## 2781

# October 2024

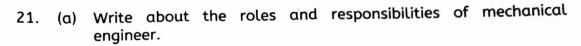
## <u>Time - Three hours</u> (Maximum Marks: 100)

- N.B. 1. Answer any fifteen questions under Part-A. All questions carry equal marks.(15X2=30)
  - Answer all questions, choosing any two sub-divisions from each question under Part-B. All questions carry equal marks.(5X14=70)(7+7)

### PART- A

- Who is mechanical engineer?
- 2. Write the opportunities of mechanical engineer.
- 3. List the scopes for mechanical engineer.
- 4. What is meant by manufacturing?
- 5. Write the classification of materials.
- 6. Write any two mechanical properties of cast iron.
- 7. What is the use of press?
- 8. Give the examples of temporary metal joints.
- 9. Write any four parts of lathe.
- 10. What is drilling?
- 11. What is the use of milling machine?
- 12. List any two work holding devices used in drilling machine.
- 13. Write any two applications of flat belt drive.
- 14. Write any two applications of chain drive.
- 15. What is the use of lubrication?
- 16. Where spur gear drive is used?
- 17. What is meant by CNC machine?
- 18. List any two applications of CNC.
- 19. Define additive manufacturing.
- 20. What is selective laser sintering(SLS) process?

#### PART- B



- (b) Explain any one method of power generation.
- (c) Write short notes on the following:
  - (i) Quality (3)
  - (ii) Logistics (4)
- 22. (a) Differentiate the hot and cold working operations.
  - (b) Explain the working of mechanical press.
  - (c) Write about brazing and soldering process.
- 23. (a) Draw a neat sketch of a lathe and explain the functions.
  - (b) Explain upright type drilling machine with neat sketch.
  - (c) Explain vertical milling machine with neat sketch.
- 24. (a) Explain about V belt drive with neat sketch.
  - (b) Explain about bevel gear drive with neat sketch.
  - (c) (i) List the properties of lubricants. (3)
    - (ii) Write about drip feed lubrication, (4)
- 25. (a) Explain about CNC machine.
  - (b) Explain about 3D printing with neat sketch.
  - (c) Explain about FDM with neat sketch.

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