Hall Ticket Number :										

R-20

Code: 20AE5AT

III B.Tech. I Semester Supplementary Examinations June 2023

Human Resource Management

(Common to CE, EEE & ECE)

Max. Marks: 70 Time: 3 Hours

****

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. In Part-A, each question carries **Two marks.**
3. Answer **ALL** the questions in **Part-A** and **Part-B**

PART-A

(Compulsory question)

1. Answer ***all*** the following short answer questions (5 X 2 = 10M)	CO	BL
a) Define HRM.	1	1
b) Define Job Design.	1	1
c) Define Placement.	1	1
d) List out the need for training employees.	1	1
e) Define Compensation.	1	1

PART-B

Answer *five* questions by choosing one question from each unit (5 x 12 = 60 Marks)

		Marks	CO	BL
	UNIT–I			
2.	Discuss in detail, the managerial and operative functions of HRM.	12M	1	2
	OR			
3.	Describe the nature, significance and scope of HRM.	12M	1	2
	UNIT–II			
4.	Write a detailed note on the various factors effecting human resource planning and the various hindrances to effective HRP.	12M	2	2
	OR			
5.	Describe in detail, the significance and process involved in job analysis.	12M	2	2
	UNIT–III			
6.	Discuss in detail, the various factors governing recruitment.	12M	3	2
	OR			
7.	Discuss in detail, the various steps in the selection process.	12M	3	2
	UNIT–IV			
8.	Describe in detail, the various stages in career development.	12M	4	2
	OR			
9.	Discuss in detail, the various methods of off the job training citing examples as applicable.	12M	4	2
	UNIT–V			
10.	Discuss in detail, the various methods of performance appraisal.	12M	5	2
	OR			
11.	Discuss in detail the process of grievance redressal in organizations.	12M	5	2

*** End ***

Hall Ticket Number :										

R-20

Code: 20A45BT

III B.Tech. I Semester Supplementary Examinations June 2023

Nano Electronics

(Electronics and Communication Engineering)

Max. Marks: 70 Time: 3 Hours

****

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. In Part-A, each question carries **Two marks.**
3. Answer **ALL** the questions in **Part-A** and **Part-B**

PART-A

(Compulsory question)

			CO	BL
1.	Answer all the following short answer questions	(5 X 2 = 10M)		
	a) What is nanotechnology?		CO1	L1
	b) Define Quantum wires.		CO2	L2
	c) List any two quantum electronic devices.		CO3	L1
	d) List the most common tunneling elements.		CO4	L1
	e) What is Heat dissipation of IC`s?		CO5	L2

PART-B

Answer *five* questions by choosing one question from each unit (5 x 12 = 60 Marks)

			Marks	CO	BL
		UNIT–I			
2.	Describe the following components of Scanning Electron Microscope				
	a) Electron Gun		6M	CO1	1,2
	b) Electronic Lens		6M	CO1	1,2
		OR			
3.	a) With schematic describe Scanning Tunneling Microscopy		6M	CO1	2,3
	b) With schematic, describe confocal Microscopy.		6M	CO1	2,3
		UNIT–II			
4.	a) Illustrate the split-gate technology		6M	CO2	3,4
	b) Discuss the model of semiconductor hetero structures using a clean sketch.		6M	CO2	2,3
		OR			
5.	a) With a drawing, describe the principles of Lithography.		6M	CO2	1,2
	b) With a drawing, describe the principles of nano imprint lithography.		6M	CO2	4,2

UNIT–III

6.	a)	Shortly describe the various MOSFET short channel effects.	6M	CO3	3
	b)	Explain the concept and operation of split-gate transistor using the appropriate schematics.	6M	CO3	2

OR

7.	a)	Describe in depth the quantum dot array	6M	CO3	2
	b)	Shortly describe the Electron-spin transistor.	6M	CO3	3

UNIT–IV

8.	a)	What are Three-Terminal Resonant Tunneling Devices? Explain the technology of RTD.	6M	CO4	4
	b)	Illustrate the Performance of the Single-Electron Transistor.	6M	CO4	2

OR

9.	a)	Comparison between FET and SET circuit design.	6M	CO4	3
	b)	Portray exhaustively the design of basic Logic gates Inverter and OR gate based on RTDS.	6M	CO4	2

UNIT–V

10.	a)	Write a note on Energy Supply and Heat Dissipation	6M	CO5	2,1
	b)	Analyze the Limits due to thermal particle motion	6M	CO5	4

OR

11.		Write a note on the following			
	a)	Thermodynamic Limits	4M	CO5	2
	b)	Relativistic Limits	4M	CO5	2
	c)	Quantum-Mechanical Limits	4M	CO5	2

*** End ***