

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fifth semester B.Tech degree examinations (S) September 2020

Course Code: AO 307**Course Name: AO 307 AIRCRAFT GENERAL ENGINEERING AND MAINTENANCE PRACTICES**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer any three full questions, each carries 10 marks.*

Marks

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|---|---|------|
| 1 | Define the following terminologies | (10) |
| | i. Maximum weight | |
| | ii. Maximum zero fuel weight | |
| | iii. Empty weight | |
| | iv. Maximum takeoff weight | |
| | v. Maximum ramp weight | |
| 2 | a) Explain the procedure for weighing an aircraft. | (5) |
| | b) Describe how fuel and oil systems are prepared for weighing process. | (5) |
| 3 | a) Enumerate and explain various types of nuts and bolts used in aircraft with neat sketches. | (8) |
| | b) What are turn buckles? | (2) |
| 4 | a) How fluid lines in aircrafts are identified? | (4) |
| | b) Explain about different types of pipe fittings used in aircraft. | (6) |

PART B*Answer any three full questions, each carries 10 marks.*

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|---|--|------|
| 5 | a) Explain the applications of combination sets. | (6) |
| | b) What are the different types of wrenches used in aircraft maintenance? | (4) |
| 6 | a) Write short note on | (6) |
| | i. Taps and dies | |
| | ii. Vernier height gauge | |
| | b) Enlist and explain the different types of pliers used. | (4) |
| 7 | a) Explain in detail the procedure for rivet installation, layout and types. | (10) |
| 8 | a) Illustrate the need for cable splicing and swaging process. | (2) |

- b) Explain the equipment setup and process involved during oxy acetylene welding. (8)

PART C

Answer any four full questions, each carries 10 marks.

- 9 a) Write short notes on (10)
- i. TCDS
 - ii. ATA specifications
 - iii. Manuals
 - iv. Aircraft Logs
- 10 a) Explain about the special inspections that should carry out in maintenance of an aircraft. (8)
- b) Brief on service bulletins. (2)
- 11 a) Enlist various checks carried out during severe turbulence condition and explain them in detail. (5)
- b) Why the inlet cowls of the engine are kept far from wing area? (5)
- 12 a) Explain the precautions and steps followed during aircraft jacking. (5)
- b) Explain the procedure of aircraft fuelling. What are the precautions to be taken during the fuelling process? (5)
- 13 a) Enlist the precautions to be taken and starting procedure of a turbojet engine in ground. (6)
- b) Explain aircraft tie down process. (4)
- 14 a) Explain aircraft taxiing and towing process in detail with the safety precautions to be followed during the process. (10)
