

CBSE | DEPARTMENT OF SKILL EDUCATION

AIR CONDITIONING AND REFRIGERATION (SUBJECT CODE – 827)

CLASS XII (SESSION 2021-2022)
BLUE-PRINT FOR SAMPLE QUESTION PAPER FOR TERM -II

Max. Time Allowed: 1½ Hours (90 min)

Max. Marks: 30

PART A - EMPLOYABILITY SKILLS (05 MARKS):

UNIT NO.	NAME OF THE UNIT	NO. OF QUESTIONS - VSA (1 MARK EACH)	NO. OF QUESTIONS - SA (2 MARKS EACH)	NO. OF QUESTIONS - LA (4 MARKS EACH)	TOTAL NUMBER OF QUESTIONS
4	Entrepreneurial Skills-IV	2	1	-	3
5	Green Skills-IV	2	1	-	3
TOTAL QUESTIONS		4	2	-	06
NO. OF QUESTIONS TO BE ANSWERED		Any 3	Any 1	-	04
TOTAL MARKS		3 x 1 = 3 Marks	1 x 2 = 2 Marks	-	05 Marks

PART B - SUBJECT SPECIFIC SKILLS (25 MARKS):

UNIT NO.	NAME OF THE UNIT	NO. OF QUESTIONS - VSA (1 MARK EACH)	NO. OF QUESTIONS - SA - I (2 MARKS EACH)	NO. OF QUESTIONS - SA - II (3 MARKS EACH)	NO. OF QUESTIONS - LA (4 MARKS EACH)	TOTAL NUMBER OF QUESTIONS
3	Components of Refrigeration Systems	1	1	1	1	4
4	Electric controls	3	2	-	-	5
5	Commercial Applications	1	1	1	1	4
6	Air-Conditioning Systems & Maintenance	2	1	2	1	6
TOTAL QUESTIONS		07	05	04	03	19
NO. OF QUESTIONS TO BE ANSWERED		05	03	02	02	12
TOTAL MARKS		5 x 1 = 05 Marks	3 x 2 = 06 Marks	2 x 3 = 06 Marks	2 x 4 = 08 Marks	25 Marks
TOTAL MARKS		05 (Part A) + 25 (Part B) = 30 MARKS				

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CLASS XII (SESSION 2021-2022) SAMPLE QUESTION PAPER FOR TERM - II

Max. Time Allowed: 1 ½ Hours (90 min)

Max. Marks: 30

General Instructions:

1. Please read the instructions carefully
2. This Question Paper is divided into 03 sections, viz., Section A, Section B and Section C.
3. Section A is of 05 marks and has 06 questions on Employability Skills.
 - a) Questions numbers 1 to 4 are one mark questions. Attempt any three questions.
 - b) Questions numbers 05 and 06 are two marks questions. Attempt any one question.
4. Section B is of 17 marks and has 16 questions on Subject Specific Skills.
 - a) Questions numbers 7 to 13 are one mark questions. Attempt any five questions.
 - b) Questions numbers 14 to 18 are two marks questions. Attempt any three questions.
5. Section C is of 08 marks and has 03 competency-based questions.
 - a) Questions numbers 19 to 21 are four marks questions. Attempt any two questions.
6. Do as per the instructions given in the respective sections.
7. Marks allotted are mentioned against each section/question.

SECTION A

(3+2 = 5 marks)

Answer any 03 questions out of the given 04 questions		1 x 3=3
Q.1	There is a garbage bin in your school canteen it generally gets filled beyond capacity every day. What you should do about that.	1
Q.2	What are the essential parts of reading process?	1
Q.3	Define the term quality.	1
Q.4	What do you understand by Productivity?	1
Answer any 01 question out of the given 02 questions		1 x 2=2
Q.5	List two ways by which we can reduce the amount of waste generated.	2
Q.6	Explain the importance of green job in reducing the emission of greenhouse gasses.	2

SECTION B**(5+6+6 = 17 marks)**

Answer any 05 questions out of the given 07 questions		1 x 5=5
Q.7	Name the type of pressure found at the inlet and outlet of the compressor.	1
Q.8	For which type of compressor is the refrigerant R11 suitable?	1
Q.9	Write down the function of thermostat switch in refrigerator.	1
Q.10	Define the term electricity.	1
Q.11	Name the instrument used to measure wind speed?	1
Q.12	What is the function of duct in air conditioning system?	1
Q.13	What type of cooling coil is used in beverage cooler?	1
Answer any 03 questions out of the given 05 questions		2 x 3=6
Q.14	Define over load protectors and the purpose of using it in motors with neat sketch/diagram	2
Q.15	What is high pressure control and where is it installed?	2
Q.16	What is the function of relay in motors and how many types of relays are there?	2
Q.17	What are the desirable properties of ideal refrigerants?	2
Q.18	Write about oil pressure failure safety switch.	2
Answer any 02 questions out of the given 04 questions		3 x 2=6
Q.19	Name the equipment and devices used in the air conditioning plants.	3
Q.20	Draw the layout of ice plant with components.	3
Q.21	Why air-filters are used in air conditioning machine and also write their types?	3
Q.22	What is the function of the evaporator in refrigeration machine and how many types of evaporators are there?	3

SECTION C**(2 x 4 = 8 marks)**

Answer any 02 questions out of the given 03 questions		
Q.23	Radhika visits her friend's house and notices that her refrigerator is too noisy. She asks her friend but her friend has no clue about it. She inspects the fridge and finds out the reason and explains it to her. What do you think may be the reason of the noise in the refrigerator? Write the causes for that and also write down remedies for the causes.	4
Q.24	Arul notices that his air conditioner is not cooling at all. He inspects it and finds the leakage and repairs it. He now wants to charge the gas in it. Suggest the steps he should follow to change the gas in the air conditioner.	4
Q.25	Draw refrigeration cycle of hermetically sealed unit.	4