

School of Engineering

M.TECH Transportation Engineering
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem II - G1PD204T - Airport planning and design

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Define the term control area in context of airport engineering. K1(2)
- 2) Write short note on occupancy time. K2(4)
- 3) Briefly describe satellite parking system. Also draw a neat sketch of it. K2(6)
- 4) Differentiate between the following: (a) Actual length and calculated length of runway, (b) Parallel runways and intersecting runways, (c) Clear zone and turning zone. K3(9)
- 5) Differentiate between the following: (a) Normal landing and normal take-off, (b) Longitudinal gradient and transverse gradient, (c) Ground access time and air time. K3(9)
- 6) Explain in detail the three factors affecting the size of apron. K5(10)
- 7) At an airport site at sea level with standard atmospheric conditions, the runway lengths required for take-off and landing are 2000 m and 2400 m respectively. The proposed airport is situated at an altitude of 150 m. If the airport reference temperature is 25 °C and if the effective runway gradient is 0.35 %, calculate the length of runway to be provided. K4(12)
- 8) Explain the importance of proper grading of the airport site. Also, state the general requirements to be observed in case of airport grading. K5(15)
- 9) What are the basic requirements of airport drainage? Also, write the specific objectives of surface drainage. K5(15)
- 10) Discuss any 12 technical terms used in the airport planning. K6(18)