

- Q.27 What is hot section Inspection? Explain.  
 Q.28 How is inspection of combustion chamber done?  
 Q.29 Explain the engine installation procedure in brief.  
 Q.30 Explain the different types of fuels and their characteristics.  
 Q.31 Draw a reheat cycle.  
 Q.32 How engine dressing is done?  
 Q.33 What is engine trimming?  
 Q.34 What is the role of ground running?  
 Q.35 What is PIGA?

### **SECTION-D**

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)  
 Q.36 Explain the need and working of Ant icing and deicing system.  
 Q.37 Explain in detail the maintenance, and operation of gas turbine engine.  
 Q.38 What is the amount of pollutants released by aircrafts of different types? How do these effect human life? What are the methods being used to control it?

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**6th Sem / Branch : AME**  
**Sub. : Turbo Propeller and Turbo Jet Engine-II**

Time : 3Hrs. M.M. : 100

### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 How can regeneration be used to improve the efficiency of Brayton cycle?  
 a) The energy of exhaust gas can be used to heat up the air which leaves the compressor  
 b) Heat supplied from external source thus decreases  
 c) The amount of heat rejected also decreases  
 d) All of the mentioned  
 Q.2 The thermodynamic cycle for Gas Turbine is \_\_\_\_\_.  
 a) Stirling Cycle      b) Brayton Cycle  
 c) Rankine Cycle      d) Carnot Cycle  
 Q.3 The stage in axial flow compressor is \_\_\_\_\_.  
 a) One rotor  
 b) One stator  
 c) One rotor and one stator  
 d) None of the above  
 Q.4 As the pressure ratio increases, the efficiency \_\_\_\_\_.

- a) Decreases
  - b) Increases
  - c) Remains constant
  - d) None of the mentioned
- Q.5 The efficiency of Brayton cycle can be increased by using staged heat supply or by use of staged compression with intercooling.
- a) True
  - b) False
- Q.6 Does pollutants from aircraft have a bad impact on human beings?
- a) Yes
  - b) No
- Q.7 What role does Afterburner play?
- a) It increases the Thrust
  - b) It reduces the Thrust
- Q.8 Which of the following is used to interchange fuel in the tanks?
- a) Fuel control valve
  - b) Fuel selector valve
  - c) Fuel transfer pump
  - d) Fuel shutoff valve
- Q.9 What is bleed air?
- a) Air drawn from compressor
  - b) Leaking Air
  - c) Air with blood
  - d) None of the above
- Q.10 Thrust reversal is used in airplanes during \_\_\_\_\_
- a) During Cruise
  - b) After Landing
  - c) Before Climbing
  - d) None of the above

### **SECTION-B**

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**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 What is Thrust augmentation system?
- Q.12 What is the operation role of compressor in a gas turbine engine?
- Q.13 Explain the role of thrust reversal system.
- Q.14 In centrifugal compressor air enters \_\_\_\_\_ and leaves \_\_\_\_\_ to the flow direction.
- Q.15 What is designated as stage of the axial flow compressor?
- Q.16 What are the methods of fixing blades to the disc?
- Q.17 What is power assessment?
- Q.18 What is the use of Propeller?
- Q.19 What are the types of airscrews?
- Q.20 What is bleed Air?

### **SECTION-C**

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain the function and working of starting system.
- Q.22 Explain the different types of lubricants used in engine?
- Q.23 Describe engine rigging briefly.
- Q.24 How is functional check of temperature Indicator done?
- Q.25 Describe power assessment tools?
- Q.26 How PIGA engine is trimmed?

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