**2021 Worksheet # 5**

**Valves:**

**Station Outlets / Inlets:**

**Manufactured Assemblies:**

**Pages:**

1. **– 50**

1. A shutoff valve shall be placed at the immediate connection of each \_\_\_\_\_\_\_\_\_\_\_\_ system to the distribution piping system. What is the name given to the valve?

 **a. Source**

 b. Isolation

 c. Main

 d. Supply

2. A shutoff valve shall be provided in the supply line when the source valve is not accessible from within the building being served. What is the name given to this valve \_\_\_\_\_\_\_\_\_\_\_\_?

 a. Service

 b. Supply

 **c. Main**

 d. Zone

3. All valves except valves zone valve box assemblies shall be secured by any of the following means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 a. Located in secure areas

 b. Located above ceiling, but remaining accessible and not obstructed

 c. Locked or latched in their operating positions

 **d. Any of the above**

4. Immediately outside each Category 1 space and anesthetizing location of moderate sedation, deep sedation, or general anesthesia there shall be located a (n) \_\_\_\_\_\_\_\_\_\_\_\_\_ in each medical gas, or vacuum line or both.

 a. Fire extinguisher

 b. Relief valve

 **c. Zone valve**

 d. Area alarm

5. In-line check valves shall not have threaded connections but shall have\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 a. Brazed extensions

 b. Threaded purge port

 c. In-line serviceability

 **d. All of the above**

6. New or replacement shutoff valves for medical gas pressure piping systems shall be permitted to be any type as long as they meet the following: \_\_\_\_\_\_\_\_\_\_\_\_.

 a. They have a minimum CV factor

 b. Quarter turn to off

 c. Constructed of material suitable for the service

 **d. All of the above**

7. Service valve shall be placed in the branch piping prior to any \_\_\_\_\_\_\_\_\_\_\_\_\_\_ on that branch.

 a. In line valve

 **b. Zone valve**

 c. Source valve

 d. Valves for future

8. Shutoff valves for positive pressure gases shall \_\_\_\_\_\_\_\_\_\_\_\_\_.

 a. Provided with copper tube extensions for brazing

 b. Permit in-line serviceability

 c. be cleaned for oxygen service by the manufacturer

 **d. All of the above**

9. The main line valve shall be located on which side of the source valve, when the main line valve enters the building.

 a. Downstream of the source valve

 **b. Facility side of the source valve**

 c. Upstream of the source valve

 d. Main line valve upstream of the service valve

10. There shall be a zone valve immediately outside of anesthetizing location of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?

 a. Moderate sedation

 b. Deep sedation

 c. General anesthesia

 **d. All or any of the above**

11. What is the name given to the shutoff valve installed on all lateral branch piping from a main or riser \_\_\_\_\_\_\_\_\_\_\_?

 a. Zone

 b. Main

 c. Riser

 **d. Service**

12. What valve is permitted to be installed to isolate or shut off piping for servicing of individual rooms or areas?

 **a. In line valve**

 b. Riser valve

 c. Service valve

 d. Future valve

13.What valves shall be readily operable from a standing position in the corridor on the same floor they serve \_\_\_\_\_\_\_\_\_\_\_?

 a. Main

 b. Service

 c. Riser

 **d. Zone**

14. With the approval of the authority having jurisdiction, in what areas shall the shutoff valves be permitted to be secured to prevent inappropriate access?

 **a. Psychiatric or pediatric**

 b. Maternity

 c. Critical care

 d. Anesthetizing

15. Manufactured assemblies employing flexible hose shall have the minimum burst pressure of\_\_\_\_\_\_\_\_\_\_\_\_?

a. 1200 psig

b. 1500 psig

**c. 1000 psig**

d. None of the above

16. Station outlets that operate at a pressure in excess of \_\_\_\_\_\_\_\_ shall be either D.I.S.S connectors comply with 5.1.5.1.5 (4).

 a. 50 psi

 b. 60 psi

 c. 70 psi

 **d. 80 psi**

17. Station outlets/inlets of manufactured assemblies that employ hose or flexible connections to the piping system that are not fully and immediately accessible, shall use \_\_\_\_\_\_\_\_\_\_\_ connectors.

 a. quick coupler

**b. D.I.S.S.**

c. demand check

d. all of the above

18. The scale range of positive pressure analog indicators shall have the normal reading fall within the \_\_\_\_\_\_\_ of the total range.

 a. lower third

**b. middle third**

c. top third

d. none of the above

19. Pressure and vacuum indicators shall be readable from a standing position and shall be provided at the following locations?

 a. Adjacent to the main line initiating device.

b. At or in area alarm panel.

c. Station outlet / inlet side of zone valve

**d. All the above**.

20. To prevent injuring to the medical staff the station outlets that is operating with pressures of 200 psi and 300 psi shall be designed to prevent removable of the adapter until\_\_\_\_\_\_\_\_\_\_\_.

 a. The proper tools is available

b. The head Doctor say it is ok

**c. The pressure has been relieved**

d. The pressure has been balance

21. MGR assemblies shall connect to the \_\_\_\_\_\_ through \_\_\_\_\_\_\_that are brazed to the pipeline.

**a. Pipeline and fittings**

b. Brazing by pipeline

c. Pipeline by brazing

d. Fittings by pipeline

22. The scale range of vacuum indicators shall be \_\_\_\_\_\_\_\_\_\_\_ gage HgV.

  a. 0 – 12”

  b. 0 – 29.9”

 **c. 0 - 30”**

 d. 0 - 30.9”

23. Where should Gas-specific demand check fitting to facilitate service testing or replacement shall be installed? That would be downstream of all source valves.

 **a. Pressure indicators**

 b. Zone valve indicators

 c. Riser valve indicators

 d. Area alarm panels

24. Openings in the MGR not occupied by station outlet/inlet shall be \_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_ so that a special tool is required for removal.

**a. Capped or Plugged**

b. Plugged or Brazed

c. Brazed or welded

d. Either a - b

25. Only one \_\_\_\_\_\_\_\_\_\_\_ shall be required for each branch off of a riser, regardless of how many zone valve boxes are installed on that lateral.

 a. riser valve

 **b. service valve**

 c. zone valve

\ d. source valve