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Roll No. :

328733(28)

**B. E. (Seventh Semester) Examination,
Nov.-Dec. 2021**

(New Scheme)

(Electronics and Telecommunication Engg. Branch)

WIRELESS COMMUNICATIONS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

***Note : Part (a) of each question is compulsory.
Attempt any two parts from part (b), (c) and
(d) of each question. Part (b), (c) and (d)
from all questions carry seven marks each.
And part (a) of each question carry two
marks.***

Unit-I

1. (a) Define wireless communication.

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- (b) Explain 4G mobile cellular communication system. 7
- (c) Give all the technical details of 3G mobile cellular communication system. 7
- (d) Explain the working of Paging system with necessary block diagram. 7

Unit-II

- 2. (a) What do you mean by cell in mobile communication? 2
- (b) Describe cell splitting in detail for the improvement in the capacity of the cellular system. 7
- (c) Explain channel assignment strategies. 7
- (d) What is the need of hand-off? Give the details of its mechanism. 7

Unit-III

- 3. (a) Write the full form of IMEI number. 2
- (b) Describe the difference between VLR and HLR. 7
- (c) Explain the mapping of GSM layer onto OSI layers. 7

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- (d) Explain the architecture of GSM. 7

Unit-IV

- 4. (a) Acronym DS-SS & FH-SS stands for what? 2
- (b) Describe the constant envelop modulation with merits and demerits. 7
- (c) Describe M-array PSK with suitable expression. 7
- (d) Explain GMSK transmitter and receiver with block diagram and expression. 7

Unit-V

- 5. (a) What is scattering? 2
- (b) For wireless communication what is mean by interleaving and diversity? 7
- (c) Describe free space propagation model with expression. 7
- (d) Explain three basic propagation mechanism reflection, diffraction and scattering. 7