Printed Pages: 2

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BT-5 / D-17

ANTENNA & WAVE PROPAGATION Paper-ECE-303-N Opt. (i)

Time allowed: 3 hours]

[Maximum marks 75

Note: Attempt any five questions by selecting at least one from each unit.

Unit-I

Find the expression of radiated field from a half wave dipole. Also find the radiation resistance of half wave dipole.

What do you understand by term power gain, directive gain and efficiency of antenna. Find the relation among them. Also write short note on Effective height, Effective aperture, and Bandwidth 15 of antenna.

Unit-II

Write short note on:

15

- Yagi-Uda Antenna.
- Helical antenna.
- Turnstile Antenna.
- Find the expression of radiated fields. Due to N element antenna array. Also find the condition for maximum and minimum radiation for N element antenna array. 15

(2)

Unit-III

- What are the advantages of patch antenna? With suitable diagram explain different feeding techniques of patch antenna. 15
- For what purpose we are using Broad band antenna. With construction details explain Log periodic antenna. 15

Unit-IV

- (a) What are the various reasons of reducing the strength of ground waves when they propagate from transmitter to receiver antenna.
- (b) Write short note on space and sky wave propagation.

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15

- Write short note on:
 - Critical frequency
 - MUF

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- Skip distance
- Virtual height

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