

**THE APOLLO UNIVERSITY**  
**Saketa, Chittoor, AP**  
**AHS- V Semester End Examination, June-2024**  
**Paper-III**  
**RTTT 3503-INSTRUMENTATION AND TROUBLESHOOTING**  
**SPECIFIC TO RESPIRATORY THERAPY**

**Time: 3 hours**

**Max. Marks: 60**

**Section –A (10x2=20 marks)**  
**Answer all Questions with short notes**

1. List the color coding's of medical gases.
2. Define Piston compressor.
3. What is aerosol therapy?
4. What is MDI and DPI?
5. Mention the troubleshooting of pneumotachometer of pulmonary function test.
6. Define helium dilution test.
7. Mention the mouth and throat instruments used in bronchoscope procedure
8. Define "Thoracoscopy.
9. Write the classifications of video laryngoscope.
10. Write the pulse oximeter's theory of operation.

**Section –B (5X8=40 marks)**  
**Answer all Questions either A or B in 400 words each**

11. A) Write a detail note on storage of medical gases and on the on control of medical gases.

**OR**

B) Draw a neat labelled diagram of: i) Preset Regulator, ii) Adjustable Regulator, iii) Piston compressor, iv) Diaphragmatic compressor.

12. A) Explain about the definition and physics of aerosol therapy in detail.

**OR**

B) Mention in detail about: i) Passover humidifier, ii) Wick humidifier, iii) Bubble through humidifier.

**Cont....**

13. A) Explain briefly about i) Helium dilution test, ii) Nitrogen wash-out test, iii) Body plethysmography, iv) Diffusing capacity for carbon-monoxide test.

**OR**

B) Explain in detail about the indications, procedure and interpretation of He – dilution technique?

14. A) Explain in detail about the definition, patient preparation, indications, troubleshooting of surgical interventions and contraindications of thoracoscopy.

**OR**

B) Discuss in detail about the indications, procedure and contraindications of rigid bronchoscopy.

15. A) Discuss in detail about the equipment's, preparatory phase, Allen's test and sites for obtaining atrial blood gas?

**OR**

B) Mention in detail about the principle, theory of operation, indications, contraindications and limitations of pulse oximeter.

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