

Code No:56091

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

III B.Tech. II Sem., II Mid-Term Examinations, April – 2014

FLUID POWER AND CONTROL

Objective Exam

Name: _____ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. Installing larger diameter pipe in pumping system results in reduction in []
a. Static head b. Frictional head c. Both a and b d. None of the above
2. For high flow requirement, pumps are generally operated in []
a. Parallel b. Series c. Both a and b d. None of the above
3. Friction losses in a pumping system is []
a. Proportional to $1 / Q$ b. Proportional to $1 / Q^2$
c. Proportional to $1 / Q^3$ d. Proportional to $1 / Q^4$
4. Throttling the delivery valve of a pump results in []
a. Increased head b. Increased power c. Decreased head d. Both a and b
5. The operating point in a pumping system is identified by []
a. Point of intersection of system curve and efficiency curve
b. Point of intersection of pump curve and system curve
c. Point of intersection of pump curve and theoretical power curve
d. Cannot be determined by the pump characteristic curves
6. Small by-pass lines are sometimes installed to []
a. Control the flow rate b. Control the pump delivery head
c. Reduce pump power consumption d. Prevent the pump from running at zero flow
7. A control valve is a device used for regulating []
a. pressure of flowing fluid b. direction of flowing fluid c. flow of fluid d. a, b and c
8. Relief valve is a []
a. Direction control valve b. Flow control valve c. Pressure control valve d. None of these
9. The function of a pressure compensating valve is to []
a. Unload the system b. Cause operations in a sequential order
c. Maintain a constant level of pressure in a hydraulic circuit
d. To relieve excess pressure in a circuit
10. Which of the following axial fan types is most efficient []
a. Propeller b. Tube axial c. Vane axial d. Radial

Cont.....2

II Fill in the blanks

- 11. In Aero plane, type of rotary compressor used is _____
- 12. Speed of rotary compressors as compare to reciprocating compressors is _____
- 13. The volumetric efficiency of compressor with increase in compression will _____
- 14. The capacity of compression will be highest when its intake temperature is _____
- 15. In multi stage compression, the isothermal compression is achieved by _____
- 16. Rotary compressor is best suited for _____
- 17. Volumetric efficiency for reciprocating air compressor is about _____
- 18. The maximum delivery pressure in a rotary compressor is _____
- 19. The parameter used by ASME to define fans, blowers and compressors is _____
- 20. The efficiency of backward curved fans compared to forward curved fans is _____

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Set No. 2

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I Choose the correct alternative:

1. Throttling the delivery valve of a pump results in []
a. Increased head b. Increased power c. Decreased head d. Both a and b
2. The operating point in a pumping system is identified by []
a. Point of intersection of system curve and efficiency curve
b. Point of intersection of pump curve and system curve
c. Point of intersection of pump curve and theoretical power curve
d. Cannot be determined by the pump characteristic curves
3. Small by-pass lines are sometimes installed to []
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a. Propeller b. Tube axial c. Vane axial d. Radial
8. Installing larger diameter pipe in pumping system results in reduction in []
a. Static head b. Frictional head c. Both a and b d. None of the above
9. For high flow requirement, pumps are generally operated in []
a. Parallel b. Series c. Both a and b d. None of the above
10. Friction losses in a pumping system is []
a. Proportional to $1 / Q$ b. Proportional to $1 / Q^2$
c. Proportional to $1 / Q^3$ d. Proportional to $1 / Q^4$

Cont.....2

II Fill in the blanks

- 11. The capacity of compression will be highest when its intake temperature is _____
- 12. In multi stage compression, the isothermal compression is achieved by _____
- 13. Rotary compressor is best suited for _____
- 14. Volumetric efficiency for reciprocating air compressor is about _____
- 15. The maximum delivery pressure in a rotary compressor is _____
- 16. The parameter used by ASME to define fans, blowers and compressors is _____
- 17. The efficiency of backward curved fans compared to forward curved fans is _____
- 18. In Aero plane, type of rotary compressor used is _____
- 19. Speed of rotary compressors as compare to reciprocating compressors is _____
- 20. The volumetric efficiency of compressor with increase in compression will _____

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II Fill in the blanks

- 11. Rotary compressor is best suited for _____
- 12. Volumetric efficiency for reciprocating air compressor is about _____
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