Roll No. .....

97676

BCA 4th Semester

Examination – May, 2019

SOFTWARE ENGINEERING

Paper : BCA-309

Time : Three hours] *[Maximum Marks : 80*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Question No. 1 is ***compulsory***. Attempt ***five*** questions in all, at least ***one*** from each Unit. All questions carry equal marks.

1. (a) What is a software crisis ? Discuss the main reason of software crisis. 2

(b) What is Data Dictionaries ? Explain. 2

(c) What do you mean by software requirement specification document ? Explain. 2

(d) What is Object Oriented Design ? Explain. 2

SECTION – A

2. (a) Discuss the different ways of producing refrigeration. 10

(b) What are secondary refrigerants ? Explain. 10

3. A Bell-Coleman gas refrigeration cycle is working between the pressure limits of 1 Bar and 8 Bar. Temperature of gas at entry to compressor is 20°C and at entry to expander is 30°C. Law of expansion and compression are both according to the law $P.V^{1.3} = C$. Find the net workdone per cycle, refrigerating effect and CoP. Assume $r = 1.4$ and $C_p = 1.05$ kJ/kgK.

If the system is designed to produce 10 tons of refrigeration having actual CoP as 60% of the theoretical CoP, find actual power required to run the machine. 20

SECTION – B

4. The following data refer to a two stage compression NH_3 refrigerating system with water intercooler. Condenser pressure = 14 bar

Evaporator pressure = 2 Bar, Intercooler Pressure = 5 Bar, Load in the evaporator = 2 TR.

If the temperature of the desuperheated vapour and sub cooled liquid refrigerant are limited to 30°C. Find :

(a) Power required

(b) CoP. 20

5. Write about :

(a) Electrolux Refrigeration. 10

(b) Steam jet Refrigerating system. 10

SECTION – C

6. Explain the following :

(a) Psychrometric chart 10

(b) Cooling with adiabatic humidification of air. 10

7. The room SH and LH loads for an air conditioned space are 25 KW and 5 KW respectively. The room condition is 25°C DBT and 50% RH. The outdoor condition is 40°C DBT and 50% RH. The ventilation requirement is such that on mass flow rate basis 20%

9. (a) What is Software Maintenance ? What is the importance of Software Maintenance ? What are various types of Software maintenance ? Discuss in detail. 8

(b) What is Software Configuration Management ? Discuss the importance of software configuration management in detail. 8