



MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH. (COMPUTER SCIENCE AND ENGINEERING)

PROCTORED ONLINE EXAMINATIONS, DECEMBER 2021

SUBJECT: AUGMENTED AND VIRTUAL REALITY

(PROGRAM ELECTIVE-III) [CSE 4051]

REVISED CREDIT SYSTEM

(24/12/2021)

Time: 75 Mins

MAX. MARKS: 20

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data, if any, may be suitably assumed.
- ❖ Write the answers on sheets of paper preferably on one side, scan all the sheets into a single pdf file, upload, Turn in /Hand in.
- ❖ Write your name, Registration number, subject code and put your signature on all the sheets

PART B

Q.No	Question statement	Marks
1.A	Analyze the modeling phase that integrates the object's physical characteristics. Include relevant examples.	5
1.B	Justify the statement – “Experience of the physical world is intrinsically multimodal and is supported to enrich the experience in Augmented Reality applications”.	3
1.C	Comment on the graphics pipeline stage that converts the vertex information output by the geometry stage into pixel information needed by the video display.	2
2.A	“In this approach, the camera pose is determined from observations in the image without instrumenting the environment with markers.” Identify the approach mentioned in the given statement and briefly describe the pipelining stages in use.	4
2.B	Differentiate the types of Head Mounted Displays used in Augmented Reality with examples for each.	3
2.C	Evaluate the pillar of virtual reality which is considered to the mind’s capacity to perceive non-existent things.	3