Instrumentation System Design (QP1)

Sem-VII (CBCS, Rev-2016, ETRX)

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| Q.1 | The purpose of valve packing is  |
| Option A: | Help reduce cavitation in the valve trim |
| Option B: | Increase stiction |
| Option C: | Cushion the valve against harm during shipment |
| Option D: | Seal process fluid from escaping past the stem |
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| Q.2  | **Cavitation in a control valve is caused by:**  |
| Option A: | process noise |
| Option B: | vibration in the piping |
| Option C: | the Von Karman effect |
| Option D: | pressure recovery |
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| Q.3 | A one-way valve that lets air into the reservoir of a compressor, but doesn’t let it out, is a  |
| Option A: | Check valve |
| Option B: | Receiver valve |
| Option C: | Control valve |
| Option D: | Three-way valve |
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| Q.4 | Heavy lifting work is often accomplished by shifting fluids in big machines. The power system of such machines can be described as  |
| Option A: | Reciprocating |
| Option B: | Pneumatic |
| Option C: | Hydraulic |
| Option D: | Hybrid |
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| Q.5 | The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ converts the compressed air energy into mechanical energy in the form of linear movement in one direction only.  |
| Option A: | Piston cylinders |
| Option B: | Double acting cylinders |
| Option C: | Single acting cylinders |
| Option D: | Hydraulic pumps |
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| Q.6 | The lubricator in a pneumatic circuit is the  |
| Option A: | First element in line |
| Option B: | Second element in line |
| Option C: | Last element in line |
| Option D: | Third element in line |
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| Q.7 | This transmitter is simple to setup, lower cost, commonly feature hazardous area approvals, and do not require local power  |
| Option A: | 2 wire |
| Option B: | 3 wire |
| Option C: | 4 wire  |
| Option D: | 1 wire |
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| Q.8 | Isolation is not present in following transmitter |
| Option A: | 1 wire  |
| Option B: | 3 wire |
| Option C: | 2 wire |
| Option D: | 4 wire  |
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| Q.9 | Flapper nozzle is designed to operate in its which region of characteristics  |
| Option A: | Central region |
| Option B: | Saturation region |
| Option C: | Lower region |
| Option D: | Upper region |
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| Q.10 | Output of a current to pressure converter is |
| Option A: | 3 to 15 PSI pressure |
| Option B: | 3 to 10 PSI pressure |
| Option C: | 3 to 25 PSI pressure |
| Option D: | 2 to 15 PSI pressure  |
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| Q.11 | In a PID controller, offset has increased, integral time constant has to be -------- so as to reduce offset. |
| Option A: | Increased  |
| Option B: | Reduced  |
| Option C: | Reduced to zero |
| Option D: | Increased to one  |
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| Q.12 | Which of the following system gives excellent transient and steady state response |
| Option A: | P+I |
| Option B: | P |
| Option C: | P+I+D |
| Option D: | P+D |
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| Q.13 | Input and output modules in PLC are of ------ type  |
| Option A: | 2 |
| Option B: | 3 |
| Option C: | 1 |
| Option D: | 4 |
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| Q.14 | PLC needs --- power to work  |
| Option A: | 24V DC |
| Option B: | 12V DC |
| Option C: | 50V DC |
| Option D: | 10V DC |
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| Q.15 | Multichannel Analog Multiplexed System utilizes time --\_\_\_\_\_  |
| Option A: | using a transformer |
| Option B: | using a capacitor |
| Option C: | using a flip-flop |
| Option D: | using a mux |
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| Q.16 | In a SCADA the central host computers server is called as  |
| Option A: | Switch |
| Option B: | Master Terminal Units (MTUs) |
| Option C: | Junction Box |
| Option D: | Microcontroller |
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| Q.17 | **The acronym DCS stands for**  |
| Option A: | Delta Console Services |
| Option B: | Distributed Control System |
| Option C: | Direct Cascade Sequencing |
| Option D: | Differential Concentration Switch |
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| Q.18 | What is the characteristic of a good control system  |
| Option A: | Sensitive to parameter variation    |
| Option B: | Insensitive to input commands |
| Option C: | Neither sensitive to parameter variation nor sensitive to input commands |
| Option D: | Insensitive to parameter variation nor sensitive to input commands |
|  |  |
| Q.19 | **This transmitter has microprocessor built inside**  |
| Option A: | 2 wire  |
| Option B: | 3 wire |
| Option C: | 4 wire |
| Option D: | Smart transmitter  |
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| Q.20 | A system that is portion of larger system is called ----- system  |
| Option A: | Primary |
| Option B: | Partition |
| Option C: | Subsystem |
| Option D: | singular |
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| Q.21 |  A controller is basically a  |
| Option A: | Sensor    |
| Option B: | Comparator |
| Option C: | Amplifier |
| Option D: | Clipper |
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| Q.22 | SCADA is a  |
| Option A: | Process |
| Option B: | Software |
| Option C: | Hardware  |
| Option D: | system |
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| Q.23 | Which of the following is not the component of a SCADA system?  |
| Option A: | Database server |
| Option B: | I/O system |
| Option C: | PLC controller |
| Option D: | Sparger controller |
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| Q.24 | Butterfly valves are used for  |
| Option A: | Low pressure applications |
| Option B: | High pressure applications  |
| Option C: | Medium pressure applications |
| Option D: | Very high-pressure applications  |
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| Q.25 | This valve has a very simple design  |
| Option A: | Ball |
| Option B: | Solenoid  |
| Option C: | Check |
| Option D: | Butterfly  |