

SRINIVASAN ENGINEERING COLLEGE, PERAMBALUR

DEPARTMENT OF AERONAUTICAL ENGINEERING

16 MARK QUESTIONS

AE 1014- AIR TRAFFIC CONTROL AND AERODROME DESIGN

UNIT-I

BASIC CONCEPTS

1. Explain objectives, parts and scope and provision of ATS service.
2. Explain,
 - (i) VFR operations.
 - (ii) IFR operations.
3. Explain the classification of ATS airspaces with neat diagrams.
4. Explain various kinds of separation followed by ATS services.
5. Explain,
 - (i) Altimeter setting procedures.
 - (ii) Division of responsibility of control.
6. Explain Establishment, designation and identification of units providing ATS.

UNIT-II

AIR TRAFFIC SERVICES

1. Explain Area control services assigned from Air Traffic Services.
2. Explain assignment of cruising levels minimum flight altitude ATS routes and significant points.
3. Explain the concepts of,
 - (i) RNAV
 - (ii) RNP
4. Explain the procedures of lateral and longitudinal separations based on time.
5. Explain the procedures of lateral and longitudinal separations based on distance.
6. Explain neatly the procedures of ATC clearance.
7. Explain neatly the procedures of Flight plans.
8. Explain neatly the procedures of Position report.

UNIT-III

FLIGHT INFORMATION ALERTING SERVICES, COORDINATION, EMERGENCY PROCEDURES AND RULES OF AIR

1. What is mean by RADAR? Explain the basic RADAR terminologies and RADAR services used for flight information services.
2. Explain the primary and secondary RADAR identification procedures.

3. Explain,
 - (i) Performance checks.
 - (ii) Use of RADAR in area and approach control services.
4. Explain,
 - (i) Assurance control.
 - (ii) Co-ordination between RADAR and non radar controls.
5. Explain the procedures of Flight Information Service.
6. Explain the procedures and functions of Advisory Service.
7. Explain the procedures and functions of Alerting service.

UNIT-IV

AERODROME DATA, PHYSICAL CHARACTERISTICS AND OBSTACLE RESTRICTION

1. Explain.
 - (i) Aerodrome Data.
 - (ii) Aerodrome reference code.
 - (iii) Aerodrome reference point.
2. Explain,
 - (i) Aerodrome elevation.
 - (ii) Aerodrome reference temperature.
3. Explain,
 - (i) Aerodrome reference temperature.
 - (ii) Instrument runway.
4. Explain the length calculations and basic needs of primary and secondary runway.
5. Explain the width calculations and basic needs of primary and secondary runway.
6. Explain the concepts and procedures of minimum distance between parallel runways.
7. Explain the concepts of Obstacle restriction.

UNIT-V

VISUAL AIDS FOR NAVIGATION, VISUAL AIDS FOR DENOTING OBSTACLES EMERGENCY AND OTHER SERVICES

1. Explain,
 - (i) Visual aids for navigation wind director indicator.
 - (ii) Landing direction indicator.
2. Explain,
 - (i) Location of characteristics of signal area.
 - (ii) Markings and general requirements of navigation system.
3. Explain neatly the various markings, lights and general requirements of visual systems.
4. Explain,
 - (i) Aerodrome beacon.
 - (ii) Identification beacon.
5. Explain,

- (i) Simple approach lighting system.
 - (ii) Various lighting systems used in aerodromes.
6. Explain,
- (i) VASI
 - (ii) PAPI
7. Explain,
- (i) Visual aids for denoting obstacles.
 - (ii) Objects to be marked and lighter.
8. Explain the Emergency and other services are carried out in Air Traffic Services.