

# VOCATIONAL PRACTICALS QUESTION BANK

*(With Effect from the Academic year 2025-26)*

EMBEDDED SYSTEM

(COURSE CODE: 328)



**State Institute of Vocational Education**

**O/o the Directorate of Intermediate Education,  
Telangana State, Hyderabad**

**&**

**Board of Intermediate Education**

**Telangana State, Hyderabad.**

<b>List of Participants</b>	
<b>1.</b>	<b>Dr.M.Shyamsunder Associate Professor Department of ECE, University college of engineering, Osmania University,Hyderabad</b>
<b>2.</b>	<b>Sri. Kumbala Prakash, Junior Lecturer in E&amp;CT Government Junior College Boys , Gajwel Siddipet dist.</b>
<b>3.</b>	<b>Sri. Md.Mateen, Junior Lecturer in E&amp;CT Government Junior College, Chanchalguda, Hyderabad dist.</b>

**EMBEDDED SYSTEM  
FIRST YEAR**

**PRACTICAL QUESTION BANK  
PAPER I: BASIC ELECTRONICS LAB**

**Time: 3hrs**

**NR CODE: - 328/21**

**Max. Marks: 50**

**SECTION-I**

**1x20=20 Marks**

1. Half wave Rectifier, Full wave Rectifier with and without filter, calculate the ripple factor and percentage of regulation
2. RC coupled Amplifier: Obtain the frequency response and calculate the gain
3. Measurement of frequency of Tuned Collector and Crystal Oscillators
4. Measurement of Resistance, Capacitance and inductance by E and I method and verification of Resistance by Color code
5. Measurement of frequency of Hartley and Colpitts Oscillators

**SECTION-II**

**1x10=10 Marks**

6. Resistors in Series and Parallel Circuits
7. Measurement of Coefficient of coupling of an iron core transformer
8. Series Resonance Circuit and determination of its resonant frequency, bandwidth
9. Parallel resonance circuit, determination of its resonant frequency, bandwidth
10. PN Diode Characteristics - Forward and Reverse characteristics
11. Zener Diode characteristics
12. Transistor characteristics - CE and CB
13. FET Characteristics
14. SCR Characteristics

**SECTION-III**

**1x10=10 Marks**

15. Zener Voltage regulators and measurement of percentage of regulation
16. Study of Push pull power Amplifier
17. Know the various cut-in voltages of different LEDs (All colors)
18. Study of different IC packages and pin identification
19. Study of different types of batteries
20. Photo diode characteristics

**Record**

**5 marks**

**Viva- Voice**

**5 Marks**

**EMBEDDED SYSTEM  
FIRST YEAR**

**MODEL QUESTION PAPER  
PAPER I: BASIC ELECTRONICS LAB**

**Time: 3hrs**

**NR CODE: - 328/21**

**Max. Marks: 50**

**[ 2 ,8,12]**

**Note: The serial numbers of the questions mentioned above are the serial number in question bank. In practical examination only the serial number of the question will be given and for forty (40) marks. The examiner shall decode it with the question bank and give the questions.**

**Record            5 marks**

**Viva- Voice    5 Marks**

**EMBEDDED SYSTEM  
FIRST YEAR**

**PRACTICAL QUESTION BANK  
QUESTION BANK  
PAPER II: ENGINEERING DRAWING**

**Time: 3hrs**

**NR CODE: - 328/22**

**Max. Marks: 50**

**SECTION-I**

**1X20=20 Marks**

1. Draw the regular Pentagon Pyramid of side 50mm, height 75 mm.
2. Draw the Ellipse of major axis 80 mm and minor axis 50mm.
3. Draw the Cylinder of diameter 50mm axis 90mm.
4. Draw the Parabola with major axis 80 mm minor axis 60mm.
5. Draw the letters A to Z neatly.

**SECTION-II**

**1X10=10 Marks**

6. Draw the Circle of 30 mm diameter.
7. Draw the Rectangle of 30 mm x 50 mm sides diameter.
8. Draw the equilateral triangle of side 40 mm.
9. Draw the square of side 40 mm.
10. Draw the regular Octagon of side 25mm.

**SECTION-III**

**1X10=10 Marks**

- 11 Draw the right-angle triangle sides 30mm, 40mm.
12. Draw the bisection of angle  $45^0$  without using Protractor.
13. Bisect a given 50 mm line without using scale.
14. Draw the Hexagon of diameter 50mm.

**Record**

**5 marks**

**Viva- Voice**

**5 Mark**

**EMBEDDED SYSTEM  
FIRST YEAR**

**MODEL QUESTION PAPER  
PAPER-II ENGINEERING DRAWING**

**Time: 3hrs**

**NR CODE: - 328/22**

**Max. Marks: 50**

**[ 2 ,8,12]**

**Note: The serial numbers of the questions mentioned above are the serial number in question bank. In practical examination only the serial number of the question will be given and for forty (40) marks. The examiner shall decode it with the question bank and give the questions.**

**Record        5 marks**

**Viva- Voice   5 Marks**

**EMBEDDED SYSTEM  
FIRST YEAR**

**QUESTION BANK [PRACTICAL]**

**Paper III: PROBLEM SOLVING USING 'C' (328/23)**

**Time: 3hrs**

**NR CODE: - 328/23**

**Max. Marks: 50**

**SECTION-I**

**1X20=20 Marks**

1. (a) Write an algorithm to find the greatest of given three numbers.  
(b) Write an algorithm to check whether the given integer value is prime or not.
2. Demonstrate the usage of formatted and unformatted input and output statements.
3. Write a program to calculate factorial of a given non-negative number.
4. Write a program to open a file, write in it and close the file.
5. Write a program to create student structure and calculate total and average marks.

**SECTION-II**

**1X10=10 Marks**

6. Write a program to sort a list of numbers.
7. Demonstrate any five string handling functions.
8. Write a program using "break" statement.
9. Write a program for addition of matrices.
10. Write a program for implementation of selection sort

**SECTION-III**

**1X10=10 Marks**

11. Write basic structure of a C program.
12. Write about switch statement with example.
13. Write how pointers are created with example.
14. Write about various modes of files with their usage.
15. Write about preprocessor, how they are useful.

**Record**

**5 marks**

**Viva- Voice**

**5 Marks**

**EMBEDDED SYSTEM  
FIRST YEAR  
MODEL QUESTION PAPER**

**Paper III: PROBLEM SOLVING USING 'C' (328/23)**

**Time: 3hrs**

**NR CODE: - 328/23**

**Max. Marks: 50**

**[3, 6, 11]**

**Note: The serial numbers of the questions mentioned above are the serial number in question bank. In practical examination only the serial number of the question will be given and for forty (40) marks. The examiner shall decode it with the question bank and give the questions.**

**Record            5 marks**

**Viva- Voice    5 Marks**