



**FEDERAL BOARD OF INTERMEDIATE AND
SECONDARY EDUCATION
H-8/4, ISLAMABAD**



**SCHEME OF STUDIES OF DIPLOMA OF ASSOCIATE ENGINEERING
(REFRIGERATION & AIR CONDITIONING TECHNOLOGY-1st YEAR)**

| S.No | Subject Name | Theory | Practical | Total Marks |
|------|---------------------------------------|------------|------------|-------------|
| 1. | Islamiyat / Pakistan Studies | 50 | -- | 50 |
| 2. | English | 100 | -- | 100 |
| 3. | Applied Mathematics-I A | 75 | -- | 75 |
| 4. | Applied Mathematics-I B | 75 | -- | 75 |
| 5. | Applied Physics | 50 | 50 | 100 |
| 6. | Applied Chemistry | 50 | 50 | 100 |
| 7. | Computer Applications | 50 | 50 | 100 |
| 8. | Principles of Refrigeration | 100 | 50 | 150 |
| 9. | Applied Electricity | 100 | 50 | 150 |
| 10. | Technical Drawing | -- | 50 | 50 |
| 11. | Basic Electronics Applied to HVAC & R | -- | 50 | 50 |
| 12. | Metal Shop | -- | 50 | 50 |
| 13. | Machine Shop / Welding Shop | -- | 50 | 50 |
| 14. | Mutal e Quran Hakim | 50 | -- | 50 |
| | Total: | 700 | 450 | 1150 |



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**SCHEME OF STUDIES OF DIPLOMA OF ASSOCIATE ENGINEERING
(REFRIGERATION AND AIR CONDITIONING TECHNOLOGY-2nd YEAR)**

| S.No | Subject Name | Theory | Practical | Total Marks |
|-------------|--|---------------|------------------|--------------------|
| 1. | Islamiyat / Pakistan Studies | 50 | -- | 50 |
| 2. | Applied Mathematics-II A | 75 | -- | 75 |
| 3. | Applied Mathematics-II B | 75 | -- | 75 |
| 4. | Industrial Manage: Human Relation | 100 | -- | 100 |
| 5. | Advance Refrigeration A | 75 | -- | 75 |
| 6. | Advance Refrigeration B | 75 | -- | 75 |
| 7. | Applied Physics | 50 | 50 | 100 |
| 8. | Principles of Air Conditioning A | 75 | -- | 75 |
| 9. | Principles of Air Conditioning B | 75 | -- | 75 |
| 10. | Principles of Air Conditioning | -- | 50 | 50 |
| 11. | Applied Thermodynamics & Low Pressure Boiler | 100 | 50 | 150 |
| 12. | Eng: & ARCH: Drawing | 50 | 100 | 150 |
| 13. | Workshop Practice-II | 50 | 100 | 150 |
| | Total: | 850 | 350 | 1200 |



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**SCHEME OF STUDIES OF DIPLOMA OF ASSOCIATE ENGINEERING
(REFRIGERATION AND AIR CONDITIONING TECHNOLOGY-3rd YEAR)**

| S.No | Subject Name | Theory | Practical | Total Marks |
|-------------|--|---------------|------------------|--------------------|
| 1. | Islamiyat / Pakistan Studies | 50 | -- | 50 |
| 2. | Business Management & Industrial Economics | 50 | -- | 50 |
| 3. | Business Communication | 50 | -- | 50 |
| 4. | Air Conditioning System Design A | 75 | -- | 75 |
| 5. | Air Conditioning System Design B | 75 | -- | 75 |
| 6. | Air Conditioning System Design | -- | 50 | 50 |
| 7. | Water and Air Distribution | 100 | -- | 100 |
| 8. | Control & Instrum: A | 75 | -- | 75 |
| 9. | Control & Instrum: B | 75 | -- | 75 |
| 10. | Control & Instrum: | -- | 50 | 50 |
| 11. | Industrial Refrigeration & Air condition | 100 | -- | 100 |
| 12. | Technical Project | -- | 100 | 100 |
| 13. | Heat Tran: & Ref Calculation A | 75 | -- | 75 |
| 14. | Heat Tran: & Ref Calculation B | 75 | -- | 75 |
| 15. | Workshop Practice-III | -- | 150 | 150 |
| | Total: | 800 | 350 | 1150 |