Assignment 12

The data below is for this assignment has passed. As per our records you have not submitted this assignment.

1. For a symmetric section:
   - (a) Chord line and symmetric line are same
   - (b) Chord line and camber line are straight
   - (c) Chord line and camber line, both are curved
   - (d) None of the above
   - No. The answer is incorrect.
   - Accepted Answer:
     - (c) Chord line and camber line are straight

2. For a turbine cascade, the angle between the chord line and the axial direction of flow is defined as:
   - (a) Blade angle
   - (b) Hub angle
   - (c) Guide angle
   - (d) Impeller angle
   - No. The answer is incorrect.
   - Accepted Answer:
     - (b) Hub angle

3. Choose the correct option for the flow through the cascade tunnel:
   - (a) Bower - Coriolis effect - Setting chamber - Honeycomb - chamber-construction section - Cascade or Test section.
   - (b) Bower - Setting chamber - Honeycomb - chamber-construction section - Coriolis effect - Cascade or Test section.
   - (c) Bower - Coriolis effect - Setting chamber - honeycomb - chamber construction section - Cascade or Test section.
   - (d) None of the above
   - No. The answer is incorrect.
   - Accepted Answer:
     - (c) Bower - Coriolis effect - Setting chamber - honeycomb - chamber construction section - Cascade or Test section.

4. Aspect ratio of a cascade is defined as:
   - (a) Blade height / Blade chord
   - (b) Distance between the two successive blades / Blade height (Length)
   - (c) Blade height / Blade height
   - (d) None of the above
   - No. The answer is incorrect.
   - Accepted Answer:
     - (a) Blade height / Blade chord

5. For a turbine cascade, incidence angle is defined as the:
   - (a) Difference between camber line angle at inlet and blade angle at outlet.
   - (b) Difference between camber line angle at outlet and blade angle at inlet.
   - (c) Difference between camber line angle at outlet and blade angle at inlet.
   - (d) None of the above
   - No. The answer is incorrect.
   - Accepted Answer:
     - (b) Difference between camber line angle at outlet and blade angle at inlet.

6. Blade angle for turbine cascade is defined as the angle between the:
   - (a) Chord line and flow axial direction.
   - (b) Flow axial direction and tangent to camber line.
   - (c) Tangent to camber line.
   - (d) None of the above
   - No. The answer is incorrect.
   - Accepted Answer:
     - (b) Flow axial direction and tangent to camber line.

7. For a given figure of turbine blade, identify the correct option for point 1, 2 and 3:
   - (1) Pressure side, 2 - Camber line, 3 - Section side.
   - (2) Pressure side, 2 - Camber line, 3 - Section side.
   - (3) Pressure side, 2 - Camber line, 3 - Section side.
   - (4) None of the above
   - No. The answer is incorrect.
   - Accepted Answer:
     - (2) Pressure side, 2 - Camber line, 3 - Section side.

8. The effective cooling of turbine blades results in:
   - (a) Reduction in number of blades
   - (b) Higher blade cooling efficiency
   - (c) Both (a) and (b)
   - (d) None of the above
   - No. The answer is incorrect.
   - Accepted Answer:
     - (c) Both (a) and (b)

9. For a given pressure ratio, increase in turbine inlet temperature results in:
   - (a) Increase in efficiency of the cycle.
   - (b) Increase in power output of the cycle.
   - (c) Decrease in both efficiency and power output.
   - (d) Both (a) and (b)
   - No. The answer is incorrect.
   - Accepted Answer:
     - (c) Decrease in both efficiency and power output.

10. In general for cascades, the minimum requirement of the blade for design assumption is:
    - (a) Seven blades with aspect ratio 3.
    - (b) Nine blades with aspect ratio 3.
    - (c) Any combination of number of blades and aspect ratio.
    - (d) None of the above
    - No. The answer is incorrect.
    - Accepted Answer:
      - (b) Nine blades with aspect ratio 3.

11. Which one is cascade configuration?
    - (a) Multi Number
    - (b) Aspect ratio
    - (c) Blade geometry and profile
    - (d) All above
    - No. The answer is incorrect.
    - Accepted Answer:
      - (d) All above