**

### **Question.2**

Delve deeper into theoretical frameworks of management of human service organizations provided by Hasenfeld and English (1983) and Zins (2001). What are the major points of convergences and departure about nature of human service organizations contained in the frameworks? How can managers of Human Service Organizations translate these theoretical frameworks into reality? **(10 Marks)**.

### **Question.3**

Analyze the strengths and weaknesses of the model for classifying human services provided by Maurer & Sheet (1998). Draw any **five (5)** implications from the model for social welfare policy planning, service design and the shaping the profiles of the helping professions. **(10 Marks)**.

#### **Question.4**

With practical examples, explain how you can manage an organization using the theoretical conceptions provided by the following management scholars:

1. Fayol (1841-1925)
2. Follet (1868 – 1933)
3. Ghoshal & Bartlett (1999)
4. Robbins (2009) **(10 Marks)**

#### **Question .5**

There are significant differences in the way first sector, second sector and third sector human service organizations operate. However, what is central in all types of human services organizations is productivity of the organizations. Delve deeper into **five (5)** theories of productivity on how the Executive Director can make the first sector, second sector and third sector organizations productive **(10 Marks)**

#### **Question.6**

With practical examples, explain how the following boards are composed and operate in human service organizations:

1. Functional Boards
2. Policy Boards
3. Mixed Boards **(10 Marks)**

**END OF EXAMINATION**

THE UNIVERSITY OF ZAMBIA  
INSTITUTE OF DISTANCE EDUCATION  
2020/2021 ACADEMIC YEAR EXAMINATION  
MSW 5715: ADVANCED COMMUNITY DEVELOPMENT

**TIME - THREE (3) HOURS**

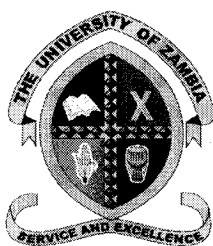
**INSTRUCTIONS:**

Read the following instructions carefully

- i) This exam contributes 50% to the course grade.
  - ii) Answer all questions.
  - iii) All answers must be written in the official booklets provided.
- 
1. Residential Neighbourhoods are generally conceived as spatial-based communities.
    - A). Based on the degree of interaction among residents; residents' identification with the neighbourhood; and residents' social connections with larger community, discuss four (4) types of residential neighbourhood communities. Illustrate your answer by giving examples in the Zambian context. **[20 Marks]**
    - B). Discuss the implications for social work practice with the four (4) types of residential neighbourhood communities. **[20 Marks]**
  2. Spatial-based communities are structured to perform certain functions that are designed to meet the needs of people who reside in the communities.
    - A). Discuss five (5) major functions of communities. **[15 Marks]**
    - B). Discuss the limitations of community functions in the context of social work practice in Zambia. Give examples to illustrate your answer. **[15 Marks]**
  3. Community Economic Development and Locality Development are among the widely used social work practice models for effecting change at the community level.
    - A). Discuss the basic assumptions of the two (2) community practice models. **[10 Marks]**
    - B). Discuss the development strategies of the two (2) community practice models. **[10 Marks]**
    - C). Discuss the strengths & limitations of the two (2) community practice models in the context of social work practice with communities in Zambia. **[10 Marks]**

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**END OF EXAMINATION**



**UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**DEPARTMENT OF ECONOMICS**  
**2020 ACADEMIC YEAR FINAL EXAMINATION**

**2018/2019 ACADEMIC YEAR**

**ECN 5012:           ADVANCED MICROECONOMICS THEORY II**

**TIME ALLOWED: THREE (3) HOURS ONLY**

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**INSTRUCTIONS: ANSWER ALL QUESTIONS**

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**DO NOT TURN OVER UNTIL INSTRUCTED TO**

### QUESTION ONE

Consider the normal-form game below:

		Player 2			
		HC	HD	LC	LD
Player 1	H	3, 3	3, 3	0, 4	0, 4
	L	4, 0	1, 1	4, 0	1, 1

- Define Nash equilibrium and sub-game perfect Nash equilibrium. Is it true or false that Nash equilibrium survives the iterated deletion of dominated strategies? Explain
- Compute the Nash equilibrium of the above game
- Assume the LC and LD strategies for player 1 are eliminated from the game, find the mixed Nash equilibrium of the game.
- Provide the definition of the subgame perfect Nash Equilibrium
- Transform the above game into an extensive game and find the Nash equilibrium

### QUESTION TWO

The Lusaka residents buy two types of used cars plums and lemons. Plums are valued at K3,000 to a buyer and K1900 to the seller. A lemon is worthy K1000 to a buyer and K500 to the seller. The fraction of used cars that are plums is  $\lambda_p = \frac{1}{4}$  and the fraction of lemons is  $\lambda_L = \frac{3}{4}$ . Assume that all parties are risk neutral and when buyers and sellers bargain, the agreed price is always the maximum that buyers are willing to pay.

- What would be the prices for lemons and plums if there is perfect information about used car quality?
- What would be the price of a used car if neither buyers nor seller knew whether a particular car was a peach or lemon?
- Explain what would be the ultimate effect of information asymmetry on the market for cars.
- The pooling equilibrium in the presence of information asymmetry is an impossibility. True/false. Justify your answer in detail.
- Explain how the set of pooling equilibria is affected by changes in the fraction of low risk consumers that the market believes to be in the market?

### Question 3

Write some notes on the following:

- Moral hazard and impact of the level of care on the equilibrium.
- Condorcet's paradox and the median voter
- Rationalisation of why the Nash Equilibrium exists.

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**END OF FINAL EXAMINATIONS**

**UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**DEPARTMENT OF ECONOMICS**

2019 ACADEMIC YEAR FINAL EXAMINATIONS

**ECN 6011: MICROECONOMIC THEORY I**

Instructions: Answer ANY FOUR questions.

Time: THREE HOURS

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**Question One**

For each of the given utility functions, find the Marshallian demand functions, the indirect utility function and the expenditure function. Assume that prices of  $x_1$  and  $x_2$  are  $p_1$  and  $p_2$  respectively, and income is  $m$ .

- (i)  $u(x_1, x_2) = \ln(x_1 + x_2)$
- (ii)  $u(x_1, x_2) = x_1 + \ln x_2$
- (iii)  $u(x_1, x_2) = x_1 + x_2$
- (iv)  $u(x_1, x_2) = \min(x_1, x_2)$

**Question Two**

Suppose that there are two goods (denote their quantities by  $x$  and  $y$ ) and two consumers, Mary and Ben in an economy. No production is possible. Each consumer has the same preference, which is representable by the utility function  $u(x, y) = \sqrt{x} + \sqrt{y}$ . Mary owns four units of the  $y$ -good but none of the  $x$ -good; Ben owns four units of the  $x$ -good but none of the  $y$ -good.

- (a) Determine the Pareto frontier for this two-person economy.
- (b) Determine the core.
- (c) State the second fundamental theorem of welfare economics.

**Question three**

There are two goods in the economy, milk and honey (quantities denoted by  $x$  and  $y$ , respectively). There are two consumers, Angela and Bill. Denote Angela's and Bill's consumption bundles by  $(x_A, y_A)$  and  $(x_B, y_B)$ . Angela's and Bill's preferences are described by the utility functions  $u_A(x_A, y_A) = 3x_A + y_A$  and  $u_B(x_B, y_B) = x_B + y_B$ . Angela owns 30 milk but no honey; Bill owns 20 honey but no milk.

- (a) Determine all the Pareto efficient allocations and depict them in an Edgeworth box diagram.
- (b) Determine all Walrasian equilibrium prices and allocations.
- (c) Now assume that each consumer owns 15 milk and 10 honey to begin with, and determine all Walrasian equilibria (if there are any).

#### Question Four

(a) Let  $G = [S_i, U_i]$  denote a 2-player game in strategic form.

	D	E	F
A	1,2	0,1	10,0
B	0,0	4,3	0,0
C	0,0	0,0	8,8

- (i) Is the above game dominance solvable?
- (ii) Does this game have a unique Nash equilibrium?

(b) Assume that there is a game called picking the last coin from four coins. This game has three players who have four coins in front of them. The rule of the game are as follows: player 1 moves and takes one or two coins, next player 2 moves and takes one or two coins, then player 3 moves and takes one or two coins, and finally player 1 picks up the last coin if there is one left. Whoever picks up the last (fourth) coin wins the game.

- (i) Draw the extensive form of the game.
- (ii) Is it ever possible for player 1 to win this game?

#### Question Five

Denote by  $\zeta(p)$  the  $L$ -dimensional vector of excess demand, i.e. demand minus supply, at prices  $p$ , then seeking sufficient conditions for Walrasian equilibrium is equivalent to seeking sufficient conditions for the existence of at least one  $p$  such that  $\zeta(p) = 0$ . Assume further that  $\ell$  is some commodity, then we write  $p_\ell$  for the price of commodity  $\ell$ , and  $\zeta_\ell(p)$  for the excess demand for commodity  $\ell$  at price vector  $p$ .

Given that,

- (i)  $\zeta$  is continuous, and
- (ii)  $\zeta$  satisfies Walras' Law:  $p \cdot \zeta(p) = 0$  for all  $p \in \Delta$ ; (where  $\Delta$  is the domain of the excess demand function)

**Show that that for every  $p \in \Delta$ , if for some good  $\ell$  we have  $p_\ell = 0$ , then  $\zeta_\ell(p) > 0$ ; then there is at least one  $p \in \Delta$  such that  $\zeta(p) = 0$ .**

-END-



**UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**DEPARTMENT OF ECONOMICS**  
**2020 ACADEMIC YEAR FINAL EXAMINATION**

**ECN 6022:           ADVANCED MACROECONOMICS II**

**TIME ALLOWED: THREE (3) HOURS ONLY**

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**INSTRUCTIONS: ANSWER ANY THREE QUESTIONS IN ALL.**

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**DO NOT TURN OVER UNTIL INSTRUCTED TO**

## QUESTION 1

In the Shapiro Stiglitz model, we observed that a representative agent's utility is given by:

$$U = \int_{t=0}^{\infty} e^{-\rho t} u(t) dt \quad \rho > 0$$

$\rho$  is the discount rate and  $u(t)$  is instantaneous utility at time  $t$  which takes the form:

$$u(t) = \begin{cases} w(t) - e(t) & \text{if employed} \\ 0 & \text{if unemployed} \end{cases}$$

$w(t)$  is wage at time  $t$ . Workers have to exert effort  $e$  to get a wage  $w$ . In general workers can be in three states: First employed and hardworking  $E$ , shirking and unemployed.

Firms which have  $L$  number of employees aim to maximise profits which at time  $t$  are:

$$\pi(t) = F(\bar{e}L(t) - w(t)[L(t) + S(t)], \quad f'(\cdot) > 0, F''(\cdot) < 0$$

As observed in class, workers can transit between states and the  $V_i$  is the value of being state ( $i = E, S, \text{ and } U$ ). As observed in class, the value of effort that an employee obtains in the limit is:

$$V_E = \frac{1}{\rho + b} [(w - \bar{e}) + bV_U]$$

where  $b =$  exogenous quit rate and all the others are as defined in class

Answer the following questions:

- Derive the no shirking condition wage rate
- Explain how the equilibrium employment and the wage rate is affected by the discount rate and the job break up rate
- Using a graph show and explain the effect of a fall in labour demand. Why is unemployment necessary for firms to get a well disciplined labour force in this model
- Provide reasons why it may be advantageous for a firm to pay workers a wage in excess of the market clearing wage

## QUESTION 2

Unusual budget deficits are often observed in most countries. Several reasons have been put forward to explain this phenomenon. Among the key models is one developed by Tabellini and Alesina a two period model in which the state can spend on  $M$  (infrastructure) or Agriculture  $R$  in the two periods. Assuming the political outcome in period 2 is uncertain and the incumbent loves infrastructure. He has to decide on how much to spend on  $M$  and  $R$  and how much debt  $D$  he must accrue in addition to the initial wealth  $Y$ . Assume the debt does not attract interest.

- Based on what we have learn, show the budget constraints for period 1 and 2
- Given that consumers give a weight of  $\alpha$  to  $M$ , derive the generic objective function for individual  $i$
- Show the individual  $i$ 's utility function in period and predicted by the model
- Explain how the median voter determines the outcome of the model.

- e. Discuss some of the reasons why unusually high debts are often observed in many developing countries

### Question 3

- a. Bewley (1980) argues that money is used as a store of value. Given the household budget constraint can be expressed as:

$$Y_1 + \frac{m_0}{1 + \pi_0} = C_1, \quad Y_2 + \frac{m_1}{1 + \pi_1} = C_2 \text{ and } M_1 \geq 0$$

where  $y_1$  and  $y_2$  represent the consumer's endowment income in the periods 1 and 2 respectively.  $C$  is consumption,  $m$  = money and  $\pi$  is inflation.

Given a consumer's utility function:

$$V = U(C_1) + \frac{1}{1+\rho} U(C_2)$$

- i. Using the optimization method and graphs, show the importance of money as a store of value
  - ii. Derive the Euler equation interpreted it
- b. Without deriving any models, explain the concept of the seigniorage Laffer curve and using the Laffer curve explain the conditions under which hyperinflation can arise

### Question 4:

Discuss the concept of dynamic inconsistency

Assume a Lucas supply curve

$$y = y^n + b(\pi + \pi^e), b > 0$$

$y$  is the log of output,  $y^n$  is the log of its flexible price level

The central's loss function is given by:

$$L = \frac{1}{2} (y - y^*)^2 + \frac{1}{2} a(\pi + \pi^*)^2, \quad y^* > a > 0$$

- a. Given  $\pi^e$  what will the central bank set  $\pi$  equal to?
- b. Assuming rational expectations, what are society's losses?
- c. Discuss some of the strategies that policy makers can use to improve the credibility
- d. Explain the concept of interest rules as a policy strategy or anchor to address inflation. What are the major concerns that have been raised about the use of interest rate?

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**END OF FINAL EXAMINATIONS**

**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**DEPARTMENT OF ECONOMICS**

**2020 ACADEMIC YEAR**

**ECN 6301: STATISTICS FOR ECONOMICS AND ECONOMETRICS**

**TIME ALLOWED: THREE HOURS**

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**INSTRUCTIONS:**

ANSWER ANY THREE QUESTIONS

Calculators are allowed.

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**DO NOT TURN OVER UNTIL INSTRUCTED TO**

Question 1

- (a) Determine the probability of picking 2 men in a sample of 6 selected at random without replacement from a group of 10 people, 5 of which are men. [3 marks]
- (b) A box holds 5 white and 3 black marbles. If 2 marbles are to be drawn at random without replacement and  $X$  denotes the number of white marbles, find the probability distribution for  $X$ . [2 marks]
- (c) Past experience indicates that an average number of 6 customers per hour stop for gasoline at a gasoline pump.
- What is the probability of 3 customers stopping in any hour? [2 marks]
  - What is the probability of 3 customers or less in any hour? [2 marks]
  - What is the expected value and standard deviation for this distribution? [4 marks]
- (d) Three different machines  $M_1$ ,  $M_2$ , and  $M_3$  were used for producing a large batch of similar manufactured items. Suppose that 20 percent of the items were produced by machine  $M_1$ , 30 percent by machine  $M_2$  and 50 percent by machine  $M_3$ . Suppose further that 1 percent of the items produced by machine  $M_1$  are defective, that 2 percent of the items produced by machine  $M_2$  are defective, and that 3 percent of the items produced by machine  $M_3$  are defective. Finally, suppose that one item is selected at random from the entire batch and it is found to be defective. Determine the probability that this item was produced by machine  $M_2$ . [5 marks]
- (e) In a certain random experiment, let  $A$  and  $B$  be two events such that  $P(A) = 0.7$ ,  $P(B) = 0.5$ , and  $P((A \cup B)') = 0.1$ . Find the  $P(A \cap B)$ . [2 marks]

Question 2

- (a) Suppose that the joint p.d.f of two random variables  $X$  and  $Y$  is as follows:

$$f(x, y) = \begin{cases} \frac{3}{16}(4 - 2x - y) & \text{for } x > 0, y > 0, 2x + y < 4 \\ 0 & \text{otherwise} \end{cases}$$

Determine; (i) the conditional p.d.f of  $Y$  for every given value of  $X$ . [-4 marks]

- (ii)  $\Pr(Y \geq 2 | X = 0.5)$  [3 marks]

- (b) Suppose that  $X$  and  $Y$  have a continuous joint distribution for which the joint p.d.f is defined as follows;

$$f(x, y) = \begin{cases} \frac{3}{2}y^2 & \text{for } 0 \leq x \leq 2, \quad 0 \leq y \leq 1 \\ 0 & \text{otherwise} \end{cases}$$

Determine

- (i) the marginal p.d.f's X and Y. [4 marks]
- (ii) Show and state whether events  $(X < 1)$  and the event  $(Y \geq 0.5)$  are independent or not. [3 marks]
- (c) Suppose that X is a random variable for which the m.g.f is as follows:

$$\varphi(t) = \frac{1}{4}(3e^t + e^{-t}) \quad \text{for } -\infty < t < \infty$$

Find the mean and the variance of X. [6 marks]

Question 3

- (a) Consider the model;  $\mathbf{y} = \mathbf{X}\boldsymbol{\beta} + \boldsymbol{\varepsilon}$ , where  $\mathbf{y}$ ,  $\mathbf{X}$ ,  $\boldsymbol{\beta}$  and  $\boldsymbol{\varepsilon}$  are of orders  $(n \times 1)$ ,  $(n \times k)$ ,  $(k \times 1)$  and  $(n \times 1)$ , respectively and  $E(\boldsymbol{\varepsilon}\boldsymbol{\varepsilon}') = \sigma^2\mathbf{I}$ . All the other classical linear regression assumptions are fulfilled. Estimate the OLS estimator,  $s^2$ , and show that it is an unbiased and consistent estimator for a finite sample. Ensure to clearly state all the assumptions used. [8 marks]
- (b) Suppose that for the model in part (a)  $E(\boldsymbol{\varepsilon}\boldsymbol{\varepsilon}') = \sigma^2\boldsymbol{\Omega}$ , where  $\boldsymbol{\Omega}$  is positive definite. Prove that the OLS estimator  $\boldsymbol{\beta}$  is unbiased and consistent. [6 marks]
- (c) Given the following model:  $\mathbf{y} = \mathbf{X}_1\boldsymbol{\beta}_1 + \mathbf{X}_2\boldsymbol{\beta}_2 + \boldsymbol{\varepsilon}$   
Show and state whether or not the above regression is biased or not when it is computed without the second set of variables? [6 marks]

Question 4

- (a) Briefly explain the steps involved in White's general test for heteroscedasticity. [4 marks]
- (b) Explain three solutions that can be used to deal with heteroscedasticity. [6 marks]
- (c) The Breusch-Godfrey Test is used to test for autocorrelation, explain the steps involved in this test.
- (d) What are the consequences of ignoring the presence of autocorrelation? [6 marks]
- (e) State and explain two remedies for autocorrelation. [4 marks]



**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**2019/2020 END OF YEAR EXAMINATIONS**

**FULL TIME**

**LIT 5010 – LITERARY RESEARCH METHODS AND PROPOSAL WRITING**

**TIME: THREE HOURS**

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**INSTRUCTIONS:**

1. Answer only three questions, one from Section A and two from Section B.
2. The question in Section A is compulsory.

**SECTION A (40 marks): The question in this section is COMPULSORY.**

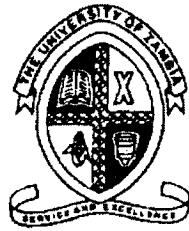
1. A research proposal may be defined as a detailed description of a proposed study designed to investigate a given problem. A design has a clear structure. List the various sections of the research proposal and provide an explanation of the content and function of each section.

**SECTION B (60 marks)**

**Answer any TWO questions from this section. Each question carries 30 marks.**

2. Apply the theory of semiotics to the reading of some specific aspects or signs of ANY novel of your choice, excluding what was discussed in class.
3. Referencing is an important aspect of academic writing. Two of the most commonly used referencing styles are the MLA and APA. Of the two, which one do you prefer? In what specific ways would you say it is better than the other?
4. In what ways does academic writing differ from ordinary writing? Illustrate.
5. You have been tasked to conduct research on poetry delivered at a traditional ceremony in praise of a chief. You will need to obtain permission to record the presentation of the poems, transcribe then translate from the Zambian language to English, after which you will then analyse the content and publish your findings. What ethical issues would you anticipate and how would you deal with them?

**END OF EXAM – GOOD LUCK!**



THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
DEPARTMENT OF LITERATURE AND LANGUAGES

2019/2020 ACADEMIC YEAR

LIT5210: *COMPARATIVE LITERATURE*

FINAL EXAMINATION

TIME: THREE (3) HOURS

INSTRUCTIONS

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1. Please write your computer number on every answer booklet used.
  2. Answer the compulsory question from Section A. Answer 2 question from Section B.
  3. This is an open book examination so you gain more marks by quoting from the text.
-

**Section A (Compulsory) - 40 marks**

1. With textual reference, examine the various paths one can employ in comparative literature.

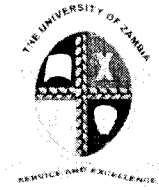
**Section B (answer any two questions) - 30 marks per question**

2. In most of his writings, Bakhtin seems to argue that through difference, one's identity becomes more definite. By focusing on two texts, or authors or genres, explore this assertion.

3. Zepetnek in *Comparative Literature: Theory, Method, Application* (1998) says, "...the theoretical and methodological proposition is that the study of literature should focus on the 'how' of literature, not the 'what.'" How central is this idea to comparative literature? Explain.

4. Conduct a comparative study of any two Zambian texts: one in English and another in a local language. Please note that no text that has been used in class should be employed in this case.

5. Conduct a comparative study of any Zambian author(s) or text(s) and a non-Zambian author(s) or text(s).



THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
2019/20 END OF YEAR EXAMINATIONS

FULL TIME

LIT 5220 – LITERARY ONOMASTICS

TIME: THREE HOURS

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**INSTRUCTIONS:**

1. Primary texts and a dictionary are allowed into the examination room.
2. Answer only three questions, one from Section A and two from Section B
3. This is an open book examination so you gain more marks by quoting from the text.
4. All the questions carry equal marks.

**SECTION A (33 marks): The question in this section is COMPULSORY.**

1. What is the significance of toponyms in “Everyman” and “Pilgrim’s Progress”? How do they contribute to the development of the story?

**SECTION B (66 marks)**

**Answer any TWO questions from this section. Each question carries 33 marks.**

2. In Act II and Scene II of *Romeo and Juliet* we are confronted by the famous quote “What’s in a name? That which we call a rose by any other name would smell as sweet.” The statement suggests that a name has no bearing on a person’s character or being. From your reading of literary texts would you agree or disagree with this statement? Illustrate your answer using textual evidence of your choice.
3. What factors influence Ngugi’s use of the Adamic Licence in *I Will Marry When I Want*? Illustrate.
4. From your reading of *The Mourning Bird* what do you think is the significance of the title in relation to the content and development of the story?
5. Compare and contrast the names of characters in *Devil on the Cross* and *Patchwork*.

**END OF EXAM – GOOD LUCK!**



**THE UNIVERSITY OF ZAMBIA**

**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**

**DEPARTMENT OF MEDIA AND COMMUNICATION STUDIES**

**EXAM FOR 2019/2020 ACADEMIC YEAR**

**COURSE: MCD 5251 – COMMUNICATION STRATEGIES AND  
COMMUNITY MOBILISATION**

**INSTRUCTIONS:**

- There are three (3) Sections
- Sections A and B are Compulsory
- Section C has seven (7) questions. Please choose five (5) only

**Venue: DRGS (LT II)**

**Time: 09:00 - 12:00hrs**

**Date: 04/12/2020**

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## SECTION A

### Instructions:

- **Write short answers**
- **All the questions are compulsory**
- **Each question has 2 marks**

1. The “Boma Iyanganepo syndrome” is a popular slogan here in Zambia. What social welfare theory is it? Explain.
2. List and briefly explain the key issues about Development Communication.
3. What is the essence of communication strategies.
4. Mention and explain the theories of poverty.
5. Mention and briefly explain at least 10 causes of poverty.

## SECTION B

### Instructions:

- **Brief answers**
- **All the questions are compulsory**
- **Each question has 3 marks**

6. You are in the Executive of the Church Mother Body tasked to reconcile the warring political parties here in Zambia. You have to write a communication strategy of how you will approach this matter. How are you going to choose your strategies?
7. There are some people who are born in Misisi compound, grow up there, marry and die there in similar or same socio-economic conditions. Why?
8. You are positioning yourself to stand as an area Member of Parliament in Mutwe wa Nkoko Constituency. In case you win, how are you going to reduce on the poverty levels in your Constituency?
9. Kindly do a critique of the theories of Development?
10. UNZA has become a home for the car cleaners from the surrounding compounds as well as for the street kids? While the rest of the students do not seem to be concerned, you are concerned. Why do you think it is necessary for you to be concerned about them?

## SECTION C

### Instructions:

- There are 7 questions in this section
- Answer 5 questions only
- Each question has 5 marks

11. Some health specialists have gone to Kwandangala village to sensitise the people against the corona virus. People have refused to stop handshakes and physical contacts because this is part of their cultural values and after all the disease is a “whiteman’s” disease. How do you diffuse this impasse?
12. Through infrastructural development, government has exaggerated the alleviation of poverty levels. You are working for a Church International NGO determined to say the truth about the socio-economic conditions of the people. Kindly illustrate how you are going to measure the socio-economic conditions of the people so that you demonstrate that you are equal to the task and hence government is lying.
13. You are a Civil Servant and a TV panelist. Opposition Political Party members are heavy criticizing government for defaulting to pay the interest on the loan. Kindly show that despite the corruption and other mistakes, the Social Welfare system is working.
14. The phyto and agro mining project at UNZA is concerned about the pollution levels in mining areas like Kabwe. The role of this project is to carry out a decontamination exercise in these areas by planting special plants which will be absorbing these pollutants through osmosis but at the same time produce biofuels from these same plants. As an MCD graduate, why do you think it is important for you to be part and parcel of this team?
15. An international organization has hit the Zambian grounds running so that their presence is felt. So they want to implement some projects straight away while you as a project manager you are insisting on the participation of the people. Why do you think it is important to go your way?
16. Kindly contrast and explain how development communication is misunderstood and how it should be understood.
17. Despite the Police Force being renamed as a Police Service, yet people still have that old image of Police Force. You have been employed as Public Relations Officer and you are determined to change the image of the Police. Kindly work out a communications strategy.

**GOOD LUCK & ALL THE BEST**



**THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
DEPARTMENT OF MEDIA AND COMMUNICATION STUDIES**

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**2019 ACADEMIC YEAR, SECOND TERM**

**FINAL EXAMINATIONS**

**MMC 5242: COMMUNICATION POLICY AND PLANNING IN DEVELOPING  
COUNTRIES**

**DATE: 11<sup>th</sup> December, 2020**

**TIME: 14:00 – 17:00**

**DURATION: 3 Hours**

**ANSWER THREE (3) QUESTIONS INCLUDING QUESTION ONE (1)**

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1. The Zambian media industry has, for a long time, been grappling with the debate on media regulation. Stakeholders have taken different positions. Some have advocated for statutory regulation, while others for self-regulation and alternative mechanisms. Join the debate and discuss the reasons for media regulation. Examine the arguments from different perspectives and argue from your preferred position. (20 marks)
2. Drawing from the historical trends of the Zambia media and communication industry, discuss the paradigms of communication policy formulation. (15 marks)
3. Discuss the normative nature of media and communication policy. With relevant examples, discuss the various issues that a national communication policy should address. (15 marks)
4. Use practical examples to discuss the process and principles of developing a communication strategy. (15 marks)

END

**THE UNIVERSITY OF ZAMBIA**

**2019/2020 ACADEMIC YEAR**

**FINAL EXAMINATIONS**

**MSW 5115: ADVANCED SOCIAL WORK PRACTICE WITH CHILDREN, YOUTH  
AND FAMILIES.**

**TIME: THREE (3) HOURS**

**INSTRUCTIONS: ANSWER ALL QUESTIONS.**

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1. Social Work is one of the leading professions in the juvenile justice system. Discuss the role of social work profession in the dispensation of juvenile justice in Zambia. Give examples to illustrate your answer.
  2. The 1989 UN Convention on the Rights of Children is a major international instrument for protecting the fundamental rights of children.
    - a) Discuss four (4) major provisions of the UN Convention relating to the Rights of Children
    - b) Discuss four (4) major challenges in the implementation of the UN Convention on the Rights of Children in the context of developing countries. Illustrate your answer by giving examples in the Zambian context
  3. Most of the family life cycle theories describe family life in stages usually marked by the age of children or family members.
    - a) Give an outline of one of the family life cycle theories
    - b) Discuss the major limitations of the family life cycle theories. Illustrate your answer by giving examples in the Zambian context.
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**END OF EXAMINATION**

**December 17, 2020**

**THE UNIVERSITY OF ZAMBIA**

**2019/2020 ACADEMIC YEAR**

**FINAL EXAMINATIONS**

**MSW 5715: ADVANCED COMMUNITY DEVELOPMENT.**

**TIME: THREE (3) HOURS**

**INSTRUCTIONS: ANSWER ALL QUESTIONS.**

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1. Neighbourhoods are generally conceived as spatial-based communities in the city or town where people live or reside. Based on the degree of interaction among residents; residents' identification with the neighbourhood; and residents' social connections with larger community, discuss the following types of neighbourhoods. Illustrate your answer by giving examples of such neighbourhood communities in the Zambian context.
    - a) Stepping Stone Neighbourhood
    - b) Anomic Neighbourhood
    - c) Parochial Neighbourhood
    - d) Diffuse Neighbourhood
  
  2. Spatial-based communities are structured to perform certain functions that are designed to meet the needs of people who live in the communities.
    - a) Discuss four (4) major functions of communities
    - b) Discuss the limitations of community functions in the context of social work practice in Zambia. Give examples to illustrate your answer.
  
  3. Social Action and Locality Development are among the widely used social work practice models for effecting change at the community level.
    - a) Discuss the basic assumptions of the two (2) community practice models
    - b) Discuss the development strategies of the two (2) community practice models
    - c) Discuss the strengths & limitations of the two (2) community practice models in the context of social work practice with communities in Zambia.

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**END OF EXAMINATION**

**December 12, 2020**

**THE UNIVERSITY OF ZAMBIA  
DEPARTMENT OF POLITICAL AND ADMINISTRATIVE STUDIES**

**2019/2020 ACADEMIC YEAR FINAL EXAMINATIONS**

**PAM 5110: THE THEORY AND PRACTICE OF PUBLIC ADMINISTRATION AND  
MANAGEMENT**

**TIME: THREE (3) HOURS**

**INSTRUCTIONS: ANSWER THREE QUESTIONS WITH AT LEAST ONE  
QUESTION FROM EACH PART**

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**PART ONE**

- 1) What are the common approaches to the study of Public Administration?  
For each of the approaches identified:
  - i) List its prominent advocates;
  - ii) Discuss their main points of departure; and
  - iii) Critically discuss the key issues of focus and the criticisms leveled against it.
- 2) Explain in some detail the basis for the claim that “the concept of **Organization Theory** is integrative”. What theoretical perspectives does it integrate? Drawing from Herbert Simon’s “**Decision Making**” theoretical perspective, describe the central element or ingredient of the integration.
- 3) Identify and discuss the three sources of legitimacy in the early German reality which Max Weber used in defining ideal Bureaucracy. What are the main tenets of Weber’s ideal bureaucracy? Illustrate the significance of these tenets of bureaucratic organization in one of Zambia’s public organizations.

**PART TWO**

- 4) Explain why theory is important in the Social Sciences? Giving relevant examples outline and critically discuss the theoretical and practical underpinnings of Public Administration. Illustrate the possibility to draw any contrast with private administration.
- 5) The Managerial Programme, upon which the New Public Management (NPM) is anchored, has some key elements. What are these key elements? Discuss at least four ways in which the objectives of the Managerial Programme’s four themes can be achieved. What do you consider to be the possible weaknesses of NPM?
- 6) What are “Ethics” and What are “Morals”? Identify and discuss at least three approaches to ethical reasoning. Explain the importance of morals and ethics to the behaviour and actions of public administration officials.

END OF EXAMINATION

**THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**

**2019/20 ACADEMIC YEAR  
FINAL YEAR EXAMINATIONS**

**POL/PAM 5431: RESEARCH METHODS AND TECHNIQUES**

**TIME: THREE (3) HOURS**

**INSTRUCTIONS: ANSWER QUESTION 1 AND ANY OTHER TWO QUESTIONS**

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1. Assume that your research proposal is concerned with the effectiveness of the Keep Zambia Clean, Green and Healthy Campaign in residential areas in Lusaka district.
  - a) Indicate the issues that background information will focus on.
  - b) Explain the significance of this research.
  - c) Indicate the people who will be the sources of qualitative data.
  - d) Indicate the people who will be the sources of quantitative data.

(14 marks)
  
2.
  - a) With the help of relevant examples, explain the difference between case study and cross-sectional study?
  - b) Explain any three (3) advantages and two (2) disadvantages of a case study.
  - c) Explain any two (2) advantages and two (2) disadvantages of a cross-sectional study.

(13 marks)
  
3.
  - a) With the help of appropriate examples, explain the difference between simple random and systematic sampling.
  - b) With the help of relevant examples, explain the difference between stratified and multistage sampling.
  - c) With the help of appropriate examples, explain the difference between convenience and snowball sampling.

(13 marks)
  
4. With the help of relevant examples, describe any four (4) methods of assessing reliability of data.

(13 marks)

[Total = 40 marks]

**END OF EXAMINATION**

**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**DEPARTMENT OF POPULATION STUDIES**

2019/2020 ACADEMIC YEAR EXAMINATIONS

POP 5110:           ADVANCED DEMOGRAPHIC ANALYSIS

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**INSTRUCTIONS:**           ANSWER ALL QUESTIONS IN SECTION A AND ONE QUESTION ONLY IN SECTIONS B, C, & D. IN TOTAL YOU SHOULD ANSWER FIVE QUESTIONS.

**TIME:**                       THREE (3) HOURS

**IMPORTANT NOTE:**       SECTION D MUST BE ANSWERED ON A SEPARATE ANSWER BOOKLET

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**SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION**

**Question 1 (Compulsory)**

**[20 marks]**

The data at the bottom of this page come from a life table for females of a southern African country in 2020.

- i. Stating all assumptions made where appropriate, derive estimates for the missing values.
- ii. In the stationary population based on this life table experiencing 100,000 births per year,
  - a) Determine the size of the population.
  - b) Calculate the crude death rate.
  - c) Estimate the proportion of this population aged between 20 and 40.
  - d) What is the life expectancy at age 20?
- iii. A new disease, SARS-COV-2 (COVID-19) causes the age specific death rates ( ${}_n m_x$ ) to increase 2.5 times in the 15-19 age group, 5 times in the age groups between 20 and 39 and 2.5 times in the 40-44 age group. If all other mortality rates remain unchanged, and denoting the new life table quantities with an asterisk,
  - a. Calculate values for the new resulting life table, showing columns for  ${}_n m_x^*$ ,  ${}_n q_x^*$ ,  ${}_n l_x^*$ ,  ${}_n d_x^*$ ,  ${}_n L_x^*$ ,  $T_x^*$  and  $e_x^*$  for ages up to and including 50, assuming the same radix as before, and that  $T_{55}^*$  is 1 160 327.
- iv. In the stationary population based on the life table derived in part (iii)
  - a) Determine the size of the population.
  - b) Calculate the crude death rate.
  - c) Estimate the proportion of this population aged between 20 and 40.
  - d) What is the new life expectancy at age 20?
  - e) Compare and contrast your answers in (a to d) above with those given in part ii) and discuss your findings.

$x$	$n$	$I_x$	${}^n d_x$	${}^n q_x$	${}^n a_x$	${}^n L_x$	$T_x$	$e_x$	${}^n m_x$
0	1	100,000	4,642	0.04642	0.3			66.0	0.04798
1	4	95,358	1,352	0.01418	1.6	378,187.2	6,505,757	68.2	0.00358
5	5	94,006	319	0.00339	2.5	469,232.5	6,127,570	65.2	0.00068
10	5	93,687	319	0.00340	2.5	467,637.5	5,658,338	60.4	0.00068
15	5	93,368	561	0.00601	2.5	465,437.5	5,190,700	55.6	0.00121
20	5	92,807	960	0.01034	2.5	461,635.0			0.00208
25	5	91,847	1,065	0.01160	2.5	456,572.5	4,263,628	46.4	0.00233
30	5	90,782	1,192	0.01313	2.5	450,930.0	3,807,055	41.9	
35	5	89,590	1,490	0.01663	2.5	444,225.0	3,356,125	37.5	0.00335
40	5	88,100	1,905	0.02162	2.5	435,737.5	2,911,900	33.1	0.00437
45	5	86,195	2,441	0.02832	2.5	424,872.5	2,476,163	28.7	0.00575
50	5	83,754	3,254	0.03885	2.5	410,635.0	2,051,290	24.5	0.00792
55		80,500	4,207	0.05226	2.5	391,982.5	1,640,655	20.4	0.01073

### Question 2 (Compulsory)

[20 marks]

The Electoral Commission of Zambia (ECZ) estimated 9 million eligible voters to be registered for the August 2021 General Elections while the Zambia Statistics Agency (ZamStats) projected 8,414,839 eligible voters aged 18 years and above in 2020. Given the ZamStats projected population distribution by age and sex for the year 2020 obtained from *Central Statistical Office, 2013. "Zambia Population and Demographic Projections 2011-2035"*, presented in the table below, and the population numbers for adolescents in ages 17, 18 and 19 years from the same source. As a Demographer, estimate the eligible voter population for the August 2021 General Elections by sex (male and female) and total, considering:

- Only the population aged 18 years and above
- 25% of the 17-year old adolescents turn 18 years in May 2021
- 50% of the 17-year old adolescents turn 18 years in May 2021
- Assuming that the percentage distribution of registered voters by province and sex has been constant over the years as observed from the 2016 voter registration exercise. Applying the assumption in part (c), estimate the number of eligible voters by province, sex and total, first, based on your own derived total eligible voters and second, compare with the distribution derived based on the ZamStats estimated total eligible voters. Complete the table of the distribution of number of eligible voters by province and sex below.
- Compare your estimates with those of ECZ and ZamStats
- Comment on the differences
- What was not accounted for in the ZamStats eligible voter estimates?
- What are the limitations of this projection?

### Adolescent Population projection 2020

Age	Male	Female
17	190,664	189,590
18	185,063	184,684
19	180,287	180,890

Source: Central Statistical Office.2013. Zambia Population and Demographic Projections 2011-2035

**Table: Zambia Population Projection 2020**

Age group	Male	Female	Total
0-4	1,579,231	1,554,009	3,133,240
5-9	1,357,442	1,343,776	
10-14	1,160,256	1,154,409	
15-19	958,687	954,923	
20-24	833,604	851,421	
25-29	693,050	727,248	
30-34	496,336	579,946	
35-39	433,030	493,825	
40-44	361,566	362,160	
45-49	298,359	283,452	
50-54	205,799	193,301	
55-59	153,109	160,905	
60-64	109,330	123,190	
65-69	72,624	79,062	
70-74	54,288	68,013	
75-79	35,056	44,637	
80+	50,407	58,971	
<b>Total</b>	<b>8,852,174</b>	<b>9,033,248</b>	<b>17,885,422</b>

Source: Central Statistical Office.2013. Zambia Population and Demographic Projections 2011-2035

**Table: Distribution of number of eligible voters by province and sex**

Province	%Male National	%Female National	%National	Eligible Number of Voters (Own computation)			Eligible Number of Voters (ZamStats)		
				Male	Female	Total	Male	Female	Total
Central	4.9	4.7	9.6						
Copperbelt	8.3	7.1	15.4						
Eastern	5.4	6.2	11.6						
Luapula	3.6	4.0	7.6						
Lusaka	8.9	7.8	16.7						
Muchinga	2.5	2.7	5.2						
Northern	4.0	4.3	8.3						
North-Western	3.0	3.0	6.0						
Southern	5.8	6.3	12.1						
Western	3.3	4.2	7.4						
<b>Total</b>	<b>49.6</b>	<b>50.4</b>	<b>100.0</b>						

**SECTION B: ANSWER ONLY ONE QUESTION IN THIS SECTION**

**Question 3:**

**[20 marks]**

Demonstrate your understanding of the Brass P/F ratio method of estimating fertility in Zambia. State the rationale, assumptions and limitations as well as factors that affect fertility estimates derived from this method. Use table shells to illustrate the computations in the application of the method.

**Question 4:**

**[20 marks]**

Using data in the table below for Western Province, Zambia 2010, estimate the following:

- (i) Total Fertility Rate (TFR)
- (ii) Gross Reproduction Rate (GRR)
- (iii) Net Reproduction Rate (NRR)
- (iv) Mean length of a generation
- (v) Intrinsic growth rate ( $\ln R_0 / (R_1/R_0 - 0.7 \cdot \ln R_0)$ )
- (vi) In this decomposition of Coale's index of general fertility, what does each index

represent: 
$$I_f = I_m \times Ig + (1 - I_m) \times I_h$$

- (vii) Interpret this index:  $I_f = 0.364$
- (viii) What are Parity Progression Ratios (PPRs)?
- (ix) Interpret this PPR  $(0,8) = 0.228$

**Table: Fertility and survival data for Western Province, Zambia 2010**

Age Group	Age group Mid-point y	Women Population	Births in the Last Year		Probability of survival
			Male	Female	
15-19	17.5	46179	2231	2198	0.97914
20-24	22.5	39986	4264	4064	0.97703
25-29	27.5	34904	3722	3634	0.97421
30-34	32.5	26479	2622	2394	0.97061
35-39	37.5	20718	1640	1583	0.96577
40-44	42.5	15265	637	637	0.95870
45-49	47.5	13419	198	205	0.94751

SECTION C: ANSWER ONLY ONE QUESTION IN THIS SECTION

Question 5:

[20 marks]

- (a) Give examples of indirect methods of estimating adult mortality that use only age and sex population data and those that use information obtained from close relatives.
- (b) Based on your understanding of the orphanhood method of indirectly estimating adult mortality,
- What is the rationale of the method?
  - What are its assumptions?
  - What are the data requirements of the method?
  - What are the computational steps in deriving adult mortality estimates from method?
  - How do you convert conditional probabilities of surviving to a common adult mortality index,  ${}_5q_1$ ?
  - What are the limitations of the method?
  - What is common and different between the orphanhood and widowhood methods?
  - Are the two methods relevant in deriving adult mortality estimates for Zambia?
  - In the equations below, what do the terms stand for?
  - What is the purpose of these equations?

*Widowhood equation:*

$$\frac{l_m(n)}{l_m(20)} = a(n) + b(n)SMAM_f + c(n)SMAM_m + d(n)NW_f(n-5)$$

*Orphanhood equation:*

$$\frac{l_f(25+n)}{l_f(25)} = W(n)S(n-5) + (1.0 - W(n))S(n)$$

**Question 6:**

**[20 marks]**

- (a) Give examples of indirect methods of estimating adult mortality that use only age and sex population data and those that use information obtained from close relatives.
- (b) The table presented below is for the application of the Brass Growth Balance (BGB) Method to census data. Answer the questions that follow:
  - i. Complete the application of the BGB for eMalangeni Country; and what are the assumptions of the BGB being considered?
  - ii. Estimate the probability of dying between exact ages 15 and 60 years ( ${}_{15}q_{15}$ )
  - iii. Why does the life table start at age 5?
  - iv. What assumptions are used in computing  ${}_nL_x$ ?

Age group $x-x+4$	Reported Female		Population at exact age $x, N(x)$	Cumulated		Ratio of		Adjusted deaths	Adjusted death rate	Life table				
	Population	Deaths		Population, $N(x+)$	Deaths, $D(x+)$	$N(x)/N(x+)$	$D(x+)/N(x+)$			$5q_x$	$lx/15$	$5L_x/15$	$T_x/15$	$e_x$
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
0-4	1082729	78481						80582	0.07443					
5-9	937761	10780						11069	0.01180	0.057325	1.000000	4.856688	54.479	54.5
10-14	579354	4610						4733		0.040033	0.942675	4.619031		52.6
15-19	558899	3928									0.904937			
20-24	528402	3499							0.00680					
25-29	556966	3067							0.00565					
30-34	387987	2127												
35-39	326671	1568												
40-44	226752	2053												
45-49	226845	1313												
50-54	176228	1597												
55-59	100492	1001												
60-64	111865	1986												
65-69	72191	1044						1072						
70-74	60753	1704						1750						
75+	179961	5979	-	179961	5979	-	-	6139	0.03411	1.000000	0.479671	1.199177	1.199	2.5

Degree of completeness =  $1/\text{slope} = 0.97\%$

**SECTION D: ANSWER ONLY ONE QUESTION IN THIS SECTION**

**Question 7:**

**[20 marks]**

- a) The renowned demographer has given to be what is considered the most comprehensive definition of urbanization. Briefly describe the five main ways in which he has defined urbanization.
- b) Apply the national growth rate method in estimating migration for each district and province in the table below.
- c) For each district and province, attempt to explain what is happening and why this may be happening in terms of push and pull theory, with Lusaka as the point of reference.

	POPULATION	
	2000	2010
<b>ZAMBIA</b>	9,885,591	13,046,508
<b>CENTRAL</b>		
Kabwe	176,758	202,914
Mkushi	107,438	151,803
<b>Total</b>	<b>1,012,257</b>	<b>1,267,803</b>
<b>COPPERBELT</b>		
Kitwe	376,124	522,092
Ndola	374,757	455,194
<b>Total</b>	<b>1,581,221</b>	<b>1,958,623</b>
<b>EASTERN</b>		
Nyimba	70,299	85,684
Petauke	235,448	337,779
<b>Total</b>	<b>1,230,853</b>	<b>1,606,319</b>
<b>LUAPULA</b>		
Mwense	105,759	117,990
Mansa	180,943	217,603
<b>Total</b>	<b>775,353</b>	<b>958,976</b>
<b>LUSAKA</b>		
Luangwa	18,948	25,294
Lusaka	1,084,702	1,742,979
<b>Total</b>	<b>1,391,329</b>	<b>2,198,996</b>
<b>MUCHINGA</b>		
Chinsali	128,646	147,845
Nakonde	75,135	118,017
<b>Total</b>	<b>524,616</b>	<b>743,109</b>
<b>NORTHERN</b>		
Chilubi	66,338	76,911
Kasama	170,929	238,035
<b>Total</b>	<b>809,400</b>	<b>1,117,903</b>
<b>NORTHWESTERN</b>		
Mwinilunga	117,505	132,688

Solwezi	203,797	239,051
<b>Total</b>	<b>583,350</b>	<b>706,462</b>
<b>SOUTHERN</b>		
Choma	204,898	244,180
Siavonga	58,864	89,787
<b>Total</b>	<b>1,212,124</b>	<b>1,606,793</b>
<b>WESTERN</b>		
Senanga	109,119	126,974
Mongu	162,002	178,454
<b>Total</b>	<b>765,088</b>	<b>881,524</b>

**Question 8:**

**[20 marks]**

- a) Briefly describe the United Nations (UN) definition of an urban area. (Credit will be given for relevant Zambian examples and illustrations)
- b) Discuss the rationale and assumptions underlying the survival ratio methods:
  - i. Forward survival
  - ii. Reverse survival
  - iii. What are the strengths and weaknesses of these methods in estimating migration?
  - iv. Use the data below to complete and compute the reverse method and comment on the results:

Cohort in 2000	Cohort in 2010	Population in 2000	Population 2010	Survival ratios
0-4	10-14	1,656,720	2,252,748	0.99049
5-9	15-19	1,461,082	1,916,287	0.99360
10-14	20-24	1,205,646	1,774,134	0.99113
15-19	25-29	1,069,996	1,531,115	0.98771
20-24	30-34	908,672	1,194,642	0.98468
25-29	35-39	741,148	1,057,077	0.98131
30-34	40-44	557,873	840,308	0.97607
35-39	45-49	429,987	682,921	0.96727
40-44	50-54	325,776	473,238	0.95297
45-49	55-59	245,320	376,164	0.93106
50-54	60-64	203,612	284,864	0.89691
55-59	65-69	144,838	194,162	0.84112
60+	70+	531,593	515,006	0.49200
<b>Total</b>		<b>9,482,263</b>	<b>13,092,666</b>	

**- END OF EXAM -**

**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**2019/2020 ACADEMIC YEAR FINAL EXAMINATIONS**  
**POP 5210: APPLIED DEMOGRAPHY**

**TIME: THREE HOURS**

**INSTRUCTIONS: ANSWER ALL QUESTIONS FROM SECTION A; AND TWO QUESTIONS IN SECTION B  
 PUT ANSWERS TO QUESTIONS FROM EACH SECTION IN SEPARATE ANSWER BOOKS.**

**SECTION A**

**ANSWER ALL THE QUESTIONS IN THIS SECTION**

1.
  - a) Clarify the differences between, applied demography, basic demography, and demographics.
  - b) Based on your answer above, complete the table below to demonstrate your knowledge of the distinction between applied demography, demographics, and basic demography.

		<b>Applied demography</b>	<b>Basic demography</b>	<b>Demographics</b>
i.	Testing the relevance of Bongaarts Proximate determinants of fertility model to the Zambian situation			
ii.	Malthusian theory on overpopulation			
iii.	Undertaking a market survey to gauge the popularity of a soft drink			
iv.	Using population forecasts in Investment planning to predict future returns to an investment in higher education			
v.	Using tables of working life in the disbursement of retirement benefits in the estimation of insurance premiums			

vi.	Data on the purchasing power of Lusaka residents			
vii.	The size of the middle class in Kitwe			
viii.	Data on the consumption patterns of Ndola residents			
a)	Analysis of rural-urban migration patterns in Zambia using the push-and - pull theory			
ix.	Income tax data broken down by age and sex			
x.	Age - sex data of shoppers at Manda Hill			
xi.	Environmental impact assessment			
b)	Application of modernization theory in understanding fertility behaviour			
c)	Conducting an opinion poll to gauge the popularity of political parties in Zimbabwe			
d)	A demographic sample survey to evaluate the impact of a shopping mall on shopping patterns			
e)	A survey to establish the feasibility the impact of an investment in on Lusaka residents			
f)	Applying the cost and benefit model to analyze fertility behaviour			

2. In each of the planning from a) to e), situations below, answer the questions that follow:

- a) City and municipal planning
- b) Education planning
- c) Health planning
- d) Insurance and pension planning

For each of the above planning situations, do the following:

- i. Indicate any two specific problems to be addressed
- ii. Indicate demographic evidence of this problem using relevant indicators
- iii. Provide possible solution (s) in response to the indicators in iii.

3. Discuss some practical examples of how these demographic techniques can be useful in the following situations:
- The use of cohort analysis in the analysis of political behaviour
  - The use of the balancing equation in non-demographic settings.
  - The use of standardization in analysis of consumption patterns.
  - The use of the life table in non-demographic settings.

### **SECTION B**

#### **ANSWER ANY TWO QUESTIONS FROM THIS SECTION**

- As a consultant for a large international company to set up a shopping mall in Kitwe you are approached to give your insights into the key demographic and quasi-demographic information that ensure long term profitability of the mall. Discuss with, with justification, the information and demographic techniques to properly advise this international company.
- The elections are due in August 2021, if a political party contracted you to advise them on how to have a competitive edge vis-à-vis other political party. Describe both the demographic and other relevant factors that would need to be considered in enhancing the party's chances of winning the elections. What specific demographic methods would you employ in the analysis of the political situation?
- Trader Kings is worried about increasing threat from competitors who are vying for a piece of the action in the detergent business in Zambian market. As a consultant, what demographic and other information would you need to harness to advise Trade Kings on the best and winning strategy? What specific demographic techniques and indicators would be relevant in this strategy?
- As human resource manager in a newly established company you are concerned about staff retention in order to maintain productivity of your staff, what demographic information both internally and externally would you need in order to retain your staff or retrench some. What demographic method(s) would be an appropriate part of your strategy?

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**END OF EXAMINATION**

**THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
DEPARTMENT OF POPULATION STUDIES  
2020 ACADEMIC YEAR FINAL EXAMINATIONS  
POP 5310: DATA ANALYSIS**

**TIME: THREE HOURS**

**INSTRUCTIONS:**

- i. Answer ALL questions in SECTION A; answer ONE QUESTION ONLY from SECTION B; and ONE QUESTION ONLY from SECTION C.
  - ii. Answers to QUESTIONS 1-3 in SECTION A must be packaged together with the answer from SECTION B be in separate answer books; and the answer to QUESTION 4 in SECTION A must be packaged together with the answer from SECTION C be in separate answer books.
- 

**SECTION A**

**ANSWER ALL QUESTIONS IN THIS SECTION. ALL ANSWERS MUST BE BRIEF AND TO THE POINT.  
THIS SECTION CARRIES 60 PERCENT OF THE TOTAL MARKS.**

1. Describe the following multivariate techniques and for each, give at least two examples.
  - a) Dependence technique
  - b) Interdependence technique.
2. Demonstrate your knowledge of cluster analysis by responding to the questions below:
  - a) State the main purpose of cluster analysis.
  - b) Briefly describe four limitations of cluster analysis.
  - c) Briefly describe these three ways of creating clusters:
    - i. Complete linkage or clink (furthest neighborhood)
    - ii. Average(between-group) linkage
    - iii. Ward's method.
  - d) With a formula given, state what the Euclidian distance is used for.
  - e) State why standardization is necessary in the computation of the Euclidian distance.
3. Demonstrate your knowledge of factor analysis by responding to the questions below:
  - a) State the main purpose of factor analysis is.
  - b) Briefly state four main assumptions of factor analysis.

- c) Briefly describe the difference between **Exploratory** and **Confirmatory** factor analysis
  - d) Briefly describe three main ways of checking for data suitability in factor analysis.
  - e) List three main factor extraction methods.
4. Explain the following terms:
- a) Competing risks
  - b) Proportional hazard
  - c) Log-rank test
  - d) Multilevel models
  - e) Intra-cluster correlation
  - f) Censoring (left, interval and right)
  - g) Probability of survival with and without censoring

**SECTION B**  
**ANSWER ONE OF THE TWO QUESTIONS.**

**EACH QUESTION ANSWERED CARRIES 20 PERCENT OF THE TOTAL MARKS**

1. The University of Zambia has decided to introduce their own admission examination to replace the ECZ examinations called the Scholastic Aptitude Test (SAT). This is based on three examinations and a pretest administered by the university itself. The minimum score expected for one to pass the SAT is 400.
- a) Interpret **R Square** and **Adjusted R Square** in the **Model Summary** in the table below:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.590 <sup>a</sup>	.348	.334	87.128

a. Predictors: (Constant), Exam3, Pretest, Exam2, Exam1

- b) Interpret **Sum of Squares** in the **ANOVA** table, demonstrate their relationship to the **Model Summary**, and comment on what the **Sig** value means in this context.

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	785377.163	4	196344.291	25.865	.000 <sup>b</sup>
	Residual	1472696.203	194	7591.218		
	Total	2258073.367	198			

- c) Interpret the **Unstandardized Coefficients**, **Standardized Coefficients** meaning of the coefficients, and comment on what the **Sig** values mean in this context.

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	273.394	27.099		10.089	.000
	Pretest	.012	.899	.001	.013	.989
	Exam1	1.583	.668	.196	2.370	.019
	Exam2	1.186	.515	.184	2.302	.022
	Exam3	1.095	.320	.295	3.427	.001

a. Dependent Variable: SAT

a. Dependent Variable: SAT

b. Predictors: (Constant), Exam3, Pretest, Exam2, Exam1

- d) Based on these results, propose two recommendations concerning the new admissions system at the university.

2. The Directorate of Research and Graduate Studies (DRGS) at the University of Zambia has introduced a new system for admitting students into the postgraduate program at the University of Zambia modeled upon the American system. This dataset has a binary response (outcome, dependent) variable called **admit**, which is equal to 1 if the individual is admitted to graduate school, and 0 otherwise. There are three predictor variables: the graduate record examination (**gre**); grade point average (**gpa**); and the university ranking (**rank**). Both **gre** and **gpa** are continuous variables measured on a ratio scale. The variable **rank** is measured on an ordinal scale and takes on the values 1 through 4. Institutions with a rank of 1 have the highest prestige, while those with a rank of 4 have the lowest. The reference category for rank is 4 – a university with the lowest prestige - and assigned with a code of 0.

a) Interpret the statistics in the **Variables in the Equation** and **Variables Not In The Equation**.

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	-.765	.107	50.764	1	.000	.465

b) Interpret **-2 Log likelihood** and either the **Nagelkerke R Square** in the **Model Summary**

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	458.517 <sup>a</sup>	.098	.138

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

c) Interpret the meaning of the **B coefficients**, **Wald statistics**, and **Exp(B)** in the **Variables in the Equation** and comment on what the **Sig values** mean in this context.

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup> gre	.002	.001	4.284	1	.038	1.002
gpa	.804	.332	5.872	1	.015	2.235
rank			20.895	3	.000	
rank(1)	1.551	.418	13.787	1	.000	4.718
rank(2)	.876	.367	5.706	1	.017	2.401
rank(3)	.211	.393	.289	1	.591	1.235
Constant	-5.541	1.138	23.709	1	.000	.004

a. Variable(s) entered on step 1: gre, gpa, rank.

d) Based on the results obtained, give two recommendations regarding the postgraduate admission system at the University of Zambia.

**SECTION C**

**ANSWER ONE OF THE TWO QUESTIONS.**

**EACH QUESTION ANSWERED CARRIES 20 PERCENT OF THE TOTAL MARKS**

1. The table below presents results of an empty model derived from data of 311 primary schools with one class taken from each school. A total of 2827 pupils were in different classes. The dependent variable is the score on an arithmetic test. We are interested in investigating whether the class that a pupil belongs to influences a pupil's score. Using the results in the table below answer the following questions:
- a) Interpret the expected score of the pupils
  - b) Calculate the total variation
  - c) Compute the intra-cluster correlation and interpret
  - d) State the difference between fixed and random effects
  - e) What is ecological fallacy?

Fixed Effects	Coefficient	S.E.
Intercept ( $\beta_0$ )	45.76	0.53
<b>Random Effects</b>		
(Level 2)	21.24	2.29
(Level 1)	65.47	1.79

Level 1: Pupil, Level 2: Class

- 2.
- a) Describe the Cox regression, the hazard function, and assumption of proportional hazards.
  - b) Write down the equation of the Cox regression model and explain the terms in the model.

In a study to establish the effect of education (0=none, 1=primary, 2=secondary and above), type of residence (0=rural, 1=urban), and wealth status (1=poor, 2=Medium, 3=rich) on infant mortality; the Cox proportional hazards model output is given below. Interpret the results of the Cox regression model output.



**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**  
**DEPARTMENT OF POPULATION STUDIES**

**2019/20 ACADEMIC YEAR EXAMINATIONS**

**POP 5410: SOCIAL RESEARCH METHODS**

**INSTRUCTIONS:** ANSWER ALL QUESTIONS IN SECTION A AND ANY TWO QUESTIONS IN SECTION B. IN TOTAL YOU SHOULD ANSWER **FOUR** QUESTIONS.

**TIME:** **THREE (3) HOURS**

**SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION**

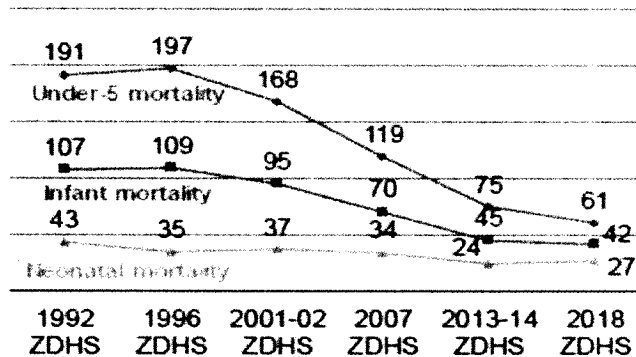
**Question 1 (Compulsory)**

**[25 marks]**

Considering the trend of neonatal mortality in Figure 8.1 obtained from the 2018 Zambia Demographic and Health Survey (ZDHS) report. Answer the following questions below:

**Figure 8.1 Trends in early childhood mortality rates**

*Deaths per 1,000 live births in the 5-year period before the survey*



- Provide a background of the trend of neonatal mortality in Zambia?
- Do you observe any potential research problem? If yes, what is the research problem?
- State the purpose statement
- State the main and specific research questions to be investigated
- State the main and specific research objectives
- State the rationale/justification
- What is the research design to be employed and what are its limitations?
- What is the study population?
- What is the outcome variable and how do you operationally define it as well as measure it?
- Identify five explanatory variables that might be associated with neonatal mortality

- (k) What methods of data analysis would you employ to identify the predictors of neonatal mortality in Zambia?

**Question 2 (Compulsory)**

**[25 marks]**

- (a) Discuss the three fundamental principles of human research ethics aimed at protecting human subjects.
- (b) Identify two institutions in Zambia responsible for research ethics, outline their mandate and roles.

**SECTION B: ANSWER ANY TWO QUESTIONS IN THIS SECTION**

**Question 3**

**[25 marks]**

Write short notes on the following:

- (a) Cross-section study (give examples)
- (b) Case-control study (give examples)
- (c) Cohort study (give examples)
- (d) Multistage cluster sampling (give examples)
- (e) Complete the table below:

<b>State of knowledge of the problem</b>	<b>Types of research questions</b>	<b>Study type</b>
Knowing that a problem exist but knowing little about its characteristics or possible causes.		
Suspecting that certain factors contribute to the problem		
Having sufficient knowledge about the causes to develop and assess an intervention that would prevent, control or solve the problem		

**Question 4**

**[25 marks]**

Write short notes on the following:

- (a) Experimental study design (give examples)
- (b) Randomized Control Trials (RCT) (give examples)
- (c) Double-blind study (give examples)
- (d) Single-blind study (give examples)
- (e) Contamination (give examples)
- (f) Types of probability sampling (give examples)
- (g) Types of non-probability sampling (give examples)
- (h) Data collection methods and instruments for probability sampling study design (give examples)
- (i) Data collection methods and instruments for non-probability sampling study design (give examples)

**Question 5****[25 marks]**

Write short notes on the following:

- (a) Research design and characteristics of a good research design
- (b) Non-intervention study designs (give examples)
- (c) Intervention study designs (give examples)
- (d) Exploratory studies (give examples)
- (e) Descriptive studies (give examples)
- (f) Comparative/analytical studies (give examples)
- (g) Quantitative research paradigm (give examples)
- (h) Qualitative research paradigm (give examples)
- (i) Mixed research paradigm (give examples)

**- END OF EXAM -**



THE UNIVERSITY OF ZAMBIA  
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES  
DEPARTMENT OF SOCIAL WORK AND SOCIOLOGY

**SWK 3110: Social Welfare Theory and Social Policy Analysis 2019**

**INSTRUCTIONS:**

1. **Question 1** in section A is compulsory. Choose any other **three questions** from section B
2. Indicate clearly in your answer booklet the questions you have answered
3. Time allowed: Three hours

**SECTION A: COMPULSORY**

1. Zambia's 7<sup>th</sup> National Development Plan (NDP) has identified mind-set change, productivity improvement and an integrated approach as preconditions for successful implementation and attainment of the vision 2030. As a policy analyst, advise the Government of Zambia on how the Vision 2030 could be achieved using policy measures that have facilitated astounding national productivity in China and Singapore. **(20 Marks)**

**SECTION B: ANSWER ANY THREE QUESTIONS**

2. Outline Gilbert and Specht's (1974) **EIGHT** stages of policy formulation and highlight the active practitioner, professional roles and tasks to perform at each stage. To what extent are social policies in Zambia formulated in this manner? **(10 Marks)**
3. Policy implementation is a very important stage in the process of policy formulation if policy objectives are to be met. Discuss policy implementation strategies as advanced by Julian Le grand (2007). Highlight main features, pros, cons and how these strategies are applied in Zambia? **(10 Marks)**
4. Discuss Esping-Andersen's Welfare State Typologies and explain how different regimes handle issues such as: equality; employment; relationship between the individual and family; and relationship between the individual and labour market. Which typology do you think should be embraced by the Government of Zambia if the welfare of the Zambian people are to be enhanced? **(10 Marks)**
5. Discuss the providers of social welfare in general and give your views on the state and challenges facing Zambia in welfare provision for the older people and people with physical disabilities. In critical manner innovate five (5) social policy implications grounded in the local soils of Zambia on how to improve the state of social welfare provision for the older people and people with physical disabilities. **(10 Marks)**
6. "There is enough evidence to suggest that the fight against capability, monetary and basic needs poverty in rural Zambia cannot be won without involving the poor themselves". In each of these types of poverty identify who are the poor who and the underlying reasons for their poverty. What policy measures do you think the Government of Zambia should formulate and implement in order to eradicate each of the above types of poverty? **(10 Marks)**

**END OF EXAM**