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Question Paper Code : P 1201

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Third Semester

(Regulation 2004)

Computer Science and Engineering

CS 1202 — DIGITAL PRINCIPLES AND SYSTEMS DESIGN

(Common to B.Tech. Information Technology)

(Common to B.E. (Part-Time) Second Semester Regulation 2005)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State and prove De-Morgan's law.

2. Name the various types of number systems with their bases and give an example for each.

3. What are the advantages of tri-state gates?

4. What is HDL?

5. Distinguish between a decoder and a demultiplexer.

6. How is division operation performed using a subtractor?

7. Give any two applications of a Shift Register.

8. What is Triggering? What is the need for a trigger in a flip-flop?

9. What are Race free assignments?

10. What is a hazard free network?

11. (a) (i) Use Boolean theorems and simplify the following :

(1) $A'BC' + ABC + A'B'C' + A'B'C + AB'C' + A'BC'$. (4)

(2) $(A + B' + C)(A' + B' + C)(A + B + C)(A' + B + C')$. (4)

(ii) State and prove the various Boolean Theorems. (8)

Or

(b) Simplify the following expression.

$y = m1 + m3 + m4 + m5 + m8 + m9 + m10 + m11 + m12 + m14$ using

(i) Karnaugh map. (8)

(ii) Quine Mcluskey method. (8)

12. (a) What are Universal gates? Represent all the gate operations with universal gates. (16)

Or

(b) What is a Combinational circuit? Explain with various circuits of how arithmetic operations are performed. (16)

13. (a) Design a full adder and a full subtractor and implement it with a suitable decoder. (16)

Or

(b) (i) Explain how HDL is used for combinational circuits. (8)

(ii) Explain the functionality of a multiplexer to get 12 outputs. (8)

14. (a) Design and explain an asynchronous master slave JK-flip-flop and give its truth table. (16)

Or

(b) Explain how shift registers are useful in performing arithmetic operations. (16)

15. (a) Explain how state reduction in flow tables is performed using asynchronous sequential circuits. (16)

Or

(b) Design and explain Fundamental mode and pulse mode sequential circuits. (16)

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Question Paper Code : **P 1208**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Fourth Semester

(Regulation 2004)

Computer Science and Engineering

CS 1253 — VISUAL PROGRAMMING

(Common to Sixth Semester Information Technology)

(Common to B.E. (Part-Time) Third Semester Regulation 2005)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   List and explain some combo box control notification messages.

2.   What is the use of pen gdi object?

3.   List the MFC classes connected with font and color.

4.   Explain the use of month calendar control.

5.   What is the use of splitter windows?

6.   Explain in brief the rich edit box control.

7.   What are ActiveX controls?

8.   Explain how a word document can be inserted to a vc++ application.

9.   What are the DAO MFC classes?

10. What are the advantages of winInet control over winsock control?

11. (a) (i) Explain in detail how user interactions are handled by the Windows OS. (8)

(ii) List and explain the windows TextOut and DrawText functions used for displaying text. (8)

Or

(b) Write a windows program to draw a rectangle and color it. (16)

12. (a) (i) Explain in detail the features of the MFC library application frame work. (8)

(ii) Explain in detail the Visual C++ components. (8)

Or

(b) (i) Explain the message map architecture in detail. (8)

(ii) Write notes on the various Mapping Modes. (8)

13. (a) Write a program and explain the creation of a Menu Resource in detail. (16)

Or

(b) What are DLLs? Write a sample program to create a user defined DLL. (16)

14. (a) (i) Explain in detail The Component Object Model. (8)

(ii) Write a program for implementing a simple ActiveX control. (8)

Or

(b) (i) Explain OLE drag Drop in detail. (8)

(ii) Explain the use of OLE container control with an example. (8)

15. (a) Explain in detail how database management is done using MFC ODBC with an example program. (16)

Or

(b) Write notes on the following :

(i) Winsock Control. (8)

(ii) ISAPI. (8)

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