

SECTION-C

Note: Long answer type questions. Attempt any three questions. $3 \times 10 = 30$

- Q.3 Describe second law of thermodynamics & its application.
- Q.4 Explain any two :- Radiation, third law of thermodynamics & Crystallization.
- Q.5 short note :- Internal Energy, Entropy, Enthalpy
- Q.6 Describe any filtration equipment either batch type or continuous type.
- Q.7 Describe about homogenous & heterogenous system, closed & open system & vandrnail's equation.

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3rd Sem.

Subject : Unit Operation in Ceramic

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. $(15 \times 2 = 30)$

- Q.1 a) Define Newtonian Fluids.
- b) Write two mixing equipments.
- c) What is the mode heat transfer.
- d) How size separation is done.
- e) What is role of mixer.
- f) How many type of conveying system are found.
- g) What is function of chain conveyor.
- h) What is mass transfer.

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- i) How filter press works.
- j) What is Fourier's Law.
- k) What is convection of heat.
- l) What is dehumidification.
- m) What is role of sedimentation.
- n) What is heat transfer coefficient.
- o) What is evaporation.
- p) What is entropy.
- q) What is ideal gas law.
- r) What is equation of state.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) Explain sieve analysis.
 - ii) Define concept of diffusion.
 - iii) What is zeroth law of thermodynamics.

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- iv) Explain open & closed system.
- v) Explain working of rotary drum fitters.
- vi) Write different mode of heat transfer.
- vii) Differentiate humidification & dehumidification.
- viii) Explain convective mass transfer.
- ix) Role of size of crystals & purities of product in crystallisation process
- x) How do you calculate heat transfer coefficient.
- xi) What is Stefan's Boltzmann law of radiation.
- xii) Explain vertical Tube evaporator.
- xiii) What is first law of Thermodynamics.
- xiv) Explain Mode heat transfer.
- xv) Write a note on sedimentation.

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