

SANT GADGE BABA AMRAVATI UNIVERSITY
BACHELOR OF ENGINEERING SEMESTER V (CGS) EXAMINATION OF S-2020

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H.V.P.Mandal's College of Engineering & Technology, Amravati

Department of Mechanical Engineering

Academic Session: 2019-20

Semesters: V

Unit- I ,II ,III, IV ,V,VI

Date: 22/12/2020

Subject Name: Heat Transfer

Subject Code:

Max Marks:

Note: Solve any 2 Questions out of 4 Question.

All question Carry equal marks

Ques 01

- a) What do you mean by thermal resistance of a material (3Marks)
 - b) What is the Fourier number? (3Marks)
 - c) State the Kirchoff's Law (1Marks)
 - d) For laminar flow, Reynolds number must not be less than_____ (1Marks)
 - e) In nucleate pool boiling, the heat flux depends on what (1Marks)
 - f) Define Effectiveness. (1Marks)
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Ques 02

- a) Thermal conductivity of a conducting solid material depends upon what (3Marks)
 - b) State the common types of fins. (3Marks)
 - c) What is the range of values for the emissivity of a surface ? (1Marks)
 - d) For laminar flow, Prandtl number must be more than_____ (1Marks)
 - e) In natural convection, the Nusselt number (Nu) depends on What (1Marks)
 - f) Give the expression for NTU. (1Marks)
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Ques 03

- a) What do you mean by thermal conductivity of a material. (3Marks)
 - b) Define and state the physical interpretation of the Biot number. (3Marks)
 - c) What is the difference between diffusion and radiation heat transfer? (1Marks)
 - d) How is natural convection different from forced convection? (1Marks)
 - e) When evaporation takes place at the liquid-vapor interface, the heat transfer is solely due to free convection and the film coefficient follows the relation_____(1Marks)
 - f) What is meant by LMTD? (1Marks)
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Ques 04

- a) What is Conduction? (3Marks)
 - b) What is a lumped system? (3Marks)
 - c) Define a black body concept. (1Marks)
 - d) If denser fluid is used what is the effect on convective heat transfer coefficient in laminar flow over a flat plate. (1Marks)
 - e) The heat flux in nucleate boiling varies in accordance with what. (1Marks)
 - f) What is meant by Fouling factor? (1Marks)
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