Code No: 80342   MR18(2018-19)   HT.NO:

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
Maisammaguda, Dhulapally, (Post Via Kompally), Secunderabad-500100.
B.TECH IV YEAR I SEMESTER REGULAR EXAMINATIONS, JANUARY-2022
SUBJECT: Unconventional Machining Processes
BRANCH: ME

Time: 3 hours   Max. Marks: 70

Answer all questions   5X14M=70 M

All Questions carries equal marks

Q.NO	QUESTIONS	MARKS	*BT LEVEL	CO
1.	Classify unconventional Machining processes according to major energy source employed in the process.	14	L3	1
	OR			
2.	a) What are the basic requirements of tool feed mechanism in Ultrasonic Machining process? Explain	7	L3	1
	b) Explain the factors, which influence the metal removal rate in Ultrasonic Machining. Explain.	7	L2	
3.	Draw the schematic diagram of Abrasive jet Machining process and explain the importance of the main elements in Abrasive Jet Machining process	14	L2	2
	OR			
4.	a) Explain the various process parameters that affect the material removal rate and surface quality in Electro Chemical Machining.	7	L3	2
	b) What is the principle of Water Jet Machining? Describe the working of a Water Jet Machining system with a neat sketch.	7	L3	
5.	a) Explain how the pulses can be controlled in Electric Discharge Machining using Relaxation circuit.	7	L2	3
	b) With the help of a line diagram explain the working of Electric Discharge Grinding.	7	L2	
	OR			
6.	a) What are the desirable properties of a dielectric fluid? Gives some examples for dielectric fluids. Explain the functions of dielectric fluid.	7	L2	3
	b) Explain the process of wire cut Electric Discharge Machining and list any two of its advantages, limitations and applications.	7	L2	
7.	Describe the Electron Beam Machining process with a simple sketch and also relate process parameters affecting Electron Beam Machining performance.	14	L2	4
	OR			
8.	a) What are the materials generally used for generation of laser? Explain.	7	L3	4
	b) Discuss the thermal features of laser beam	7	L2	
9.	With neat diagram explain the principle of Plasma arc machining. State its advantages, limitations and application.	14	L3	5
	OR			
10.	What are the steps involved in the chemical machining? Explain.	14	L3	5

*Bloom's Taxonomy Level (BT Level): L1-Remember, L2- Understand, L3- Apply, L4- Analyse, L5- Evaluate, L6- Create.

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B.TECH IV YEAR I SEMESTER REGULAR EXAMINATIONS, JANUARY-2022

SUBJECT: PRODUCTION PLANNING AND CONTROL

BRANCH: ME

Time: 3 hours   Max. Marks: 70

Answer all questions   5X14M=70 M

All Questions carries equal marks

Q.NO	QUESTIONS	MARKS	*BT LEVEL	CO
1.	a) Explain different types of production systems and differentiate between them. b) Distinguish between production planning and production control and state their objectives. c) What is PPC and what are its objectives? Explain in detail.	5 5 4	L2	1
	OR			
2.	a) Discuss the organization structure of Production planning and control department. b) Explain the functions of production planning and control.	7 7	L2	1
3.	a) Discuss the factors which affect the choice of forecasting method. b) A firm uses simple exponential smoothing with α =0.3 to forecast demand. The forecast for the first week of January was 500 units, whereas actual turned out to be 450 units. (i) Forecast the demand for the second week of January (ii) Assume that the actual demand during the second week of January turned out to be 550 units. Forecast the demand up to February third week, assuming the subsequent demands as 475, 450, 470, 525, and 470 units.	7 7	L2	2
	OR			
4.	Write short notes on a) Qualitative and Quantitative methods b) Types of forecasting's	 7 7	L4	2
5.	a) What is meant by VED analysis? What is its significance? b) Alpha industry estimates that it will sell 12000 units of its product for the forthcoming year. The ordering cost is Rs. 100 per order and the carrying cost per unit per year is 20% of the purchase price per unit. The purchase price per unit is Rs.50.Find i) Economic Order quantity, ii) No. of orders per year and iii) Time between successive orders.	7 7	L4	3
	OR			
6.	a) Explain the use of Line of Balance (LOB) in Production control. Explain in detail the steps involved in LOB. b) Explain the various elements of Just in Time.	7 7	L2	3
7.	a) Explain about Bill of Materials with a suitable example. b) Explain about any one scheduling policy.	7 7	L2	4
	OR			
8.	a) Explain the steps involved in the preparation of route sheet. b) Distinguish between the routing functions of continuous and intermittent productions.	7 7	L2	4

9.	a) Describe the following costs in aggregate planning and explain the difficulties that arise in attempting to measure them in a real operation environment. i) Smoothing costs (ii) Holding costs		L2	5
		7		
	b) What are the stages of follow up? Explain any two.	7		
	OR			
10.	a) What are the functions of dispatching?	7	L2	5
	b) Explain the applications of computer in production planning and control.	7		

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B.TECH IV YEAR I SEMESTER REGULAR EXAMINATIONS, JANUARY-2022

SUBJECT: Product Design & Development

BRANCH: ME

Time: 3 hours   Max. Marks: 70

Answer all questions   5X14M=70 M

All Questions carries equal marks

Q.NO.	QUESTIONS	MARKS	*BT LEVEL	CO
1.	Illustrate the following a) Characteristics of successful product development. b) Challenges in new product development.	7 7	L3	1
	OR			
2.	a) List out the steps involved in the application of generic product development process. b) Make use of diagram explain the steps involved in reverse engineering.	7 7	L4 L3	1
3.	What are the various tools available to help generate concepts? Elaborate. With an example illustrate how one of the tools is used to generate concepts	14	L2	2
	OR			
4.	Product Specification changes as the product transforms from the concept to the final product. Elaborate with an example why this happens and what needs to be done from the designer point of view.	14	L2	2
5.	a) Describe the factors to be considered for selection of concept. b) Distinguish concept screening and concept scoring in product development process.	7 7	L2 L4	3
	OR			
6.	Elaborate with the case study the application of Quality function Deployment in Product Development.	14	L3	3
7.	Elaborate the product architecture design process with suitable example.	14	L3	4
	OR			
8.	Sketch the classifications of product architecture and explain the implications of product architecture.	14	L3	4
9.	Briefly describe the principles and evaluation methods of various aspects of design for environment with suitable example.	14	L4	5
	OR			
10.	Distinguish product reliability and product maintainability with suitable examples.	14	L4	5

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B.TECH IV YEAR I SEMESTER REGULAR EXAMINATIONS, JANUARY-2022

SUBJECT: Python Programming

BRANCH: COMMON TO ME, EEE

Time: 3 hours   Max. Marks: 70

Answer all questions   5X14M=70 M

All Questions carries equal marks

Q.NO	QUESTIONS	MARKS	*BT LEVEL	CO
1.	a) What is a REPL in Python? How do you use REPL in Python? b) Explain about the input and output statements or methods with an example.	14	L2	1
	OR			
2.	a) Write a python code to demonstrate type conversions using int (), float () and str ()? b) Write a short note on history and features of python.	14	L2	1
3.	a) Write a Python program that reads a number in feet, converts it to meters, and displays the result. One foot is **0.305** meters. b) Outline with an example the assignment and bitwise operators supported in Python.	14	L3	2
	OR			
4.	a) List various types of operators in Python and write any 4 types of operators. b) What is a loop in programming language? Explain any one loop in detail with an example in Python.	14	L3	2
5.	Create a list and perform the following methods with an example. 1) insert() 2) remove() 3) append() 4) len() 5) pop() 6) clear()	14	L4	3
	OR			
6.	a) Differentiate key word and default arguments. b) An digit integer is entered through the keyboard. Write a function to Calculate the sum of the n digit number.	14	L3	3
7.	a) What are modules in Python? b) How to create a module? c) What is import statement in modules?	14	L2	4
	OR			
8.	What is an Exception? Explain types of exceptions and give an example.	14	L2	4
9.	a) Explain about Data Compression with an example in Python. b) Explain about Dates and Times with an example.	14	L2	5
	OR			
10.	What is multi-threading in Python? Explain different types of multi-threading in Python.	14	L2	5

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B.TECH IV YEAR I SEMESTER REGULAR EXAMINATIONS, JANUARY-2022
SUBJECT: Green Buildings
BRANCH: COMMON TO ME, MINING, CSE&IT

Time: 3 hours   Max. Marks: 70

Answer all questions   5X14M=70 M
All Questions carries equal marks

Q.NO.	QUESTIONS	MARKS	*BT LEVEL	CO
1.	a) Differentiate between conventional building and green building.	7	L2	1
	b) Explain on the sources of green materials.	7	L2	1
	OR			
2.	a) Discuss on the high performance green buildings.	7	L2	1
	b) Describe various methods and tools used for building assessment.	7	L2	1
3.	a) Write a detailed note on the process of green buildings.	7	L2	2
	b) Explain the advantages of green building with relevance to the safety.	7	L2	2
	OR			
4.	a) What are the strategies followed for the selection of green building sites?	7	L2	2
	b) Discuss on the disadvantages of green buildings with relevant examples.	7	L2	2
5.	Discuss in detail various strategies used in green buildings.	14	L2	3
	OR			
6.	a) Write a short note on building commissioning strategies.	7	L2	3
	b) Explain about the team responsibilities and controls required for the construction of green buildings.	7	L2	3
7.	a) Write a short note on the economic issues of green buildings development.	7	L2	4
	b) Explain tools used for cost estimation of green buildings.	7	L2	4
	OR			
8.	Discuss in detail the future directions in green building technologies with a relevant case study.	14	L2	4
9.	a) Discuss on the carbon accounting for green buildings.	7	L2	5
	b) Write a short note on the net zero energy buildings.	7	L2	5
	OR			
10.	Explain about sustainable green building with a relevant case study.	14	L2	5

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B.TECH IV YEAR I SEMESTER REGULAR EXAMINATIONS, JANUARY-2022

SUBJECT: English Language Skills

BRANCH: ME

Time: 3 hours   Max. Marks: 70

Answer all questions   5X14M=70 M

All Questions carries equal marks

Q.NO.	QUESTIONS	MARKS	*BT LEVEL	CO
1.	What is the importance of communication skills? Explain oral, aural and written communication.	14	L2	1
	OR			
2.	Elaborate on 'Rate of Speech, Pitch and clarity in communication with practical examples.	14	L2	1
3.	Explain verbal and non-verbal communication. What care must one take to avoid miscommunication?	14	L2	2
	OR			
4.	Define kinesics and elucidate on the importance of body language in communication and conversation in various contexts.	14	L3	2
5.	Explain the types of reading. Write brief notes on Factual reading, Contextual clues and Inferring.	14	L2	3
	OR			
6.	What is critical reading? Explain the importance and strategies of critical reading.	14	L2	3
7.	Write a persuasive essay on the need of spending time with family and recreation instead of getting addicted to mobile phones and gadgets. Give an attractive title to the essay.	14	L3	4
	OR			
8.	How important is the skill of writing effective official letters? Write notes on Format, Styles and effectiveness with examples.	14	L2	4
9.	You are the Secretary of a student NGO which took up several social service initiatives during the pandemic. Prepare a report to submit to the District Collector.	14	L3	5
	OR			
10.	Explain the Mechanics, Methodology and Characteristics of effective writing.	14	L2	5

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B.TECH IV YEAR I SEMESTER REGULAR EXAMINATIONS, JANUARY-2022

SUBJECT: Environmental Impact Assessment and Life Cycle Analysis

BRANCH: ME

Time: 3 hours   Max. Marks: 70

Answer all questions   5X14M=70 M

All Questions carries equal marks

Q.NO.	QUESTIONS	MARKS	*BT LEVEL	CO
1.	a) Differentiate between Environmental Impact Statement (EIS) and Environmental Management Plan (EMP).	7	L3	1
	b) Explain about the network methods.	7	L2	1
	OR			
2.	a) Discuss various factors affecting EIA.	7	L2	1
	b) Explain the Environmental media quality index method.	7	L2	1
3.	a) Describe the environment impacts of deforestation.	7	L2	2
	b) Evaluate the developmental activities on ground water environment by using systematic method.	7	L3	2
	OR			
4.	Explain about methodology for the assessment of impacts on surface water environment.	14	L2	2
5.	Describe in detail the steps involved in the study of impact assessment on air environment.	14	L2	3
	OR			
6.	a) Discuss the criteria used for mitigation of noise impacts.	7	L2	3
	b) Explain the assessment of impact of developmental activities on wild life.	7	L2	3
7.	a) Discuss the salient features of Environmental Protection Act?	7	L2	4
	b) What is the purpose of post environment audit?	7	L2	4
	OR			
8.	a) Write about Water Act and Motor Act.	7	L2	4
	b) Describe the advantages and disadvantages of environment audit protocols.	7	L3	4
9.	Discuss how you will prepare an EIA for a national highway projects.	14	L2	5
	OR			
10.	Describe the preparation of EIA for a river valley projects.	14	L2	5

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