Total No. of Questions : 6]

SEAT No. :

P1550

[Total No. of Pages : 2

BE/Insem/APR-158
B.E. (Civil)
AIRPORT & BRIDGE ENGINEERING (ELECTIVE - III)
(2015 Pattern)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates :

1) ***Attempt Q.1 or Q2, Q3 or 4 and Q5 or Q6.***
2) ***Figures to the right indicate full marks.***
3) ***Draw neat figures wherever necessary.***
4) ***Assume suitable data, if necessary.***
5) ***Use of non-programmable scientific calculator is allowed.***

Q1) a) Explain with neat sketch the following : **[5]**

i) Aileron

ii) Rudder

iii) Elevator

b) Describe in detail any one method of air travel demand forecasting required for airport planning. **[5]**

OR

Q2) a) State any five aircraft characteristics and state their application in airport planning. **[5]**

b) Write a note on roles & responsibilities of : **[5]**

i) FAA

ii) ICAO

Q3) a) A runway is being constructed in a new airport at an elevation of 535m above mean sea level. The airport reference temperature is 22.65°C. The effective gradient is 1% and length of runway required for a design aircraft under standard conditions is 2000m. Design the corrected runway length. **[5]**

b) Explain in one line different imaginary surfaces considered while planning an airport. Draw a neat sketch. **[5]**

P.T.O.

OR

Q4) a) The runway length for an airport located at 450m above MSL, corrected for elevation is 3670m. The monthly mean of maximum and mean daily temperature for the hottest month of the year is 27°C & 18°C respectively. The effective gradient is zero. Design the corrected runway length. **[5]**

b) Explain with neat sketch Instrument Landing System (ILS) used as navigational aid for guiding the aircraft for landing. **[5]**

Q5) a) Describe in detail the runway pavement design criteria. **[5]**

b) Describe CBR method of runway design. **[5]**

OR

Q6) a) State the factors to be considered for designing the drainage of proposed Navi Mumbai International Airport. **[5]**

b) Describe FAA method of runway design. **[5]**