INTERNATIONAL UNIVERSITY OF EAST AFRICA
'Learning to Succeed'

FACULTY OF SCIENCE AND TECHNOLOGY

END OF SEMESTER EXAMINATIONS - DECEMBER 2025

PROGRAMME: MIT
YEAR/SEM: YEAR 1/SEMESTER 2
COURSE CODE: MIT810
NAME: IT STRATEGIC AND INFRASTRUCTURE MANAGEMENT

DATE:
TIME:

INSTRUCTIONS TO CANDIDATES:

SECTION A

Attempt one question

Question 1:

DigiServe Technologies is a rapidly expanding ICT support company providing managed services to several organisations across East Africa. The company's support centre receives a high volume of daily service requests, including account unlocks, software upgrades, equipment replacement, and requests for access to specialized systems. Recently, management observed rising turnaround times, repeated submissions of the same requests, and declining user satisfaction levels. Some requests require urgent attention, while others are routine but have remained pending longer than expected. Support staff also report being overwhelmed, noting that many users bypass the official service desk and contact technicians directly. To resolve these issues, DigiServe plans to adopt an ITIL-based service request management framework, introduce workflow automation, strengthen communication channels, and begin tracking metrics such as MTTR (Mean Time to Resolve), customer satisfaction scores, and SLA adherence.

(a) Explain the meaning of Service Request Management under ITIL and highlight how it differs from Incident Management.
(6 marks)

(b) Outline and describe the key steps DigiServe Technologies should follow in the Service Request Fulfilment process to improve the handling of service requests.
(10 marks)

(c)Discuss how automation, the "shift-left" approach, and standardization can help DigiServe enhance efficiency in managing service requests while reducing technician overload.
(8 marks)

(d) Identify and explain four performance metrics (KPIs) that DigiServe could use to measure the success of its new service request management framework.
(8 marks)

(e) Draw and clearly label the framework of the request fulfilment

process, based on ITIL recommendations, showing all major steps and interactions involved that could help DigiServe improve its request handling process. (8 marks)

Question 2:

a)

(i) Define a Service Level Agreement (SLA) and provide two examples of SLA terms that NetPro could include. (6 marks)

(ii) Discuss two major benefits NetPro may gain from adopting a well-designed SLA (e.g., improved transparency, coordination, or productivity). (4 marks)

(iii) Explain the relationship between Key Performance Indicators (KPIs) and SLAs in monitoring service performance. (4 marks)

b)

(i) Identify and describe two key challenges organisations like NetPro commonly face when introducing or updating SLAs. (4 marks)

(ii) Suggest two practical strategies to address these implementation challenges. (4 marks)

(iii) Explain why aligning SLAs with organisational goals and priorities is crucial for long-term effectiveness. (4 marks)

c)

(i) Define First Call Resolution (FCR) and describe why it is important for customer satisfaction and operational performance.
(4 marks)

(ii) Outline two best practices for accurately measuring FCR.
(4 marks)

(iii) Explain how help desk or ticketing software can improve SLA tracking and overall ticket management at NetPro
(2 marks)

d) Provide two actionable recommendations NetPro could implement to enhance service quality and improve SLA performance.
(2 marks)

SECTION B

Attempt a maximum of 3 questions.

Question 1:

a) Define IT Change Management and explain two main reasons why it is important in an organization. (5 Marks)

b) Describe the three types of changes defined in ITIL, giving one example for each.

(9 Marks)

c) Briefly explain the role of the Change Advisory Board (CAB) and outline three best practices for effective change management.

(6 Marks)

Question 2:

a) Define IT Change Management and explain two main reasons why it is important in an organisation. (5 Marks)

b) Describe the three types of changes defined in ITIL, giving one example for each. (9 Marks)

c) Briefly explain the role of the Change Advisory Board (CAB) and outline three best practices for effective change management. (6 Marks)

Question 3:

a) Explain the term IT Infrastructure Management (2 marks)

b) Discuss any five key components of IT Infrastructure Management and describe the role each plays in supporting business operations. (10 marks)

c) Analyse four major benefits that effective IT Infrastructure Management provides to modern businesses. (8 marks)

Question 4:

a) Explain the term conversational ticketing and state two advantages it offers to IT support teams. (5 Marks)

b) Define a virtual agent and describe two ways it improves IT service delivery. (5 Marks)

c) What is a service catalog? Explain two benefits of using a service catalog in an organisation. (5 Marks)

d) Define an IT service portal and describe two key features that make it effective. (5 Marks)

Question 5:

a) Define IT Asset Management (ITAM) (2 marks)

b) Explain four reasons why asset management is important in any enterprise. (4 Marks)

c) Outline and briefly describe the five main stages of the IT asset management process.

(8 Marks)

d) Explain the term Configuration Management Database (CMDB) and discuss three benefits it provides to IT service management. (6 Marks)

Question 6:

(a) Explain why it is important to have a proper IT infrastructure management (4 marks)

(b) Define a service request and differentiate it from an incident and a problem according to ITIL
guidelines
(6 marks)

(c) Explain the meaning of “Shift-Left” in improving customer

experience and discuss two benefits it provides to an IT support team. (6 marks)

(d) Explain two (2) major difficulties IT teams face when tracking and updating SLA performance. (4 marks)

Question 7:

(a) Define the concept of Organisational Change Management (OCM) and briefly distinguish between 'Planned Change' and 'Emergent Change.' (6 Marks)

(b) State 3 main reasons for establishing a formal, standardised Change Management Process within a corporate or IT service environment. (6 marks)

(c) Detail the critical elements that should be documented during the Change Plan phase of the Change Management Process (8 marks)

Question 8:

(a) Explain any 6 characteristics of the Configuration Management Database (CMDB) (12 marks)

(b) Discuss two categories of configuration items (CIs). (4 marks)

(c) Explain any four features to consider when selecting a CMDB software (4 marks)

Question 9:

a) Differentiate between IT change management and release management (4 marks)

b) Explain the change management process steps, giving the best practices in each step (16 marks)

Question 10:

(a) Define IT management (2 marks)

(b) Explain the 6 core responsibilities of the IT Manager (12 marks)

(c) Explain 3 key features of an IT service portal. (6 marks)

Question 11:

(a) Discuss three major challenges organizations face in hardware asset management. (9 marks)
(b) Explain how automation and accurate documentation help address these challenges in (a) above. (7 marks)
(c) Identify two risks associated with security vulnerabilities in assets. (4 marks)

Question 12:

(a) Explain the stages of the hardware asset management life cycle, listing activities in each stage (16 marks)
(b) Describe two methods of asset disposal and when each is appropriate. (4 marks)