H.T No: | | | | | | | | | | | R18 | Course Code: A30531

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VI Semester Supplementary Examinations Jun/ July-2024

Course Name: Python Programming

(Electronics & Communication Engineering)

Date: 06.07.2024 FN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Classify various literals used in python.	2 M
2.	How to specify an empty body of FOR Loop?	2 M
3.	What is an iteration in python?	2 M
4.	What is the use of return statement in python?	2 M
5.	How many ways dictionary can be created and initialized?	2 M
6.	Differentiate index( ) and find( ) in strings.	2 M
7.	Differentiate Class & Object.	2 M
8.	Write the purpose of constructor.	2 M
9.	What is the use of destroy( ) function in tkinter Module?	2 M
10.	Which function is used to make the arrow color as black?	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Demonstrate various operators supported in python with suitable examples.	10M
	OR	
11. B).	Write a python script to calculate a student's result based on results of 2 examinations, 1 sports event and 3 activities conducted. The weightage of activities = 30%, Sports = 20% and Examination = 50%.	10M
12. A).	Summarize various mathematical functions and constants available in python with example.	10M
	OR	
12. B).	Define a function and Illustrate types of function arguments with example.	10M
13. A).	Compare and Contrast Lists, Tuples and Sets.	10M
	OR	
13. B).	Write a Python script that counts the number of occurrences of a letter in a string, using dictionaries.	10M
14. A).	Demonstrate class, superclass and subclass with suitable example.	10M
	OR	
14. B).	Create 4 classes with the names as 'Shape', 'Triangle', 'Rectangle', and 'Square'. Make the 'Shape' as 'Abstract Base Class (ABC)' and remaining 3 are 'Derived Classes' of 'Shape'. In 'Shape' Class, create an 'abstract method' with the name area( ) and show the implementation (calculation of area using parameters) of that method in the derived classes.	10M

(P.T.O..)

15. A). Describe the Tkinter module in Python for building GUIs. 10M

OR

15. B). Write a Python program using the Turtle module to draw various geometric shapes like square, rectangle, triangle, circle. The program should allow the user to choose which shape to draw and specify its size or dimensions. 10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30165**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VI Semester Regular Examinations Jun/ July-2024

Course Name: Sustainability Concepts in Civil Engineering

(Common for CSE, CSC, CSM, AIM, CSD & AID)

Date: 06.07.2024 FN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1. What is role of technology in sustainable development? 2 M
2. List 2 multilateral environmental protocols and give its salient features. 2 M
3. What do you mean by resource degradation? List the causes? 2 M
4. What is Life Cycle Assessment? Give its importance? 2 M
5. What do you mean by sustainable habitat? Explain. 2 M
6. What is GRIHA? Give its salient features. 2 M
7. List challenges in harnessing wind energy. 2 M
8. What are biofuels? Explain the consequences of use of bio fuels? 2 M
9. What do you mean by social and technological change in sustainability? 2 M
10. What is Industrial ecology? Explain. 2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A). Define Sustainability. Discuss briefly the Socio-Environmental and Economic Sustainability concepts. 10M

OR

11. B). i) Explain the challenges in sustainable development. 5M
ii) Discuss the salient aspects of Water Act. 5M

12. A). Explain the causes for climate change? Suggest strategies to control climate change. 10M

OR

12. B). What is meant by Carbon Sequestration? Explain the steps involved in carbon sequestration with a neat sketch. 10M

13. A). What are Green buildings? Explain the Green Building Concepts and Sustainable design adopted in India. 10M

OR

13. B). Discuss the concepts of energy efficient building design. Explain various methods used for achieving energy efficiency. 10M

14. A). i) Present a detailed classification of energy resources and give two examples each. 5M
ii) Discuss the challenges in capturing solar energy. 5M

OR

14. B). i) With help of a sketch, explain the working principles of Fuel cells. 5M
ii) Explain the concept of rain water harvesting and its importance in urban areas. 5M

(P.T.O..)

15. A). What is Green Engineering? Discuss the principles of green engineering. 10M

OR

15. B). i) What is Sustainable Urbanization? Explain strategies used to achieve it. 10M

ii) Write a detailed note pollution prevention.

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H.T No: | | | | | | | | | | | R18 | Course Code: A30477

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VI Semester Regular Examinations Jun/ July-2024

Course Name: Fundamentals of Embedded Systems

(Common for CSE, IT, CSC, CSM, AIM & CSD)

Date: 06.07.2024 FN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Give some important applications of embedded systems.	2 M
2.	Define an embedded system.	2 M
3.	What is a sensor?	2 M
4.	List the examples of on-board communication interface.	2 M
5.	What are the embedded firmware development languages?	2 M
6.	Describe the use of oscillator unit.	2 M
7.	What is a Task Control Block?	2 M
8.	Write about threads.	2 M
9.	What is message queue?	2 M
10.	What is the function of sockets?	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Explain the different classification of embedded systems with an example.	10M
	OR	
11. B).	Explain the different characteristics of embedded systems in details.	10M
12. A).	Explain on-board and external communication interfaces in detail.	10M
	OR	
12. B).	i) Discuss the different factors that needs to be considered in the selection of memory for embedded systems.	5M
	ii) Distinguish between SRAM and DRAM.	5M
13. A).	i) Discuss the significance of Watchdog timer in an Embedded.	5M
	ii) Describe the role of reset circuit in embedded system.	5M
	OR	
13. B).	Explain the various design approaches of embedded firmware.	10M
14. A).	i) Differentiate multitasking and multiprocessing.	5M
	ii) What is a process? With a neat representation explain the process states and state transition?	5M
	OR	
14. B).	i) Compare General purpose operating system and Real Time Operating System.	5M
	ii) Explain the role of RTC in embedded system design.	5M

(P.T.O..)

15. A). Explain the architecture of device drivers and discuss the role of device driver in embedded OS based products. 10M

OR

15. B). i) Explain message passing technique for inter process communication in detail. 5M

ii) How the concept of Shared memory is used in task communication? Discuss in detail. 5M

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H.T No: | | | | | | | | | | | **R18** **Course Code: C30168**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VI Semester Regular/ Supplementary Examinations Jun/ July-2024

Course Name: Intellectual Property Rights

(Common for CSE, CSC, CSM, AIM, CSD & AID)

Date: 06.07.2024 FN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)
Each question carries TWO marks. **10x2=20M**

1. What is Intellectual Property? 2 M
2. What are the objectives of Intellectual property rights? 2 M
3. Give examples of Trade mark. 2 M
4. What are various types of trademarks? 2 M
5. What are the basic requisites of Patentability? 2 M
6. What are the objectives of Copyrights? 2 M
7. What is Trade secret litigation? 2 M
8. Write about Misappropriation right of publicity. 2 M
9. Write about International Copy right law. 2 M
10. Write about International Trade mark law. 2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A). What is Intellectual Property Rights (IPR)? What are the different types of IPR? 10M

OR

11. B). What is the importance of Intellectual property rights? 10M

12. A). What do you mean by Trade mark? What are the functions of Trade mark? 10M

OR

12. B). Discuss about Trade mark selection and evaluation procedure. 10M

13. A). Explain about Copyright, process of Copyright registration. 10M

OR

13. B). Elaborate the procedure meant for filing of patents in India 10M

14. A). What is unfair competition? Write about the protection of unfair competition. 10M

OR

14. B). Write about liability for misappropriation of Trade secrets. 10M

15. A). What is international overview on Intellectual property. 10M

OR

15. B). What are the new developments in Trade mark law and Copyrights law? 10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: C30164**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VI Semester Regular/ Supplementary Examinations Jun/ July-2024

Course Name: Entrepreneurship

(Common for CSE, IT, CSC, CSM, AIM, CSD & AID)

Date: 06.07.2024 FN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Define entrepreneur.	2 M
2.	List out the characteristics of entrepreneur.	2 M
3.	What is entrepreneurial personality?	2 M
4.	Define the term Resilience.	2 M
5.	State the qualities of a creative person.	2 M
6.	Outline the types of Innovation.	2 M
7.	Write a short note on Trademarks.	2 M
8.	Define Intellectual property rights.	2 M
9.	Mention the importance of Strategic positioning.	2 M
10.	Name the importance of strategic planning.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Discuss the recent trends in the entrepreneurship development in India.	10M
	OR	
11. B).	Summarize the growth and evaluation of Entrepreneurship in India.	10M
12. A).	Enumerate the motivational drivers of an entrepreneur.	10M
	OR	
12. B).	Explain about Entrepreneurial Stress and Ego.	10M
13. A).	Define Corporate creativity. Explain its importance in today's context.	10M
	OR	
13. B).	Elucidate the seven sources of innovation process.	10M
14. A).	Illustrate the measures to be taken for the promotion of a venture.	10M
	OR	
14. B).	Discus the scope and importance of IPR in Entrepreneurship.	10M
15. A).	Define Strategic planning explain its importance in entrepreneurship.	10M
	OR	
15. B).	Describe the various stabilization strategies used in entrepreneurship.	10M

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H.T No: | | | | | | | | | | | R18 | Course Code: A30378

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VI Semester Regular/ Supplementary Examinations Jun/ July-2024

Course Name: Waste to Energy

(Common for CSE, IT, CSC, CSM, AIM, CSD & AID)

Date: 06.07.2024 FN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Write the classification of waste as fuel.	2 M
2.	Explain about MSW.	2 M
3.	Define pyrolytic oil.	2 M
4.	Write short notes on Charcoal.	2 M
5.	Define gasifier.	2 M
6.	Write short notes on Downdraft.	2 M
7.	Write Short notes on Biomass stoves.	2 M
8.	Define Inclined Grate combustors.	2 M
9.	Classify Biogas plants.	2 M
10.	Explain briefly about Biomass resources.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Explain the importance of Industrial waste utilization with neat sketches.	10M
	OR	
11. B).	Explain the following gasifies with neat sketches i) Updraft ii) Down draft gasifier.	10M
12. A).	Explain about the various types of pyrolysis? Write the Comparison between methods.	10M
	OR	
12. B).	Explain about primary applications of Syngas in various engineering fields.	10M
13. A).	Explain Gasifier burner arrangement for thermal heating in detail	10M
	OR	
13. B).	How gasifier output is utilized in Electrical Power Plants – Justify.	10M
14. A).	Explain Design, Construction and Operation of Fixed bed Combustor	10M
	OR	
14. B).	Explain the Design, Construction and Operation of Fluidized bed combustor with neat sketches.	10M
15. A).	Explain Design, Constructional features of Biogas Plant Technology.	10M
	OR	
15. B).	Explain Alcohol production from Biomass	10M

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H.T No: | | | | | | | | | | | **R18** | **Course Code: A30164**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VI Semester Regular/ Supplementary Examinations Jun/ July-2024

Course Name: Basic of Civil Engineeirng

(Common for CSE, CSC, CSM & AIM)

Date: 06.07.2024 FN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1. List any four types of buildings as per National Building Code. 2 M
2. What is Flex building and list any two uses? 2 M
3. Define surveying. 2 M
4. Name any four building area terms. 2 M
5. What is cement mortar and list any two places in building where it is used? 2 M
6. Why do we use HYSD bars are reinforcement in structural members? 2 M
7. Name any four types of brick masonry. 2 M
8. List out various types of roofs. 2 M
9. What is basic difference between Elevator and Escalator? 2 M
10. What is Intze tank? 2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A). Illustrate about various components of a residential building with a neat sketch. 10M

OR

11. B). Classify Industrial buildings and explain briefly about each with a neat sketch. 10M

12. A). Analyze various building areas using a 2BHK plan of your own. 10M

OR

12. B). The following offsets are taken from a chain line to an irregular boundary towards right side of the chain line. Distinguish the area's using Trapezoidal and Simpson's rule 10M

Chainage	0	25	50	75	100	125	150
Offset 'm'	3.6	5.0	6.5	5.5	7.3	6.0	4.0

13. A). Classify various types of cements and list their uses in building construction. 10M

OR

13. B). The following staff readings were observed successively with a dumpy level. The instrument has been shifted after the fourth, sixth and eighth readings: 1.895, 1.500, 1.865, 2.570, 2.990, 2.020, 2.410, 2.520, 2.960, 3.115. The first reading was with staff held on benchmark of RL 30.500m. Determine the RL of all points with use of rise and fall method. 10M

14. A). Distinguish different types of paints that are used in buildings. 10M

OR

14. B). Explain any four various types of foundations with neat sketches. 10M

15. A). Explain about the Intelligent buildings. 10M

OR

15. B). Explain about the various materials that are used in sound-proofing of a building. 10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30358**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VI Semester Regular/ Supplementary Examinations Jun/ July-2024

Course Name: Industrial Safety Engineering

(Common for CSE, IT, CSC, CSM, AIM, CSD & AID)

Date: 06.07.2024 FN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Give any two causes of accidents in mechanical industry.	2 M
2.	Write about the safety policy for industry.	2 M
3.	List any four types of maintenance.	2 M
4.	What is the difference between maintenance and maintainability	2 M
5.	List the differences between wear and corrosion.	2 M
6.	List any two types of corrosions and its prevention methods.	2 M
7.	What is fault tracing concept?	2 M
8.	List various types of Machine Faults.	2 M
9.	What is Periodic Maintenance?	2 M
10.	Write about Schedule maintenance.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Explain the need of safety planning in industry. And also write the salient features of Factory Act 1948.	10M
	OR	
11. B).	Give the need of precaution to be taken against Electrical hazards. Explain it in details.	10M
12. A).	State function and responsibilities of maintenance department. Explain the procedure of Shut down maintenance.	10M
	OR	
12. B).	Explain about process of identifying the service life of equipment with example.	10M
13. A).	Explain the working of Splash lubrication with neat sketch and write its applications.	10M
	OR	
13. B).	Explain about pitting corrosion in detail and discuss the factors that influence the rate of corrosion.	10M
14. A).	Explain the process of fault finding activities along with the decision tree for electrical motors.	10M
	OR	
14. B).	What are the different types of failures in machine tools and write its general causes for each?	10M
15. A).	Explain the common troubles and remedies of electric motor with the help of decision tree.	10M
	OR	
15. B).	Define 'Preventive Maintenance'. What is its primary goal? How do you evaluate a Preventive Maintenance Program? Explain with example.	10M

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