

Roll No.: [22B0372]

Marks: 1.0

Question 40.

When was the Water (P & CP) Act enacted?

☐ 1974.

☐ 1981.

☒ 1976.

☐ 1982.

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 39.

How is the term "Environment" conceptualized in the Environment (Protection) Act of 1986?

- ☐ Environment includes interrelationships between water, air, land, human beings, other living creatures and property.
- ☐ Environment includes atmosphere, oceans, rivers, lakes, groundwater and soils.
- ☐ Environment includes all natural surroundings which human beings can own and exploit for their benefit.
- ☒ Environment includes those components of natural surroundings which are polluted or could potentially be polluted by human activities.

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 37.

Which of the following is **not** a property of aerobic composting in municipal solid waste management?

- ☐ Transformation of biodegradable waste into biologically stable matter using microorganisms
- ☒ Destroy pathogens
- ☐ Reduces the volume of waste
- ☐ Produces biogas which can be used as a source of energy

CHAT

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Marks: 1.0

Question 36.

Three (3) Ts in combustion stands for?

- ☐ Time, Temperature and Transfer Rate
- ☐ Turbulence, Time and Transfer Rate
- ☐ Toxic emissions, Time and Turbulence
- ☒ Temperature, Time and Turbulence

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 35.

Which of the following municipal solid waste treatment method could be a major source of dioxins and furans?

- ☒ Incineration
- ☐ Composting
- ☐ Anaerobic digestion
- ☐ Sanitary landfilling

CHAT

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Marks: 1.0

Question 34.

Gas stream from anaerobic digestion of municipal solid waste majorly contains two gases ... and ....

☐  $CO_2, CH_4$

☒  $CO, H_2$

☐  $NO_x, SO_2$

☐  $CO_2, H_2S$

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Question 33.

The chemical formula of a municipal solid waste sample is  $C_{90}H_{220}O_{100}N$ . The energy content of waste material will be ..... MJ/kg.

*Use the following if needed:*

Heating value (kJ/kg) =  $337C + 1428(H - 0.125O) + 93S + 23N$

Atomic mass: C = 12, H = 1, O = 16, N = 14 and S = 32

- ☐ 32.8
- ☐ 13.5
- ☐ 326.6
- ☒ 135.0

CHAT

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Marks: 1.0

Question 32.

Which of the following is categorized under physical properties of waste:

- ☒ Hydraulic conductivity
- ☐ Proximate analysis
- ☐ Calorific value
- ☐ Nutrients determination

CHAT



Roll No.: [22B0372]

Marks: 1.0

Question 31.

Which is the correct sequence of waste hierarchy (starting from most preferred one):

- ☐ Reduction, Recycle, Composting, Energy recovery, Landfilling
- ☒ Reduction, Composting, Recycle, Energy recovery, Landfilling
- ☐ Reduction, Recycle, Energy recovery, Composting, Landfilling
- ☐ Reduction, Composting, Recycle, Landfilling, Energy recovery

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Question 30.

Dobson unit is specifically used to measure

- ☐ UV rays' intensity
- ☐ Ozone concentration in the stratosphere
- ☒ Ozone layer thickness in the stratosphere
- ☐ DNA damaging potential of UV rays

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 29.

Which sector is the largest consumer of groundwater resources in India?

- ☒ Agriculture
- ☐ Industrial
- ☐ Domestic
- ☐ Commercial

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 27.

Climate forcing refers to

- ☐ Interaction of the different environmental media
- ☒ Imbalance in the Earth's energy budget caused by a perturbation of the climate system
- ☐ Amount of energy absorbed by 1 ton of a greenhouse gas
- ☐ Increase in earth's average temperature

CHAT

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Marks: 1.0

Question 28.

The amount of energy consumed for generating one unit of GDP is:

- ☐ Per capita energy consumption
- ☒ Energy intensity
- ☐ Energy efficiency
- ☐ Carbon intensity

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 26.

The pollutant most widely used to study changes in the atmosphere as an indicator of climate change:

- ☒ CFCs
- ☐  $CO_2$
- ☐  $CH_4$
- ☐ PM2.5

CHAT

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Marks: 1.0

Question 25.

Drivers of land use change include:

- ☐ Conversion of forestland to pastures
- ☐ Conversion of peatlands to oil palm plantations
- ☐ Mining
- ☒ All of the above

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 23.

Environmental degradation refers to:

- ☐ Increase in the use of resources
- ☒ Reduction of the capacity of the environment to meet social and ecological objectives
- ☐ Increase in global population
- ☐ Increase in pollution

CHAT



Roll No.: [22B0372]

Marks: 1.0

Question 22.

Which of the following elements should be present in an EMS conforming to ISO 14001 of 2015?

- ☐ environmental policy
- ☐ procedures for emergency response
- ☐ plan for corrective actions
- ☒ all of these

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 21.

Draft ISO 14000 series EMS standards were first agreed upon in \_\_\_\_.

☐ 1991

☒ 1993

☐ 1995

☐ 1997

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 24.

The concept of “Planetary Boundaries” does not include:

- ☐ Safe operating space for humanity
- ☐ Transgressing a boundary has a deleterious or catastrophic risk to ecosystem health
- ☒ Improving energy efficiencies of vehicles and industries
- ☐ Impacts of transgressing boundaries are likely irreversible and non-linear

CHAT

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Marks: 1.0

Question 20.

What is the benefit of vertical mixing?

- ☐ Prevents horizontal transport to other regions
- ☒ Keep the pollution away from breathing level
- ☐ Moisture in the upper layers absorbs the pollution
- ☐ Dilutes the pollutants in the atmosphere

CHAT

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Marks: 1.0

Question 19.

Three features of a Wind-Rose are :

- ☐ Height, Mean Sea Level, Latitude
- ☐ Anemometer, Weather Station, Lighthouse
- ☐ Velocity, Humidity, Temperature
- ☒ Speed, Direction, Frequency

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 18.

What are three key principles of gaseous emissions control in the industry?

- ☐ Cyclones, adsorption, incineration
- ☐ adsorption, incineration, absorption
- ☐ fabric filters, incineration, catalytic conversion
- ☒ impactors, electrostatic precipitators, incineration

CHAT

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Marks: 1.0

Question 17.

Why is the PM<sub>2.5</sub> to PM<sub>10</sub> ratio important ?

- ☒ PM<sub>2.5</sub> represents only the respirable fraction of PM<sub>10</sub>
- ☐ If it is greater than 1, it is harmful
- ☐ It represents the toxic fraction of PM
- ☐ PM mass greater than 2.5mm is toxic

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Roll No.: [22B0372]

Marks: 1.0

Question 16.

What are the three modes of atmospheric particle size distributions?

- ☐ Nuclei, Accumulation and Coarse
- ☐ Gas, Liquid and Solid
- ☒ Smoke, Dust and Haze
- ☐ Cigarette smoke, Sand particles and Road dust

CHAT



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Marks: 1.0

Question 15.

What is the difference between Primary and Secondary pollutants?

- ☐ Primary are more of a health risk
- ☒ Secondary are what is left after treatment of primary
- ☐ Secondary are not emitted directly
- ☐ Secondary are a sub-set of primary

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Marks: 1.0

Question 14.

How would one know for sure if the air is polluted?

- ☐ Dirt on shirt collars
- ☐ Visibility at the airport
- ☒ Compare with NAAQS
- ☐ Dust cars in the parking lot

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Roll No.: [22B0372]

Marks: 1.0

Question 13.

What are the key steps in air quality management?

- ☒ inventory, modelling, monitoring, source control
- ☐ source apportionment, receptor modelling, health records, meteorology
- ☐ meteorology, road sweeping, monitoring, fogging at construction sites
- ☐ ban of garbage burning, ban of stubble burning, artificial rain, satellite data

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Marks: 1.0

Question 12.

What are the advantages of Membrane bioreactor (MBR):

- ☐ High effluent quality
- ☐ High footprint
- ☐ High-pressure membrane (NF/RO) used
- ☒ Both a and b

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Roll No.: [22B0372]

Marks: 1.0

Question 11.

What are endocrine disrupting PPCPs:

- ☒ Steroids
- ☐ Nonsteroidal pharmaceuticals
- ☐ Personal care products
- ☐ All of the above

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Roll No.: [22B0372]

Marks: 1.0

Question 10.

In a conventional municipal wastewater treatment system, the function of tertiary or advanced treatment is to

- ☐ Remove dissolved and suspended organic solids
- ☒ Remove pathogens
- ☐ Remove nutrients and micropollutants
- ☐ Remove larger and inorganic materials

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Roll No.: [22B0372]

Marks: 1.0

Question 9.

After the secondary treatment, wastewater does not contain:

- ☐ Dissolved inorganic matter
- ☒ Larger suspended solids
- ☐ Nutrients (N, P)
- ☐ Pathogens

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Roll No.: [22B0372]

Marks: 1.0

Question 8.

The dimensions of a regular settling tank are 20 m length, 5 m width and 3 m height. It passes 5 million litres of water per day. The detention period of the tank would be:

- ☐ 3 h
- ☐ 2 h
- ☒ 2.4 h
- ☐ 2.1 h

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Marks: 1.0

Question 7.

In the disinfection of water by chlorine, the most reactive chlorine species is:

☐  $OCI^-$

☒ HOCl

☐  $Cl_2$

☐  $Cl^-$

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Question 6.

A perc test is conducted in a soil to determine feasibility of septic tank. During the test, it was observed that the water level was dropped by 150 mm in 30 min duration. The 'Perc rate' will be approximately..... (take 1 inch = 2.54 cm)

- ☒ 5 min/inch
- ☐ 5 mm/min
- ☐ 0.2 inch/ min
- ☐ 0.2 min/cm

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Roll No.: [22B0372]

Marks: 1.0

Question 5.

The main purpose of activated sludge process in sewage treatment plant is to remove:

- ☐ Inorganic matter
- ☒ Biodegradable organic matter
- ☐ Only nutrients
- ☐ Inorganic and organic matter both

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Roll No.: [22B0372]

Marks: 1.0

Question 4.

Thermal pollution in a river can reduce its

- ☒ DO level
- ☐ COD level
- ☐ BOD level
- ☐ Nutrient level

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 3.

Acid rain has pH values

☒ <5.7

☐ <7

☐ >5.7

☐

CHAT

Roll No.: [22B0372]

Marks: 1.0

Question 2.

Which of the following is not a physical pollutant in a water sample?

- ☐ Color
- ☐ Turbidity
- ☐ Foam or froth
- ☒ TDS

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Roll No.: [22B0372]

Marks: 1.0

Question 1.

Match the following

Type of Water	Source
A) Greywater	1.) Urinal v
B) Blackwater	2.) Laundry
C) Yellow water	3.) Toilet w
D) Brown water	4.) Separat

- ☐ A-1, B-3, C-2, D-4
- ☐ A-3, B-2, C-4, D-1
- ☒ A-2, B-3, C-1, D-4
- ☐ A-2, B-4, C-3, D-1

Calls and notifications will vibrate

Roll No.: [22B0372]

Marks: 1.0

Question 38.

How is "Air Pollution" defined in India's Air Act of 1981?

- ☐ Any solid liquid or gaseous substance including noise present in the atmosphere beyond permissible limits.
- ☒ Any solid liquid or gaseous substance present in the atmosphere beyond permissible limits but excluding noise.
- ☐ Presence of Green Houses Gases in atmosphere including  $CO_2$ ,  $NO_x$ ,  $SO_x$  and aerosols.
- ☐ Presence of smoke, fumes and toxic gases emitted by vehicles and industries.

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