

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
EIGHTH SEMESTER B.TECH DEGREE EXAMINATION(S), OCTOBER 2019

Course Code: CE494

Course Name: ENVIRONMENTAL HEALTH AND SAFETY

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- | | | |
|---|---|-----|
| 1 | a) Explain any two occupational related diseases. | (6) |
| | b) Describe the role of an industrial hygienist. | (5) |
| | c) Write the effects of lead on occupational health. | (4) |
| 2 | a) What do you mean by ionizing radiation? Explain types of ionizing radiation. | (5) |
| | b) Explain any two biological agents causing health hazards. | (5) |
| | c) Write note on dust and fume with examples. | (5) |
| 3 | a) What are the local, systemic and chronic effects of industrial toxicology? | (6) |
| | b) Write a short note on noise exposure regulation. | (5) |
| | c) Explain how oxides of carbon effect human health? | (4) |

PART B

Answer any two full questions, each carries 15 marks.

- | | | |
|---|--|------|
| 4 | a) Explain the major health effects of radiation on human body | (6) |
| | b) Explain the effects of air pollution on plants | (6) |
| | c) Distinguish between the disposal techniques of low level, intermediate level and high level radioactive wastes. | (3) |
| 5 | a) Elaborate various electrical hazards. | (7) |
| | b) What are the effects of electric shock on human body? | (4) |
| | c) Explain the hazards in excavation sites and the safety precautions to be taken to safeguard the workers | (4) |
| 6 | a) What is ozone depletion? Explain its effects in global environment. | (7) |
| | b) Write short note on the safety aspects of the following | |
| | (i)Scaffolding and working platform | (4) |
| | (ii)Welding and cutting | (4) |

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) Differentiate point and non point source of water pollution with example. (4)
- b) Define hazardous waste? Explain the criteria for identification of hazardous waste (8)
- c) Explain the characteristic and classification of hazardous waste. (8)
- 8 a) What are the various types of pollution from cement industry? Explain the methods of control of pollution from cement industry. (10)
- b) Explain the environmental impact of dyes and pigments. (5)
- c) What are the major pollutions in textile industry? (5)
- 9 a) Explain the various health hazards arising from polluted water. (6)
- b) Discuss the major sources of pollution and pollution control in thermal power plant (7)
- c) How does tanneries cause water pollution? Point out its pollution effects. (7)

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Eighth semester B.Tech degree examinations, September 2020

Course Code: CE494**Course Name: ENVIRONMENTAL HEALTH AND SAFETY**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer any two full questions, each carries 15 marks.*

Marks

- 1 a) Discuss local, systemic and chronic effects of Industrial Toxicity? (5)
b) Illustrate the role of Industrial Hygienist. (4)
c) Explain the effect and prevention methods of lead, nickel, and chromium toxicity? (6)
- 2 a) Explain the effects of chemical hazards. (3)
b) Write a short note on silicosis and asbestosis (6)
c) Explain the noise exposure regulations given by OSHA. (6)
- 3 a) List out the methods to control dust. (4)
b) Explain the ill effects of harmful Gases. (5)
c) Discuss the biological agents causing health Hazards. (6)

PART B*Answer any two full questions, each carries 15 marks.*

- 4 a) Define Non-ionizing radiation. (3)
b) Explain the various methods for the disposal of nuclear waste. (6)
c) List out the major causes of electrical hazard. (6)
- 5 a) Which are the safety measures in cement manufacturing industries? (5)
b) Explain various Electrical Hazard protection works. (5)
c) Discuss the effects of various air pollutants on human body. (5)
- 6 a) Discuss "Clean Coal Technology". (7)
b) Explain the safety measures to be ensured while welding and cutting metal. (4)
c) Explain safety in excavation. (4)

PART C*Answer any two full questions, each carries 20 marks.*

- 7 a) List out various hazardous wastes and explain its characteristics. (9)
b) Explain various methods involved in recycling of radioactive waste. (6)
c) Explain sources of dust in cement production line. (5)

- 8 a) Define water pollution. Explain the sources of water pollutants. (8)
- b) Discuss the effluent quality standards of waste water. (6)
- c) Explain the effect of thermal pollution on ecosystem and its control measures. (6)
- 9 a) Explain the pollution control measures taken in dyeing and pigment industries. (8)
- b) List out the modern pollution control methods. (6)
- c) Elucidate different eco-friendly energy sources. (6)

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019

Course Code: CE494

Course Name: ENVIRONMENTAL HEALTH AND SAFETY

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- 1 a) What are Occupational diseases? Explain any two occupational diseases (causes, effects on human body and preventive measures) caused by particulate matter arising from various industries. (6)
- b) Explain the difference between Lethal Dose (LD) and Effective Dose (ED) of toxins? Explain LD₅₀ and ED₅₀ (5)
- c) Discuss the health hazards arising from chemical fumes, mist, vapour and gases from various industries (4)
- 2 a) Explain local, systemic and chronic effects of industrial toxins. (5)
- b) Define Noise. Briefly explain the noise exposure regulations given by OSHA (5)
- c) Briefly discuss the classification of Biohazardous agents (5)
- 3 a) Explain the toxic effects of Lead and Chromium Heavy metals for workers handling it in industries. What are the modes through which these metals enter into the human body? (5)
- b) Explain Material Safety Data Sheet (MSDS) (5)
- c) Explain the different methods of control of chemical hazards arising due to dust and fumes (5)

PART B

Answer any two full questions, each carries 15 marks.

- 4 a) What are Ionizing Radiations? Explain the health effects of radiations on human body (5)
- b) Discuss the different health effects on humans and animals due to the depletion of Ozone layer (5)
- c) Explain the different safety aspects that are to be ensured while working on temporary scaffoldings and platforms in construction industries (5)

- 5 a) Explain the concept of clean coal combustion technology. Discuss the different clean coal combustion technologies adopted in thermal power plants (5)
- b) Explain the different safety actions to be taken when an electrical emergency arises (5)
- c) Discuss the safety methods which are to be adopted by workers handling Concrete in construction industry (5)
- 6 a) Explain the different methods of disposal of Radio-active waste (6)
- b) Discuss the various aspects of safety for workers engaged in Welding and Cutting work of metals (4)
- c) What precautions should workers take when transporting (moving) materials manually and mechanically (5)

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) Discuss the different Eco-Friendly energy technologies (6)
- b) Define Hazardous waste. Explain in detail the characterization and classification of Hazardous waste (10)
- c) Explain the pollution control measures for handling suspended particulate matter in cement manufacturing industries (4)
- 8 a) Explain the various pollution control measures taken in Thermal Power Plants (5)
- b) Explain in detail the effluent quality standards of waste water (10)
- c) Explain the various treatment methods adopted for disposal of Hazardous waste (5)
- 9 a) Explain the pollution control measures taken in dyeing and pigment industries (8)
- b) Explain the recycling and reuse of radioactive waste material (6)
- c) Discuss in detail the pollution control measures taken for textile and tannery industries waste. (6)
