



Roll No.											
----------	--	--	--	--	--	--	--	--	--	--	--

PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 07-10-2025

Time: 02.00pm to 03.30pm

School: SOE	Program: B. Tech	
Course Code: MEC3076	Course Name: Human Robot Interaction	
Semester: V	Max Marks: 50	Weightage: 25%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	14	12	24	-	-

Instructions:

- (i) *Read all questions carefully and answer accordingly.*
- (ii) *Do not write anything on the question paper other than roll number.*

Part A

Answer ALL the Questions. Each question carries 2 marks.

5Q x 2M=10M

1	What sensors are used for video in Human Robot Interaction?	2 Marks	L2	CO1
2	Which company has developed Kismet robot and how many degrees of freedom does it have?	2 Marks	L2	CO2
3	Write full form of ASR and TTS, terms used with respect to verbal interaction in robots.	2 Marks	L2	CO3
4	What is voice detection activity in human robot interaction?	2 Marks	L2	CO3
5	Write the components of Robotic Vision System.	2 Marks	L2	CO1

Part B

Answer the Questions.

Total Marks 40M

6.	Explain about Keepon Robot, Paro Robot, Baxter Robot in detail which are part of evolution of Human Robot Interaction.	10 Marks	L3	CO1
Or				
7.	Explain Human Robot Interaction is an interdisciplinary endeavor	10 Marks	L3	CO1

	and also explain in detail about Sophia and i-Cub robot.			
--	--	--	--	--

8.	Robotic vision systems are finding an application in non-verbal human robot interaction. What is Robotic Vision System? Also explain the robotic vision system along with neat sketch.	10 Marks	L3	CO2
-----------	--	-----------------	-----------	------------

Or

9.	Explain the functions of robotic vision system in detail.	10 Marks	L3	CO2
-----------	---	-----------------	-----------	------------

10.	Many product-based companies are into the speech production in robots. Explain in detail about the speech production used in robots. Also explain the technologies used in speech production in human robot interaction.	10 Marks	L3	CO3
------------	--	-----------------	-----------	------------

Or

11.	Explain in detail about the voice detection activity and dialogue management.	10 Marks	L3	CO3
------------	---	-----------------	-----------	------------

12.	Speech is perhaps the most obvious mode of communication among humans because it is both audible and explicit. Explain in detail about the human-human verbal interaction.	10 Marks	L3	CO3
------------	--	-----------------	-----------	------------

Or

13.	Write components of speech, explain in detail about the speech recognition, speech production, voice detection in the robots.	10 Marks	L3	CO3
------------	---	-----------------	-----------	------------