**Program: BE ELECTRONICS AND TELECOMMUNICATION Engineering**

**Curriculum Scheme: Revised 2016**

**Examination: Fourth Year Semester VII**

**Course Code: ECC702 and Course Name: Mobile Communication System**

**Time: 1 hour Max. Marks: 50**

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**SAMPLE PAPER**

Note to the students:- All the Questions are compulsory and carry equal marks .

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| Q1. | What is the unit for the measure of traffic intensity? |
| Option A: | Meters |
| Option B: | Henry |
| Option C: | Ohm |
| Option D: | Erlang |
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| Q2. | Which of the following techniques do not help in expanding the capacity of cellular system? |
| Option A: | Sectoring |
| Option B: | Scattering |
| Option C: | Splitting |
| Option D: | Microcell zone concept |
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| Q3. | Propagation model that characterize rapid fluctuation is called |
| Option A: | Hata model |
| Option B: | Fading model |
| Option C: | Large scale propagation model |
| Option D: | Okumura model |
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| Q4. | Which of the following mechanism do not impact propagation in mobile communication system? |
| Option A: | Reflection |
| Option B: | Diffraction |
| Option C: | Scattering |
| Option D: | Refraction |
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| Q5. | Small scale multipath propagation is will not caused due to waves with |
| Option A: | Different propagation delays |
| Option B: | Different amplitudes |
| Option C: | Different phase |
| Option D: | Same phase |
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| Q6. | Fading will not be  caused due to |
| Option A: | Multi path propagation |
| Option B: | Obstacles |
| Option C: | Frequency variations at the source |
| Option D: | Variation in amplitude and phase at receiver |
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| Q7. | Guard band is |
| Option A: | The small unused bandwidth between the frequency channels to avoid interference |
| Option B: | The bandwidth allotted to the signal |
| Option C: | The channel spectrum |
| Option D: | The spectrum acquired by the noise between the signal |
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| Q8. | The advantages of FDMA over TDMA includes |
| Option A: | Division is simpler |
| Option B: | Propagation delays are not  eliminated |
| Option C: | Cheaper filters with less complicated logic functions |
| Option D: | Linearity |
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| Q9. | A GPRS Network works same in . |
| Option A: | 2G |
| Option B: | 3G |
| Option C: | 2G and 3G |
| Option D: | 4G |
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| Q10. | What changes GPRS need to acquire while upgrading itself from GSM |
| Option A: | A whole new base station |
| Option B: | New transceiver at base station |
| Option C: | New channel cards |
| Option D: | New packet overlay including routers and gateways |
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| Q11. | Each IS-95 channel occupies of spectrum on each one way link. |
| Option A: | 1.25 MHz |
| Option B: | 1.25 kHz |
| Option C: | 200 kHz |
| Option D: | 125 kHz |
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| Q12. | In cellular telephony IS-95 uses two band for |
| Option A: | Duplex Communication |
| Option B: | Traditional ISM Communication |
| Option C: | Digitized Communication |
| Option D: | simplex Communication |
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| Q13. | What is not  the parts of a 3G network architecture? |
| Option A: | User Equipment (UE) |
| Option B: | Radio Access Network (RAN) |
| Option C: | Core Network |
| Option D: | Mobile Station |
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| Q14. | What is the name of a BTS in a 3G mobile network? |
| Option A: | Structure |
| Option B: | Node-B |
| Option C: | Node-N |
| Option D: | Node N and Node B |
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| Q15. | A UMTS(Universal Mobile Telecommunication) network is a   network. |
| Option A: | First Generation |
| Option B: | Second Generation |
| Option C: | Third Generation |
| Option D: | Fourth Generation |
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| Q16. | CDMA2000  technology  is also a network. |
| Option A: | 2G |
| Option B: | 3G |
| Option C: | 4G |
| Option D: | 5G |
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| Q17. | Which RLC mode adds the least amount of delay to user traffic? |
| Option A: | Unacknowledged mode (UM) |
| Option B: | Acknowledged mode (AM) |
| Option C: | Low latency mode (LM) |
| Option D: | Transparent mode (TM) |
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| Q18. | How much bandwidth is required to transmit the primary and secondary synchronization signals? |
| Option A: | 1.08 MHz |
| Option B: | 1.4 MHz |
| Option C: | 930 KHz |
| Option D: | 20 MHz |
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| Q19. | Which type of cell provides the best level of service for average subscribers? |
| Option A: | Acceptance cell |
| Option B: | Barred cell |
| Option C: | Reserved cell |
| Option D: | Suitable cell |
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| Q20. | What is the average uploading speed of 4G LTE network? |
| Option A: | 1-3 Gbps |
| Option B: | 2-5 Gbps |
| Option C: | 1-3 Mbps |
| Option D: | 2-5 Mbps |
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| Q21. | Which of the following technology does not use MIMO? |
| Option A: | 4G |
| Option B: | WiFi |
| Option C: | WiMax |
| Option D: | AMPS |
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| Q22. | \_\_\_\_\_\_\_ is a technique of transmit diversity used in UMTSS third-generation cellular systems. |
| Option A: | STTD |
| Option B: | SM |
| Option C: | Collaborative Uplink MIMO |
| Option D: | MU-MIMO |
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| Q23. | \_\_\_\_\_\_\_ is a transmission method used in MIMO wireless communications to transmit encoded data signals independently. |
| Option A: | STTD |
| Option B: | SM |
| Option C: | Collaborative Uplink MIMO |
| Option D: | MU-MIMO |
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| Q24. | What is not the new applications enabled by Cognitive Radio? |
| Option A: | Dynamic spectrum access |
| Option B: | Self-organizing networks |
| Option C: | Cellular data boost |
| Option D: | Static spectrum access. |
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| Q25. | What is the possible range of height for the occurrence of sporadic E-region with respect to normal E-region? |
| Option A: | 20 km – 50 km |
| Option B: | 45 km – 85 km |
| Option C: | 90 km – 130 km |
| Option D: | 140 km – 200 km |