AR13

CODE: 13OE4001 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.Tech I Semester Regular Examination, November-2016

AIR QUALITY MANAGEMENT
(OPEN ELECTIVE)
(Civil Engineering)

Time: 3 Hours **Max Marks: 70**

PART-A

ANSWER ALL QUESTIONS **[1 x 10 = 10 M]**

1. a) What are the effects of photo chemical smog?
   b) Name four air pollutant with their sources.
   c) What is a wind rose diagram?
   d) What are the air pollutants in automobile exhaust?
   e) What is adiabatic lapse rate?
   f) What are all the impact of air pollution on materials?
   g) What are natural contaminants
   h) Enumerate the limitations of gravitational settling chamber?
   i) Suggest two important steps to control indoor air quality.
   j) What is adsorption?

PART-B

Answer one question from each unit **[5x12=60M]**

UNIT-I

2. a) Explain air pollution due to automobiles. [6 M]
   b) List the types of Indoor air pollutants, their sources and associated impacts. [6 M]

(OR)

3. a) List the recorded major air pollution episodes chronologically. [6 M]
   b) List out four man made and four natural sources of air pollution. Which pollutants are coming out from these sources? [6 M]

UNIT-II

4. a) Give the sources and effects of following air pollutants. i)Sulfur dioxide ii)Carbon monoxide [6 M]
   b) What is global warming? How do GHG contribute to this? [6 M]

(OR)

5. a) Explain the causes and impacts of Ozone Layer depletion along with associated control efforts. [6 M]
   b) Explain the effects of CO,SO_2 and heavy metals on human being [6 M]

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UNIT-III

6. a) Give the construction and working of venture scrubber [6 M]
   b) With a sketch, explain the principle and operation of an electrostatic precipitator [6 M]

(OR)

7. a) With the help of neat sketch .explain the working condition of cyclone separator. [6 M]
   b) What are the advantages and disadvantages of electrostatic precipitators? [6 M]

UNIT-IV

8. a) List the pollutants likely to present in the emissions from a coal fired Thermal Power Plant. Explain their impacts and different measures to prevent and control such emissions. [6 M]
   b) Describe the principles and equipment's associated with different methods to control particulate emissions. [6 M]

(OR)

9. a) What are the different effects of NO_2 on man, material and vegetation [6 M]
   b) Compare the principles and applications of absorption, adsorption, condensation and incineration in Air Pollution Control. [6 M]

UNIT-V

10. a) Describe the operation of High Volume Sampler for air quality monitoring [6 M]
    b) Distinguish between "Ambient Air Quality Standards" and "Emission Standards" [6M]

(OR)

11. a) Compare the plume behaviours under different conditions of atmospheric stability. [6 M]
    b) Write the ambient air quality standards as per CPCB. [6 M]

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CODE: 13OE4007 **SET-1**

ADITYA INSTITUE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
IV B.Tech I Semester Regular Examination, November-2016
RENEWABLE ENERGY
(OPEN ELECTIVE)

Time: 3 Hours **Max Marks: 70M**

PART A

ANSWER ALL QUESTIONS **[1 x 10 = 10M]**

1. (a) List out the factor that effect the Solar Energy.
   (b) How will you quantify solar radiation?
   (c) What is a Solar Pond?
   (d) List out the disadvantages of Solar Energy.
   (e) Differentiate tide and wave.
   (f) What are the principle of Bio – Conversion?
   (g) What is geothermal power?
   (h) What is the principle of operation of an OTEC Plant?
   (i) What is Hall Effect?
   (j) List some applications of fuel cells

PART B

Answer one Question from each unit **[5 x 12 = 60M]**

UNIT-I

2. (a) Explain briefly the construction and working of Pyranometer. [6M]
   (b) Define the terms [6M]
   i. Solar Radiation
   ii. Declination angle
   iii. Zenith angle

(OR)

3. (a) Define extraterrestrial and terrestrial solar radiation and explain how do they Propagate to earth with neat sketch [6M]
   (b) Calculate the angle made by the beam radiation with the normal to flat collector on December 1 at 10AM solar time for location at 28 degree 45 Min North the Collector is titled at an angle of Latitude + 16.1 Degree with horizontal and pointing due south. [6M]

UNIT-II

4. (a) Enumerate the different types of concentrating type collectors. [7M]
   (b) Why orientation is needed in concentrating type collectors? [5M]

(OR)

5. (a) What are the advantages and disadvantages of PV solar energy conversion? [6M]
   (b) Write short notes on [6M]
   (i) Solar pumping
   (ii) Solar Cooking
   (iii) Solar arrays.

UNIT-III

6. (a) Explain the working of Janatha model fixed dome digester and KVIC model digester with neat sketch. [8M]
   (b) Define biomass. Give a descriptive classification of biomass resources. [4M]

(OR)

7. (a) Explain the function of different components of WECS with suitable diagrams. [8M]
   (b) Describe the process of biogas generation. List the factors affecting the generation of gas. [4M]

UNIT-IV

8. (a) Explain open cycle OTEC system for ocean thermal energy with neat sketch. [6M]
   (b) Explain the working of single basin tidal power plant. [6M]

(OR)

9. (a)Explain hot dry rock (petro thermal) resources of geothermal energy and how they can exploit as a source energy [8M]
   (b) Explain how electricity can be generated from geothermal energy. [4M]

UNIT-V

10. (a) What is MHD Generator? Explain its principle and working. [6M]
    (b) Explain briefly carnot cycle. [6M]

(OR)

11. (a) Explain various types of fuel cells and its applications [7M]
    (b) Write a short notes on principle of DEC and need for DEC. [5M]

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CODE: 13OE4009 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.TECH I SEM REGULAR EXAMINATIONS, NOVEMBER, 2016

TOTAL QUALITY MANAGEMENT

(OPEN ELECTIVE)

Time: 3 Hours **Max Marks: 70**

PART-A

ANSWER ALL QUESTIONS **[1 x 10 = 10 M]**

1. a) Define TQM
   b) Write a brief note on Evolution of Quality
   c) List the 5S in TQM
   d) What is Juran's Triology?
   e) What is Process Capability
   f) Highlight the product life cycle characteristics curve
   g) What is QFD?
   h) Write the different types of benchmarking.
   i) Discuss the need of ISO
   j) Discuss the benefits of ISO 14000

PART-B

Answer one question from each unit **[5x12=60M]**

UNIT-I

2. a) Explain in detail the evolution of quality **[6 M]**
   b) Discuss the Total Quality Management Frame Work **[6 M]**

(OR)

3. a) What are the contributions of the Deming's in TQM? Discuss **[6 M]**
   b) List out the obstacles for the implementation of TQM **[6 M]**

UNIT-II

4. a) Explain the TQM principles associated with customer retention **[6 M]**
   b) How to assess the performance appraisal of employees in organization. Also discuss how performance appraisal can be interlinked with the benefits. **[6 M]**

(OR)

5. a) Explain KAIZEN policy and various types of losses eliminated by KAIZEN **[6 M]**
   b) Discuss how supplier selection and performance can be gauged by TQM **[6 M]**

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CODE: 13OE4009 **SET-1**

UNIT-III

6. A company that makes soft drinks wants to monitor the sugar content of its drinks.The sugar content (X) is normally distributed, but the means and variances are unknown. **[12 M]**
The target sugar level for one of its drinks is 15 grams.
The lower spec limit is 10 grams.
The upper spec limit is 20 grams.
The company wants to know how much sugar on average is being put into this soft drink and how much variability there is in the sugar content in each bottle.
The company also wants to know if the mean sugar content is on target.Lastly, the company wants to know the percentage of drinks that are too sweet and the percentage that are not sweet enough. To obtain this information, the company decides to sample 3 bottles of the soft drink at 3 different time each day: 10 A.M, 1:00 P.M. and 4:00 P.M.
Construct an X-bar and R chart?

Day	Hour	X1	X2	X3
1	10 am	17	13	6
	1 pm	15	12	24
	4 pm	12	21	15
2	10 am	13	12	17
	1 pm	18	21	15
	4 pm	10	18	17

(OR)

7. a) How TPM is different from that of TQM. Explain. **[6 M]**
b) What are the principles and applications of Business Process Re-engineering. **[6 M]**

UNIT-IV

8. a) What is Quality Function Development (QFD)? Give benefits of QFD **[6 M]**
b) How to build HOQ in TQM environments. **[6 M]**

(OR)

9. a) Explain the seven new management tools? **[6 M]**
b) Enumerate the steps in POKA-YOKE and explain. **[6 M]**

UNIT-V

10. a) Explain the ISO 9000 series and standards **[6 M]**
b) Discuss the ISO: 9000 documentation process **[6 M]**

(OR)

11. a) What is the purpose of quality audit? Explain with suitable examples **[6 M]**
b) Distinguish between the benefits of ISO 9000 and ISO 14000 **[6 M]**

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CODE: 13OE4002 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.Tech I Semester Regular Examination, November-2016

CYBER LAWS

(OPEN ELECTIVE)

Time: 3 Hours **Max Marks: 70**

PART-A

ANSWER ALL QUESTIONS **[1 x 10 = 10 M]**

1. a) Define the term registration of FIR?
   b) Explain about the importance of the security policies in the cyber environment?
   c) Define the term Hacking?
   d) Mention any three old crimes that are committed through the new medium of Internet?
   e) Define the Permanent Establishment (PE)?
   f) Define the terms E-commerce Taxation?
   g) Define the digital signature importance?
   h) What are uses of E-governance?
   i) Describe the Consumer Complaint?
   j) What do you mean by relative impact of human factors in cyber laws?

PART-B

Answer one question from each unit **[5 x 12=60M]**

UNIT-I

2. Write a brief description about necessity of arrest without warrant from any place, public or otherwise? [12M]

(OR)

3. Differentiate between Cognizable and Non- Cognizable Offences in detail? [12M]

UNIT-II

4. Explain the classification of computer crimes by the nature of the usage of the computers and illustrate with the section in IPC? [12M]

(OR)

5. Explain about Mischief in detail and illustrate in terms of defamation, harassment and e-mail abuse? [12M]

UNIT-III

6. Describe about "A tug of war on the concept of Permanent Establishment (PE) " in all means? [12M]

(OR)

7. Explain the following :-
   a.) The Impact of the internet on custom duties (b) Taxation policies in India [12M]

UNIT-IV

8. Differentiate between the Digital Signature and Certifying Authorities briefly? [12M]

(OR)

9. Write a short notes on:-
   a.) Main functions performed by a Signature (b) E-Governance in the India [12M]

UNIT-V

10. Justify thoroughly that "Are Cyber Consumers Covered under the Consumer Protection"? [12M]

(OR)

11. Explain the concepts of **Protection of Cyber Consumers in India** through [12M]
    a.) Goods and Services (b) Consumer Complaint

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