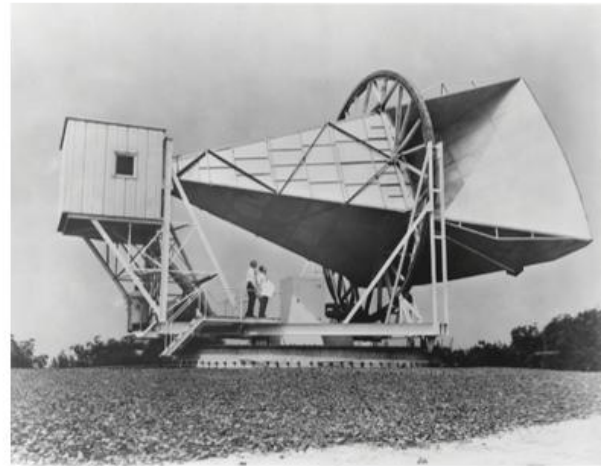


Question 12

(4 marks)

Cosmic Microwave Background radiation (CMB) was first observed in 1965 by Arno Penzias and Robert Wilson at the Bell Telephone Laboratories in Murray Hill, New Jersey. They had built a Dicke radiometer that they intended to use for radio astronomy and satellite communication experiments. They detected the CMB in every direction they pointed their radiometer.



(a) Briefly explain the origin of CMB as part of the Big Bang theory.

(2 marks)

(b) How does the study of CMB provide evidence that the universe is expanding? (2 marks)
