

JNTU ONLINE EXAMINATIONS [Mid 2 - FMHM]

1. _____ head is defined as the head against which a centrifugal pump has to work. :-> Manometric
2. If A is the area of cross section of the piston. ' N ' speed of the crank in r.p.m and ' r ' radius of the crank, then the theoretical discharge of a single acting pump will be :->
3. A 1: 5 model of a turbine has ratio of prototype speed to that of model as 0.28. If the power developed by the property is 18.6 5MW, then that developed by the model in megawatts will be:->0.27
4. A 1:5 turbine model has ratio of prototype speed to its own speed as 0.28. If the discharge in the model turbine is 1.30 m³ per second , the prototype discharge will be:-> 45.5
5. A centrifugal pump can also be used for lifting highly viscous liquids such as oils, muddy and sewage water, paper pulps etc., whereas a reciprocating pump can lift :->Pure water
6. A centrifugal pump is just the reverse of a :-> radially inward flow reaction turbine
7. A centrifugal pump is just the reverse of a :->radially inward flow reaction turbine
8. A cylindrical open topped storage reservoir provided to protect the penstock against water hammer pressure is called :-> surge tank
9. A double acting reciprocating pump, running at 40 rpm, is discharging 1.0 m³ of water per minute. The pump has a stroke of 400 mm. The diameter of the piston is 200 mm. The delivery and suction head are 20 m and 5 m respectively. Find the discharge from the pump. :->0.01675m³/sec
10. A double acting reciprocating pump, running at 40 rpm, is discharging 1.0 m³ of water per minute. The pump has a stroke of 400 mm. The diameter of the piston is 200 mm. The delivery and suction head are 20 m and 5

m respectively. Find the slip from the pump. :->0.1675m³/sec

11. A forebay in a hydel system is provided at the junction of :->the power channel and the penstock

12. A low head pump is that which is capable of working against a total head of :->15 m

13. A Pelton turbine, with six nozzles has specific speed of 8.1 . The specific speed of one nozzle will be :->3.3

14. A single acting reciprocating pump, running at 50 rpm, delivers 0.01m³/sec of water . The diameter of the piston is 200 mm and stroke length 400 mm. Calculate coefficient of discharge :->0.955

15. A single acting reciprocating pump, running at 50 rpm, delivers 0.01m³/sec of water . The diameter of the piston is 200 mm and stroke length 400 mm. Calculate the slip :->0.00047m³ /sec

16. A single acting reciprocating pump, running at 50 rpm, delivers 0.01m³/sec of water . The diameter of the piston is 200 mm and stroke length 400 mm. Calculate the percentage of slip :->4.489%

17. A single acting reciprocating pump, running at 50 rpm, delivers 0.01m³/sec of water. The diameter of the piston is 200 mm and stroke length 400 mm. Determine the theoretical discharge of the pump :-
>0.01047m³/sec

18. A surge tank is provided in a hydropower scheme to :->reduce the pressures under transient conduits

19. Air vessel in a reciprocating pump is used :-> to obtain a continuous supply of water at uniform rate

20. All other conditions and parameters remaining the same, water hammer pressure can be reduced by :->using
pipe of greater diameter

21. As compared to reciprocating pumps, the discharging capacity of a centrifugal pump is more whereas its pressure head will be :->less

22. As highly viscous oil leads to a greater resistance , so in machine it will cause:->maximum power loss
23. Cavitation can take place in case of :-> Francis turbine
24. Cavitation causes damage in turbine runner near the :->inlet on the convex side of blades
25. Cavitation damage in the turbine runner occurs :->near the outlet on the convex side of the blades
26. Cavitation in turbine causes :->damage to blades, noise and vibrations and fall in efficiency
27. Coefficient of discharge is the ratio of :->Actual discharge to the theoretical discharge
28. Draft tube is used for discharging water from the exit of :->Francis turbine, a Kaplan turbine
29. Draft tube is used for discharging water from the exit of :->Francis turbine, a Kaplan turbine
30. Due to limitations in diameter and speed of the impeller the head developed by a centrifugal pump is generally restricted to :-> 50 meters
31. During suction stroke of a reciprocating pump, the separation may take place:->in the beginning of the **suction stroke**
32. Francis turbine is :->A reaction radial flow turbine
33. Francis turbine is :->A reaction radial flow turbine
34. Hydraulic turbines are the machines which convert water energy into :->mechanical energy
35. If 'A' is the area of cross section of the piston. 'N' speed of the crank in r.p.m and 'r' radius of the crank, then the theoretical discharge of a double acting pump will be :->
36. If Cavitation parameter is zero :->Boiling should occur
37. If 'H' is the head of water under which a turbine works and 'N' is the actual speed in r.p.m., then the unit speed can be calculated by :->

38. If 'P' is the power developed by a turbine and 'H' is the water head under which a turbine is working, then unit power can be calculated by:->

39. If the head on the turbine is more than 300 m, the type of turbine used should be :->Pelton

40. If the specific speed of a pump is 5000, the type of pump used is :->slow speed radial flow

41. If the specific speed of turbine is more than 300, the type of turbine is :->Kaplan

42. If the theoretical discharge is less than the actual discharge of the pump is known as _____:-

>negative slip

43. If the theoretical discharge is more than the actual discharge of the pump is known as _____:-

>positive slip

44. If the value of Cavitation parameter in two homologous units is same, then :->Cavitation is same in both the

units

45. If the vanes of an impeller has only base plate, no crown plate, then it is known as :->semi-open impeller

46. In a reaction turbine, which is not relevant :-> gate valve in a penstock

47. In a single acting reciprocating pump, water is delivered in :->Delivery stroke

48. In a water wheel, when water enters the buckets mounted on the periphery of a wheel at its top, then it will be known as :->Over shoot wheel

49. In Cavitation, the collapse pressure of vapour bubble is :->13600 atmospheric pressure

50. In centrifugal pump, which of the statement is not relevant :->the valve and strainer is provided

51. In order to have better utilization of hydro power potential the plants to be installed should be :->reservoir

power plants

52. In Pelton turbine the efficiency :-> First increases and then decreases, both parabolically
53. In Pelton wheel , hydraulic efficiency will be maximum when speed of the buckets as compared to velocity of the jet will be :->half
54. Jet ratio (m) is defined as the ratio of :->diameter of Pelton wheel to diameter of the jet water
55. Jet ratio (m) is defined as the ratio of :->diameter of Pelton wheel to the diameter of the jet of water
56. Kaplan turbine is :-> An axial flow turbine
57. Kaplan turbine is :->an axial flow reaction turbine
58. Main characteristic curves of a turbine means :-> Curves at constant head
59. Manometric efficiency of a pump is the ratio of :->Manometric head and the Euler's head
60. Maximum efficiency of a series of vertical plates is :->66.67%
61. Mechanical efficiency (mech) of a centrifugal pump is given by:-> (Power at the impeller)/S.H.P.
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63. Mechanical efficiency mech of a centrifugal pump is given by:->Power at the impeller / S.H.P.
64. NPSH is a acronym of :-> Net Positive Suction Head
65. NPSH is most popularly used in :->Pumps
66. Overall efficiency is defined as :->Product of Manometric efficiency and mechanical efficiency
67. Pelton wheel is a :-> tangential flow turbine
68. Pipe used to carry water under pressure from storage reservoir to the turbines are called :->penstocks
69. Priming is not required in :-> reciprocating pumps
70. Specific speed is :->a shape factor
71. Speed ratio is given by :->

72. The centrifugal pump should not be installed above the water level in the sump more than :->6.7 m height

73. The channel or pipe which carries away water from the power house after it has been passed through the turbine is known as :-> tail race

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75. The component of a centrifugal pump, which converts the mechanical energy into hydraulic energy is :->

runner

76. The device adopted to maintain constant speed of the runner, when load on the generator changes, is known as :->governor

77. The difference between the power obtained from the turbine shaft and the power supplied by water at its entry to the turbine is :->mechanical losses

78. The difference between the theoretical discharge and actual discharge of the pump is known as _____ :->Slip

79. The difference of absolute pressure head at the inlet of the pump and vapour pressure head plus velocity head is known as :->NPSH

80. The direction of flow of liquid in a propeller pump impeller is in :->axial direction

81. The direction of flow of liquid in a propeller pump impeller is in :->axial direction

82. The discharge through a single acting reciprocating pump is :-> $Q =$

83. The discharge through Kaplan Turbine is given by :->

84. The generation of hydro-electric power as compared to power generated by coal, oil etc is :->cheaper

85. The hydro power plants operating under a head between 30 m to 250 m will be called as :->medium head

plant

86. The hydro power plants operating under a head of less than 30 m will be called as :->low head plant

87. The impounding of excess run-off during seasons of surplus flow for further use during dry season is known as :->storage

88. The machine which converts mechanical energy into hydraulic energy is known as :-> pump

89. The manometer efficiency(η_m) of centrifugal pump is given by :->

90. The Manometric efficiency(η_{man}) of centrifugal pump is given by :->

91. The Manometric efficiency(η_{man}) of centrifugal pump is given by :->

92. The Manometric head in a pump is :->the head developed by the pump

93. The outlet angle of the impeller blades, which governs the performance of a centrifugal pump for fast runner

is :-> more than 90°

94. The overall efficiency of a turbine is given by :->

95. The pipes used to carry water under pressure from storage reservoir to the turbine and generally made of steel

or R.C.C. are called as :-> penstocks

96. The power (P_u) is given by the expression :-> $P_u = \rho g Q H$

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98. The power channel that extends from the intake works to the power house is called :->head race

99. The pressure head due to acceleration (h_a) in reciprocating pump is given by :-> $h_a = \frac{a \cdot r}{g}$

100. The pressure, at which separation takes place, is known as separation pressure or separation pressure

head. For water, the limiting value of separation pressure head is :->2.5 m (abs)

101. The ratio between power developed by the runner and the net power supplied by the water at the

entrance to a turbine is known as :-> hydraulic efficiency

102. The ratio of the dynamic head and the actual head developed in a pump, is known as :->Manometric
ef ficiency

103. The ratio of the Mano metric head to the head imp arted by the impeller to the water is known as
_____ efficiency :->Manometric

104. The ratio of the power available at the impeller to the power at the shaft of the centrifugal pump is known as _____ efficiency:->mechanical

105. The relative velocity of the Pelton jet an exit is less than that at inlet due to :->both Frictional losses

over the buckets and non-zero thickness of the splitter ridge

106. The specific speed (N_s) of a pump is given by the expression :-> $N_s =$

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108. The specific speed (N_s) of a turbine is given by :-> $N_s =$

109. The specific speed of (N_S) of a pump is given by the expression :-> $N_S =$

110. The specific speed of a Francis turbine is in the range :-> 10 to 35

111. The specific speed of the Francis turb ine var ies in between :-> 60 to 400

112. The speed ratio for Pelton wheel varies from :-> 0.45 to 0.50

113. The sum of the suction head and delivery head is known as :-> Static head

114. The turbine suitable for low heads and high flow rates is :->Francis

115. The unit discharge (Q_u) is given by the expression :-> $Q_u =$

116. The unit discharge (Q_u) is given by the expression :-> $Q_u =$

117. The unit speed (N_u) is given by the expression :-> $N_u =$

118. The unit speed (N_u) is given by the expression :-> $N_u =$

119. The valve provided in a suction pipe is called :->foot valve

120. The work saved by fitting an air vessel to a double acting reciprocating pump is :->39.2%

121. The work saved by fitting an air vessel to a single acting reciprocating pump is :->84.4%

122. Those hydro power plants which utilize the flow as it comes without any storage are known as :->**runoff**

river plants

123. Tick mark the correct statement :->Curves at constant head are called main characteristic curves.

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125. Tick mark the correct statement :->Centrifugal pump convert mechanical energy into hydraulic

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128. To regulate the flow of water and to suit the variation in power demand :->pondage is necessary

129. Two thro w reciprocating pump means :-> double cylinder pump

130. Unit power of a turbine means the power developed by a turbine, when working under a head of :-> 1

meter of water

131. Unit speed of turbine means speed of the turbine developed under a head of :->1 meter of water

132. Variations in head and speed are common in turbines working under low head. In these units speed is

per mitted to vary within very narrow limits but head may vary even up to:- >50% or more

133. When the vanes of an impeller have neither base plate, nor the crown plate, then it is known as :-

>open impeller

134. Wicket gates are:- >Guide vanes of a reaction turbine

135. Windage is :->Friction between Pelton wheel and atmosphere