

Government College of Engineering
Department of Information Technology
Class Test-I (Winter 2016-17)

Sub: ITU301 COMMUNICATION ENGINEERING

Marks: 15

Solve any three (each of 5 marks)

- ~~Q.1~~ What is modulation? Write need of modulation.
- ~~Q.2~~ Draw and explain in detail block diagram of communication system.
- ~~Q.3~~ Explain the following :
- ~~a)~~ Thermal agitation noise
 - ~~b)~~ Shot noise
 - ~~c)~~ Transit-time noise
- Q.4** Enlist and explain different types of channel.

Engineering, Amravati
Government College of Engineering
Department of Information Technology
Class Test-I (Winter 2016-17)

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Solve any three (each of 5 marks)

- Q.1 Define signal to noise ratio and noise figure of receiver.
OR
- Q.2 Discuss the types, causes and effects of various forms of noise which may be created within a receiver or an amplifier
- Q.3 Draw the block diagram of communication system and explain the function of each block.
- Q.4 Explain the need for modulation in communication system.

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Class Test-I (Winter 2015-16)

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Solve any three (each of 5 marks)

Q.1 Explain with block diagram of high level and low level modulation.

Q.2 Prove that balanced modulator produces an output consisting of sidebands only with the carrier removed.

Q.3 Derive the formula for the instantaneous value of an FM voltage and define the modulation index.

Q.4 When the modulation frequency in an FM system is 400Hz and the modulating voltage is 2.4V, the modulation index is 60. Calculate the maximum deviation. What is the modulation index when modulating frequency is reduced to 250 Hz and the modulating voltage is simultaneously raised to 3.2 V?

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Solve the following (each of 5 marks)

- Q.1** What are the elements of communication system? Describe their functionality. [5]
- Q.2** Define signal-to-noise ratio and noise figure of a receiver and noise temperature. [5]
- Q.3** Derive the expression for instantaneous voltage of AM wave. [5]
- Q.4** A 360 W carrier is simultaneously modulated by two audio waves with modulating percentages 55 and 65, respectively. What is total sideband power radiated? [5]

Government College of Engineering
Department of Information Technology
Class Test- 1 (Winter 2017-18)

Sub: ITU301 COMMUNICATION ENGINEERING

Marks: 15

Solve any three (each of 5 marks)

- Q.1 Draw and explain in detail block diagram of communication system.
Q.2 What is noise? Explain internal noise and there types.
Q.3 What is modulation? Write need of modulation.
Q.4 Enlist and explain different types of modulation.