

**SECOND YEAR KGCE EXAMINATION IN REFRIGERATION
AND AIR CONDITIONING REFRIGERATION AND AIR
CONDITIONING-II (TRADE THEORY)**

MODEL QUESTION PAPER SET-1

(Time: 3 hours)

(Maximum Marks:60)

PART-A

(There should be at least 3 questions from each module)

(MaximumMarks:20x1 Marks = 20 Marks)

I. Answer the following questions by choosing the correct answer from the options given below.

Each question carries 1 mark.

Q No	Question	Module
1	Which valve is opened first after installing the package AC for test run? (A) Ball valve (B) Globe Valve (C) Service Valve (D) Solenoid valve	M 1.1
2	Which RAC system belongs to domestic AC system (A) Split AC (B) Cassette AC (C) Chiller plant (D) Package AC	M 1.1
3	Which refrigerant is charged in car A.C? (A) R11 (B) R22 (C) R134 (D) R12	M 1.2
4	The bank of tubes at the back of domestic refrigerator is (A) Condenser tubes (B) Evaporator tubes (C) Refrigerant cooling tubes (D) Capillary tubes	M 1.2
5	Which electronic component senses the temperature in indoor unit of VRV system? (A) Resistor (B) Thyristor (C) Transistor (D) Thermistor	M 1.1
6	Which of the following is not a component of packaged air conditioners? a) Compressor b) Condenser c) Chiller d) Evaporator	M 2.1

7	In window type air-conditioners the following expansion device used : (A) Float valve (B) Capillary tube (C) Thermostatic expansion valve	M 2.2
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8	. The function of duct in air conditioning unit is (A) air cooling (B) air drying (C) air cleaning (D) air distributing	M 2.2
9	In an air conditioning system the comfort conditions are defined by : (A) 15°C DBT 90% RH (B) 25°C DBT 35% RH (C) 20°C DBT 80% RH (D) 22°C DBT 60% RH	M 2.1
10	When air is heated relative humidity : (A) Decreases (B) Increases (C) Very high (D) None of the above	M 2.1
11	Which tool is used for descaling the condenser in tubes in shell & tube condenser (A) Steel brush (B) Brass brush (C) Sponge brush (D)Teflon fiber brush	M 3.1
12	Which of the following refers to the term C.O.P. of refrigeration? a) Cooling for Performance b) Coefficient of Performance c) Capacity of Performance d) Co-efficient of Plant	M 3.2
13	Why the U trap is provided in water drain line of AHU? (A) Allows air from outside (B) Block dust from outside (C) Prevent entry of foul smell (D) Ensure free flow of drain water	M 3.1
14	What is the benefits of VRV system (A) Bigger in size (B) Many controls (C)Energy saving (D) Saving refrigerant	M 3.2
15	Why is the evaporator used? a) To absorb heat b) To decrease the refrigeration effect c) To reject heat d) To improve C.O.P.	M 3.2
16	Which is the purpose of evacuation before gas charging (A) Flush oil particles (B) Charge refrigerant (C) Remove refrigerant (D) Remove moisture and non-condenser	M 4.1
17	What is the effect of improper alinement of machine while installing a central plant? (A) Silent operation (B) Excess of wear and tear (C) Less noise and vibration (D)Less power consumption	M 4.1
18	What is the function of magnetic clutch? (A) Check rpm of engine shaft (B) Check rpm of compressor shaft (C) Start and Stop evaporator blower (D) Start and stop compressor electromagnetically	M 4.1

19	What is the advantages of periodical cleaning of air filter? (A) Decrease the volume of air handling (B) Increase the speed of fan motor (C) Decrease the cooling capacity (D) Increase the cooling capacity	M 4.1
20	What is the reason for poor cooling effect in split air conditioner (A) Efficient compressor (B) Proper condensation (C) Good insulation (D) Dirty air filter	M 4.2

PART-B

(There should be at least 2 questions from each module)

(MaximumMarks: 8x5 Marks = 40 Marks)

II. Answer *any eight* questions from the following. Each question carries marks.5 Marks.

Q No	Question	Module
1	Identify the components of inverter AC.	M 1.1
2	Explain the procedure of gas charging.	M 1.2
3	Explain evaporative condenser.	M 1.2
4	State the terms 1. DBT 2. WBT 3. RH	M 2.1
5	List the remedial measures in packed AC systems.	M 2.2
6	What are the advantages of packed AC systems?	M 2.2
7	List the various components of Central AC system	M 3.1
8	Explain the procedure of descaling of different types condensers and cooling tower.	M 3.1
9	Identify different parts of VRF/VRV system.	M 3.2
10	Explain evacuation process.	M 4.1
11	What is the use of magnetic clutch in AC system?	M 4.2
12	What are the applications of IoT in refrigeration system	M 4.2