



**DIPLOMA IN EDUCATION MANAGEMENT EXAMINATION**  
**PAPER 5: ICT INTEGRATION IN EDUCATION**

**TIME: 2 HOURS**

**DATE: 8<sup>th</sup> August, 2019**

**INSTRUCTIONS**

This paper consists of **TWO** sections

Answer **ALL** the questions in **SECTION A**

Answer any **THREE** questions from **SECTION B**

Answer all the questions in the answer booklet provided

**Use of mobile phones in the examination room is prohibited**

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

**ANSWER ALL QUESTIONS IN THIS SECTION**

1. Information Communication Technology (ICT) is considered to be the key to unlocking skills and knowledge in our learners. It has therefore become a valuable tool for automating education management

(a)

- (i) What is the meaning of the term 'computer data programs?'  
**(2marks)**

- (ii) State **four** ways in which the teachers could use the interactive walls as a teaching and learning resource **(4marks)**

- (b) Outline **four** benefits realized from the use of ICT in teaching and learning process **(4marks)**

2.

- (a) Distinguish between output devices and the central processing unit (CPU) **(2marks)**
- (b) Identify **four** ways in which teachers can access teaching and learning resources from the internet **(4marks)**
- (c) Outline **four** challenges encountered by teachers while using online resources **(4marks)**

3.

- (a) Explain **three** ways in which the Ministry of Education has benefited from the adoption of 4-in-Balance ICT model **(6marks)**
- (b) Identify **four** characteristics of effective multimedia in the learning process **(4marks)**

4.

- (a) Explain **four** ways of ensuring optimal use of ICT equipment **(8marks)**
- (b) Give **two** advantages of using local area network for preparing assessment materials **(2marks)**

**SECTION B - 60 MARKS**

**ANSWER ANY THREE QUESTIONS IN THIS SECTION**

5. The Digital Literacy Program (DLP) is a major investment involving supply of power to schools capacity building of teachers and supply of digital devices. However, there are many unforeseen challenges that may hinder effective implementation of DLP

- (a) Outline **four** outcomes realized from the digital literacy program **(4marks)**
- (b) Explain **four** challenges that hinder effective implementation of DLP **(8marks)**
- (c) Describe **four** features of Learning Management System (LMS) that teachers can use to enhance teacher-learner interaction **(8marks)**



6. Use of electronic data management has revolutionized how data is managed in the Education Sector.

(a) State **three** ways in which each of the following electronic data management systems have improved service delivery

(i) Integrated Payroll and Personnel Database (IPPD) **(3marks)**

(ii) Education Management Information System (EMIS) **(3marks)**

(b) Explain **four** ways in which the adoption of the National Education Management Information System (NEMIS) will benefit the management of data in the Education Sector **(8marks)**

(c) Describe **three** measures that should be taken to ensure safety of electronic data **(6marks)**

7.

(a) Describe the **three** major elements of Technological Pedagogical Content Knowledge (TPACK) model **(6marks)**

(b)

(i) Describe **three** ways in which a teacher can utilize the TPACK model to integrate ICT in the teaching and learning process **(6marks)**

(ii) Outline **four** factors that teachers should consider while planning for an ICT integrated lesson **(4 marks)**

(c) Describe the following considerations made to integrate ICT into the curriculum

(i) Basic Computing Skills **(2marks)**

(ii) ICT assisted Instructions **(2marks)**

8. There is overwhelming evidence that learners can benefit from use of ICT in learning. However, parents and other stakeholders have raised concern over the effects of its use.

(a) Explain **four** effects of use of ICT by learners that has caused parents and stakeholders to get concerned **(8marks)**

- (b) Explain **four** measures that parents and teachers can take to ensure proper use of ICT by the learners **(8marks)**
- (c) Explain **two** ways in which e-waste is a threat to the environment **(4marks)**





**DIPLOMA IN EDUCATION MANAGEMENT EXAMINATION**  
**PAPER 5: ICT INTEGRATION IN EDUCATION**

**2 HOURS**

**DATE: 21<sup>st</sup> July, 2021**

**INSTRUCTIONS**

The paper consists of **TWO** sections  
**ALL** the questions in **SECTION A**  
Answer any **THREE** questions from **SECTION B**  
Write all the questions in the answer booklet provided

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<p><b>SECTION A (COMPULSORY)- 40 MARKS</b> <b>ANSWER ALL QUESTIONS IN THIS SECTION</b></p>
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- 1) Highlight five (5) benefits of ICT Integration in Education (5 marks)**
- 2) Identify computing devices that can be used for ICT Integration in teaching and learning (5 marks)**
- 3) Identify five (5) advantages of using presentation applications such as power point for lesson presentation (5 marks)**
- 4) Highlight five (5) ways in which a teacher can use spreadsheets such as MS Excel in teaching and learning process (5 marks)**

Discuss ways in which an Education Manager can use the internet in their education Institutions in enhancing efficiency **(10 marks)**

- (a) Outline **five (5)** ways of ensuring proper use and maintenance of computing devices **(5 marks)**
- (b) Identify the challenges faced by schools in the use of ICT in Education **(5 marks)**

### SECTION B - 60 MARKS

**ANSWER ANY THREE (3) QUESTIONS IN THIS SECTION**

To effectively integrate Information and Communication Technology (ICT) in schools, the Ministry of Education adopted 4-in-balance model for ICT Integration in teaching and learning.

- (a) Explain what you understand by 4-in-Balance Model in ICT Integration **(4 marks)**
- (b) Discuss what each of the pillars in the 4-in-Balance model entails **(8marks)**
- (c) Assess the extent to which each of the 4 pillars of the model was addressed in the Digital Literacy Program (DLP) **(8marks)**

Social media has gained credibility over the years as a source of information and the platform which are quickly being adapted by Education Institutions.

- (a) Outline ways in which teachers and learners can benefit from social media **(5 marks)**
- (b) Highlight risks associated with use of social media by learners **(5marks)**
- (c) Explain **five (5)** measures that parents and teachers can take to ensure online safety for learners **(10 marks)**

Automation of services lead to increased efficiency, effectiveness, transparency and accountability. The Government through ICT Authority



ICTA) has been spearheading automation of services offered by the Government.

a)

- (i) Identify five (5) Government services that have been automated **(5 marks)**
- (ii) Outline five (5) benefits accruing from automation of education management functions **(5 marks)**

b) Explain five (5) factors that a school should consider before procuring ICT equipment and applications **(10 marks)**

Computers like any other piece of electronic equipment need special care and attention in order to perform properly and safely.

a) Discuss any five (5) threats to computers in an Institution of learning **(10 marks)**

b) Explain five (5) precautionary measures that should be observed to provide a safe and conducive environment for computers in a school **(10 marks)**

COVID-19 Pandemic posed serious problems to provision of education in the Country and the world at large. Teachers were called upon to be creative and innovative to ensure continued learning during school closure.

a) Discuss five (5) ways in which teachers utilized ICT for continued learning during the breakout of COVID-19 Pandemic **(10 marks)**

b) Explain the challenges that arose from online learning conducted during the school closure **(10 marks)**.





KENYA EDUCATION  
MANAGEMENT INSTITUTE

## DIPLOMA IN EDUCATION LEADERSHIP AND MANAGEMENT EXAMINATION

### PAPER 5: LEADERSHIP IN ICT INTEGRATION IN EDUCATION

TIME: 2 HOURS

DATE: 21<sup>st</sup> September, 2022

#### INSTRUCTIONS

This paper consists of **TWO** sections

Answer **ALL** the questions in **SECTION A**

Answer any **THREE** questions from **SECTION B**

Answer all the questions in the answer booklet provided

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#### SECTION A (COMPULSORY) - 40 MARKS

#### ANSWER ALL QUESTIONS IN THIS SECTION

1.

- What do you understand by ICT Integration in education (2 marks)
- Give **four (4)** reasons why teachers should use ICT for teaching and learning (4 marks)
- Outline **four (4)** challenges encountered by teachers while using online resources (4 marks)



2. Information and Communication Technology (ICT) has revolutionized the concept of libraries. Librarians are slowly becoming digitized.
- (a) Describe any two (2) requirements for the establishment of a digital library (4 marks)
  - (b) Describe three (3) benefits of a digital library (6 marks)
3. ICT Integration in teaching and learning largely depends on our teachers' ability to use available tools and technologies.
- (a) Outline five (5) factors that teachers should consider while selecting ICT tools for teaching and learning (5 marks)
  - (b) State five (5) ways in which internet can be used for educational purposes. (5 marks)
4. An online community is a group of people who interact with each other primarily via the internet.
- (a) State two (2) benefits of using online communities in the Education Sector (2 marks)
  - (b) Explain how the following online communities can be used constructively in the Education Sector.
    - (i) Twitter (2 marks)
    - (ii) LinkedIn (2 marks)
  - (c) State four (4) ways in which Teachers Design Teams (TDTs) can help teachers to use ICT more effectively (4 marks)



**SECTION B - 60 MARKS**

**ANSWER ANY THREE (3) QUESTIONS IN THIS SECTION**

5. Many schools have inadequate ICT infrastructure and this limits use of ICT in teaching and learning.
- (a) Discuss five (5) ways in which teachers can use smart phones for learning purposes (10 marks)
  - (b) Explain five (5) factors that may hinder effective ICT Integration in schools (10 marks)
6. A 10-year old pupil is busy doing his homework online and curiously decides to check out a naughty site his friends had told him about. It turns out to be pretty graphic and distressing. He decides to tell his teacher about the site.
- (a) Discuss five (5) risks that learners face while accessing internet (10 marks)
  - (b) Explain five (5) measures that the school management can put in place to ensure online safety of learners (10 marks)
7. While acquisition of ICT infrastructure is a capital intensive venture, the use of ICT in education has become a top priority in the recent past in most Institutions of learning.
- (a) Explain three (3) elements of Technological Pedagogical and Content Knowledge (TPACK) Model (6 marks)
  - (b) Describe three (3) ways in which a teacher can utilize TPACK model to integrate ICT in teaching and learning process (6 marks)
  - (c) Discuss four (4) factors that teachers should consider while planning for an ICT Integrated lesson (8 marks)



8.

SECTION B - 60 MARKS

- (a) Discuss five (5) ways in which automation can help improve education management (10 marks)
- (b) Explain five (5) services offered on the National Education Management Systems (NEMIS) (10 marks)

9. Reliability of online educational data is the foundation of online systems security that is free of malicious attacks and safe operation of ICT equipment.

- (a) Describe five (5) security threats that are likely to affect online education systems (10 marks)
- (b) Explain five (5) measures that could be taken to safeguard an online educational operation system (10 marks)





**DIPLOMA IN EDUCATION LEADERSHIP AND MANAGEMENT  
EXAMINATION**

**PAPER 5: LEADERSHIP IN ICT INTEGRATION IN EDUCATION**

**TIME: 2 HOURS**

**DATE: 18<sup>TH</sup> JANUARY 2023**

**INSTRUCTIONS**

This paper consists of **TWO** Sections

Answer **ALL** questions in **SECTION A**

Answer any **THREE** questions from **SECTION B**

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

**ANSWER ALL QUESTIONS IN THIS SECTION**

Effective ICT Integration in teaching and learning requires good planning.

(a) Identify **five (5)** factors that a teacher should consider while planning for an ICT Integrated lesson. **(5 marks)**

(b) State **five (5)** ICT tools that a teacher can use in an ICT Integrated lesson. **(5 marks)**

(c) Explain **five (5)** measures you would use to address the constraints in ICT. **(5 marks)**



2.

- (a) Explain five (5) uses of spread sheets in teaching and learning (5marks)
- (b) Explain five (5) advantages of word processors in teaching and learning (5 marks)

3.

- (a) Explain five (5) ways in which teachers can use social media for educational purposes (5 marks)
- (b) State five (5) ways that teachers can promote responsible use of social media by learners. (5 marks)

4.

- (a) State two (2) factors you should consider in procuring a laptop (5marks)
- (b) Highlight five (5) ways you should use to ensure that your learners make optional use of their digital devices in teaching and learning (5 marks)

**SECTION B - 60 MARKS**

**ANSWER ANY THREE (3) QUESTIONS IN THIS SECTION**

5. The Competency Based Curriculum emphasizes on digital literacy as a core competency to be acquired by learners.

- (a) Explain five (5) reasons why digital literacy is important (10 marks)
- (b) Explain five (5) constraints that teachers encounter in the process of imparting digital literacy (5 marks)
- (c) Explain five (5) measures you would use to address the constraints in 5b (5 marks)

6. With the advent of COVID-19, online learning has taken a new dimension in many Countries.
- (a) Using an example in each case, explain the differences between synchronous and asynchronous **(4 marks)**
  - (b) Explain three (3) requirements for online learning **(6 marks)**
  - (c) Discuss five (5) advantages of a Learning Management System (LMS) in online learning **(10 marks)**
7. The Kenya Data Protection Act, 2019 stipulates actions that Individuals and Institutions should take to ensure the safety of data in their possession.
- (a) Explain five (5) threats to computer data **(10 marks)**
  - (b) Discuss five (5) measures that an Education Institution can take to ensure the safety of data **(10 marks)**
- 8.
- (a) Explain the main components of “four-in-Balance Model” **(8 marks)**
  - (b) Assess the extent of the “four-in-Balance Model” were catered for in the Digital Literacy Program **(12 marks)**
9. Education Institutions stand to gain from ICT Integration in administration and in teaching and learning.
- (a) Discuss five (5) ways in which Education Institutions can benefit from automation of administrative processes **(10 marks)**
  - (b) Explain five (5) roles of the Head of Institution in effective ICT Integration in learning Institutions **(10 marks)**