

958**October 2017**

*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. Name any four pattern materials.
2. State any two advantages of die casting.
3. State any two functions of flux coating.
4. Write any four defects in welding.
5. What is hot working?
6. What is a press tool?
7. Name any four taper turning methods.
8. What is calibration?

PART - B

9. State any three merits of dry sand mould.
10. Sketch the pit furnace and mark the parts.
11. What is the principle of resistance welding?
12. Sketch any one type of gas welding technique.
13. Compare mechanical press with hydraulic press.
14. Why sintering operation is required in powder metallurgy process?
15. Compare back gear head stock with all gear head stock.
16. Explain counter boring operation with a sketch.

[Turn over...

PART - C

17. (a) Briefly explain the five types of pattern allowances.

(Or)

(b) Sketch and explain the cupola furnace.

18. (a) Explain MIG and TIG welding with sketches.

(Or)

(b) Sketch and explain the magnetic particle test and ultrasonic test.

19. (a) Sketch and explain upset forging and roll forging operations.

(Or)

(b) With sketches explain any five design rules for powder metallurgy process.

20. (a) Sketch and show the nomenclature of a single point cutting tool.

(Or)

(b) Explain any two methods of taper turning with sketches.

21. (a) Explain any two methods of holding a drill bit with sketches.

(Or)

(b) Explain clinometer and angle dekkor with sketches.
