



# UNIVERSITY OF THE PUNJAB

B.A. / B.Sc. Part - I  
Annual Examination - 2017

Roll No. ....

**Subject: Space Science-I**  
**PAPER: A (Astronomy, Astrophysics & Meteorology)**

**TIME ALLOWED: 3 hrs.**  
**MAX. MARKS: 75**

**NOTE: Attempt any FIVE questions. All questions carry equal marks.**

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|--------|--|-----|
| Q-1(a) | Differentiate between Sidereal and Synodic time periods?   | 7.5 |
| (b)    | Discuss Colour Magnitude relation of stars?  | 7.5 |
| Q-2(a) | Discuss different system of coordinates in detail?   | 10  |
| (b)    | Discuss Define the following terms.<br>Milky way                  Meridian                  Prime Meridian<br>Celestial Equator      Ecliptic  | 05  |
| Q-3(a) | Discuss in detail about the Atmospheric Refraction?  | 10  |
| (b)    | A ship travels along parallel of latitude between A and B. Find the distance traveled in nautical miles given that the position of A and B is:<br>A(38°N, 42°W)                  A(38°N, 15°W) | 05  |
| Q-4    | Define Galaxy. What is the structure of our Galaxy?  | 15  |
| Q-5    | How the Solar eclipse occurs. Do write about the partial and total Solar eclipse takes place?  | 15  |
| Q-6(a) | How Radio sonde is used for meteorological observations?   | 7.5 |
| (b)    | How Heat low develops over Balochistan. Discuss its significance?  | 7.5 |
| Q-7    | What is the significance of Stratospheric Ozone. What is the cause and concept of Ozone hole?  | 15  |
| Q-8    | Discuss in detail about the interior of the planet Earth?  | 15  |
| Q-9(a) | Define an Air mass. What are its source regions and characteristics?   | 7.5 |
| (b)    | Discuss the characteristics of Fronts?   | 7.5 |