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CAS 554

IV Semester M.Sc. Degree Examination, September/October 2022
ANALYTICAL CHEMISTRY
Environmental Chemistry
(CBCS – 2016-2017 Syllabus)

Time : 3 Hours

Max. Marks : 70

Instructions : 1) Answer Part – **A** and **any four** questions from Part – **B**.
2) Figures to the **right** indicate marks.

PART – A

1. Answer **all** the following sub-questions : **(9×2=18)**
- a) “Soil does not have any efficient ion exchanger site”. Comment on this statement.
 - b) Explain buffer capacity of a soil.
 - c) What is knocking ? Give its mechanism.
 - d) “The concentration of air pollutants in automobile exhaust depends on air : fuel ratio”. – Justify the statement.
 - e) What do you mean by ‘black snow’ ?
 - f) Describe the flame ionization method for analysis of hydrocarbons.
 - g) How CO is analyzed through NDIR method ?
 - h) What is desulphurization of gases ?
 - i) Explain the role of wet scrubber in the removal of particulates.

PART – B

Answer **any four full** questions :

2. a) Soil becomes very often deficient in nutrients K^+ , NO_3^- and $HPO_4^{2-}/H_2PO_4^{2-}$. Justify the statement.
- b) What are clay materials ? How they are analyzed ?
 - c) Explain Coal beneficiation and Blending of Coal. **(5+4+4)**

P.T.O.

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