

C-6110

Sub. Code

82248

B.Voc. DEGREE EXAMINATION, APRIL 2022.

Fourth Semester

Manufacturing Technology

DESIGN OF MACHINE ELEMENTS

(2019 Onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. Define- Stress equations
2. List out the few theories of failure
3. Point out the usage of couplings
4. What is rigidity?
5. State the process of cotter joints
6. What is threaded fasteners?
7. List out the few types of springs
8. Point out the benefits of connecting rods
9. Define- Boyd graphs
10. What is sliding contact?

Part B

(5 × 5 = 25)

Answer **all** the questions.

11. (a) Briefly explain about eccentric loading.

Or

- (b) Give a short note on stress concentration.

12. (a) Describe about critical speed.

Or

(b) Differentiate between Rigid and flexible couplings.

13. (a) Briefly explain about Welded joints.

Or

(b) Give a short note on theory of bonded joints.

14. (a) Describe about optimization of helical springs.

Or

(b) Point out the usage of punching machines.

15. (a) Briefly explain about Hydrodynamic journal bearings.

Or

(b) Write a short note on rolling contact bearings.

Part C (3 × 10 = 30)

Answer **all** the questions.

16. (a) Explain in detail about factors influencing machine design.

Or

(b) Describe about keyways and splines.

17. (a) Enumerate the different types of permanent joints.

Or

(b) Narrate about energy storing elements.

18. (a) Explain in detail about different types of bearings.

Or

(b) Describe about Bending and torsional stress equations

C-6112

Sub. Code

82262

B.Voc. DEGREE EXAMINATION, APRIL 2022.

Sixth Semester

Manufacturing Technology

INDUSTRIAL SAFETY

(2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Narrate the two factors which reduce accidents in a machine shop.
2. State the preventive measures to run engine lathes safely.
3. Define the term Zero Mechanical State (ZMS)
4. Point out hazards associated with turret lathes and screw machines.
5. How leak detection can be carried out in pipeline.
6. What is flashback arrestor?
7. List out the types of injuries that occur in kick presses.
8. Discuss about cold working.
9. Where dynamic balancing is required?
10. Analyze the need for hydro testing

Part B

(5 × 5 = 25)

Answer **all** questions

11. (a) Explain the procedure for safely removing chips, shavings, and cuttings.

Or

- (b) Write the inspection procedure for boring machine.

12. (a) Differentiate mechanical and non-mechanical Hazards.

Or

- (b) Analyze in detail about the hazards associated with boring and drilling.

13. (a) Explain the common hazards in welding two metals.

Or

- (b) Generalize the safety measures in storing of gas cylinders.

14. (a) Explain point of operation safeguarding in cold working.

Or

- (b) Explain in detail about various operations in power presses.

15. (a) Explain the precautions to be taken during nitriding.

Or

- (b) Describe the safety measures for electroplating.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss in detail about the general safety rules in metal working industry.

Or

- (b) Explain safety precautions while manufacturing gears in milling machine.

17. (a) Explain in detail various personal protective equipment used in welding process.

Or

- (b) Recommend and explain suitable practices for Industrial safety.

18. (a) Explain the safety training process in hot working.

Or

- (b) Recommend the suitable procedure for safety in inspection and testing.

C-5664

Sub. Code

**16/17/23/25/
26/27/29**

**Common for All U.G. B.Sc./B.B.A. DEGREE
EXAMINATION, APRIL 2022**

First/Second Semester

ENVIRONMENTAL STUDIES

(2019/2020 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. ZSI.
2. WII.
3. What is renewable energy?
4. Food web.
5. Pyramid of numbers in aquatic ecosystem.
6. Red data book.
7. List out any five Endemic species of India.
8. List out marine pollutants.
9. *Ex Situ* Conservation.
10. Enlist Option Values of Biodiversity.

Part B

(5 × 5 = 25)

Answer **all** the questions.

11. (a) Write notes on definition, scope and importance of environmental studies.

Or

- (b) Write notes on soil erosion and desertification.

12. (a) Write notes on energy flow in the ecosystem.

Or

- (b) Write notes on threads to biodiversity.

13. (a) Write notes on Biodiversity at Global, National and Local levels.

Or

- (b) Write notes on various strategies of conservation of Biodiversity.

14. (a) Write notes on ecological pyramids.

Or

- (b) Write notes on air pollution.

15. (a) Write notes on noise pollution.

Or

- (b) Write notes on effects and control measures of nuclear hazards.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write an essay on the multidisciplinary nature of Environmental Studies.

Or

- (b) Write an essay on the following resources with special emphasis to how they are overexploited/utilized which in turn damage the environment, (i) Forest Resources and (ii) Food Resources.

17. (a) Write an essay on “India is a mega-diversity nation”.

Or

- (b) Write an essay on Biodiversity and their values.

18. (a) Write an essay on causes, effects and control measures of (i) Marine Pollution and (ii) Water Pollution.

Or

- (b) Write an essay on concept, structure and function of ecosystem.