CENTRAL BHARAT SEVAK SAMAJ

NATIONAL DEVELOPMENT AGENCY, ESTABLISHED IN 1952 BY PLANNING COMMISSION, GOVT. OF INDIA

CENTRAL BOARD OF EXAMINATIONS

BSS NATIONAL VOCATIONAL EDUCATION MISSION

TTS011-BSS DIPLOMA IN INDUSTRIAL AUTOMATION

ONE YEAR EXAMINATION NOVEMBER-2025

TTS011-01 COMMUNICATIVE ENGLISH AND COMPUTER FUNDAMENTALS

TIME: 3 Hours **Marks: 100**

INSTRUCTIONS

* 43 questions are there in total
* Write answers to each question in proportion to the mark allotted
* During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS - ANSWER FOR ANY 10 QUESTIONS **1 x 10 = 10**

1) One day _____ Old man came to my village.

2) I _____ 50 kms everyday

3) I _____ coffee everyday

4) The tiger _____ A deer

5) I am going _____ library

6) He is _____ manager.

7) website is group of _____

8) firm ware is known as _____

9) Use _____ to change the settings, both hardware and softw

10) _____ is popular word processor

11) ALU stands for _____

12) The word computer is comes from the word _____

13) Ramu is _____ doctor and he looks after patients well

14) www. means _____

15) Have mercy _____ the poor

II. DEFINE THE FOLLOWING - ANSWER FOR ANY 10 QUESTIONS **2 x 10 = 20**

1) Define what is demonstrative pronoun?
2) Define the formation of Adjectives?
3) Define the adjectives words?
4) What is conjunction?
5) Define kinds of verbs?
6) Define kinds of adjectives?
7) Adjective
8) Digital computer
9) What is the difference between Notepad and Wordpad
10) What is hardware & Software
11) Clauses
12) Storage device
13) Decimal
14) Clause
15) What is URL?

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS **5 x 5 = 25**

1) Work area
2) Use of 'has' and 'have' in sentences
3) Edit
4) Tool menu
5) Explain any five options for the format 'menu'
6) CPU
7) Shutdown the computer
8) What is sentence? Define its classification

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS **15 x 3 = 45**

1) Write a letter to your father asking permission join the N.C.C?
2) Write about the conversation to two person?
3) What are the advantages of using computer in the Modern Field.
4) Write briefly about generations of computer?
5) Write about Parts of speech?

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ONE YEAR EXAMINATION NOVEMBER-2025

TTS011-02 INDUSTRIAL AUTOMATION - THEORY

TIME: 3 Hours **Marks: 100**

INSTRUCTIONS

* 43 questions are there in total
* Write answers to each question in proportion to the mark allotted
* During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS - ANSWER FOR ANY 10 QUESTIONS **1 x 10 = 10**

1) Merit rating is the method of determining worth of _____

2) Standard time as compared to normal time is _____

3) A marketing plan dose not involve _____

4) Division of lab our increases _____

5) Founder of scientific management is _____

6) For project planning, oldest method is _____

7) Bar charts are suitable for _____

8) For an automobile industries most popular type of organization is _____

9) Main advantage of line organization is its _____

10) Leadership is the best describe is being _____

II. DEFINE THE FOLLOWING - ANSWER FOR ANY 10 QUESTIONS **2 x 10 = 20**

1) Differentiate between Automation and Mechanization.
2) Give the symbol of 4/2 paddle operated spring return DC valve.
3) Draw the symbol of twin pressure valve.
4) What is Solenoid?
5) What is Memory Function?
6) Define Coanda Effect.
7) What are the basic components of PLC?
8) What is Transfer Device?
9) What do you mean by Automating Industry?
10) What are the basic trouble shootings in hydraulics?

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS **5 x 5 = 25**

1) Inventory control.
2) Quality control.
3) Preventive maintenance.
4) Recruitment.
5) What are the different fluid power control elements? Discuss.
6) What are the various types of directional control valves used in hydraulics systems?
7) Define a term "Control System Audit" and explain the benefits of the same.
8) With a suitable example explain the role of SCADA in Automation.

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS **15 x 3 = 45**

1) State the function of Industrial management.
2) What are the function of purchase management.
3) Explain the function of Finance department.
4) Explain briefly the scientific management.
5) What are the factor that are to be considered while selecting a plant location.

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TTS011-BSS DIPLOMA IN INDUSTRIAL AUTOMATION

ONE YEAR EXAMINATION NOVEMBER-2025

TTS011-03 INDUSTRIAL AUTOMATION TECHNIQUES

TIME: 3 Hours **Marks: 100**

INSTRUCTIONS

* 43 questions are there in total
* Write answers to each question in proportion to the mark allotted
* During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS - ANSWER FOR ANY 10 QUESTIONS **1 x 10 = 10**

1) SCR is a _____ directional device.

2) A snubbar circuit is a _____ cicuit.

3) A single phase full wave half controlled bridge uses _____ no. of SCRs

4) The HMI stands for _____

5) A cycloconverter is a circuits which converts _____ to _____

6) List different automation tools used in process.

7) Compare voltage source inverter with current source inverter.

8) Write short note on different types of grippers used in robotics?

9) Write a short note on Gyroscopes.

10) Write a short note on Accelerometer.

II. DEFINE THE FOLLOWING - ANSWER FOR ANY 10 QUESTIONS **2 x 10 = 20**

1) Explain the Characteristics of power diode.
2) Differentiate between Natural and forced commutation.
3) What is the importance of free- wheeling diode.
4) Explain the operation of two quadrant DC chopper
5) Explain the operation of a step-up DC chopper.
6) Compare voltage source inverter with current source inverter.
7) Mention the application of the cycloconverrters.
8) Explain the block diagram of Field control of DC shunt motor.
9) Write a short note on Proximity sensors.
10) Define Automation.

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS **5 x 5 = 25**

1) Explain the two transistor analogy of SCR.
2) Explain snubber circuit used for protection of thyristor.
3) Explain how UJT relaxation oscillator is used trigger an SCR.
4) Define Commutation? Explain Complementary commutation.
5) Explain single phase full wave bridge controlled rectifier with waveforms.
6) Explain the lamp dimmer circuit.
7) Explain the basic principle of chopper operation.
8) Explain Variable DC Link Inverter.

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS **15 x 3 = 45**

1) What is HaZOp? With the help of flow chart explain the HaZOp procedure.
2) What is Process Hazard Analysis? List different method for PHA.
3) Explain DCS support for Enterprise resource planning.
4) With the help of an example explain what "Third party interface?
5) Explain the need of security and user access management in a DCS system.