

Code No: D7007

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH II - SEMESTER EXAMINATIONS, APRIL/MAY 2012
RADAR SIGNAL PROCESSING
(ELECTRONICS AND COMMUNICATION ENGINEERING)

Time: 3hours**Max. Marks: 60**

Answer any five questions
All questions carry equal marks

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- 1.a) With the help of block schematic, discuss in detail about beacon equation.
b) What are the losses in radar system and how do you compensate them?
- 2.a) Describe about range resolution of the matched filter.
b) Explain about matched filter receiver.
- 3.a) Write about CFAR uses in radar.
b) In detail, explain about the cell-averaging CFAR concept.
c) List the limitations of cell-averaging CFAR.
- 4.a) Compare envelop detector and logarithmic detector.
b) Explain about radar ambiguity function.
- 5.a) With justifications, bring out the advantage of pulse compression in Radar signals.
b) Write about SAW pulse compression.
- 6.a) With the help of block schematic explain about linear FM pulse compression.
b) Write about maximum length sequences.
- 7.a) Differentiate between binary phase coding and poly phase coding.
b) Explain about waveform design requirements.
8. Write notes in:
 - a. Frank codes
 - b. Radar detection with Jamming
 - c. RCS of fluctuating of targets
