

# **THE UNIVERSITY OF ZAMBIA**

## **SCHOOL OF EDUCATION**

### **2021/22 ACADEMIC YEAR (MID YEAR)**

1. AED 4411: Human Resource Management
2. AED 4915: Non-Governmental Organisations
3. DPE 2111: Fundamental Concepts of Mathematics
4. DPE 3031: Expressive Arts Education
5. DPE 4111: Geometry, Statistics and Probability for Primary School Teaching
6. EAP 9075: Introduction to Economics of Education
7. ECE 3015: Assessment and Identification in early Childhood
8. EDU 2011: Sociology of Education
9. EDU 3011: Learning Processes: Psychology Perspective
10. EED 9011: Advanced Environmental Management
11. EPS 2035: Physical Disabilities and Health Impairments
12. EPS 3021: Classroom Management
13. EPS 4311: Identification, Assessment and Intervention in Special Education
14. HME 3021: Family Resource Management
15. ICT 2021: Computational Mathematics
16. ICT 9025: Mobile Applications and Technologies
17. ICT 9045: Management Information Systems
18. LIS 2021: Collection Development
19. LIS 3021: Management of Information Systems
20. RAM 3031: Management of Financial Records
21. RAM 4021: Management of Human Resource Records

**THE UNIVERSITY OF ZAMBIA**

**SCHOOL OF EDUCATION**

**DEPARTMENT OF COMMUNITY EDUCATION AND LIFELONG LEARNING**

**2021/2022 ACADEMIC YEAR**

**MID YEAR EXAMINATION**

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**COURSE : AED 4411 HUMAN RESOURCE DEVELOPMENT**

**DURATION : 3 HOURS**

**INSTRUCTIONS: ANSWER THREE (3) QUESTIONS ONLY**

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**QUESTIONS**

- 1) Compare and contrast Human Resource Development during the pre-colonial period and the 21<sup>st</sup> Century. Decipher the advantages and disadvantages of the two.
- 2) Imagine that you are a Human Resource Manager and you have been tasked to design a training programme. Describe how you would design a training programme using an example of your choice.
- 3) Discuss the qualities and competences of the Human Resource Manager that are essential for an organization to run efficiently and effectively.
- 4) We have four (4) stages of career development. Identify and discuss each one of them in detail. Explain the relevance of these stages.
- 5) Write brief notes on each of the following:
  - a) Career development
  - b) Organization development
  - c) Individual development
  - d) Task analysis
  - e) Organizational analysis
  - f) Individual analysis

**END OF EXAMINATION**

THE UNIVERSITY OF ZAMBIA  
SCHOOL OF EDUCATION  
DEPARTMENT OF COMMUNITY EDUCATION AND LIFELONG LEARNING

AED 4915: NONGOVERNMENTAL ORGANIZATIONS- MID YEAR  
EXAMINATIONS

TIME: 3 HOURS

INSTRUCTIONS

- a) There are seven (7) questions in this paper
  - b) Answer **Question 1** and **any** other 2
  - c) Your answers should be in an easy format
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Questions

1. Non-Governmental Organisations (NGOs) have become highly visible throughout the world and play a significant role in community, national and international development. (20 marks)
  - a. Identify and clearly explain any four (4) distinctive features of NGOs that separate them from any other form of organisation (5 marks)
  - b. Using clear and practical examples, elucidate the role of NGOs in the Zambian society. In your explanation, indicate the strengths and limitations of NGOs as they play their role in national development (15 marks)
2. When NGOs are classified based on their orientation, the aspects of *charitable*, *service*, *participatory* and *empowering* orientations become prominent. Using clear examples, pick and explain any three (3) of these orientations. (15 marks)
3. Critically analyse David Korten's first generation of NGOs. Your analysis should also include the advantages and disadvantages of these types on NGOs. (15 marks)
4. Discuss Fakih Mansour's **transformist** NGOs and show how superior they are to the reformist NGOs. (15 marks)
5. NGOs depend on both external and internal funding mechanism for survival. Explain these sources and clearly highlight their strengths and weaknesses. (15 marks)
6. Explain why David Korten's fourth generation of NGOs qualifies be a **people's movement** and indicate the merits and demerits of such NGOs. (15 marks)
7. As a student of NGO management, explain the steps involved in the process of establishing a legally recognised NGO in Zambia. (15 marks)

END

**THE UNIVERSITY OF ZAMBIA  
SCHOOL OF EDUCATION**

**2021/22 ACADEMIC YEAR FINAL EXAMINATIONS**

**DPE 2111: FUNDAMENTAL CONCEPTS OF MATHEMATICS**

**INFORMATION:**

- This paper contains **six (6)** questions.
- Each question carries **20** marks.
- Marks for parts of questions are shown in brackets [   ]

**INSTRUCTION:** Answer **five (5)** questions.

**TIME ALLOWED:**            **3 hours**      **MARKS POSSIBLE:**            **100**

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**Question 1**

- (a) A triangular prism has a base in the form of a right-angled triangle, with sides 6 cm, 8 cm and 10 cm. If the height of the prism is 5.5 cm, sketch the prism and calculate:
- (i) Its total surface area
  - (ii) Its volume [09]
- (b) The diagonals of a square ABCD are 24 mm each and bisect at O. Calculate the area of
- (i) Triangle OBC [03]
  - (ii) Square ABCD [03]
- (c) Calculate the height of a triangle whose base is 18 cm and whose area is equal to that of a square of side 15 cm. [05]

**Question 2**

- (a) Give **one (1)** example of each of the following represented as a table of values:
- (i) One-to-many relation. [03]
  - (ii) Many-to-one relation. [03]
  - (iii) One-to-one relation. [03]
- (b) Given that  $f(x) = x^2$  and  $g(x) = x - 1$ ,
- (i) calculate the inverse of  $g$ . [03]
  - (ii) Outline a reason why  $f(x) = x^2$  has no inverse function. [03]

(ii) Show that  $fg \neq gf$  where  $fg$  and  $gf$  are composite functions. [05]

### Question 3

(a) Which of the following properties hold for integer subtraction? If the property holds, give an example. If it does not hold, disprove it by a counter example.

i) Closure    ii) Commutative    iii) Associative    iv) Identity    [06]

(b) Given that  $I = \text{Integers}$ ,  $N = \{-1, -2, -3, -4, \dots\}$ ,  $P = \{1, 2, 3, \dots\}$ ,  $W = \text{whole numbers}$ . List the members of the following sets

i)  $N \cup W$

ii)  $N \cap I$

iii)  $N \cap P$  [05]

(c) A learner does not believe that  $-10 < -5$ . She argues that a debt of K10 is greater than a debt of K5. Explain to the learner to convince her that the inequality is TRUE.

[05]

(d) Find the integer that satisfies the equation(s) below

(i)  $x - (-5) = -8$  [02]

(ii)  $-5 - y = -2$  [02]

### Question 4

(a) Explain to a learner the difference between equivalent sets and equal sets [04]

(b) Write down two conditions for a finite set, hence or otherwise what is an infinite set. [05]

(c) How many different one-to-one correspondences are possible between  $A = \{1, 2, 3, 4\}$  and  $B = \{a, b, c, d\}$  [04]

(d) A poll of 100 registered voters designed to find out how voters kept up with current events revealed the following facts;

65 watched the news on television

39 read the newspapers

39 listened to the radio news

20 watched TV news and read the newspaper

27 watched TV news and listened to radio news

9 read the newspaper and listened to radio news

6 watched TV news, read the newspapers and listened to radio news.

-i) How many of the 100 people surveyed kept up with current events by some means other than the three sources listed above? [03]

ii) How many of the 100 surveyed read the paper but did not watch TV news? [02]

iii) How many of the 100 people surveyed used only one of the three sources listed to keep up with current events? [02]

### Question 5

(a) State **one (1)** advantage and **one (1)** disadvantage of using *an arithmetic mean* as a measure of central tendency. [04]

(b) UNZA students were requested to donate pencils to pupils at Chongwe secondary school. The results are shown in the following table:

Number of pencils donated ( $x$ )	1	2	3	4	5
Number of students who donated	10	5	11	1	3

Calculate,

- (i) An estimate of the *mean* number of pencils that were donated. [04]
- (ii) The *mode* of the distribution. [02]
- (iii) The *median*, justifying your reasoning. [04]

(c) A survey was conducted to determine the number of lecturers who used venues of the University of Zambia on a particular day in May 2022. The information was recorded in the following table:

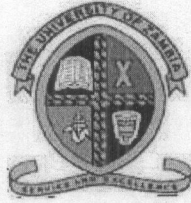
Venues	Number of lecturers
Mathematics Lab.	150
MSE resource room	25
Conference room	75

Represent the information in the table above using a pie-chart. [06]

### Question 6

- (a) The length of electrical wire in a roll is 2.24 km. The wire is cut into 40 pieces of equal length. What is the length of each piece in metres? [06]
- (b) Find  $5.25 \text{ m} - 215 \text{ cm} + 4 \text{ m } 30 \text{ cm}$  and the final answer should be in m [04]
- (c) The size of an interior angle of a regular polygon is  $160^\circ$ .
  - (i) What is the size of an exterior angle?
  - (ii) How many sides does the regular polygon have? [06]
- (d) A cylinder has base radius 5 cm and volume  $125 \text{ cm}^3$ . Find its height. [04]

**END OF EXAMINATION**



**THE UNIVERSITY OF ZAMBIA  
SCHOOL OF EDUCATION  
2021 ACADEMIC YEAR EXAMINATIONS**

**COURSE: DPE 3031 EXPRESSIVE ARTS EDUCATION**

**TIME: 09: 00 - 12:00 HRS**

**TIME: THREE (3) HOURS**

**TOTAL MARKS: 100**

**INSTRUCTIONS**

1. Read the instructions carefully before you start answering the questions. This paper has **TWO** sections A and B.
  2. Section A carries **40 marks**, section B carries **60 marks**
  3. All questions must be answered in the answer booklet provided
  4. Credit will be awarded to legible, good and orderly presentation of work.
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**DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO**

**SECTION A (40 Marks)**

**Answer all questions in this section**

1. What are sports skills?  
.....(2 marks)
2. List two fundamental movement skills.  
.....(2 marks)
3. How would you distinguish traditional games from conventional sports?  
.....(2 marks)
4. Explain what gross movements are in physical activity?  
.....(2 marks)
5. Provide 2 examples of fine movements.  
.....(2 marks)
6. List four different methods of teaching a new skills in PES.  
.....(4 marks)
7. Describe what a soundscape is  
..... (2 marks)
8. Name four instruments that you can use to teach children music.  
..... (4 marks)
9. Name the elements of music.  
..... (2 marks)
10. Describe four documents that are required in the teaching and learning of music.  
..... (2 marks)
11. Briefly explain why it is important for a prospective music teacher to study music theory.  
..... (2 marks)
12. State two advantages of having recorders in a school.  
..... (2 marks)
13. Texture is the way objectives surfaces feel when touched or seen, it can either be smooth or rough. Name the two main types of texture.  
..... (2 marks)

14. Mention any two types of balance.

.....  
..... (2 marks)

15. Define a shape as used in art and design.

.....  
..... (2 marks)

16. State what constitute three dimensional art and give an example.

.....  
..... (2 marks)

17. Mention two main types of form.

.....  
..... (2 marks)

18. Briefly explain the importance of value in drawing and painting.

.....  
..... (2 marks)

19. Give two examples on how Visual Arts communicates to you.

.....  
..... (2 marks)

## **SECTION B (60 marks)**

**This section has six (6) questions and you are to answer three (3) only. Choose one question from each contributory subject area. Each question is worth 20 marks.**

### **PHYSICAL EDUCATION AND SPORT (PES)**

1. As a teacher who has been posted to a school that does not offer PES, write a concept note to the head teacher justifying why you must have PES at the school.  
**(20 marks)**
2. Write a PES lesson plan for 10 year old children, teaching them a volleyball skill of your choice.  
**(20 marks)**

### **MUSIC**

1. By drawing on the classical methods of teaching music, discuss how you would teach the following music elements to grade four children
  - a) Solfa notation
  - b) Rhythmic diction
  - c) Improvisation**(20 marks)**
2. Most schools are under resourced in Zambia. Explain how you as music a teacher would teach music musically  
**(20 marks)**

### **ART**

1. Artists use the Elements and Principles of Design in concert to produce effective visual statements. Discuss the relevance of the Elements and Principles of Art/Design in the production of artworks.  
**(20 marks)**
2. Line is the oldest and most direct means of all forms of visual communication. Explain the functions of line in drawing and painting.  
**(20 marks)**

# THE UNIVERSITY OF ZAMBIA

## 2021/22 ACADEMIC YEAR FINAL EXAMINATIONS

### DPE 4111: GEOMETRY, STATISTICS AND PROBABILITY FOR PRIMARY SCHOOL TEACHING

#### INFORMATION:

- This paper contains **six (6)** questions.
- Each question carries 20 marks.
- Marks for parts of questions are shown in brackets [ ]

#### INSTRUCTION:

Answer any **five (5)** questions.

**TIME ALLOWED:**

**3 hours**

**MARKS POSSIBLE:**

**100**

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#### Question 1

- (a) State **four (4)** reasons why probability is important in everyday life. [02]
- (b) Generate probability statements from everyday life to illustrate the terms: likelihood, not likely, almost certain, certain, likely, probably, and impossible. [07]
- (c) A number is selected at random from set  $D = \{1, 2, 3, 4, 5, 6, 7, \dots, 20\}$ . Find the probability that:
- (a) a 1 is selected
  - (b) an even number is selected
  - (c) a prime number is selected
  - (d) an odd number is selected
  - (e) a number less than 1 is selected
  - (f) one number is selected [11]

#### Question 2

- (a) (i) Find the gradient of the line that passes through the points  $A(-8, -6)$  and  $B(0, 0)$ . [02]
- (ii) Show that the point  $C(12, 9)$  is collinear to the points  $A$  and  $B$  above. [03]
- (b) The point  $M$  is the midpoint of  $AB$ . Given that the coordinates of  $A$  are  $(-3, -1)$  and  $M$  is  $(-1, 3)$ . Find the coordinates of the point  $B$ . [03]
- (c) Given are the coordinates of the vertices of a triangle as  $A(-2, 5)$ ,  $B(0, -1)$ , and  $C(12, 3)$ . Determine if the triangle is a right triangle. [06]
- (d)(i) Write down the equation of a line that passes through the points  $A(4, 7)$  and  $B(10, 7)$ . [02]
- (ii) Hence or otherwise find the  $y$ -intercept and gradient of the line. [02]
- (iii) For the equation;  $2x - 3y = 6$ , find one point whose coordinates satisfy the equation. [02]

### Question 3

- (a) Explain what is meant by each of the following citing an example for each case:
- (i) A permutation. [04]
  - (ii) A combination. [04]
- (b) In a choir rehearsal room, three chairs labelled  $A, B$  and  $C$  are available to be occupied by the three choir leaders named Peter, Mary, and John. Calculate
- (i) the number of ways in which the three choir leaders could sit on the three chairs in a row. Present the possible sitting arrangements of the leaders. [05]
  - (ii) the number of arrangements in a row involving two chairs out of the three chairs  $A, B$  and  $C$  which could be made assuming that on a particular rehearsal day only choir leaders attend out of the three. [04]
  - (iii) Suppose that on a particular rehearsal day only two choir leaders attend out of the three. Showing your method, determine the number of arrangements in a row involving two chairs out of the three chairs  $A, B$  and  $C$  which could be made. [03]

### Question 4

- (a) Answer part (a) of this question on a sheet of graph paper provided. Using a scale of  $1\text{cm}$  to represent  $1\text{unit}$  on each axis, draw the  $x$  and  $y$  axes for  $-6 \leq x \leq 7$  and  $-7 \leq y \leq 7$ .
- (i) Given that triangle  $ABC$  with vertices  $A(-3,0), B(-5,0), C(-5,-2)$  is reflected across the line  $x = 0$  onto triangle  $A_1B_1C_1$ , draw and label triangles  $ABC$  and  $A_1B_1C_1$ . [04]
  - (ii) Rotate triangle  $A_1B_1C_1$  about the origin  $(0,0)$  using angle  $-90^\circ$ . Draw and label the image as  $A_2B_2C_2$ . [06]
  - (iii) Triangle  $A_2B_2C_2$  is mapped onto triangle  $A_3B_3C_3$  whose vertices are  $A_3(2,-5), B_3(2,-7)$  and  $C_3(0,-7)$ . Draw and label triangle  $A_3B_3C_3$ . [03]
  - (iv) Describe fully a single transformation that maps triangle  $A_2B_2C_2$  onto triangle  $A_3B_3C_3$ . [03]
- (b) An enlargement maps triangle  $XYZ$  with vertices  $X(2,2), Y(2,0)$  and  $Z(0,1)$  onto triangle  $X'Y'Z'$  with vertices  $X'(-4,-4), Y'(-4,0)$  and  $Z'(0,-2)$ . Calculate
- (i) the centre of enlargement. [01]
  - (ii) the scale factor. [01]
- (c) Triangle  $XYZ$  in part (b) above is mapped onto triangle  $X^2Y^2Z^2$  by a translation such that the image point of  $X$  is the point  $X^2(0,0)$ . Calculate the column vector representing this translation. [02]

### Question 5

- (a) State whether each of the following statements is TRUE or FALSE. Justify your reasoning
- i) All equilateral triangles are similar [02]
  - ii) All isosceles right triangles are congruent [02]
  - iii) Two isosceles triangles are similar if their non-base angles are congruent. [03]
  - iv) Triangles are similar if their corresponding sides are respectively parallel to each other. [03]
- b) A median of a triangle is a segment joining a vertex and the midpoint of the opposite side. Construct the **three** medians of the triangle with sides 9cm, 8cm and 7cm. What can you say about the medians? [06]
- c) Show that the diagonals of a rectangle are congruent. [04]

### Question 6

- (a) 100 learners sat for Mathematics and Geography tests. The distribution of marks is shown in the table below:

Marks	Mathematics	Geography
0-10	1	2
11-20	0	3
21-30	4	6
31-40	12	10
41-50	24	11
51-60	36	14
61-70	12	22
71-80	6	30
81-90	4	2
91-100	1	0

- (i) Construct cumulative frequency tables for each subject.
- (ii) Draw a cumulative frequency curve for each subject on the same axes.
- (iii) Estimate the median and quartile marks for both subjects.
- (iv) If 65% of pupils have to pass, what is the pass mark in each class?
- (v) How many pupils obtained 75% and above in each class.
- (vi) Between which two points is each curve steeper and why?
- (vii) Using your graph, show the position of a learner who scores 70% in:
  - Mathematics
  - Geography

[14]

- (b) The following set of scores were recorded by learners in mathematics: 30, 40, 50, 60, 70, 80, 90 and 100. Find:

- (i) The mean
- (ii) The variance
- (iii) The standard deviation

[06]

END OF EXAMINATION



THE UNIVERSITY OF ZAMBIA  
SCHOOL OF EDUCATION  
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND POLICY STUDIES

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2021/22 MID YEAR EXAMINATIONS  
EAP 9075: INTRODUCTION TO ECONOMICS OF EDUCATION  
DURATION: THREE (3) HOURS

**INSTRUCTIONS**

- a. *This examination paper has nine (09) questions.*
  - b. *Carefully read through all the questions before selecting the ones to attempt.*
  - c. *Answer any **THREE** (03) questions).*
  - d. *Legibly write your answers in the booklets provided.*
  - e. *Each question carries a maximum of seventeen (17)marks.*
- 

1. Discuss the role of education in the utilization of at least four economic resources in Zambia.
2. How can contraction of an impending IMF loan by the Zambia Government promote economic growth in the short term?
3. Zambia has been facing rising debt, inflation and poverty which have exacerbated the setbacks already experienced due to COVID-19. Suggest possible strategic education and economic responses to these challenges.
4. How is education a dynamic driver of socio-economic development as well as a potent tool for reducing poverty, improving health and gender equality in Zambia?
5. Compare and contrast formal and non formal education in terms of cost effectiveness for an individual seeking a skills-training course in today's economic situation in Zambia.
6. Discuss the advantages and disadvantages of the declaration of free education from primary to secondary school in Zambia?
7. Explain how at least five macroeconomic factors have affected the provision of education in Zambia in the last five-years.
8. Demonstrate in practical ways how wealth may be built to enhance socio-economic development in Zambia.
9. Is financing university education through the student loan scheme in Zambia justifiable and sustainable?

**END OF EXAMINATION**

# THE UNIVERSITY OF ZAMBIA

FINAL EXAMINATION

2021/2022 ACADEMIC YEAR

ECE 3015 ASSESSMENT AND IDENTIFICATION IN EARLY CHILDHOOD

TIME: 3 HOURS

TOTAL MARKS: 50%

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## INSTRUCTIONS

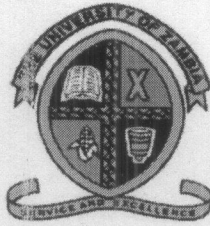
THERE ARE FIVE QUESTION IN THIS PAPER.

ANSWER **THREE QUESTIONS, QUESTION ONE** AND ANY OTHER TWO OF YOUR CHOICE.

THIS EXAMINATION ACCOUNTS FOR 50% OF YOUR COURSE WORK

1. Children who are less than 6 years are not easy to assess. They present a number of challenges that make it difficult to have a clear profile of their behaviour and development. Discuss the methods that are recommend for assessing young learners. (20 Marks)
2. Early Childhood Education provides a critical opportunity to alleviate the effects of atypical development or poor nurturing in children. Write a paper on the benefits of early intervention. (15 Marks)
3. Early childhood Education is a time when children are prepared for formal education. With specific illustrations, highlight the specific areas of evaluations conducted in children in the early childhood phase. (15 Marks)
4. Failure to adhere to the same procedures for assessment may result in our failure to offer appropriate support to young learners. What are the principles that guide assessment at early childhood? (15 Marks)
5. Assessment and Evaluation provide useful information for Early Childhood Development programmes. With appropriate illustrations, show the value of Assessment and Evaluation to different audiences. (15 Marks)

**END OF EXAMINATION**



THE UNIVERSITY OF ZAMBIA  
UNIVERSITY MID-YEAR EXAMINATION, JUNE 2022

EDU 2011: SOCIOLOGY OF EDUCATION

TIME: 3 HOURS

COMPUTER NUMBER: \_\_\_\_\_

**INSTRUCTIONS:**

1. This examination paper has two sections: **A** and **B**.
2. Answer **all** the questions in **all three** parts of **section A**. All answers for section A should appear in this question paper.
3. Answer any **one** question in section B. Your answers should appear in the answer booklet(s) provided.
4. Make sure that **your student ID number** is clearly indicated on this question paper and on the answer booklets.
5. Credit will be given for well-thought-out work.
6. This examination paper forms 50% of the total course assessment.

**SECTION A (35 %)**

**Part A: Circle the most appropriate answer**

1. The component of culture through which education preserves society's values, norms and concepts is known as the \_\_\_\_\_.
  - A. Socialised component
  - B. Instrumental component
  - C. Foundation component
  - D. Expressive component
  
2. Keeping students out of the full-time job market for several years is an example of \_\_\_\_\_.
  - A. Manifest dysfunction of education
  - B. Latent function of education
  - C. Manifest function of education
  - D. Latent dysfunction of education
  
3. Which of these perspectives do you think will answer the question, "What do we ourselves say sociology of education is?"
  - A. Classical perspective
  - B. Empirical perspective
  - C. Analytical perspective
  - D. Historical perspective
  
4. The teacher's organisational status is also known as \_\_\_\_\_.
  - A. Functional status
  - B. Community status
  - C. Scalar status
  - D. Linear status
  
5. According to the Teaching Profession Act of 2013, the practising certificate will be renewed every \_\_\_\_\_.
  - A. Year
  - B. 2 years
  - C. 3 years
  - D. 5 years
  
6. "In the school organisation, there is no overlapping of work." Which characteristic of an ideal bureaucracy does this statement describe?
  - A. Uniform rules and regulations
  - B. Hierarchy of authority
  - C. Division of labour
  - D. Impersonality
  
7. You have been asked to carry out a prestige rating study with the following arbitrary weightings; 1 for very high prestige, 2 for high prestige, 3 for average prestige, 4 for low prestige and 5 for very low prestige. What arbitrary weighting will represent an occupation with very high prestige?
  - A. 5
  - B. 4
  - C. 1
  - D. 3

8. The earliest socialising agent in a person's life is the \_\_\_\_\_.
- A. Peer group
  - B. Family
  - C. School
  - D. Culture
9. Which one of these statements is **not correct** regarding the duties of the Teaching Council of Zambia?
- A. Disciplining erring teachers
  - B. Deploying of teachers
  - C. Affiliating of Colleges of Education
  - D. Licensing of teachers
10. In the classroom, a teacher should mainly use the \_\_\_\_\_ style of leadership to produce problem solvers, independent and creative thinkers.
- A. Authoritarian
  - B. Laissez-faire
  - C. Expressive
  - D. Democratic
11. Sometimes a person may be required to discard former behavioural patterns and relearn new ones as part of a transition in one's life. We refer to this process as \_\_\_\_\_.
- A. Socialisation
  - B. Life-course
  - C. Sociability
  - D. Resocialisation
12. There are \_\_\_\_\_ schools of thought that explain the relationship between the school and the community.
- A. seven
  - B. four
  - C. three
  - D. five

**PART B: Circle the appropriate word to show whether these statements are True or False**

13. **True False** Micro theories explain the interaction patterns of people in specific units or groups.
14. **True False** Durkheim argued that education imparts status group values, while Max Weber argued that education imparts common values in the school children.
15. **True False** Several social roles are known as a role set.
16. **True False** The Conflict theory justifies the existence of inequalities in society.
17. **True False** When applied to education, the labelling theory suffers from the *black box of education* problems.
18. **True False** Peer groups have an enormous socialising influence during childhood.

19. **True False** Bureaucracies are more likely to excel in organisations that experience constant technological change than in those involving routine tasks that are well specified.
20. **True False** The Labelling theory is concerned with the curriculum.
21. **True False** The future of professions is bleak due to bureaucratisation.
22. **True False** Credentialism is a good example of a latent function of education.
23. **True False** In a caste system, stratification is based on ascribed status.

**PART C: Complete the blank spaces with the most appropriate word/s, phrase/s or sentence/s**

24. The founding father of Sociology of Education is \_\_\_\_\_.
25. According to Mead, the spontaneous and creative part of the self is known as the \_\_\_\_\_.
26. A social position of children in relation to that of their parents is known as \_\_\_\_\_ social mobility.
27. The \_\_\_\_\_ theory of deviance views deviant behaviour as the natural outgrowth of the values, norms, and structure of society.
28. The \_\_\_\_\_ makes us bring various parts of a uni- together and understand it as a whole.
29. The study of the social world using scientific methods is known as \_\_\_\_\_.
30. \_\_\_\_\_ implies that a profession is more concerned with the quality of the profession, advancement of knowledge and provision of services than with personal and monetary gains.
31. Mention **four** manifest functions of education.
- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_
32. Name **three** sources of second-hand information that teachers use to label their pupils.
- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
33. Outline **three** norms propagated by the school.
- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

34. List **four** major social institutions of society that influence education.

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_

35. State **any four** informal aspects of a social organisation.

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_

36. Outline **three** consequences of pupil indiscipline.

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

37. According to the conflict theory, people without power commit deviant acts for two reasons. What are these reasons?

- i. \_\_\_\_\_
- ii. \_\_\_\_\_

38. Mention **four** of Durkheim's themes of sociology of education.

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_

39. State **three** reasons why status is important for any occupation.

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

**SECTION B. (15 %)**

Answer **only one** question of your choice in the answer booklet provided.

40. Using the New Sociology of Education theory, discuss school factors that negatively influence learners' chances of excelling in their academic pursuits.

41. Analyse the major historical events that shaped the discipline of sociology.

42. With relevant examples, critically discuss what has led to the decline of teachers' status in Zambia.

43. The roles of a teacher in the school are regarded as diffuse rather than specific. Discuss the six sub-roles of a teacher in the school.

**END OF EXAMINATION**

**THE UNIVERSITY OF ZAMBIA**  
**SCHOOL OF EDUCATION**  
**2022 ACADEMIC YEAR**  
**FINAL EXAMINATIONS**  
**EDU 3011: LEARNING PROCESSES: PSYCHOLOGY PERSPECTIVE**

**DURATION: TWO HOURS**

Computer Number: \_\_\_\_\_

**INSTRUCTIONS:**

- 1. THIS PAPER CONSISTS OF THREE (3) SECTIONS A, B AND C. SECTION A HAS 20 MULTIPLE CHOICE QUESTION, SECTION B 10 SHORT ANSWER QUESTIONS, WHILE SECTION C HAS**
- 2. ANSWER ALL QUESTIONS IN SECTIONS A AND B. CHOOSE AND ANSWER ONE ESSAY QUESTION IN SECTION C.**
- 3. THIS EXAMINATION CONTRIBUTES 50% TO THE TOTAL COURSE WORK.**
- 4. WRITE ANSWERS FOR SECTIONS A AND B ON THE QUESTION PAPER.**

**SECTION A: WRITE YOUR ANSWERS IN THE GRID BELOW.**

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	

**SECTION A (20 MARKS): THERE ARE 20 MULTIPLE QUESTIONS IN THIS SECTION. ANSWER ALL QUESTIONS AND WRITE THE LETTER WITH YOUR CORRECT ANSWER IN THE ANSWER GRID ON THE FRONT PAGE.**

1. According to the law of effect, if a stimulus results in a negative outcome, the Stimulus-Response bond is \_\_\_\_\_
  - a. Strengthened
  - b. Weakened
  - c. Stabilized
  - d. unsterilized
2. Which is the correct sequence of stages in Piaget's theory of cognitive development?
  - a. sensorimotor, preoperational, concrete operational, formal operational
  - b. sensorimotor, preoperational, formal operational, concrete operational
  - c. preoperational, sensorimotor, concrete operational, formal operational
  - d. preoperational, sensorimotor, formal operational, concrete operational
3. The field of study concerned with the construction of thought processes, including remembering, problem solving, and decision-making is called \_\_\_\_\_
  - a. Education
  - b. Pedagogy
  - c. Cognitive Development
  - d. Epistemology
4. A child whose mother drank heavily when she was pregnant is at heightened risk of:
  - a. being emotionally excitable during childhood.
  - b. becoming insecurely attached.
  - c. being born with the physical and cognitive abnormalities of fetal alcohol syndrome.
  - d. addiction to a range of drugs throughout life.
5. To which of Kohlberg's levels would moral reasoning based on the existence of fundamental human rights pertain?
  - a. Pre-conventional morality
  - b. conventional morality
  - c. post-conventional morality
  - d. generative morality
6. In Erikson's theory, individuals generally focus on developing \_\_\_\_\_ during adolescence and then \_\_\_\_\_ during young adulthood.
  - a. identity; intimacy
  - b. intimacy; identity
  - c. basic trust; identity
  - d. identity; basic trust

7. \_\_\_\_\_ occurs when a pigeon that has been trained to peck at a picture of a circle also pecks at a picture of an oval.
- Stimulus discrimination
  - Shaping
  - Stimulus generalization
  - Instinctive drift
8. One of the three divisions in Freud's model of the psyche that serves as a mediator between the other two divisions is the \_\_\_\_\_
- Ego
  - Superego
  - Id
  - None of the three
9. As a child observes, liquid is transferred from a tall, thin tube into a short, wide jar. The child is asked if there is now less liquid in order to determine if she has mastered:
- the schema for liquids.
  - the concept of object permanence.
  - the concept of conservation.
  - the ability to reason abstractly.
10. Vygotsky's term for the process of constructing an internal representation of external physical actions or mental operations is \_\_\_\_\_.
- Community of learners
  - Internalisation
  - Scaffolding
  - Zone of proximal development
11. In classical conditioning, nature provides the \_\_\_\_\_ connection, and conditioning provides the \_\_\_\_\_ connection.
- UCS-CS; UCR-CR
  - UCS-UCR; CS-CR
  - UCR-CR; UCS-CS
  - CS-CR; UCS-UCR
12. The desire to experience success and to participate in activities in which success depends on personal effort and abilities is known as:
- Primary motivation
  - Stimulus generalization
  - Extrinsic motivation
  - Achievement motivation

13. For an effective teaching, the teacher must be a subject matter expert that includes (I) command over the subject, (II) the ability to convey knowledge (III) the ability to apply ideas from one discipline to another.
- a. I only      b. II only      c. I and II only      d. I, II and III
14. The \_\_\_\_\_ region of the mind contains material about which the person is not currently aware but which could readily enter awareness should the person decide to retrieve the material.
- a. conscious      b. preconscious      c. unconscious      d. libidinous
15. Which of the following component processes in observational learning is involved in the encoding and remembering of a model's behaviour?
- a. reproduction      b. motivation      c. retention      d. attention
16. \_\_\_\_\_ is said to occur when a pattern of behaviour is linked to an earlier unresolved conflict associated with a particular stage of development.
- a. oedipus complex      b. fixation      c. electra complex      d. phallic
17. Twins are often used to test the genetic bases of constructs such as intelligence. Which one of the following is true?
- a. Identical twins are likely to be good at very different things because they 'split' their different intelligences.
- b. Fraternal twins show lower concordance between their levels of intelligence than identical twins because they do not share any genes in common.
- c. Identical twins have very similar levels of measured intelligence because intelligence is highly heritable.
- d. Fraternal twins rarely have an IQ above 100 because they have had to share their genetic material.
18. Which of the following is true according to Vygotsky?
- a. Knowledge is individually constructed.
- b. Knowledge is constructed between people as they interact.
- c. Knowledge is gained through reinforcement.
- d. Knowledge is gained in a passive manner.
19. Calculating IQ can help us to understand a child's abilities relative to his or her peers. Which one of the following is true?
- a. A child scoring better than the average child of his age would have a lower MA than CA.

- b. A child scoring worse than the average child of his age would have a lower MA than CA.
- c. A child who has an IQ of 100 is exceptionally intelligent.
- d. A child who has an IQ of 100 is likely to know as much as an adult with an IQ of 100.

20. Urie Bronfenbrenner's ecological model of development emphasizes the many ways the environment affects family life. He describes that the interrelationships between parents and other people who care for children as:

- a. microsystem
- b. mesosystem
- c. exosystem
- d. macrosystem

**SECTION B: ANSWER ALL QUESTIONS IN THIS SECTION. WRITE A SHORT ANSWER FOR EACH QUESTION IN THE SPACES PROVIDED BELOW.**

21. With an appropriate example define an unconditioned stimulus

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22. Define and give an example of Crystallized intelligence

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23. Define and give an example of the Flynn effect

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24. Pre Conventional morality

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25. Adaptation and Equilibration

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26. Shaping

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27. Critical periods

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28. Outline the difference between concrete operational thinking and formal operational thinking.

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29. Bronfenbrenner's chronosystem

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30. Using an appropriate explain the Mesoderm

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**SECTION C: CHOOSE AND ANSWER ONE ESSAY QUESTIONS IN THIS SECTION. WRITE YOUR ANSWER IN THE ANSWER BOOKLET PROVIDED.**

31. Outline Lawrence Kohlberg's stage theory of moral development and describe some criticisms of the theory.

32. Describe the two main differences between psychosexual and the psychosocial theories of personality development. Describe Erikson's generativity versus stagnation stage. Use appropriate examples to explain ways in which generativity may be achieved in Zambia.

33. Use appropriate examples to define teratogens. State and describe four factors that determine whether a particular teratogen will be harmful.
34. With appropriate examples, describe the zone of proximal development. What is the significance of Vygotsky's zone of proximal development to the teaching-learning discourse? How does it relate to scaffolding?

- The End -

THE UNIVERSITY OF ZAMBIA

School of Education

2021/2022 Academic Midyear Examination

EED 9011: Advanced Environmental Management

**DURATION** : Three (3) Hours

**INSTRUCTIONS** : Answer a total of **three questions**. **Question one** is compulsory, then answer any other two. Credit will be given for answers showing detailed understanding of the topic instead of mere memorization of Lecture notes.

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1. i) List and explain three types of Environmental Technology as discussed in this course. (10 marks)
- ii) Identify an environmental problem in Zambia and **explain** how Environmental Technology can help solve such a problem. (10 marks)
2. i) What is the role of environmental law in enforcing environmental management? (5marks)
- ii) Describe how “prevention through command” and “Environmental Standards” can help enforce environmental legislation. (10 marks)
3. **Discuss** with examples, how Indigenous Knowledge System can complement modern environmental management. (15 marks)
4. Explain the importance of Environmental Monitoring to the following.
  - i) Agricultural Sector (5marks)
  - ii) Health Sector (5 marks)
  - iii) Zambia as a country (5 marks)

END OF EXAMINATION

**THE UNIVERSITY OF ZAMBIA**

**SCHOOL OF EDUCATION**

**DEPARTMENT OF EDUCATIONAL PSYCHOLOGY SOCIOLOGY & SPECIAL  
EDUCATION**

**2021/22 ACADEMIC YEAR SUPPLEMENTARY EXAMINATION**

**EPS 2035: PHYSICAL DISABILITIES AND HEALTH IMPAIRMENTS**

**TIME - THREE (3) HOURS**

**INSTRUCTIONS:**

Read the following instructions carefully

- i). This exam contributes 50% to the course grade.
- ii). There are three sections in this paper.
- iii). Answer all the questions in section A and B.
- iv). Answer only three (3) questions in Section C. (Answer question 1 which is compulsory and any other two in Section C).
- v). All answers must be written in the official booklets provided.

**SECTION A**

**[10 Marks]**

**Answer all the questions in this section**

- 1) Curvature of the spine is also known as?.. [1 Mark]
- 2) With examples, describe the following concepts: [6 Mark]
  - a. Orthopedic impairments
  - b. Muscular problems
  - c. Neurological impairment
- 3) What condition is described as a condition whereby a microscopic-size virus is introduced into the body only to weaken the body immunity. [1 Mark]
- 4) Blockage of cerebrospinal fluid outflow in the ventricles over the brain is called? [1 Mark]
- 5) Briefly describe Cerebral Palsy conditions: [1 Mark]

- 3) Acquired Immune Deficiency Syndrome
- 4) Early Training and Stimulation of a Child with physical and health impairment.
- 5) Poliomyelitis and its education implications.

**Section C**

**Section B**

There are five (5) questions in this section. Answer all the questions [10 Marks]

**Instruction**

Write short notes on the following aspects of Special Education. Your notes should not exceed a page on each item.

- 1) Cystic Fibrosis [2 Marks]
- 2) Orthopaedic impairments. [2 Marks]
- 3) Acquired Immune Deficiency Syndrome and its education implications. [2 Marks]
- 4) Early Training and Stimulation of a Child with physical and health impairment. [2 Marks]
- 5) Poliomyelitis and its education implications. [2 Marks]

**Section C**

There are five (5) questions in this section, question 1 is compulsory. Answer any other two questions in addition to the compulsory one [30 Marks]

- 1) Discuss the possible benefits and challenges associated with mobility aids used by persons with physical disabilities. [10 Marks]
- 2) Imagine you are on a TV panel on the Zambia National Broadcasting Corporations tasked to explain to the public how COVID-19 is related to Physical and Health Impairments. With specific examples, discuss features that demonstrate that COVID-19 belongs to the Physical and Health Impairments. What measure should be taken to mitigate the impact of COVID-19 at school level? [10 Marks]
- 3) Discuss how parents could be involved in the education of children with Physical disabilities in Zambia. [10 Marks]
- 4) Discuss the issues surrounding accessibility and mobility of children with Physical disability in Zambia. [10 Marks]
- 5) Discuss associated problems to Epilepsy. What measures would you recommend to mitigate the effects of Epilepsy in Zambian schools? [10 Marks]

END OF EXAMINATION



**THE UNIVERSITY OF ZAMBIA**  
**DEPARTMENT OF EDUCATIONAL PSYCHOLOGY, SOCIOLOGY AND SPECIAL**  
**EDUCATION**

**UNIVERSITY MID-YEAR EXAMINATION, JUNE 2022**

**EPS 3021: CLASSROOM MANAGEMENT**

**TIME: 3 HOURS**

**INSTRUCTIONS**

1. Check that you have the correct examination paper.
2. There are six (6) questions in this question paper. Question **one is compulsory**.
3. Answer **question one** and any **other two** questions of your choice.
4. All answers must be written in the answer booklet provided.
5. Credit will be given for well-thought-out answers.
6. Ensure that you write your computer number clearly on the answer booklet.
7. This examination paper forms 50% of the total course assessment.

Answer question one and any other two questions of your choice in the answer booklet provided.

1. In not more than 10 lines for each item, write brief notes on **all** of the items below. **Compulsory question (20 marks)**
  - (a) Democratic classroom management style.
  - (b) Mediatlional model.
  - (c) Assumptions of the expectancy theory.
  - (d) Four barriers to communication often found in the classroom.
  - (e) The potential danger of the non-interventionist behavioural management model if the misbehaviour is prolonged.
  
2. Classroom management is one of the major roles of a classroom teacher.
  - (a) Explain why a course in classroom management is essential for trainee teachers. **(5 marks)**
  - (b) Discuss **five** strategies that a teacher can use to keep students productively engaged on tasks. **(10marks)**
  
3. Cultural tendencies impact the way children participate in education.
  - (a) Explain the influence of culture on teaching and discipline styles. **(10 marks)**
  - (b) Outline **five** ways in which a teacher can foster a culturally inclusive classroom. **(5 marks)**
  
4. Robert Merton developed the Structural Strain Theory to explain deviant behaviour in society.
  - (a) Using relevant examples, analyse the **four** categories of deviant behaviour that result from structural strain. **(12 marks)**
  - (b) Differentiate between common-sense and theoretically based models of managing misbehaviour. **(3 marks)**
  
5. Effective teachers use rules and procedures in their day-to-day management of the classroom.
  - (a) Distinguish between rules and procedures **(5 marks)**
  - (b) With relevant examples, discuss **five** strategies that a teacher can use to create effective classroom rules and procedures. **(10 marks)**
  
6. According to John French and Bertram Raven (1959), teachers may knowingly or unknowingly draw upon five kinds of power in dealing with the misbehaviour of pupils. Using examples, discuss these **five** powers. **(15 marks)**

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**End of Examination**

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# THE UNIVERSITY OF ZAMBIA

FINAL EXAMINATION

2021/2022 ACADEMIC YEAR

EPS 4311 IDENTIFICATION, ASSESSMENT AND INTERVENTION IN SPECIAL EDUCATION

TIME: 3 HOURS

TOTAL MARKS: 50%

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## INSTRUCTIONS

THERE ARE FIVE QUESTION IN THIS PAPER.

ANSWER **THREE QUESTIONS, QUESTION ONE** AND ANY OTHER TWO OF YOUR CHOICE.

THIS EXAMINATION ACCOUNTS FOR 50% OF YOUR COURSE WORK

### QUESTION 1:

In a bid to ensure that all learners get the appropriate services in school, the Ministry of Education decided to collect data on the types, prevalence and distribution of disabilities in the country. Discuss, with appropriate illustrations, the different possibilities of results that would be obtained and the implications each of these outcomes would have on understanding disability in the country (20 Marks)

### QUESTION 2

Mutowe is making very slow progress in school. In a case review meeting, the school and the parent do not agree on how to help the child. As a Special teacher in the school, you have been asked to give a position on how to proceed with helping Mutowe. Write a paper highlighting the considerations necessary to support Mutowe's education. (15 Marks)

### QUESTION 3

The Universal Nonverbal Intelligence Test (UNIT) gives consistent results but shows a poor ability to pin point problems children face in class. What is the positive aspect of this instrument and what areas is it falling short of? (15 Marks)

### QUESTION 4

Following a wide range of information showing that most children in schools were performing poorly, the Ministry of Education decide to investigate whether or not the instruments used for identification were fit for the purpose. What guidance would you give to the Ministry about what to investigate in the instrument being used? (15 Marks)

### QUESTION 5

Discuss the different types of reliability and the cautions necessary to minimise their effects on understanding learning profiles? (15 Marks)

**END OF EXAMINATION**



**THE UNIVERSITY OF ZAMBIA**

**School of Education**

**DEPARTMENT OF PRIMARY EDUCATION**

**2021/2022 ACADEMIC YEAR FINAL EXAMINATION JUNE 2022**

**COURSE HME 3021 FAMILY RESOURCE MANAGEMENT**

**TIME: THREE (3) HOURS**

**MARKS: 100**

**INSTRUCTIONS**

1. Read the instructions carefully before you start answering the questions. This paper has TWO sections A and B.
2. Section A carries **40 marks**, Section B carries **60 marks**.
3. Write your answers in the booklet provided.
4. Credit will be awarded to legible, good and orderly presentation of work.

**DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO**

## **SECTION A (40 MARKS)**

Answer **All** the Questions in this Section.

1. Define the following terms in family resources management;
  - a) Family (2)
  - b) Resource (2)
  - c) Standard of living (2)
  - d) Dove tailing (2)
  - e) Space organisation (2)
2. Give **three** characteristics of both human and non-human resources. (3)
3. Briefly explain any **two** facilities offered by financial institutions. (4)
4. Suggest **four** ways you would maximise satisfaction in the use of resources. (4)
5. Explain **four** ways of classifying values. (4)
6. Explain any **six** ways you would conserve energy in the home. (6)
7. Briefly explain **four** roles government can play in controlling environmental degradation. (4)
8. Suggest **three** points to be remembered when planning the use of time in advance. (3)
9. Give any **two** ways for removing physiological fatigue. (2)

## **SECTION B (60 Marks)**

Answer **three** questions only. Each question carries **20 marks** each.

1. Discuss the systems theory and explain how it can help in family relationships. [**20 marks**]
2. Explain the steps to be followed in the decision making process. [**20 marks**]
3. Make a monthly household budget for a family of five with a total income of K20,000.00. [**20 marks**]
4. Discuss the advantages and disadvantages of using solar, hydro and wind as forms of energy. [**20 marks**]
5. Describe the three different types of fatigue. Suggest measures to prevent fatigue when using energy as a resource. [**20 marks**]

**END OF EXAMINATION**

**THE UNIVERSITY OF ZAMBIA**  
**MID-YEAR EXAMINATIONS: JUNE, 2022**  
**ICT 2021: COMPUTATIONAL MATHEMATICS**

**INSTRUCTIONS:**

- This examination paper consists of a total of four (4) questions and four (4) pages.
- Answer all questions from **Section A** and any two (2) questions from **Section B**.
- Marks will be awarded for correct working and the final answer
- You are allowed to use a calculator in this examination.

**MARKS: 80**

**TIME: THREE (3) HOURS**

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**SECTION A (COMPULSORY) 30 MARKS**

**Question 1 [30 marks]**

- a) Find the value of  $x$  in the equation:  $\log_2 x + \log_2 12 - \log_2 18 = 2$  [5]
- b) Using logical equivalence laws, show that  $[(p \rightarrow q) \wedge (q \rightarrow r)] \rightarrow [p \rightarrow r]$  is a tautology [12]
- c) Let  $S = [(p \wedge (\neg(\neg p) \wedge \neg q)) \vee (p \wedge q)] \rightarrow p$  and  $R = (p \vee r) \rightarrow \neg q$
- i. Give the inverse of S [2]
  - ii. Give the contrapositive of R [2]
  - iii. Give the converse of  $(S \rightarrow R)$  [3]
- d) Draw a logic circuit for the following Boolean function: [6]
- $$F(a, b, c, d, e) = a(\overline{b + \overline{cd}}) \oplus e + ac$$

**SECTION B (ANSWER ANY TWO QUESTIONS) 25 MARKS EACH**

**Question 2**

- a) Let  $U$  be the Universal set.  
If  $|U| = 102$ ,  $|A \cup B| = 62$ ,  $|B| = 48$  and  $|A \cap B| = 21$   
Find the number of elements in set  $A$  [4]
- b) Show the truth values of the expression  $(p \oplus q) \leftrightarrow (r \rightarrow \neg p)$  using a truth table [5]
-

c) Let  $A = \{1,2,3,4,5,6,7,8,9\}$ . Determine the truth value, true or false, for each of the following expressions:

i.  $(\forall x \in A)(\exists y \in A)(x + y < 14)$  [2]

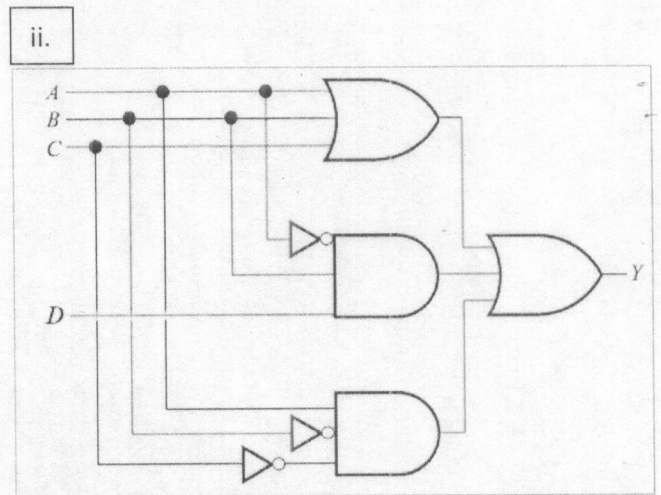
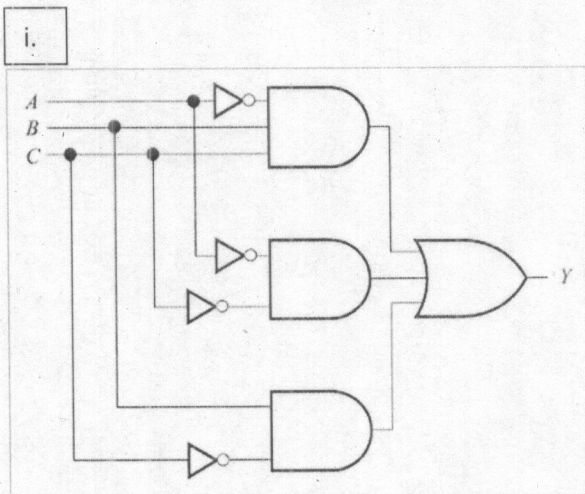
ii.  $(\forall x \in A)(\forall y \in A)(x + y < 15)$  [2]

d) If  $\log_2 x = v$  and  $\log_2 y = w$ , express each of the following in terms of  $v$  and  $w$ :

i.  $\log_4 xy$  [3]

ii.  $\log_x y^2$  [3]

e) Express the output of Y as a Boolean expression for each of the following logic circuits (3 marks each): [6]



### Question 3

a) Using suitable propositions and a truth table, determine if the following argument is true or false [6]

If 7 is less than 4, then 7 is not a prime number

7 is not less than 4

Therefore 7 is a prime number

b) Using a truth table, show that  $[(p \rightarrow q) \wedge (q \rightarrow r)] \rightarrow [p \rightarrow r]$  is a tautology [6]

c) Given that  $U = \{1,2,3,4,5,6,7,8\}$  and

Set  $A = \{1,2,4,5,7\}$  Set  $B = \{3,6,8\}$  and Set  $C = \{1,2,3,7,8\}$

- i. Give the cardinality of  $(A' \cup B) \cup (C' \cap A)$  [3]
- ii. List the elements of  $(A' \cup C) \cup (A \cap B)$  [3]
- iii. Give  $P(B)$ , the Power set of B [3]

d) Let  $P(x, y, z)$  be the predicate  $\frac{x+4}{y+2} > z$

Where the domain is *all positive odd integers greater than 4*

Indicate whether the following propositions are true, false or unknown

- i.  $P(17,5,7)$  [1]
- ii.  $P(13,3,5)$  [1]
- iii.  $P(17,5,5)$  [1]
- iv.  $P(19,9,5)$  [1]

#### Question 4

a) Let the domain =  $\{-3, -2, -1, 0, 1, 2, 3\}$

and the codomain is *all integers between -6 and 6 (inclusive)*

For the following function  $f$  state if the function is injective, surjective, bijective or none of the above

- i.  $f(x) = x^2 - x + 1$  [3]
- ii. if  $h(x) = 2x - 1$ , draw an arrow diagram of function  $h$  and state if function  $h$  is injective, surjective, bijective or none of the above [4]

b) Find the value of  $x$  in the following equations:

- i.  $32^{4x} = 4^{8x+6}$  [3]
- ii.  $\log_3 4x - \log_3(2x - 1) = 1$  [3]

c) Let  $p$  be the proposition "Jane is smart" and  $q$  be the proposition "Jane runs fast"

Write an English sentence equivalent for the following compound proposition:

$$(p \vee q) \wedge (p \rightarrow q) \quad [2]$$

d) Let  $A = \{2,3,5\}$ ,  $B = \{a, b, c\}$  and  $C = \{x, y, z\}$

Consider relation  $R_1$  from Set A to B whereby  $R_1 = \{(2, a), (2, b), (3, a), (5, b), (5, c)\}$

and relation  $R_2$  from Set B to C whereby  $R_2 = \{(a, x), (a, z), (b, x), (b, y), (c, y)\}$

List the elements of the composed relation  $R_1R_2$  [5]

e) Show that  $[\neg p \wedge (p \vee q)] \rightarrow q$  is a tautology, using a truth table [5]

**Table 1 - Logical Equivalence Laws**

Equivalence	Name
$p \wedge T \equiv p$ $p \vee F \equiv p$	Identity Laws
$p \vee T \equiv T$ $p \wedge F \equiv F$	Domination Laws
$p \wedge p \equiv p$ $p \vee p \equiv p$	Idempotent Laws
$\neg(\neg p) \equiv p$	Double Negation Law
$p \wedge q \equiv q \wedge p$ $p \vee q \equiv q \vee p$	Commutative Laws
$\neg(p \wedge q) \equiv \neg p \vee \neg q$ $\neg(p \vee q) \equiv \neg p \wedge \neg q$	De Morgan's Law
$(p \wedge q) \wedge r \equiv p \wedge (q \wedge r)$ $(p \vee q) \vee r \equiv p \vee (q \vee r)$	Associative Laws
$p \vee (q \wedge r) \equiv (p \vee q) \wedge (p \vee r)$ $p \wedge (q \vee r) \equiv (p \wedge q) \vee (p \wedge r)$	Distributive Laws
$p \vee (p \wedge q) \equiv p$ $p \wedge (p \vee q) \equiv p$	Absorption Laws
$p \vee \neg p \equiv T$ $p \wedge \neg p \equiv F$	Negation Laws
$p \rightarrow q \equiv \neg p \vee q$	
$p \rightarrow q \equiv \neg q \rightarrow \neg p$	

— END OF EXAMINATION —

**THE UNIVERSITY OF ZAMBIA**

**MID-YEAR EXAMINATIONS: JUNE, 2022**

**ICT 9025: MOBILE APPLICATIONS AND TECHNOLOGIES**

**INSTRUCTIONS:**

- This examination paper consists of a total of four (4) questions and two (2) pages.
- Answer all questions from **Section A** and any two (2) questions from **Section B**.

**MARKS:** 80

**TIME:** Three (3) hours

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**SECTION A (COMPULSORY) 30 MARKS**

**Question 1 [30 Marks]**

- a) Regarding the Wireless Application Protocol:
- i. Explain the function of the WAP Proxy [3]
  - ii. Using a diagram, illustrating how the WAP Proxy works [3]
- b) Explain the difference between FDD and TDD, include a diagram of FDD and TDD [4]
- c) Suppose a CDMA Base Station has the chip sequence 1101  
Give the code that would be transmitted to represent the data 101110. [3]
- d) Regarding access methods:
- i. Explain how TDMA works in a GPRS network [3]
  - ii. Using a diagram, illustrating how TDMA works in a GPRS network [3]
  - iii. Give one difference between OFDMA and SC-FDMA [2]
  - iv. Explain two differences between FDMA and CDMA [4]
- e) Explain the difference between ubiquitous computing and pervasive computing, additionally give an example of one device that uses ubiquitous computing [5]

**SECTION B (ANSWER ANY TWO QUESTIONS) 25 MARKS EACH**

**Question 2**

- a) Explain one advantage and two disadvantages of 5G cell towers [3]
- b) Explain what OFDMA is and give two networks that use OFDMA [4]
- c) Name the three types of 5G networks and give one difference between any two of them [2]
- d) Explain two differences between 4G and 5G networks [2]
- e) Give one similarity and three differences between WAP 1.0 and WAP 2.0 [4]
- f) Regarding WAP Layers, explain two functions of the WSP [4]
- g) Give one difference between GSM and iDEN [2]
- h) Regarding GPRS, explain the function of the PCU and the function of the BSC [4]
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### Question 3

- a) Regarding WLAN:
- i. Explain the difference between infrastructure mode and ad hoc mode [4]
  - ii. Give an example of a network that uses infrastructure mode and a network that uses ad hoc mode [2]
- b) Besides the ROM, explain any four components of a SIM card's smart chip [4]
- c) Regarding GSM, explain the function for each of the following:
- i. OMC [2]
  - ii. NMC [2]
  - iii. IMSI and TMSI [2]
- d) Besides GSM, GPRS and iDEN, name and describe two other 2G networks [2]
- e) Explain the difference between FHSS and DSSS, additionally give an example of a network that uses DSSS and a network that uses FHSS [4]
- f) GSM has three categories of service, name and explain the function for each category [3]

### Question 4

- a) Regarding GPRS, explain the function for each of the following:
- i. EIR [3]
  - ii. HLR [3]
  - iii. GGSN [3]
- b) Explain three differences between GSM and GPRS [3]
- c) Explain any three Android App components [3]
- d) Regarding the Android Runtime: explain the difference between JVM, DVM and ART [3]
- e) Name the group that manages WiMax and give two differences between WiMax and UMB [3]
- f) Explain two security issues of wireless communication [4]

— END OF EXAMINATION —

**UNIVERSITY OF ZAMBIA**

**MID YEAR EXAMINATIONS: JUNE 2022**

**ICT 9045: MANAGEMENT INFORMATION SYSTEMS**

**INSTRUCTIONS: ANSWER THREE (3) QUESTIONS**

**TIME: THREE (3) HOURS**

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**SECTION A (COMPULSORY QUESTION) 40 Marks**

1. Write short notes on all of the following. Note that short notes are more than just definitions but should not be more than half a page.
  - i. Computer based Information System
  - ii. Data vs. Information
  - iii. Information Technology vs. Information System
  - iv. Information Governance
  - v. Joint Application Design (JAD)
  - vi. Project Scope
  - vii. One reason why projects fail
  - viii. One way of minimizing project failure

1

**SECTION B: ANSWER TWO QUESTIONS (30 MARKS EACH)**

2. Compare and contrast Object Oriented Systems Analysis and Design and the Spiral method.
3. The Vincent Mulenga Chisunka University in Mporokoso has hired you to develop and implement a tailor made student's Information System because the one they are currently using has a lot of flaws. Evaluate all the changeover procedures, choose one and give reasons for your choice.
4. A system analyst worth his/her salt should possess certain characteristics and skills in order to perform his/her role as investigator, change agent, system designer, IT expert, trainer and motivator efficiently and effectively. With the help of relevant examples, critically analyse five personal characteristics and five technical characteristics they should possess.

**END OF EXAMINATION**

**THE UNIVERSITY OF ZAMBIA**

**MID-YEAR EXAMINATIONS: JUNE, 2022**

**LIS 2021: COLLECTION DEVELOPMENT**

**INSTRUCTIONS:** ANSWER THREE (3) QUESTIONS

**TIME:** THREE (3) HOURS

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**SECTION A: COMPULSORY (40 MARKS)**

1. A large cancer hospital has decided to introduce a library for cancer related health information that will be open to anyone in the community. The collection will consist of both print and e-resources. As a newly appointed Librarian for the above library, discuss any five (5) factors you would consider in the selection of e-resources for addition to the library collection.

**SECTION B: ANSWER ANY TWO (2) QUESTIONS (30 MARKS EACH)**

2. Assume that the Lusaka City Council is in the process of opening a new public library in your local community and you have been hired as a consultant to conduct a user needs analysis. Discuss any six (6) types of data you would possibly yield from the study.
3. You have been hired as a Media Specialist for a reputable private school. It has been five years since the school has hired a trained Librarian. The collection has, thus, suffered from neglect. Your initial examination finds that many of the materials need to be weeded. You have, therefore, been asked to write a position paper to the school Principal in order to justify the need for the weeding program. Discuss any five (5) points you would include in your paper.
4. "Collection Development Policies (CDPs) serve as blueprints for the operations of a library as a whole" (Vicki, 2011: 31). Using six (6) points analyse the importance of CDPs.

**END OF EXAMINATION**

**UNIVERSITY OF ZAMBIA**

**MID YEAR EXAMINATION: JUNE 2022**

**LIS 3021: MANAGEMENT OF INFORMATION SYSTEMS**

**INSTRUCTIONS:**

**ANSWER THREE QUESTIONS. ONE FROM SECTION A AND TWO FROM SECTION B.**

**TIME: THREE (3) HOURS**

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**SECTION A: (COMPULSORY QUESTION) 40 MARKS**

1. It is said that a good manager must be knowledgeable about a complete performance management process. Explain the importance of the three major components of the performance management process to both the line manager and his/her subordinate.

**SECTION B: (ANSWER ANY TWO QUESTIONS) 30 MARKS EACH**

2. Explain:
  - a). the six reasons why employees resist change.
  - b). the eight methods a manager may use to reduce resistance to change.
3. Discuss the need for a library to have both good leaders as well as managers for it to function effectively.
4. Describe the three major factors that a manager needs to take into consideration in motivating employees.
5. You have been called for an interview to head a library. One of the interviewers says that one of the critical responsibilities you have to do is planning for library activities. She then asks you to outline seven advantages that a library plan may enjoy that libraries who do not plan may not. What would be your answer?

**END OF EXAMINATION**



**THE UNIVERSITY OF ZAMBIA**

**MID-YEAR FINAL EXAMINATIONS: JUNE 2022**

**COURSE: RAM 3031: MANAGEMENT OF FINANCIAL RECORDS**

**DURATION: THREE (3) HOURS**

**INSTRUCTIONS: ANSWER THREE (3) QUESTIONS.**

**SECTION A: COMPULSORY (40 MARKS)**

1. a) Effective public financial management is anchored on a robust Legal Framework. Using the reasons advanced for the need to reinforce good public financial management, identify the role played by the Ministry of Finance in the generation of financial records.
- b) Identify the four (4) Units/Departments involved in the making of payments in government. In each of these Units/Departments, there are procedures in which records are generated to facilitate the payments. Using your understanding of this process kindly identify any five procedures and the records generated from such procedures.

**SECTION B: ANSWER ANY TWO QUESTIONS (30 MARKS EACH)**

2. Distinguish between a Financial Management System and an Integrated Financial Management System.
3. The significance of effective management of public finances cannot be overemphasised. Discuss the various stakeholders involved in the management of public finances.
4. Discuss the consequences of inadequate care of electronic financial records.

**END OF EXAMINATIONS**



**THE UNIVERSITY OF ZAMBIA**

**MID-YEAR FINAL EXAMINATIONS: JUNE 2022**

**COURSE: RAM 4021: MANAGEMENT OF HUMAN RESOURCE RECORDS**

**DURATION: THREE (3) HOURS**

**INSTRUCTIONS: ANSWER THREE (3) QUESTIONS.**

**SECTION A: COMPULSORY (40 MARKS)**

1. a) Organisations come in different types and operate using many functions which include the human resource management function. Identify the eight (8) main functions of Human Resource Management. For each of the eight (8) identified major functions, list at least three documents that are generated under each function.
- b) To what extent do you consider the significance of Human Resource Management (HRM) records in the management of organisations.

**SECTION B: ANSWER ANY TWO QUESTIONS (30 MARKS EACH)**

2. Compare and contrast centralised and decentralised systems of managing human resources management records.
3. Using examples, discuss the consequences of poorly managed human resource management records.
4. Discuss the stages and roles in which records managers participate during the introduction of computerised human resource information systems.

**END OF EXAMINATIONS**