



HDY-003-1103005 Seat No. _____

M. Sc. (Chemistry) (Sem. III) (CBCS) Examination

November / December – 2017

CPA-303 : Advance in Environmental Chemistry
(*New Course*)

Faculty Code : 003

Subject Code : 1103005

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instructions :

- (1) All questions are compulsory.
- (2) All questions carry equal marks.

1 Answer the following : (any seven)

- (a) Briefly discuss the types of water pollution.
- (b) Define water pollutants and classify them.
- (c) Briefly explain the mechanism of action of pesticides. Why dueterated DDT exhibit same level of toxic effects as DDT ?
- (d) Explain the nature of effluents emerging from varoius industries.
- (e) Classify the waste water treatment processes.
- (f) Explain the need of treatment of domestic effluents.
- (g) How can the soil pollution be controlled ? Suggest effective measures to preserve soil pollution.
- (h) Briefly explain voluntary carbon market.
- (i) Discuss the environmental problems associated with nuclear wastes. How can they be managed ?
- (j) How are solid waste classified ? What are the characteristics of solid wastes ?

2 Answer the following : (any **three**)

- (a) What is the purpose of water treatment ? How temporary and permanent hardness can be removed ? Explain with chemical equation.
- (b) List the methods of domestic effluent treatment and discuss any one in brief.
- (c) Mention the sources, characteristics and effect of effluent from electroplating industries.
- (d) Write note on surface water pollution.

3 Answer the following :

- (a) Describe carbon credits in detail.
- (b) Write note on particulate emission control in air pollution.

OR

- (a) Write note on compliance carbon market.
- (b) Describe the water treatment for municipal purposes.

4 Answer the following : (any **two**)

- (a) Write note on Kyoto's flexible mechanism.
- (b) Describe the effects of radioactive pollution.
- (c) Explain the role of bioremediation and phytoremediation in soil pollution control.

5 Answer the following : (any **two**)

- (a) Discuss preventive environmental management (PEM) and industrial ecosystem.
- (b) What is eutrophication ? Discuss their effect and control.
- (c) Describe the effects of oil pollution in marine water.
- (d) Mention the sources, characteristics and effect of effluent's from leather industries.