



END OF SEMESTER ONE EXAMINATIONS

ACADEMIC YEAR 2025/2026

DEPARTMENT: ICT

YEAR OF STUDY: ONE

PROGRAMME: DIPLOMA IN E-GOVERNANCE & DIGITAL TRANSFORMATION (DEDT)

COURSE: GOVERNING IN THE DIGITAL AGE

COURSE CODE: EDT1101

DATE: WEDNESDAY 10TH DECEMBER, 2025

TIME: 09:00 AM – 12:00 NOON

DURATION: 3 Hours

INSTRUCTIONS:

- (a) This paper consists of two sections A and B**
- (b) Section A carry 40 marks and is compulsory**
- (c) Attempt any THREE questions from section B**
- (d) Any number in section B carry equal marks**
- (e) Credit will be given for use of relevant examples and illustrations**
- (f) Begin each number on a new page of the answer sheet**

SECTION A [40 MARKS]

Attempt **ALL** the Questions in this section.

This section consists of 40 multiple choice questions each for 1 mark.

Make a table of two columns having numbers 1 to 20 and 21 to 40 in the answer booklet.

Write a letter corresponding to the best answer to each of the questions.

1. **Which best defines the “Digital Age”?**
 - A. Period when most business is done by telephone
 - B. Era marked by widespread use of digital technologies to create, store and share information
 - C. Time when analog TV was dominant
 - D. Era when paper records were the primary information store
2. **eGovernment primarily refers to:**
 - A. Government outsourcing to private firms
 - B. Government use of digital tools to deliver public services to citizens
 - C. Government-only internal IT projects
 - D. Political campaigns conducted online
3. **eGovernance differs from eGovernment because it emphasizes:**
 - A. Only mobile apps
 - B. Policy, participation, and decision-making processes enabled by ICTs
 - C. Hardware procurement for ministries
 - D. Offline citizen services
4. **Which is *not* an element of the Digital Age?**
 - A. Connectivity and networks
 - B. Data analytics
 - C. Handwritten record-keeping as primary channel
 - D. Mobile computing
5. **A common eGovernance business model is G2C. What does G2C stand for?**
 - A. Government-to-Citizen
 - B. Global-to-Cloud
 - C. Governance-to-Company
 - D. Government-to-Corporation
6. **Optimizing the Digital Age in government usually requires:**
 - A. Ignoring legacy systems
 - B. Holistic change: process redesign, training, and infrastructure investment
 - C. Hiring only external consultants and no internal staff development
 - D. Reducing transparency for security
7. **Mobile Governance (m-Governance) includes all EXCEPT:**
 - A. SMS alerts
 - B. USSD services
 - C. Mainframe punch-card processing
 - D. Mobile apps for service delivery

8. **Digitization is best described as:**
- A. Using AI to make decisions
 - B. Converting analog information into digital format
 - C. Rewiring organizational structure for digital workflows
 - D. Replacing employees with robots
9. **Digitalization (not digitization) refers to:**
- A. Scanning documents only
 - B. Using digital data and technologies to improve processes and create new business models
 - C. Destroying paper records
 - D. Buying more servers
10. **Which statement describes digital transformation?**
- A. Buying the latest devices for staff
 - B. Strategic, organization-wide rethinking of processes, culture and services enabled by digital tech
 - C. Installing a new email system only
 - D. Increasing paper filing speed
11. **A key difference between digital transformation and technology adoption is that:**
- A. Adoption always fails
 - B. Transformation implies business model and cultural change, adoption may be limited to tools
 - C. Adoption requires national laws
 - D. Transformation never uses cloud services
12. **Which is an element of digital transformation?**
- A. Process re-engineering
 - B. Ignoring data governance
 - C. Eliminating user training
 - D. Maintaining siloed legacy databases intentionally
13. **The evolution of digital transformation typically started with:**
- A. Distributed ledgers as first step
 - B. Digitization of records, then digitalization of processes, then transformation of business models
 - C. Mobile apps before any computers
 - D. Immediate cultural change without tech adoption
14. **A Critical Success Factor (CSF) for digital transformation is:**
- A. Lack of leadership involvement
 - B. Strong executive sponsorship and clear governance
 - C. Never measuring outcomes
 - D. Relying solely on vendor promises
15. **When planning digital transformation in government, the first step should be:**
- A. Full national rollout immediately
 - B. Conducting readiness assessment and defining strategy/roadmap
 - C. Firing IT staff
 - D. Purchasing the most expensive software available

16. **Which sector example from Uganda is often cited for digital transformation case studies?**
- A. Space tourism
 - B. Primary growth sectors such as health and agriculture
 - C. Polar fishing industry
 - D. Ancient artifact restoration
17. **Personal data protection primarily aims to:**
- A. Make all personal data public
 - B. Protect individuals' privacy and control over their personal information
 - C. Eliminate data collection entirely
 - D. Mandate use of only paper records
18. **Treating data and information as an organizational asset means:**
- A. Storing everything indefinitely without governance
 - B. Recognizing its value, managing lifecycle, ensuring quality, and securing it
 - C. Only saving data in printed form
 - D. Selling data without controls
19. **Which is an example of an information security threat?**
- A. Regularly patched software
 - B. Phishing attacks targeting employees
 - C. Proper data classification
 - D. Strong multi-factor authentication
20. **A vulnerability is best described as:**
- A. A successful cyberattack only
 - B. A weakness in a system that can be exploited by a threat actor
 - C. An organization's budget surplus
 - D. Immutable hardware
21. **Which dimension is NOT part of information systems security?**
- A. Confidentiality
 - B. Integrity
 - C. Availability
 - D. Profitability.
22. **A practical solution to mitigate security threats is:**
- A. Ignoring updates to avoid downtime
 - B. Implementing regular patching, access controls and encryption
 - C. Sharing passwords among staff
 - D. Disabling logging to save storage
23. **The IT function in an organization is best defined as:**
- A. Only the helpdesk support team
 - B. The department responsible for planning, implementing, operating, and governing information and communications technology services
 - C. A legal department subunit
 - D. External vendors only

24. In the digital age, the role of IT shifts from cost-centre to:

- A. Irrelevant department
- B. Strategic enabler of business and service innovation
- C. Only hardware purchasing
- D. Solely back-office bookkeeping

25. Which capability is important for IT operations in the digital age?

- A. Manual, paper-based ticketing only
- B. Rapid deployment (DevOps/CI/CD), reliable infrastructure, and service management
- C. Deliberately long change cycles to avoid updates
- D. Single-vendor lock-in without SLAs

26. Digital innovation is defined as:

- A. Copying existing paper forms into PDFs only
- B. Creating new or improved products, services or processes enabled by digital technologies
- C. Disallowing experimentation
- D. Only hiring developers

27. Which is an element of digital innovation?

- A. User-centred design
- B. Closed, secretive development with no testing
- C. Refusal to collect feedback
- D. Ignoring scalability

28. A key stage in the technology innovation cycle is:

- A. Idea generation, prototyping, piloting, scaling and commercialization
- B. Only procurement
- C. Permanent pilot without scaling
- D. Decommissioning before testing

29. Accountability for digital innovation usually resides with:

- A. No one — innovations happen randomly
- B. Named sponsors or product owners supported by governance structures
- C. Only interns
- D. Solely external consultants with no internal oversight.

30. Stakeholders in digital innovation typically include:

- A. Only the IT team
- B. Users, business owners, IT, regulators, and external partners
- C. Only the CEO's family
- D. No stakeholders at all

31. Balancing digital innovation and consistent IT service requires:

- A. Running innovation in isolation from operations forever
- B. Governance that supports experimentation while maintaining SLAs and stability
- C. Stopping all operations for innovation projects
- D. Prohibiting pilots

32. When conducting a case study on digital transformation in an organization, the AS-IS analysis refers to:

- A. The desired future state only
- B. The current state of processes, systems, people and technology
- C. A random guess about competitors
- D. Only financial projections without context

33. The As-Ought-To-Be matrix is used to:

- A. Compare current state (AS-IS) with desired future state and identify gaps
- B. Replace the need for stakeholder engagement
- C. Freeze budgets permanently
- D. Determine salary increases only

34. A practical next step after AS-IS and As-Ought-To-Be analysis is to:

- A. Abandon the project due to complexity
- B. Draft a transition plan detailing steps, timelines, resources and KPIs
- C. Immediately delete legacy data
- D. Outsource all decision making and never review progress
- B. Limited digital literacy and inconsistent infrastructure in some regions
- C. Too many qualified digital specialists in rural areas
- D. No need for stakeholder buy-in

35. Data governance in the digital age includes:

- A. Policies for data quality, access, lineage and protection
- B. Storing data without metadata forever
- C. Allowing unrestricted data access to everyone
- D. Destroying all data monthly

36. An example of a solution to an information systems vulnerability is:

- A. Leaving default passwords unchanged
- B. Implementing multi-factor authentication and regular vulnerability scanning
- C. Disabling backups to save costs
- D. Publishing system architecture publicly with no controls.

37. IT as an enabler of transformation means IT should:

- A. Only react to requests with no strategic input
- B. Collaborate with business units to design digital services and innovate processes
- C. Always block business initiatives to preserve legacy systems
- D. Ignore service level metrics

A good KPI for measuring digital transformation progress is:

- A. Number of meetings held about transformation (only)
- B. User adoption rate of a new digital service, reduction in processing time, or customer satisfaction score
- C. Number of legacy servers still running indefinitely
- D. Amount of paper used per month (increase)

38. When designing mobile services for citizens (m-Governance), inclusivity can be improved by:

- A. Only building smartphone-exclusive apps in English
- B. Providing multi-channel access (SMS, USSD, voice, apps) and local language support
- C. Requiring the latest device and high bandwidth only
- D. Avoiding feedback mechanisms

SECTION B [60 MARKS]

Attempt Only Three Questions in this section.

Question 1

The Ministry of Public Service in Uganda has launched a National Digital Transformation Programme aimed at improving service delivery. The programme seeks to introduce online portals for licence applications, integrate mobile payment systems, deploy SMS-based alerts for application status, and implement an open data platform to increase transparency. Despite these efforts, the programme faces challenges: low digital literacy in rural areas, limited broadband access, resistance from public servants who fear job loss, and unclear communication about the benefits of the new eGovernment platform. The government plans to adopt a hybrid eGovernance model combining Government-to-Citizen (G2C), Government-to-Business (G2B), and internal Government-to-Government (G2G) systems.

- (a) Explain the concept of the Digital Age and show how the case study fits within it. **(5 marks)**
- (b) Analyze the purpose of the Digital Age in the context of public sector transformation. **(5 marks)**
- (c) Evaluate the eGovernance business model selected by the government in the case. **(5 marks)**
- (d) Propose **three ways** the Ministry can optimize use of the Digital Age based on the challenges identified. **(5 marks)**

Question 2

Digital Transformation in Uganda's Health Sector

The Ministry of Health in Uganda has launched a national Digital Health Transformation Programme to improve service delivery in hospitals and health centers. The programme includes:

- An Electronic Medical Records (EMR) system to replace paper files;
- Digitization of old patient records stored in archives;
- A digital referral system linking district hospitals;
- Mobile health platforms for patient appointment reminders;
- Data dashboards for tracking disease trends in real time.

However, challenges have emerged: outdated computers at some facilities, health workers resisting the new EMR system, poor internet connectivity in rural districts, and inadequate training on digital tools. The Ministry wants to scale the programme nationwide but needs guidance on improving implementation.

- (a) Define digital transformation and explain how the Ministry's programme reflects digital transformation. **(5 marks)**

- (b) Distinguish between digitization and digitalization, using examples from the case. 5 marks
- (c) Analyze the critical success factors (CSFs) required for successful Health Digital Transformation. **(5 marks)**
- (d) Propose strategies for planning and scaling digital transformation initiatives in the health sector. **(5 marks)**

Question 3

E-Bank Africa is a fast-growing digital bank operating fully online. The bank collects large amounts of personal data, including national IDs, phone numbers, transaction histories, and geolocation logs. Recently, a third-party payment processor used by the bank experienced a security breach due to outdated software. As a result, attackers accessed names, account numbers, and partial card details of over 30,000 customers.

The incident caused public panic, regulatory scrutiny, and loss of customer trust. The bank's security report revealed that the third-party provider lacked strong access controls, used weak encryption, and had not updated its systems for more than 18 months. The bank now seeks to strengthen its information security and rebuild trust.

- (a) Explain how personal data, privacy, and protection principles apply to this case. **(5 marks)**
- (b) Discuss "data and information as an asset" using the context of this breach. **(5 marks)**
- (c) Identify and explain three information security threats and vulnerabilities illustrated in this case. **(5 marks)**
- (d) Recommend security solutions E-Bank Africa should implement to prevent future incidents. **(5 marks)**

Question 4

TechModa Fashion Ltd is a mid-sized retail company that recently shifted from traditional in-store sales to a hybrid model that includes e-commerce, mobile applications, and automated warehouse systems. The company's leadership realised that their IT function was still operating as a support department rather than a strategic driver of transformation. The CEO wants the IT function to lead digital transformation initiatives such as online payment integration, customer analytics, real-time inventory visibility, and robotic process automation in warehouses.

However, internal challenges exist:

- IT staff lack advanced digital skills
- Legacy systems cannot integrate with new digital tools
- Business departments do not collaborate with IT
- IT operations are reactive instead of proactive

The company plans to restructure the IT function to improve capabilities and align it to digital-age demands.

- (a) Define the IT function and explain its relevance to TechModa. **(4 marks)**
- (b) Analyze the role of the IT function in the digital age using this case. **(6 marks)**
- (c) Explain how the IT function can act as an enabler of transformation in TechModa. **(4 marks)**
- (d) Assess the impact of IT operations and capabilities on TechModa's competitiveness **(6 marks)**

Question 5

Nex-Agro Foods Ltd is a Ugandan agribusiness company specializing in grain processing, distribution, and export. To overcome recurring losses from poor inventory visibility, delayed supplier deliveries, and unpredictable market pricing, the CEO has launched a digital innovation programme.

Proposed innovations include:

- A mobile app for farmers to submit produce availability
- IoT sensors for real-time warehouse temperature monitoring
- Blockchain for transparent supplier contracts
- AI-powered market price prediction

However, the company struggles with accountability concerns, unclear stakeholder roles, and pressure to keep IT services stable while innovating. The IT department is worried that innovation projects may disrupt daily operations such as ERP and logistics systems.

- (a) Define digital innovation and explain how it applies to Nex-Agro Foods. **(4 marks)**
- (b) Analyze the elements of digital innovation within Nex-Agro's proposed initiatives. **(6 marks)**
- (c) Describe the key stages of the technology innovation cycle in this case. **(4 marks)**
- (d) Examine how NexAgro can balance digital innovation with consistent IT service delivery. **(6 marks)**

END