

Total No. of Questions : 8]

SEAT No. :

P-6534

[Total No. of Pages : 2

[6181]-83

B.E. (Civil)

AIRPORT AND BRIDGE ENGINEERING

(2019 Pattern) (Semester - VII) (Elective-IV) (401004D)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Figures to the right indicate full marks
- 3) Use of electronics pocket calculator is allowed.
- 4) Assume suitable data if necessary.
- 5) Neat diagrams must be drawn wherever necessary.

- Q1)** a) Explain need of Building information modelling for Airport. [6]
b) What is the aim of airport drainage and give functions of the airport drainage. [6]
c) What is Ultimate and Practical Runway Capacity? Give Factors affecting on Runway Capacity. [6]

OR

- Q2)** a) What are the benefits of Building Information Modelling for Airport? [6]
b) Write a Short note on Virtual Reality. [6]
c) Give classification of airport pavement and explain in detail. [6]

- Q3)** a) What are the different factors that affecting on the Airport Lighting? [6]
b) Write a Short note on: Airport Marking. [5]
c) Explain in brief Heliport and Stolport. [6]

OR

- Q4)** a) Write a short note on [5]
i) Marking of Heliports
ii) Lighting of Heliports
b) What are the different characteristics of STOL Aircraft? [5]
c) How to plan stolports? Give advantages of STOL Aircraft. [6]

P.T.O.

- Q5)** a) Give brief classification of different bridge structures. [5]
b) What are the different components of bridge? Explain in detail with the help of neat sketch. [5]
c) What is economic span of bridge? Give Derivation for economic span of bridge. [7]

OR

- Q6)** a) What are the different types of Culvert? Explain in detail with the help of neat sketch. [5]
b) What is causeway? Explain the different types of causeway with the help of neat sketch. [5]
c) Explain Preliminary and detailed survey work to be done before construction of bridge structure. [7]

- Q7)** a) Give explanation on Direct Method of Calculating the maximum flood discharge. [10]
b) From the following data, Calculate linear Waterway required for a bridge to be constructed across the River: [8]

Catchment Area = 800 Hectares

Maximum intensity of Rainfall = 1.21 cm per hour

Runoff Coefficient = 0.80

Permissible Velocity = 120 cm/ second

Average depth of flow = 180cm

OR

- Q8)** a) Explain in details Movable - Span Super Structures with the help of neat Sketches. [9]
b) Explain Cut Boat Bridge, Flying Bridge, Lift Bridge and Swing Bridge with the help of neat sketches. [9]

