KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food. Engg) 2012 Admission

I st Semester Final Examination- January/February -2013

Cat. No: Basc.1104

Title: Engineering Chemistry (2+1)

Marks: 80

Time: 3 hours

I Fill in the blanks (20×0.5=10)

a) ..... hardness cannot be removed by boiling.

b) The mixture of gases issuing out of the combustion chamber is called ..... gas.

c) Soils having low resistivity have high.....

d) Daniel cell is a good example for a .....cell.

e) Oiliness is a very important quality of.....

f) Natural rubber is a polymerised form of.....

II State true or false

a) Total hardness can be determined by titrating the water sample against standard soap solution.

b) A dispersion of graphite in oil is called Aquadag.

c) Neoprene is a synthetic rubber.

d) When two metals are in electrical contact, the metal higher up in the galvanic series becomes cathode and suffers corrosion.

e) Peat represents the first stage of conversion of vegetable matter to coal.

f) Zeolites are used as catalyst in cracking process.

III Match the following

a) Nylon	_	Rubber
b) Cetane rating	_	$Al_2 O_3$
c) Orsat apparatus	_	Hardness of water
d) Galvanisation	_	Lubricant
e) Adsorption chromatography	_	Diesel oil
f) Ion exchange resins	_	Flue gas analysis
g) Graphite	_	Prevention of corrosion
h) Vulcanisation	_	Caprolactam

IV Write short notes on *any ten*. **(10×3=30)**

a) Reverse osmosis.
b) Compounding of plastics.
c) Application of plastics in engineering and industry.
d) Flash point and fire point.
e) Standard cell.
f) Electro chemical corrosion.
g) Pulverised coal.
h) Leaded petrol.
i) Emulsions.
j) Reinforced plastics.
k) Disadvantages of hard water.
l) Synthetic fibres.

V Write short essays on *any six* of the following. **(6×5=30)**

a) Determination of hardness of water.
b) Vulcanisation of rubber and its uses.
c) Synthetic lubricants.
d) Reference electrodes.
e) Applications of emf measurements.
f) Types of corrosion.
g) Liquefied petroleum gas (LPG).
h) Water gas.

IV Write an essay on any *one* **(1×10=10)**

a) What are the differences between the thermal and catalytic cracking methods? Which is more advantageous and why?
b) What are the factors influencing corrosion? Mention the methods to overcome the same.

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