

**B.E DEGREE EXAMINATIONS: NOV/ DEC 2014**

(Regulation 2009)

Eighth Semester

**AERONAUTICAL ENGINEERING**

AER144 : Aircraft Safety Rules And Regulation

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. The Aircraft Rules were released in \_\_\_\_\_
  - a) 1940
  - b) 1950
  - c) 1934
  - d) 1937
2. Agency responsible to ensure that aircraft has current and valid C of A (Certificate of Airworthiness)
  - a) Aircraft owner / Operator
  - b) DGCA
  - c) Aircraft Manufacturer
  - d) Regional Airworthiness Office
3. The aircraft is maintained in airworthy condition by subjecting it to \_\_\_\_\_
  - a) Periodic inspection
  - b) Life component replacements
  - c) Repairs / Modifications
  - d) All of the above
4. CAR Section-2 Series A part I is cancelled in view of
  - a) CAR-G
  - b) CAR-A
  - c) CAR-M
  - d) CAR-L
5. MEL is framed on the basis of \_\_\_\_\_
  - a) Operator's experience
  - b) MMEL
  - c) DGCA regulations
  - d) All of the above
6. Investigation of major defects shall be completed within \_\_\_\_\_
  - a) One month
  - b) Three months
  - c) Two months
  - d) Six months
7. Hard time maintenance is carried out at
  - a) Number of flight hours
  - b) Number of landings
  - c) Calendar Landings
  - d) Any one of the above

8. SSI refers to
  - a) Solid Structure Items
  - b) Supplemental Structural Inspection
  - c) Significant Structural Item
  - d) Significant Service Instruction
9. Condition monitoring implies the philosophy of \_\_\_\_\_
  - a) Fit and forget
  - b) Fit and failure
  - c) Both A & B
  - d) None of the above
10. Firms approved in category F can carry out \_\_\_\_\_
  - a) Maintenance of aircraft
  - b) Manufacturer of aircraft
  - c) Distribution of fuels / lubricants
  - d) None of the above

**PART B (10 x 2 = 20 Marks)**

11. List out the difference between MEL and MMEL.
12. List out the difference Airworthiness directives and Alert Service Bulletin.
13. List out the difference Maintenance planning document and Servicing schedule.
14. List out the difference Major defect and minor defect.
15. List out the difference Permit and certificate of Airworthiness.
16. List out the difference ETOPS and EROPS.
17. Explain “Condition monitoring” type of maintenance.
18. Sketch the aircraft classification table as per CAR.
19. How would you ensure Continuing Airworthiness as per CAR regulations?
20. Define concession? Who can grant it and under what circumstance.

**PART C (5 x 14 = 70 Marks)**

21. a) Briefly discuss the functions and role of “Accountable Manager”, duties and responsibilities of CEM and QCM.  
 (OR)  
 b) Discuss in detail the relevant Rules and Regulations that govern the human factors aspects of aircraft accident and incident.
22. a) Briefly describe the CAR document released by DGCA on maintenance and training and the salient changes introduced in the new Regulations.  
 (OR)  
 b) Discuss on the regulations that govern the carriage, handling, storage and transportation of dangerous goods.

23. a) Explain the issue of AME License its classification and experience requirements.

**(OR)**

b) Discuss the Procedure for issue/revalidation of Type certificate of aircraft and its engines / propeller.

24. a) (i) Write down the functions of DGCA. (4)

(ii) Write in brief about Continuing Airworthiness requirements. (5)

(iii) Write in detail about the responsibilities of the operator / owner and Airworthiness Directorate as per CAR-M regulations. (5)

**(OR)**

b) Quote the various National / International recommendations / regulatory requirements that relate to noise, pollution and climate change.

25. a) Write in detail about “Aircraft Maintenance Programme and their approval” as per CAR section 2 series ‘D’/CAR M.

**(OR)**

b) Briefly explain the following:

(i) CAR 21,

(ii) CAR 145,

(iii) CAR 147,

(iv) CAR 66 and

(v) CAR M

List the various sections contained in CAR and describe the one dealing with Airworthiness.

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