**TWO MARK QUESTION**

1. **What is an aperture antenna?**

Aperture antenna represent a class of antenna which are analysed considering the antenna as an opening in an otherwise closed surface.

**Ex**: slot antenna, horn antenna, reflector antenna

**2. What is slot antenna?**

The slot antenna consists of a radiator formed by cutting a narrow slot in a large metal surface. The shape and size of the slot, as well as driving frequency determine the radiation pattern.

**3. What is the different between slot antenna and its complementary dipole antenna?**

- Polarization are different, the electric fields associated with the slot antenna are identical are identical with the magnetic field of the complementary dipole antenna.
- The electric field will be vertically polarized for the slot and horizontally polarized for the dipole.
- The radiation from the backside of the conducting plane of the slot antenna has the opposite polarity from that of the complementary antenna.

**4. What is complementary dipole?**

The slot antenna radiates radio waves in similar way to a dipole antenna. Therefore the slot antenna is frequently compared to a conventional half wave dipole consisting of two flat metal strip.

**5. Represent the various methods of feeding of a slot antenna?**

i. Co-axial line feed.
ii. Waveguide feed

**6. What is horn antenna?**

It is a flared out waveguide. It is a transition matching section from the guided mode inside the waveguide to the unguided mode outside the waveguide.

**7. What are the different types of horn antenna?**

1. Sectoral horn antenna
2. Pyramidal horn antenna
3. Conical horn antenna

4. Biconical horn antenna

**8. What are secondary antennas? Give example.**

Antennas that are not radiators by themselves are called as secondary antennas.

**9. What are the various feeds used in reflector antenna?**

1. Dipole antenna
2. Horn antenna
3. End fire feed
4. Cassegrain feed

**10. What is meant by sectoral horn?**

If flaring is done in only one direction , then it is called as sectoral horn.

**11. what is meant by pyramidal horn antenna?**

If flaring is done along both the walls, then it is called as pyramidal horn antenna.

**12. What is conical horn?**

If flaring is done uniformaly on the walls of a circular waveguide, then it is called as conical horn.

**13. List the application of horn antenna?**

- Microwave application
- Short radar system
- As a feeder in parabolic reflector

**14. What is reflector type of antenna?**

The antennas which is used to eliminate the backword radiations from an antenna and to modify the radiation pattern in a desired manner to desired direction is called as reflector type of antenna.

**15. What are the most widely used types of reflector?**

i. Plane sheet reflector
ii. Corner reflector
iii. Parabolic reflector
iv. Hyperbolic reflector
v. Elliptical reflector
vi. Circular reflector

**16. What is a parabolic reflector?**

It is a parabola shaped reflective devices used to collect or distribute energy entering the reflector at a particular angle.

**17. State the design equation of a parabolic reflector?**

**18. List the various types of feed systems for a parabolic reflector?**

1. Waveguide horn
2. Helix antenna
3. Dipole end fire feed
4. Cassegrain feed

**19. List the advantages of cassegrain feed?**

1. Feed can be placed at convenient location
2. Beam can be widened
3. Focal length can be increased
4. Minor lobes are reduced.

**20. Define spill over.**

Some of the desired rays are not captured by the reflector antenna and this constitute spill over.

**21. What is back lobe radiation?**

Some radiation from the primary radiator occur in the forward direction in addition to the desired parallel beam. This is known as back lobe radiation.

**22. List the applications of parabolic reflector?**

The parabolic reflector are used in

i) Radio astromony
ii) Microwave communication
iii) Satellite tracking