

QuEST Global Technical - Mechanical Engg Model Question Paper

1.A high Pressure compressor Blade is found to have a crack near the root

- a. The blade has to be rejected for further operation as root is a high stress area**
- b. The blade is accepted bal for further service operation**
- c. Compressor blades can never develop cracks at the root**
- d. None of the above is correct**

2.A bradable coating are used for

- a. Maintaining clearance between the rotating components and casing/seals**
- b.To provide heat insulation for the component**
- c.Both Option (A) and (B)-ans**
- d.None of the above**

3.Advantage of composite are

- a. Composite provides strengths similar to metal components**
- b. Light in weight-ans**
- c. Act as noise suppression mechanism**
- d .All of the above**

4. Advantage of shrouded High Pressure Turbine blades is

- a.It improves Engine Performance**
- b.It reduces vibrations**
- c.Both 1 and 2 above**
- d.None of these**

5.Advantage of Titanium alloys are

- 1.Low density and possess good corrosion resistance property**

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2.High Specific strength

3.suitable for high temperature operation

a.Option 1 and 2

b.option 1 and 3

c.Option 2 and 3

d.All the above

6."air worthiness Directive

1.Requires mandatory compliance

2.Compliance is based on Operator policy

Is issued by Airworthiness Authority

a.Option 1 and 2

b.Option 1 and 3

c.Option 2 and 3

d.All the above

7. Annular Combustor has

a More pressure loss

Less combustion efficiency

c. Less heat release for a given volume

d .Less pressure loss

8. Balance correction is done by

a. Re-distribution of weight

b. Addition of weight

c. Removal of weight

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d .All the above

9. By pass ratio is defined as

a .Ratio of core air to bypass air

b. Ratio of bypass air to core air

c. Ratio of total air mass flow to bypass air

d .None of the above

10. Centrifugal force is directed

a. Towards the center

Away from center

c. Perpendicular to the radius of the circle

d. None of the above

11. During the normal start of a gas turbine engine

a .The starter alone is used

b. Starter and ignition system are used simultaneous

c. Ignition system alone is used

d. None of the above

12. Eddy current inspection is performed

a. For subsurface cracks

b .For surface cracks

c. For nicks and scratches

d. For composite materials

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13.Engine vibrations refer to

- a. Whirling of shaft**
- b. Bucking of shaft**
- c .Movement of the shaft in the axial direction**
- d. None of these**

14.High by pass ratio engines give

- a. High specific thrust**
- b .Low specific thrust**
- c .Constant specific thrust**
- d. None of the above**

15 High Pressure Turbine blades are cooled using air from

- a. Ambient atmosphere**
- b. High Pressure Compressor**
- c. Low Pressure Compressor**
- d. None of the above**

16modular engine architecture reduces

- a. Overhaul burden**
- b .Line maintenance burden**
- c. Cost of Ownership**
- d. None of the above**

17.A Blisk is a

- a.Bladed Disc-ans**

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b. Bladed drum

c. Location where shaft meets the disc

d .None of these

18.A knife edge seal is used to

a. Reduce pressure variation in cavity

b. Stop leakage-ans

c. Avoid thermal leakage

d. Is used as a support

19During Compression process the pressure and temperature of air

a .Increase-ans

b. Decrease.

c. Initially increase and then decrease

d .None of these

20 "Most common type of bearing used in a gas turbine engine are

a.ball bearing

b.roller bearings

c.plane bearing

a.Option 1 and 2

b.Option 1 and 3

c.Option 2 and 3

d. All the above