**Q1/ Define only two of the following**

1. Thermal pollution **b-** BOD5 , **c-** Global warming

Photochemical smog , Eutrophication , COD

**Q2/ Chooses only one alternative that complete best and suitable answer:** [

1. Environmental pollution on one hand and -------on the other, are threatening the very existence of life on the earth.
2. ***industrial activity, b- activities of human, c- defor­estation and population explosion***
3. The inorganic mineral of the--------- constituents include complex mixture of silicates of sodium, oxides of iron and carbonates of Ca and Mg..

***a-Bio sphere , b- Hhdro sphere , c- Lithosphere***

**3.** Most skin cancer in human are due to over exposure to -----------.

***a- UV-A , b- UV-B , c- UV-C , d- Thermal - IR***

1. The most anthropogenic source of methane released into the air from ------------.

***a -oceans , b- coal mining , c- biomass burning***

**5.** Minor components of the atmosphere are **-----------**gases**.**

***a- (Ar , CO2) , b- ( Ar , CO2 & H2O) ,  c- (Kr , CO2 & H2O)***

**1.** The atmosphere screens the dan­gerous U.V radiations but transmits the radiations in the range--------.  ***a- 200nm to 16500nm , b- 300 nm to 2500 nm , c- 400nm to 16500nm***

**2.** General quality assessment for a rivers indicate a good description if the **BOD5**value is----

***a- 15 , b- 0.0 , c- 4.0***

**3.** Waters **hardness** classified according to degree of **200 – 300 mg/l** indicate for --------- .

***a- Slightly hard , b- hard water , c- very hard water***

**4.** Mussels contain levels of ---------- 100,000 times greater than those in the water .

***a- lead , b- chromium , c- mercury***

**5.** Carbonic acid is the most important acid, which is produced in natural waters by the dissolution of CO2 gas, this gives a pH of about-------- .

***a – ( 4.5 ) , b- ( 5.6 ) , c- ( 6.5 )***

**6.**Typical pollutant emissions from Iron and steel industry are-------

***a-(NOx,NH3) , b- (CO , SO2 and particulates) , c- (CO, NO, oxide fumes and smoke****)*

**Q3/** Write all photochemical reactions for thedestroyed of Ozone by human activity.

**Q4/ Write** " **T** " for true and " **F** " for the false sentences and then correct the false sentences: [

a- Oceans are the major sinks for the atmospheric CO2 which convert it­ into soluble bicarbonates

b-. Water of moderately hardness contain 300 mg l-1 CaCO3

c- Suspended solids content of a sample is determined by evaporating a known volume of the filtrate water sampleand drying the residue for 24 hours at 103°C to 105°C

d- Some scientists fear that the concentration of the ozone in the atmosphere may double within the next 50 years. If this happen the average global temperature increase and influence the climatic changes.

e- Enrichment of surface waters with phosphorusenhance dissolved oxygen in natural water surface

f- Ultra-violet radiations from the sun in the regions 280 - 315 nm called UV-A.

a-Many Org-Cl insecticides properties are low solubility in the fatty tissue in living matter.

b- The photosynthetic activity in the green plants increases with increase in CO level in the atmosphere.

c- Forests maintain a balance of the CO2 level. Therefore, deforestation decreases the CO2 level.

d- Toxic metals occur in small quantities in the earth's crust ( 100 ppm) are called trace metals.

e- Ozone is an important species present in the stratosphere and its concentration is about 10 ppm.

f- A chemical whose concentration increases along a food chain is said to be bioaccumulation

**g**- Inorganic particulate matter emitted from automobile exhausts, certain particulates contain (P

**Q5/** Enumerate only device used for controlling particulate matters. [9marks]

**Q6**/Give the reason for the following: [8marks]

1. DDT is no longer used in many countries?
2. Pollution by Lead cause a biochemical effects to human body?

**Q7/ Discuss**: Health hazards of nitrates in water. Support your answer using chemicalequations.