

Za1A-3. a1a1Syx0a qE a'11q/aa avah¥ n

Write a note on extraction.

OR

¥Akatt aSyycSylmçN¥ ¥Akatt E3Zaf/1a Sjç;Syaa ycSyçE Sj Zasaam SyEmçN¥

What are enzymes? What are the factors that affect the enzyme catalysis?

Za1A-4. ta¥Emà ¥wptav/vmà Sjç;yfa yaNm ytl aç¥ n

Explain the molarity and molality with formula.

OR

q0aj 6ij/a qE y0a1m a'11q/aa avah¥ n

Write a short note on recycling process.

Za1A-5. EAaya1aSyçE/1a ¥Andqa ytl aç¥ n

Explain enthalpy of neutralisation.

OR

Euaçp tçkayma/a qE aarb avah¥ n

Write an essay on energy balance in industries.

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Annual Examination - 2017

B.Sc.-I

INDUSTRIAL CHEMISTRY

Paper - II

INDUSTRIAL ASPECTS OF PHYSICAL CHEMISTRY,
MATERIAL AND ENERGY BALANCE

Max.Marks : 33

Time : 3 Hrs.

Min Marks : 11

11q B h1p'j ' tç; a'p; anv1 aEaZa1A Na akANvNv SyEaa ; a1avaueNen h1p'r' tçvi aEa Za1A h1p'y' tçAai eEUEau Za1A Nen h1p'j ' Sjç;yryçqNvçNv SyEçN

Note : Section 'A' containing 8 very short answer type questions, is compulsory. Section 'B' consists of short answer type questions and Section 'C' consists of long answer type questions. Section 'A' has to be solved first.

h1p'j '(Section-'A')

a1Aa1a1Sçm j an vi EUEau Za1Aa1p Sjç EUE ¥Sy uà Aaç;wà'ua1p tç A1p n
(Answer the following very short-answer-type questions in one or two sentences) (1x8=8)

Za1A-1. atyç 'ua N¥ EAçya wa1SyçE/1a Aaç¥ n

What are Micelles? Give their classification.

Za1A-2. j aolax/1a ytmçqà 'ua N¥

What are Adsorption Isotherm?

Za1A-3. E3ZafSçj 'ua N¥

What are catalysts?

Za1A-4. w1q1a Sjç qE saxa Aaç¥ n

Define evaporation.

Za1A-5. aya1u Zaa1Na j asa1yua yç; aq 'ua ytl mçN¥

What do you understand by gas phase reaction.

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ZalĀa-6. ĀĀĀ ĒĪtā Šġā tNŪw rmatuĉn

Give the importance of heat of combustion.

ZalĀa-7. āyĪtāōāĒmā yĉ' uā mā'quēĒĒ

What is meant by heat capacity?

ZalĀa-8. yĪswĀ ŠġĪ ĴĀndqā ytl āĉĴ n

Explain enthalpy of formation.

hĴĴ-'r' (Section-'B')

āĀĀĀŠġm vi ā ĒĪĒĒu ZalĀa Šġ ĒĪĒ 150-200 ĪĀĀ-yātā tĴĀĴ n

(Answer the following short-answer type questions with word limit 150-200) (5x2=10)

ZalĀa-1. ĀĴĀĀĴvŠġ ytmāqā ytl āĉĴ n

Explain Freundlich Isotherm.

OR

āvŪnŠġĵā yĪj vĀā qĒ ā'ĴĴĴā āvāhĴ n

Write a note on electrophoresis.

ZalĀa-2. Đwmb Ē3ZĒĴĴ' uā ĒĒ ĒĀĀĒĒĴĴ yāĪm ytl āĉĴ n

What is autocatalysis? Explain with example.

OR

Ē3ZĒŠġ ŠġĪ ŠġāŌāt mā āŠġĀ ŠġĒŠġĴĒ qĒ āĀĒ ĒĴmā ĒĒ ytl āĉĴ n

What factors affect the efficiency of a catalyst? Explain.

ZalĀa-3. tā'āšġĒĴ qĒ ā'ĴĴĴā āvāhĴ n

Write a note on crystallization.

OR

ĴĴĀĉĉ ZĒĒm ; āšġġuā ŠġĪ āŠġuā āvāō āvāhĴ mnā tāĉŠġvĴ ĐĒĒāŠġ ĪuāĴĀā ŠġĴĴ n

Write the mechanism of enzyme catalysed reaction and derive the Michaelis constant.

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ZalĀa-4. tāv ZāsĀk ŠġĴyĀā yāĪm ytl āĉĴ n

Explain mole fraction with formula.

OR

ōw ZāwĐnā ; āšġġuā qĒ yĴĀĪm ĀāĴpāvāhĴ n

Write a brief note on liquid phase reaction.

ZalĀa-5. ĒĒy āĀut Šġā ; ĀāĀuāā āvāhĴ n

Write the application of Hess's Law.

OR

āy ÷ ŠġĴĴĴ (Prove that) : $C_p = \left(\frac{\partial H}{\partial T} \right)_p$

hĴĴ-'y' (Section-'C')

āĀĀĀŠġm Āāi ē ĒĪĒĒu ZalĀa Šġ ĒĪĒ 300-350 ĪĀĀ-yātā tĴĀĴ n

(Answer the following long-answer type questions with word limit 300-350) (5x3=15)

ZalĀa-1. ĴĒāyāv Šġā wā'ŠġĒĴĴ ĴwĴāā rmatĴ n

Give the classification and properties of aerosols.

OR

ĴāĪāĴĴ ytmāqā yĉ; āĴ' uā ytl mĴĒĒ āŠġyāĴŠġ ZāŠĒ Šġ ; āĪāĴĴ ytmāqā ŠġĴ ytl āĉĴ n

What do you mean by adsorption isotherm? Explain the types of adsorption isotherm.

ZalĀa-2. yĴāā ĴwĴāvxtāā Ē3ZĒĴĴ Šġā āvāō āvāhĴ n

Distinguish between homogenous and heterogenous catalysis.

OR

ZāwĐnā ĐnāĀĀĒĒĒĒ Ē3ZĒŠġ' uā ĒĒ ĄĀŠġ ŠġāēŠġĪ Īuā' uā ŠġĴĴ n

What are phase transfer catalysts? Explain their working.