



CRAWFORD UNIVERSITY, FAITH CITY, IGBESA
COLLEGE OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF COMPUTER AND MATHEMATICAL SCIENCES
Bachelor of Science Degree in Information and Communications Technology (ICT)

HARMATTAN SEMESTER EXAMINATION

SESSION: 2021/2022

COURSE CODE: ICT 421

TITLE: TELECOMMUNICATION POLICIES AND REGULATIONS

UNITS: 3

DURATION: 3 HOURS

INSTRUCTION: ANSWER QUESTIONS ONE AND ANY OTHER THREE.

QUESTION ONE (30 marks)

- (A) (i) What is Regulation and why do we regulate telecommunication? **(3mrks)**
(ii) Briefly discuss the evolution of the telecommunication market and its regulation in Nigeria **(3mrks)**
- (B) (i) Describe the three different structures for the international public telecommunication standards according to the ITU-T Recommendation E.164 for:
-International public telecommunication number for geographic areas. **(2mrks)**
-International public telecommunication number for global services. **(2mrks)**
-International public telecommunication number for networks. **(2mrks)**
(ii) Describe the hierarchical structures of telecommunication numbers according to the same standards for B (i) above **(3mrks)**
- (C) (i) Briefly discuss the following: **(3mrks)**
• Regulatory Capture **(3mrks)**
• Collocation **(3mrks)**
• Roaming **(3mrks)**
• Unbundled Access **(3mrks)**
(ii) Identify the stakeholders involved in general telecommunications regulation and their respective roles. **(3mrks)**

QUESTION TWO (10 marks)

- (A) (i) Discuss briefly the benefits of a well-regulated competitive telecommunications market **(2mrks)**
(ii) Telecommunications firms with market power may try to use their position to reduce competition. Identify some common forms of anti-competitive conduct **(3mrks)**
- (B) Discuss the elements of regulatory effectiveness and identify the key success factors for such effective regulation to be achievable. **(5mrks)**

QUESTION THREE (10 marks)

- (A) (i) What is Spectrum management? Justify the need for regulating RF spectrum access and use. **(2mrks)**
(ii) Briefly discuss the basic approaches to Spectrum management **(3mrks)**
- (B) Define Convergence and briefly discuss the levels at which it can exist **(5mrks)**

QUESTION FOUR (10 marks)

- (A) (i) Identify, and briefly discuss the specific roles of the regulatory authorities in charge of telecommunications regulation locally (in Nigeria) and Internationally (globally) (6mrks)
- (B) Briefly discuss any four (4) methods of fixing the financial terms of Interconnection (4mrks)

QUESTION FIVE (10 marks)

- (A) Briefly discuss the roles of regulatory agencies in Interconnection negotiation (3mrks)
- (B) (i) Explain the concept of 'access' as it relates to Interconnection (3mrks)
(ii) Identify the Commercial, Technical, Operational and Framework issues in Interconnection (4mrks)

QUESTION SIX (10 marks)

- (A) Briefly discuss the forms of spectrum trading and the mechanisms for trading RF spectrum (4mrks)
- (B) Explain the following Spectrum Management terminologies concisely:
- Planning (2mrks)
 - Harmonization (2mrks)
 - Refarming (2mrks)

*Vertical spectrum
cellular spectrum
refarming*

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