C–6296	Sub. Code
	82316

B.Voc. DEGREE EXAMINATION, APRIL 2022

First Semester

Industrial Automation

MANUFACTURING TECHNOLOGY

(2019 onwards)

Duration : 3 Hours　　　　　　　　Maximum : 75 Marks

Part A　　　　　　(10 × 2 = 20)

Answer **all** questions.

1. Define Casting.

2. How will you make sand mould?

3. What are the moulding tools?

4. Write a note on investment moulding.

5. What is meant by continuous casting?

6. What is meant by soldering?

7. Why Ultrasonic machining is used?

8. Write a note on Thermoplastics.

9. Define the term Shaper and Planer.

10. What is meant by Powder metallurgy?

Part B $(5 \times 5 = 25)$

Answer **all** questions.

11. (a) Discuss on permanent mould casting.

Or

(b) Write briefly about centrifugal casting.

12. (a) Write a short note on submerged arc welding.

Or

(b) Discuss about metal inert gas welding.

13. (a) Briefly discuss about Universal drilling machine.

Or

(b) Discuss about the basics of CNC machines.

14. (a) Write about the Moulding of Thermoplastics.

Or

(b) Write a note on Injection and Rotational moulding.

15. (a) Discuss about the Compression and Transfer moulding.

Or

(b) Highlight the importance of Forging, Rolling and Extrusion

Part C $(3 \times 10 = 30)$

Answer **all** questions.

16. (a) Explain on different Casting types.

Or

(b) Explain in detail about the types of core making and machine moulding.

C–6296

17. (a) Explain the principles of Oxy-acetylene gas welding.

Or

(b) Elaborate on plasma arc welding welding and laser beam welding.

18. (a) Explain Electric discharge machining and Electro chemical machining.

Or

(b) Elaborate on advantages and disadvantages of powder metallurgy.

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C–6296

C–6298	Sub. Code
	82346

B.Voc. DEGREE EXAMINATION, APRIL 2022

Fourth Semester

Industrial Automation

DIGITAL ELECTRONICS

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1. State the Boolean laws.

2. Write a note on Karnaugh map minimization.

3. What is mean by magnitude comparator?

4. Draw the circuit of full adder.

5. Mention about ring counter.

6. Write a note on serial adder.

7. Expand EAPROM.

8. What is PAL?

9. What is pulse mode circuits?

10. Expand VERILOG.

Answer **all** questions.

11. (a) Discuss about the multilevel gate implementations.

Or

(b) Write a note on

(i) Sum of products (SoP)

(ii) Product of sums (PoS).

12. (a) Explain the working of full adder.

Or

(b) Write a note on serial adder/subtractor.

13. (a) Discuss about the modulo-n counter.

Or

(b) Write a note on

(i) Edge triggering

(ii) Level triggering.

14. (a) Explain the dynamic RAM cell.

Or

(b) Discuss the memory decoding and memory expansion.

15. (a) Explain the use of algorithmic state machine.

Or

(b) Explain the design of hazard free switching circuits.

C-6298

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the exclusive – OR and Exclusive – NOR implementations of logic functions using gates.

Or

(b) Clearly explain the fast adder and carry look ahead adder.

17. (a) Elaborate the design of synchronous counters with diagram and table.

Or

(b) Write a note on

(i) Shift register counters

(ii) Shift counters

(iii) Sequence generators.

18. (a) Explain clearly the static RAM cell and Bipolar RAM cell.

Or

(b) Explain the design of fundamental mode and pulse mode circuits.

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C-6298

C–6300		Sub. Code
		82362

B.Voc. DEGREE EXAMINATION, APRIL 2022

Sixth Semester

Industrial Automation

INDUSTRIAL SAFETY

(2019 onwards)

Duration: 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1.   Define - Milling machine.

2.   List out the process of wood working.

3.   Point out the few policy for ZMS.

4.   What is machine guarding?

5.   State the few common hazards.

6.   What is pipe line safety?

7.   List out the operation of hot rolling mill operation.

8.   Point out the functions of power press electric controls.

9.   Define-Electro plating.

10. What is dynamic balancing?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Write about general industrial safety rules.

Or

(b) Give a short note on boring machines.

12. (a) Describe about Zero Mechanical State.

Or

(b) Differentiate between automatic guard and trip guard.

13. (a) Describe about personal productive equipment.

Or

(b) Write a short note on safety precautions in brazing.

14. (a) Describe about feeding and cutting mechanism.

Or

(b) Point out the process of safety in forging.

15. (a) Write about industrial waste disposal.

Or

(b) Write a short note on hydro testing.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about safety measures in metal working machinery.

Or

(b) Explain about storage and handling of gas cylinders.

2 **C–6300**

17. (a) Enumerate about the different types of guards.

Or

(b) Differentiate between cold working and cold framing.

18. (a) Explain in detail about health and welfare measures in engineering industry.

Or

(b) Explain about planning machine and grinding machine.

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3   **C–6300**

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 $(5 \times 5 = 25)$

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.

C–5664

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.

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C–5664