



THE COPPERBELT UNIVERSITY
SCHOOL OF MATHEMATICS AND NATURAL SCIENCES

MAY, 2017 – SESSIONAL EXAMINATIONS
PE231 – EDUCATION MEDIA AND TECHNOLOGY

TIME ALLOWED: THREE HOURS

INSTRUCTIONS :

- **Maximum Marks Available – 100**
- **This paper has SIX(6) Questions**
- **Answer Any FIVE(5) Questions**
- **All Questions Carry Equal Marks (20 marks)**

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QUESTION ONE

- a) The control unit is part of the Central Processing Unit , List four functions of this component **[6 marks]**
- b) Define the following terms associated with the operating system **[6 marks]**
 - i) Virtual Memory
 - ii) Paging
 - iii) File management
 - iv) Multithreading
- c) State and describe the four primary tasks performed by most database management systems (DBMS) **[8 marks]**

QUESTION TWO

- a) Briefly discuss the three (3) categories of programming languages. **[6 marks]**
- b) Describe the steps that source code goes through before it can be executed by the computer. **[8 marks]**
- c) Describe three (3) abilities provided for by Microsoft PowerPoint presentations. **[6 marks]**

QUESTION THREE

- a) State and describe three types of errors in programming. **[6 marks]**
- b) Compare and Contrast between an algorithm and pseudocode in programming. **[6 marks]**
- c) Write an algorithm to determine the week's earnings for an employee from the hourly pay rate and hours worked for the week. Report the gross earnings (including overtime earnings) for the week. Given that Overtime hours = hours over 40 and Overtime pay rate = $1.5 * \text{regular pay rate}$. **[8 marks]**

QUESTION FOUR

- a) Compare and contrast between a variable and a constant in programming. **[4 marks]**
- b) Write a pascal program that calculates your age. **[6 marks]**
- c) Write a pascal program that calculates your final exam mark given the following distribution of marks: CA: 40 (test1: 15, Test 2: 15 and Assignment: 10) and Exam 60 (marked out of 100). **[10 marks]**

QUESTION FIVE

a) Write a pascal program which inputs student marks, and prints the grades as follows: below 40, D, between 40 and 50, D+, between 50 and 65, C, between 65 and 75, B and above 75, A. **[8 marks]**

b) Write a pascal program that calculates the total surface area of a cone. **[6 marks]**

Note: $A = \pi r^2 + \pi r l$

c) List six advantage of using Computer Aided Instruction when teaching. **[6 marks]**

QUESTION SIX

a) Describe four uses or advantages of using LCD projectors when teaching. **[6 marks]**

b) State six uses or advantages of using Charts when teaching. **[6 marks]**

c) List eight selection criterion for choosing a particular teaching media. **[8 marks]**

.....**ALL THE BEST**.....