Seat No: _____ **Enrollment No: _____**

PARUL UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

M.Tech., Winter2017 – 18 Examination

Semester: 1 **Date: 04/01/2018**

Subject Code: 03211130 **Time: 2:00 pm to 4:30 pm**

Subject Name: Airport Engineering **Total Marks: 60**

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 **A) Explain the following terminologies. (Attempt any three)** **(05)**

1. Approach Surface
2. Conical Surface
3. Horizontal Surface
4. Take off Climb Surface
5. Transitional Surface

B) Define approach zone profile for runway with ILS with neat sketch. **(05)**

C) Write a short note on Cross Wind Component. **(05)**

Q.2 **Answer the following questions. (Attempt any three)** **(15)**

A) Explain the six groups of airport markings.

B) What are the various factors affecting airport lighting.

C) Explain briefly various factors affecting site selection of an airport.

D) Write a short note on Runway Orientation.

Q.3 A) Write the steps of design of surface drainage system. **(07)**

B) State the various assumptions applied in the basic runway length. Determine the length of the runway required from the following data. **(08)**

Basic runway length =1260 m

Site elevation = 400 m above MSL

Mean of Maximum average daily temperature of the hottest month = 44.8^{o}C

Mean of average daily temperature of the hottest month = 26.2^{o}C

Effective gradient= 0.5%

OR

B) Define airport capacity. What are the points to be considered in the selection of a site for an airport? **(08)**

Q.4 A) What are the various purposes for installing the visual aids at the airport? **(07)**

OR

A) Describe airport master planning process as per ICAO recommendations. **(07)**

B) Draw a neat cross section of runway for International airport and show all the geometric features. **(08)**