

997**October 2018**

Time – Three hours
(Maximum Marks: 75)

- [N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory.
Answer any FOUR questions from the remaining in each PART – A
and PART – B
(2) Answer division (a) or division (b) of each question in PART – C.
(3) Each question carries 2 marks in PART – A, 3 marks in Part – B
and 10 marks in PART – C.]

PART – A

1. What is a helicopter?
2. What is a rotor?
3. What are the parts of helicopter fuselage?
4. What is a tail drive shaft?
5. Write four glossary terms used in helicopter technology.
6. What are the uses of swash plates?
7. What are the types of engines that can be used in helicopter?
8. What is jacking?

PART – B

9. Define co-axial rotor.
10. What are the various helicopter configuration used currently?
11. Mention some materials used in the main structure of a helicopter.
12. Write notes on freewheeling unit.
13. What is the purpose of lubricating systems? Explain in short.
14. What is refuelling and refuelling?
15. Write about control setting.
16. Write about anti torque pedals.

[Turn over.....

PART – C

17. (a) Write down ten glossary terms used in helicopter technology.
(Or)
(b) Explain the control systems that are used in helicopter.
18. (a) Discuss in detail (i)Tail boom stabilizers (ii)Landing gears.
(Or)
(b) Explain the overall structure of helicopter along with materials types.
19. (a) Explain in detail about the hydraulic systems the purpose and operation.
(Or)
(b) Write short notes on (i)Main gear box (ii)Tail gear box (iii) Anti-torque pedals.
20. (a) (i) Discuss in detail about the engine fuel control systems for a turbine engine.
(ii) What is the purpose of a lubricating system?
(Or)
(b) What are the types of engines used in helicopter? Explain the construction and working principle of reciprocating engine.
21. (a) What are the types of inspection? Discuss in detail.
(Or)
(b) Write short notes on (i) Jacking (ii) Towing (iii) Bracking.
