

DIGITAL SWITCHING TELECOMMUNICATION

FINAL EXAMINATION

TIME ALLOCATION: 3 HOURS

INSTRUCTION TO STUDENTS: ATTEMPT ALL QUESTIONS

1. In switching systems, there are THREE types of communication transmission modes. State and explain them briefly. (5 Marks)

2. In software architecture, there are two categories; System software and application software. Briefly define them mentioning examples. (5 Marks)

3. Define the following terms as they have been used in digital switching telecommunication. (10 Marks)
 - i. ISDN

 - ii. Frequency

 - iii. LAN

 - iv. Topology

 - v. Storage program control (SPC) exchange

 - vi. Semaphore

 - vii. Attenuation

 - viii. Satellite

 - ix. Baud rate

 - x. Transmission medium

4. State FIVE factors associated with the production of switching software (10 Marks)
5. There are THREE different types of telephone networks. State and discuss them briefly (10 Marks)
6. State Five ways in which a telecommunication network may be categorized into: (5 marks)
7. State FIVE merits and FIVE demerits of Geostationary satellite. (20 Marks)
8. Signaling systems link a variety of switching systems, transmission systems and subscriber equipment in a telecommunication network to enable the network function as a whole. State the THREE forms of signaling that are involved in a telecommunication network. (5 Marks)
9. Discuss the open system inter-connection (OSI) model. List and briefly explain the seven layers in the model. (30 Marks)