

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2024
(Fifth Semester)

Branch – NETWORKING AND MOBILE APPLICATION

EMBEDDED SYSTEMS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 Which of the following is not an example of small scale embedded system?
(i) Electronic Barbie doll (ii) Simple calculator
(iii) Cell Phone (iv) Electronic toy car
- 2 Which of the following is one time programmable memory?
(i) SRAM (ii) PROM
(iii) FLASH (iv) NVRAM
- 3 For a Commercial embedded product the unit cost is high during _____
(i) Product launching (ii) Product maturity
(iii) Product growth (iv) Product discontinuing
- 4 Which port of 8051 is true bidirectional?
(i) Port 0 (ii) Port 1
(iii) Port 2 (iv) Port3
- 5 The term model in EDLC represents
(i) The various phases in the life cycle of the product
(ii) the various analysis of the product
(iii) the various design of the product
(iv) the various architecture of the product

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a Compare General Purpose Computing System Vs Embedded System.
OR
b. List and explain the major application areas of embedded system.
- 7 a. Compare RISC and CISC processors.
OR
b. Write about Sensors and Actuators.
- 8 a. Analyze the importance of non-operational quality attributes of Embedded Systems.
OR
b. Explain the different communication bases used in automotive application.
- 9 a Describe the role of 8051 program memory organization.
OR
b Explain the fundamental issues in hardware software co-design.

Cont...

- 10 a Write the objectives of EDLC.
OR
b. Analyze the bottleneck faced by embedded industry.

SECTION -C (30 Marks)

Answer ALL questions
ALL questions carry EQUAL Marks (5 x 6 = 30)

- 11 a Summarize the classification of Embedded Systems.
OR
b Identify the different purposes of embedded systems.
- 12 a Explain the general purpose and domain specific processors.
OR
b Categorize and explain about the program storage memory.
- 13 a Point out the important characteristics of Embedded Systems.
OR
b Explain the inner working of Automotive Embedded Systems.
- 14 a Interpret the important factors to be considered in the selection process of microcontroller.
OR
b Summarize the different addressing mode supported by 8051.
- 15 a Explain the various activities involved in requirement analysis phase of EDLC.
OR
b Discuss the key processor/architecture trends in embedded systems.

Z-Z-Z

END