[6263]-64
B.E. (Civil)
AIRPORT AND BRIDGE ENGINEERING
(2019 Pattern) (Semester - VII) (401004D) (Elective - IV)

Time : 2½ Hour]   *[Max. Marks : 70*

Instructions to the candidates:

1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6 and Q7 or Q8.*
2) *Neat diagram must be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data if neccessary.*

Q1) a) Explain the necessity of airport drainage.   **[6]**

b) What is BIM? Explain its benefits.   **[6]**

c) Give comparison between the Highway and Airfield pavement.   **[6]**

OR

Q2) a) Explain the factors affecting the design of Airport capacity.   **[6]**

b) Briefly explain the application of Building Information Modelling (BIM) in airport engineering.   **[6]**

c) Write a note on planning and design of airport pavement.   **[6]**

Q3) a) What is the need of runway lightening and marking?   **[6]**

b) Explain with neat sketch -   **[6]**

    i)   Approach Lights

    ii)   Runway End Lights

    iii) Taxiway Lights

c) Explain the type of runway marking.   **[6]**

OR

Q4) a) Draw the neat sketch of Heliport orientation.   **[6]**

b) Explain vertical take-off and landing, short take-off and Landing.   **[6]**

c) What is Runway side strips marking?   **[6]**

Q5) a) Give detailed classification of the bridges. **[6]**

b) What are the characteristics of ideal bridge site? **[6]**

c) What is Afflux? Give Maririman's and Molesworth's equation to calculate afflux. **[5]**

OR

Q6) a) Enlist the design loads to be considered in case of Bridge. **[6]**

b) Explain the concept of linear waterway. **[6]**

c) Write short note on economic span of bridge. **[5]**

Q7) a) What is Culvert? Give its types. **[6]**

b) Explain in details Temporary bridges. **[6]**

c) Compare the salient features of Simply supported, continuous and cantilever bridges. **[5]**

OR

Q8) a) Give the functions of bearing in Bridges. Explain any one type of bearing with figure. **[6]**

b) What is moveable bridge? Enlist all types. Explain Any one **[6]**

c) Give factors affecting the location of the Culvert. **[5]**

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