Latest QuEST Global Technical Model Question Paper

1. Radiographic examination is performed
   1. To identify the cracks
   2. To identify internal defects component
   3. To identify the defects in magnetic material
      a. Option 1 and 2
      b. Option 1 and 3
      c. Option 2 and 3
      d. All the above

2. Rotating stall, surge and flutter can be overcome by the
   a. Variable stator vanes
   b. Introducing inter-stage bleed
   c. Both the above
   d. None of the above

3. Shot-peening is a process used for introducing a
   a. Compressive surface layer
   b. Use a hardening coating to improve metal properties
   c. Reduce metal surface imperfection by machining
   d. Is the process of coating with an anti-corrosive paint

4. Specific fuel consumption (SFC) is ratio of
   a. Fuel flow rate/thrust
   b. Thrust/fuel/flow rate
   c. Thrust/air mass flow rate
   d. None of the above
5. The component used for transferring axial thrust form a rotating component to a static component is
   a. Roller Bearing
   b. Thrust Bearing
   c. Ball Bearing
   Both 2 and 3 above

6. The Oil system in Turbofan engine has the following roles
   a. It cools the bearing and spline
   b. It lubricates bearings and spline
   c. Both 1 and 2
   None of these

7. The Thermal Expansion of the Turbine casting is controlled throughout the cycle to
   a. Maintain optimum clearance between Blade tip and case
   b. To relieve the stresses developed in the casing
   c. To support Engine Health Monitoring
   d. To reduce Turbine speed

8. To ensure component integrity, types of Inspection Techniques used is
   a. Visual inspection
   b. Dimensional inspection
   Non destructive Inspection
   All the of the above
9. Variable geometry inlet duct are used on supersonic aircrafts for
   a. Slowing the airflow to subsonic speeds at the face of the compressor and increase static pressure
   b. Accelerating the airflow, to supersonic speeds, during cruising flight
   c. Increasing the airflow, at outlet end of compressor
   None of these

10. What are the metal joining techniques
   a. Welding
   b. Brazing
   c. Thermal spray Technique
   Mechanical Fastner
   a. Option 1, 2 and 3
   b. Option 2, 3 and 4
   c. Option 1, 2 and 4
   d. All the above

11. What are the metal removal techniques
   a. Ultra High Pressure jet Machining
   b. Electro Discharge Machining
   c. Electro Chemical Machining

12. Which of the following properties makes titanium ideal for fan blades
   a. It is very light
   b. It is very leak
It is silver coloured
d.all the above

13 why do we need to do Inspection
1. To determine whether the component is serviceable
2. To restore Fit, Form and Function of the component
3. To determine whether the component is repairable
a. Option 1 and 2
b. Option 1 and 3
c. Option 2 and 3
d. All the above

14 With increase in pressure ration the specific fuel consumption
a. Increase
b. Decrease
c. remains constant
d. None of the above

15 Full Authority Digital Engine Control (FADEC) system
a. Decrease the Fault detection capability of the engine
b. Has no effect on Fault detection capability of the engine
c. Increase the fault detection capability of the engine
d. None of the above

16 Additional thrust is required for
a. Landing
17. The surge margin of Centrifugal compressor is----than that of an Axial compressor
   a. More
   b. Less
   c. Equal
   d. Not adequate

18. An aircraft which is longitudinally stable, will tend to return to level flight after a movement about which axis
   a. Pitch
   b. Roll
   c. Yaw
   d. All the above

19. In normal flight conditions, an increase in aircraft speed
   a. Cause the nose of the aircraft to drop
   b. Cause the nose of the aircraft to lift
   The nose remains in the same position
   d. None of these

20. During a glide the following forces act on an aircraft
   a. Lift, weight, thrust
   b. Lift, drag, weight
21 With increasing altitude pressure decrease and
   a. Temperature decreases at the same rate as pressure reduces
   b. Temperature decreases but at a lower rate than
   c. Temperature remains constant to 8000ft
   d. None of these

22 Longitudinal stability is given by
   The fin
   b. the wing dihedral
   c. the horizontal tailplane
   d. None of the above

23 The boundary layer is
   Thicker at the leading edge
   b. Thickest at the trailing edge
   Constant thickness from leading to trailing edges
   d. None of the above

24 What are the types of rivets that are used in Aerospace Industry
   a. Solid rivet
   b. Hollow rivet
   c. Blind rivet
   a. Option 1 and 2
   b. Option 1 and 3 c. Option 2 and 3 d. All the above