**ARVR**

**Question Bank**

**Module 1**

Define AR (2 mark)

Components of AR (2 mark)

Architecture of AR (2/5 mark)

How does AR work? (2 mark)

Applications of AR (2/5 mark)

* Gaming, education, healthcare, retail, etc

Types of AR - Marker based and markerless AR (2mark)

Related fields of AR (2/5 mark) – VR, MR, XR

*AR vs VR vs XR vs MR (2/5 mark)*

*Architecture and algorithm steps of MR (5 mark)*

**Module 2**

Types/modes of displays (2/5 mark)

– audio, visual, sensory, olfactory, gustatory

**Visual Display models of AR (2/5 mark)**

- near eye, handheld, projected, stationery

Optical vs video see through (2 mark)

Monocular and binoculars (2 mark)

*Spatial display model (5 mark)*

– model, view and projected transformations

Tracking processes (2 mark)

– tracking, calibration, registration

Characteristics of tracking technology (2/5 mark)

– measurement principle, DOF, sensor arrangement, etc

Types of sensors (2/5 mark)

* Accelerometer, magnetometer, GPS, wireless n/w, etc…

Active and passive illumination (2 mark)

Sensor fusions (5 mark)

- complementary, competitive, cooperative

Tracking methods /computer vision techniques (5 mark)

* Pipeline steps as flow chart for all tracking method
* Marker tracking, multicamera, **natural feature detection**, incremental, **SLAM,** outdoor tracking

Epipolar geometry, triangulation, homography, P-n-P, Essential matrix (2mark)

Multi camera setup - outside in and inside out (2mark)

DOF pose (2mark)