

Code No: M0124

R07

Set No.1

IV B.Tech. I Semester Regular Examinations, November, 2011
ENVIRONMENTAL ENGINEERING - II
(Civil Engineering)

Time: 3 Hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. What is Climate Change? What are Carbon credits? Discuss briefly the sources, effects and methods of control of GHE, Ozone Holes and Heat Islands.
2. a) Discuss the suitability of various Particulate Control Devices with reference to Particle size, Head loss, Efficiency of removal of particles of various sizes, and Advantages and disadvantages.
b) Describe the general methods of controlling gaseous emissions.
3. Describe the functional and operational aspects, advantages and disadvantages and suitability of various Advanced Water Treatment Processes like Ion Exchange, Reverse Osmosis and Adsorption for supply of water to an industrial estate.
4. Describe the Common Methods of treatment of industrial wastewaters like Volume reduction, strength reduction, neutralization, Equalization, Color and Odor removal, Removal of Iron and Manganese, Removal of Nitrogen and Phosphorous compounds, in detail. Discuss the suitability of biological treatment methods in treating industrial wastewaters.
5. Describe the Solid Waste Management Methodologies to be adopted for a city like Visakhapatnam, stepwise. Describe the operations of a Municipal incinerator, Composting and Land-filling in detail.
6. Describe in detail the methods of treatment and management of Hazardous wastes with special reference to treatment and management of Biomedical wastes, Chemical wastes and Nuclear wastes.

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7. Describe the various methods of reducing noise in residential areas and industries, with reference to Noise Standards.

8. Write short notes on:
 - a) Environment Protection Act
 - b) Effects of SO₂, NO_x, CO and SPM on man, material and vegetation
 - c) Collection, handling and processing of Solid wastes before treatment
 - d) Defluoridation

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Set No.2

IV B.Tech. I Semester Regular Examinations, November, 2011
ENVIRONMENTAL ENGINEERING - II
(Civil Engineering)

Time: 3 Hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. What is Climate Change? Discuss briefly the sources, effects and methods of control of GHE, Ozone Holes, Acid Rains and Heat Islands.
2. a) Discuss the suitability of various Particulate Control Devices with reference to Particle size, Head loss, Efficiency of removal of RPM and Advantages and disadvantages.
b) Describe the design and functional details of ESPs and Packed Towers.
3. Describe the operational aspects, advantages and disadvantages and suitability of various Advanced Water Treatment Processes for supply of water to a village or an industry.
4. Describe the Common Methods of treatment of industrial wastewaters in detail.
5. Describe the Solid Waste Management Methodology to be adopted for a city like Kakinada, stepwise. Discuss the possibility of various devices and describe the operation of a Municipal incinerator in detail.
6. Describe in detail the methods of treatment of Hazardous wastes with special reference to Management of Biomedical wastes, Chemical wastes and Nuclear wastes.
7. Describe the various methods of reducing noise in residential areas and industries.
8. Write short notes on:
 - a) Reverse Flow Cyclones
 - b) Environmental Protection Act
 - c) Collection, handling and processing of Solid wastes before treatment
 - d) Defluoridation

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Set No.3

IV B.Tech. I Semester Regular Examinations, November, 2011
ENVIRONMENTAL ENGINEERING - II
(Civil Engineering)

Time: 3 Hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. What is Climate Change? What are Carbon credits? Discuss briefly the sources, effects and methods of control of GHE, Ozone Holes, Acid Rains and Heat Islands.
2. a) Discuss the suitability of various Particulate Control Devices with reference to Particle size, Head loss, Efficiency of removal of RPM and Advantages and disadvantages.
b) Describe the general methods of controlling gaseous emissions.
3. Describe the functional and operational aspects, advantages and disadvantages and suitability of various Advanced Water Treatment Processes for supply of water to an industrial estate.
4. Describe the Common Methods of treatment of industrial wastewaters like Volume reduction, strength reduction, neutralization, Equalization, Color removal, Removal of Nitrogen and Phosphorous compounds, in detail.
5. Describe the Solid Waste Management Methodology to be adopted for a city like Kakinada, stepwise. Describe the operations of a Municipal incinerator, Composting and Land-filling in detail.
6. Describe in detail the methods of treatment of Hazardous wastes with special reference to Management of Biomedical wastes, Chemical wastes and Nuclear wastes.
7. Describe the various methods of reducing noise in residential areas and industries, with reference to Noise Standards.
8. Write short notes on:
 - a) Effluent Standards
 - b) Effects of SO₂ and NO_x on man, material and vegetation
 - c) Collection, handling and processing of Solid wastes before treatment
 - d) Defluoridation

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R07

Set No.4

IV B.Tech. I Semester Regular Examinations, November, 2011
ENVIRONMENTAL ENGINEERING - II
(Civil Engineering)

Time: 3 Hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. What is Climate Change? What are Carbon credits? Discuss briefly the sources, effects and methods of control of GHE, Ozone Holes, Acid Rains and Heat Islands.
2. a) Discuss the suitability of various Particulate Control Devices with reference to Particle size, Head loss, Efficiency of removal of particles of various sizes, and Advantages and disadvantages.
b) Describe the general methods of controlling gaseous emissions.
3. Describe the functional and operational aspects, advantages and disadvantages and suitability of various Advanced Water Treatment Processes like Ion Exchange, Reverse Osmosis and Adsorption for supply of water to an industrial estate.
4. Describe the Common Methods of treatment of industrial wastewaters like Volume reduction, strength reduction, neutralization, Equalization, Color removal, Removal of Nitrogen and Phosphorous compounds, in detail. Discuss the suitability of biological treatment methods in treating industrial wastewaters.
5. Describe the Solid Waste Management Methodology to be adopted for a city like Visakhapatnam, stepwise. Describe the operations of a Municipal incinerator, Composting and Land-filling in detail.
6. Describe in detail the methods of treatment of Hazardous wastes with special reference to Management of Biomedical wastes, Chemical wastes and Nuclear wastes.
7. Describe the various methods of reducing noise in residential areas and industries, with reference to Noise Standards.
8. Write short notes on:
 - a) Effluent Standards
 - b) Sources of SO₂, NO_x, CO and SPM.
 - c) Collection, handling and processing of Solid wastes before treatment
 - d) Defluoridation

IV B.Tech I Semester Regular Examinations, November, 2011

NETWORK PROGRAMMING

(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours

Max. Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. a) Describe the OSI reference model and Unix Standards.
b) Write briefly about the TCP and UDP connection establishment, format and Buffer sizes.
2. Explain the IPv4 Socket Address Structure and IPv6 Socket Address Structure with suitable examples.
3. Explain the following with suitable examples
 - a) Value –Result Arguments and Byte ordering functions
 - b) Byte Manipulation functions
 - c) Address conversion functions
4. a) Describe elementary TCP socket functions with an example.
b) Write briefly Posix Signal Handling and Termination of Server Process.
5. What is I/O Multiplexing? Explain different types of Synchronous and asynchronous I/O models.
6. Discuss the use of Generic Socket and IPv4 Socket options. Write briefly about getsockopt and setsockopt functions.
7. a) Describe the UDP Echo server functions and lost datagram with an example.
b) Write briefly about lack of flow control with UDP. List the differences between TCP and UDP.
8. Write short notes on the following
 - a) File and Record locking
 - b) rlogin
 - c) DNS and RPC transparency

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Set No.2

IV B.Tech I Semester Regular Examinations, November, 2011
NETWORK PROGRAMMING
(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours

Max. Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain with a suitable diagram the socket system calls used for connection oriented communication between a client and a server.
2. a) Explain with diagrams the following I/O models provided by Unix:
 - i. Blocking I/O model.
 - ii. Non blocking I/O model.b) Explain the functionality provided by poll function.
3. a) Compare the IPC functionality provided by pipes and message queues.
b) Explain file locking with semaphores.
4. a) Write a sample to discuss the lack of flow control with UDP.
b) Distinguish between recvfrom and read functions.
5. Explain in detail the various issues needed to be considered to make the use of RPC transparent to the application.
6. a) Explain how the signals are handled in Unix.
b) Consider the TCP Echo Server and TCP Echo Client application and discuss what happens to the client when the server process crashes.
7. a) Explain the differences among the exec family of functions of Unix.
b) Discuss how the getaddr info function handles IPV6 addresses.
8. Write notes on the following:
 - i. OSI model.
 - ii. Types of Resources Records (entries in the DNS).

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R07

Set No.3

IV B.Tech I Semester Regular Examinations, November, 2011

NETWORK PROGRAMMING

(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours

Max. Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. a) Describe the syntax and purpose of the each of the following:
i) Socket ii) Bind iii) Accept iv) listen v) connect
b) Explain briefly the byte order conversion functions.
2. a) Explain with a diagram signal driven I/O model.
b) What are the differences in functionality between the poll and select functions?
3. a) What are named and unnamed pipes? How are they created?
b) Explain in detail how the IPC functionality is provided by message queues.
4. a) Explain with a diagram the steps that normally take place in a remote procedure call.
b) Describe the getaddr info function as applicable to IPV6.
5. a) Explain with a sample code how a connected UDP socket can be used to determine the outgoing interface.
b) Discuss the lack of flow control with UDP with a suitable example.
6. a) What are signals? Describe the methods of handling SIGCHLD signals.
b) What are the differences between concurrent servers and iterative servers?
Give examples of services handled in iterative and concurrent fashions.
7. a) Describe the connection establishment handshake of TCP.
b) Discuss the uses of the following TCP Socket options:
i) TCP_MAXSEG ii) TCP_NODELAY.
8. Write notes on the following:
a) Pseudo-Terminals.
b) Crashing and Rebooting of Server Host in TCP Client/Server application