

**KING FAHD UNIVERSITY OF PETROLEUM & MINERALS**  
**DEPARTMENT OF ELECTRICAL ENGINEERING**

EE 418	Introduction to Satellite Communications	QUIZ # 1
Semester (061)	Section (01)	8 October, 2006

NAME :		
I.D. # :		Score : / 10

**1) 1. Some advantages of using satellites in the geostationary orbit are:**

- a. Use of hand held receivers       b. No frequency shift due to Doppler effects  
 c. Coverage of large area on the earth    d. Reduction of transmission delay  
 e. Provide communications 24 hours a day

**2) The use of communication satellites in highly elliptical orbits has the following advantages:**

- a. Provide 24 hour a-day communication.  
b. Provide coverage beyond latitudes of  $\pm 76^\circ$ .  
c. It provides relatively large bandwidth.  
d. Small Doppler shift

**3) Communications to high latitude locations ( $\geq 75^\circ$ ) is provided by satellites located in:**

- (a) *The geo-stationary orbit*       (b) *Inclined elliptical orbits*  
 (c) *Low earth orbits*       (d) *All available satellites*

**4) The line joining the centre of the earth and the direction of perigee defines the x-axis in the following coordinate system:**

- (a) *Geocentric Equatorial*       (b) *Heliocentric ecliptic*  
 (c) *Right ascension-declination*    (d) *perifocal*  
 (e) *Celestial horizon*