INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

Mechanical Engineering

STUDENT QUESTIONNAIRE – B.TECH PROJECT WORK

Roll Number	:	
Name of the Student	:	
Department	:	
Project Title	:	
Name of the Supervisor / Guide	:	
Academic Year	:	

I. Project Work: Program Outcomes | Program Specific Outcomes | Course Outcomes

PROGRAM OUTCOMES (PO)	
PO1	**Engineering Knowledge:** Apply the knowledge of mathematics, science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.
PO2	**Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design / Development of Solutions:** Design solutions for complex Engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and Environmental considerations.
PO4	**Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern Engineering and IT tools including prediction and modeling to complex Engineering activities with an understanding of the limitations
PO6	**The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and Sustainabilit**y: Understand the impact of the professional Engineering solutions in societal and Environmental contexts, and demonstrate the knowledge of, and need for sustainable development
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project Management and Finance:** Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary Environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSO)	
PSO1	Focus on Ideation and Research towards Digital manufacturing in Product development using Additive manufacturing, Computer Numerical Control (CNC) simulation and high speed machining.
PSO2	Formulate and Evaluate concepts of Thermo-Fluid Systems to provide solutions for Inter Disciplinary Engineering Applications.
PSO3	Make use of Computational and Experimental tools for Building Career Paths towards Innovation Startups, Employability and Higher Studies.
COURSE OUTCOMES (CO)	
CO1	Apply the knowledge to implement an investigative or developmental project given general objectives and guidelines.
CO2	Make use of laboratory, modern tools and techniques for implementing the project in particular, and on society in general.
CO3	Analyze data to produce useful information and to draw conclusions by systematic deduction.
CO4	Discover the individual / team interactions for an inter-disciplinary research experience.
CO5	Examine the results, concepts, analyses and ideas in written and oral form.
CO6	Evaluate an extended independent investigation that results in the production of a research thesis in the contemporary challenges.

II. Mapping of each CO with PO(s), PSO(s)

COURSE OUTCOMES	PROGRAM OUTCOMES												PSO'S		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	✓	✓	✓	✓					✓	✓			✓	✓	
CO2	✓	✓	✓	✓	✓			✓	✓	✓			✓	✓	✓
CO3	✓	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	
CO4	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓
CO5	✓	✓	✓			✓	✓	✓	✓	✓			✓		✓
CO6	✓	✓	✓	✓				✓	✓	✓		✓	✓	✓	✓

III. To what extent did each of the following contribute to:

S. No	Specification	Rubric Strength				
Please **circle** a number, 1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent						
1	Apply the knowledge to implement an investigative or developmental project given general objectives and guidelines.	**1**	**2**	**3**	**4**	**5**
2	Make use of laboratory, modern tools and techniques for implementing the project in particular, and on society in general.	**1**	**2**	**3**	**4**	**5**
3	Analyze data to produce useful information and to draw conclusions by systematic deduction.	**1**	**2**	**3**	**4**	**5**
4	Discover the individual / team interactions for an inter-disciplinary research experience.	**1**	**2**	**3**	**4**	**5**
5	Examine the results, concepts, analyses and ideas in written and oral form.	**1**	**2**	**3**	**4**	**5**
6	Evaluate an extended independent investigation that results in the production of a research thesis in the contemporary challenges.	**1**	**2**	**3**	**4**	**5**

IV. Answer the following questionnaire on attainment of COs, POs and PSOs of your project work.

1. How did you plan and implement your project? (1-2 sentences). **[CO1]**
   Answer:

2. How important would it be to continue learning about engineering, upgrading your skills throughout your lifetime of employment? Why is this important? (1-2 sentences). **[CO2]**
   Answer:

3. What contemporary issues in society and your branch of engineering do you see as being related to your project, or its topical area? What impact of results / conclusions do you think a project or topic like this has on your responsibilities in particular, and on society in general? (3-4 sentences). **[CO3]**
   Answer:

4. Explain your role in the team and your supervisor in successful completion of the project? **[CO4]**
   Answer:

5. Write in brief the concepts and analyses used in your project and the main result of project. **[CO5]**
   Answer:

6. What impact does your project, or research in the area of your project, have on the global community in general, and on our society in particular? (1-3 sentences). **[CO6]**
   Answer:

Date: **Signature of the student**