# KENYA NATIONAL EXAMINATION COUNCIL
# REVISION MOCK EXAMS 2016
## TOP NATIONAL SCHOOLS

**PRECIOUS BLOOD HIGH SCHOOL**
**COMPUTER STUDIES**
**PAPER 1**

# PRECIOUS BLOOD KCSE TRIAL AND PRACTICE EXAM 2016

**451/1**
**COMPUTER STUDIES**
**Paper 1**
**(THEORY)**
**Time 2 ½ HOURS**

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## SECTION A (40 MKS)

### Answer ALL the questions in this section

1.  Define the following terms                                      (4mks)
    (i)   Multiplexing
    (ii)  Baseband signal
2.  Explain the difference between digital signal and analog signal in data communication
                                                                    (2mks)
3.  List down **Four** types of computer viruses                    (2mks)
4.  Define the following terms as used in disk management
    (i)   Partitioning                                              (1mk)
    (ii)  Defragmenting                                             (1mk)
5.  Explain the following terms as they are used in internet
    (i)   Sign in                                                   (1mk)
    (ii)  Surf                                                      (1mk)
    (iii) Downloading                                               (1mk)
6.  State **Three** ways in which your school librarian can use a computer   (3mks)
7.  Distinguish between simulation and virtual reality              (2mks)
8.  Convert $11011011111_2$ to Octal                               (3mks)
9.  (a)  One of the challenges that computer organizations face is unauthorized access to computer systems. Distinguish between logical access and physical access.
                                                                    (2mks)
    (b)  State **One** way in which each of the types of unauthorized access to computer systems can be controlled.                      (2mks)
10. Give **Two** possible ways of fitting the document in one page  (2mks)
11. Differentiate between real time processing and batch processing giving examples where each could be used                           (2mks)
12. Give **Two** advantages of an electronic spreadsheet over traditional analysis ledger sheet
                                                                    (2mks)
13. List **Four** E-mail services                                  (2mks)
14. State any **Three** advantages of simulation in training       (3mks)
15. Suggest **Two** possible causes of data and program loss in computer(2mks)
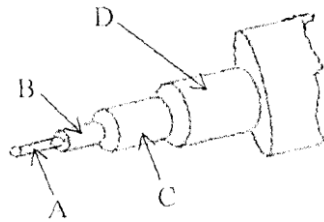
## SECTION B (60 MARKS)

### Answer question 16 and any other THREE questions in this section

16. (a)  Jane is a landlord and she rents houses for Ksh.2500 per month. A customer is awarded a 5% discount if he/she pays rent for over six months in advance. Currently, Jane has ten rental houses which are fully occupied. Develop a pseudo code that can capture the rent payment for all the ten tenants and calculates the total amount paidand the total discount awarded.                         (7mks)
    (b)  Draw a flowchart for the above algorithms              (5mks)

(c) Program documentation is writing of support materials explaining the program.
State **Three** types of program documentation (3mks)

17. (a) Define the term 'Data integrity' (2mks)
    (b) Give **Three** ways in which one would curb threat to data integrity (3mks)
    (c) Explain the following electronic data processing modes giving relevant examples
    Where they are used.
    (i) Real time processing (2mks)
    (ii) Distributed data processing (2mks)
    (d) Give **Three** components of a computer based information system (3mks)
    (e) Computer hardware is categorized according to the types of operations it
    performs. List **Three** operations. (3mks)

18. Study the diagram below and answer the questions that follow.



    (a) (i) Name the above cable as used in data communication media (1mk)
        (ii) Name the parts labeled A, B, C and D (4mks)
        (iii) Highlight any **Three** advantages of the above cable. (3mks)
    (b) (i) What is an Uninterruptible Power Supply (UPS) (2mks)
        (ii) Explain **Two** functions of UPS (2mks)
    (c) (i) Give **Two** advantages of sound output devices (2mks)
        (ii) Why are CD-ROM and CD-R referred to as WORM? (1mk)

19. Information and Communication Technology is relatively a new area of study which is
advancing. Due to this reason, everyone is expected to keep a breast with the changing
trend of information and Communication Technology (ICT)
    a) (i) Explain how ICT has affected employment (3mks)
       (ii) Explain **Two** health problems that have resulted from prolonged use of
       computers (4mks)
    (b) (i) What is artificial neural network? (2mks)
        (ii) Give **Two** features (artributes) of neural networks. (2mks)
    (c) Explain characteristics of a system
        (i) Holistic thinking (2mks)
        (ii) System entropy (2mks)

20. (a) (i) Distinguish between a system analyst and a programmer (2mks)
        (ii) List **Two** types of job opportunities that are available in the field of
        computer hardware. (2mks
    (b) Highlight any **Two** factors you would consider before enrolling for an ICT course
    in a college. (2mks)
    (c) Give **Two** disadvantages of observation when used in fact finding.
    (2mks)
    (d) Explain the following changeover strategies
        (i) Parallel changeover (2mks)
        (ii) Phased changeover (2mks)
    (e) Explain briefly each of the following in data security.
        (i) Firewalls (1mk)
        (ii) Data encryption (1mk)
        (iii) Sabotage (1mk)