



AVANTHI
INSTITUTE OF ENGINEERING & TECHNOLOGY
ECE, CSE & EEE UG Programmes are Accredited by NBA
Approved by AICTE, Recgd by Govt. of TS and Affiliated to JNTU (H)

2.5.2 Mechanism to deal with internal/external examination related grievances is transparent, time-bound and efficient

Response:

The Institute has a Dean Evaluation, appointed by the Principal for smooth execution of exams and to resolve Examination related grievances. The Dean acts as the Controller of Examination and looks after the entire system of examinations.

Grievances related to the external examinations: The grievances such as malpractice, Non-issue of Hall ticket for examination, Appointing the scribes for the students on medical grounds, non-declaration/withheld of results of students, non-receipt of marks sheet after declaration of the results, Incorrect entries in the hall tickets and mark memos, Rechecking/Revaluation.

All the above mentioned grievances of the students are forwarded to the university by the institute within the stipulated time and the same information is communicated to the concerned student.

Grievances related to internal examinations: The examination cell of the institute is solely responsible for the grievances related to the internal examinations. For the grievances regarding the mid examinations, the students can complain on any aberration in the result, within two days of the declaration of results, to the concerned faculty. Students can contact their faculty mentor, respective HOD or directly the examination cell, for any grievances related to the internal examinations. Faculty mentor can take a note of students' grievances and report the same to the faculty member and the HOD concerned. HOD may contact Dean Evaluation for any suggestion and query related to the students' grievances. As there is complete transparency in the process besides regular supervision, very less grievances is observed related to the evaluation of internal marks. However, if the student is still unsatisfied, He/she can contact the Principal, who is the highest and competent authority to resolve any issue related to the internal examinations.


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Gunthapally (V), Abdulapurmet (Mdl.), R.R. Dist.



INTERNAL DISSCRIPTIVE EXAM - MID 2



NAME: G. Sumana

ROLL No.: 19065A0305

CLASS: IV year Mech SEM. II

SIGNATURE OF THE STUDENT: Sumana

10/10 → 9/10

DATE: 29/6/22

Subject: Industrial Robotics

SIGNATURE OF THE INVIGILATOR'S: [Signature]

TOTAL MARKS:

1Q:- Define automation & explain types?

A:- → The process in which performing operation by using different kind of machine Automations & done by using control systems and by using information technologies and this will reduce the human work.

→ The industrial automation is the process in which creating the products with the help of computers and programmable controllers. Automation use control systems such as numerical controls, PLC, and other industrial control systems. By using computer aided technologies such as CAD, CAM, CAX.

* Features of industrial automation:

→ There could be automatic machines tools to process parts

[Signature]

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→ Assembly machines are automatic and used for assembling.

→ Assembly machines are automatic

→ Quality Control is done by using automatic Inspection System.

→ Due to the automatic there is Computer process control and feedback control.

Advantages :-

→ Because of industrial automation the manufacturing tasks can be done quickly and effectively.

need of automation:-

→ By the help of automation we can replace or can reduce upto 90% and human can cause error and in certain condition the error can increase, and that is why we need automation.

→ What are types of automation?

→ programmable automation

→ flexible automation

→ fixed automation.

→ Programmable automation:

By using this the production automation is capable to handle different product configurations. In the

programmable automation the operation sequence.

is controlled by the program and will be set by the instructions. and the system will be able to read these instructions and are capable to do necessary operations.

→ flexible automation;

→ By this type of automation the system can be changed from one job to the next quickly and it won't take any time. By using the flexible automation different kinds of products can be manufactured.

→ fixed automation;

In this type of operation the sequence of processing the operation is done by the equipment configuration. The sequence operation is done by the equipment configuration.

→ Advantages :

- Productivity is increased
- improved Quality
- Cost is reduced
- Safety in worked conditions.
- Accuracy
- reliability
- Quality



disadvantages:

- The sensors or robots that are used in automation can't take any judgment call.
- It takes time to repair.
- It could be hazardous and also can cause problems.

Q) Explain about Accuracy & Repeatability?

1. Accuracy:

The formal definition of Accuracy is "the degree to which a measurement, calculation, or specification conforms to the correct or known value or standard." In relation to a linear drive system, this can be taken to mean the degree to which the final position matches the commanded position. So, if we command a rack & pinion system to travel 35 mm. accuracy.

2. Repeatability:

It is a drive mechanism's ability to return the same position multiple times under identical conditions. Repeatability can be defined as uni-directional in which the point is always

approached from the same direction, or
bi-directional, in which the point can be
approached from either direction.

For real world ex g

lets consider a basketball player. if the
player is accurate he'll always get the ball
close to the hoop. if his shooting is repeatable,
he'll always shoot to the same location.

Abd

9/10

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY
IV B.Tech II Sem., I Mid-Term Examinations, MAY - 2022
ROBOTICS
Objective Exam

Name: G. Sumana

Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

Choose the correct alternative:

- Based on finger movement, Mechanical gripper can be classified as _____
A. pivoting movement B. linear or translational movement. C. Both a & b D. none (b)
- A _____ connects two or more links.
A. Joint B. actuator C. sensor D. sensor (a)
- The following coordinate systems are used to find Forward Kinematics and Inverse Kinematics equation for position analysis.
A. Cartesian B. Cylindrical C. Spherical D. all the above (c)
- A Spherical coordinate robot should have _____ joints
A. one revolute and two prismatic B. three prismatic C. two revolute and one prismatic D. a,b & c (b)
- Which of the following is the person who wrote the three laws of robotics?
A. Karel Capek B. Isaac Asimov C. Joseph-Marie Jacquard D. Richard Hohn (b)
- Homogeneous transformation is based on mapping 3- Dimensional space into _____ dimensional space.
A.1 B.2 C.3 D.4 (c)
- A transformation matrix must be in _____ form.
A. Triangle B. square C. rectangle D. circle (d)
- A robot with cylindrical configuration has
A. 3P B. 2P2R C. 1P3R D. 3R (c)
- Robots ability to position its wrist end at a desired target point with in the work volume is _____
A. Accuracy B. Repeatability C. Resolution D. Pay load (d)
- Based on the coordinate system robots can be classified as _____ robots.
A. Cartesian B. Spherical. Cylindrical D. a, b & c (a)

FILL IN THE BLANKS

- At the end of the arm clavide is attached
- A device that attaches to the wrist of the robot arm and enables the general purpose robot to perform specific task is known as end effector
- The devices used to grasp and hold the objects in a robot are called grippers
- The total number of DOF that rigid body in free space has is 6
- D-H notation is used for solving attaching problems.
- Translational matrix is the representation of 3 number of basic movement for a robot.
- A controller is a reprogrammable, multifunctional manipulator designed to move material, parts, tools or specialized devices through variable programmed motions for the performance of a variety of tasks.
- Robotic First Law states that a robot shall not harm a human, or by inaction allow a human to come to harm
- DLR Kinematics we used to determine where the robot's hand is?
- Expand DH Representation Denavit - Hartenberg

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AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

IV-B.TECH I SEMESTER

SUB: ROBOTICS

MID-1

MARKS: 10

PART-A

NOTE: Answer any two questions and each question carries 5 marks.

1. Explain about accuracy and repeatability.

OR

2. What is mean by actuator? Mention the types and explain about any one actuator with neat diagram.
3. Define automation and explain about different types of automation.

OR

4. Explain the robotic applications .



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Gangireddy (M), Abdulcader (M), R.P. Elsi



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FORMAT FOR INTERNAL EXAMINATIONS GRIEVANCES

AY: 2021-22 DATE: 08/07/23 BRANCH: Mech SUBJECT NAME: Industrial Robotics

To
The Subject Teacher,

A. Shankar

Respected sir/madam

I A. Sumana bearing Roll no: 19065A0305
studying IV year II sem in the Mechanical Department. Requesting you to
consider the following corrections in my objective/ Descriptive answer scripts.

Counting r mistake/marks not included in total /answer not corrected .

Mention question numbers

Q. NO. 2

.subject teacher comments and sign

Counting mistake , sl

adde
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Chittoor District, R.R. Dist

9/10

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

IV B.Tech II Sem., I Mid-Term Examinations, MAY - 2022

ROBOTICS

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Hall Ticket No.

19 06 RA 0305

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[Signature]
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Date:- 29/06/2022,
Aunthapally.

TO,
The HOD,
Mechanical Engineering,
Avanathi Inst. of Engg & Technology,
Aunthapally.

Sub:- Request for Re Exam of Heat
Transfer Lab Internal.

I M. Keerthana bearing HTNO: 20Q65AD303
studying mech - ^{II Sem} II year in Avanathi Inst of Engg & Technology.
Due to my health issue i didn't write the Heat
Transfer Lab Internal Exam. I admitted in Hospital
due to malaria. I am requesting you to grant the
permission to Rewrite the Lab Internal Exam.

Thanking you,

Yours obediently.

Keerthana
20Q65AD303

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Guntur Road, Abdullapuram (Mdl), P. O. Dist.