Total No. of Questions : 5] *[Total No. of Printed Pages : 3*

Roll No .....

EI/IC-402

B.E. IV Semester

Examination, December 2016

Signals and Systems

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

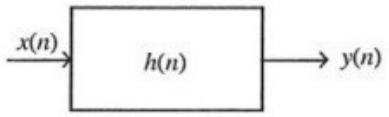
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) What is the physical significance of Eigen function?
   b) How do you characterize a LTI system?
   c) Explain transmission of signals through LTI system.
   d) Prove for the given system

$$y(n) = \sum_{k=-\infty}^{\infty} x(k)h(n-k)$$



OR

What do you mean by static and dynamic behaviour of the system? Explain with suitable example.

c) What is VSAT system? How does a VSAT work? Who uses VSAT system?

d) With the help of block diagram explain the operation of DBS system.

OR

What are VSAT networks? Explain various VSAT network topologies.

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Total No. of Questions :5] *[Total No. of Printed Pages : 4*

Roll No .....

EC-702

B.E. VII Semester

Examination, December 2016

Satellite Communication

Time : Three Hours

Maximum Marks : 70

Note : i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) Why is it preferable for a remote sensing satellite to be in a sun-synchronous orbit?

   b) Describe the characteristics and uses of geostationary orbit.

   c) Define the following parameters with reference to satellite orbits :

      i) Apogee and perigee

      ii) Eccentricity

      iii) Ascending and descending nodes

   d) Define Kepler's laws of orbiting bodies and derive an equation to show that the third law is true for any orbiting satellite.