CS/BCA/SEM-3/BCA-303/2013-14

2013

GRAPHICS AND INTERNET

Time Allotted : 3 Hours   *Full Marks :* 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP – A

(Multiple Choice Type Questions)

1.   Choose the correct alternatives for the following : 10 × 1 = 10

   i)   If your mail address is s@x.y.z.com then the domain
        name is

        a)   com   b)   x.y.z.com

        c)   w   d)   none of these.

   ii) One common format for saving images is

        a)   .jpeg   b)   .mp3

        c)   .wav   d)   none of these.

   iii) The protocol used in conjunction with SMTP to hold
        mail for host is

        a)   POP   b)   PPP

        c)   FTP   d)   both (a) & (b).

   iv) Which is perspective anomaly ?

        a)   Cavalier   b)   Vanishing point

        c)   Oblique   d)   None of these.

v) In homogeneous coordinate representation [4, 2, 0] represents a point

    a) lying at infinity

    b) at (4, 2)

    c) at (4, 2) and at (2, 1)

    d) none of these.

vi) If P_0, P_1, P_2 be the control points (in sequential ordering) then the Bezier curve must pass through

    a) P_0 and P_1

    b) P_1 and P_2

    c) P_2 and P_0

    d) points close to P_0, P_1 and P_2.

vii) The total no. of pixels put "ON" for the line starting at (1, 1) and ending at (12, 7) would be

    a) 7   b) 11

    c) 12   d) more than 12.

viii) If we want to triple the size of an object twice in succession, the final size would be .... times that of the original.

    a) 3   b) 6

    c) 9   d) none of these.

ix) One browser to execute Java servelet is

    a) access navigator   b) solaris

    c) posix   d) none of these.

x) Two successive reflections of a point equal

    a) clockwise rotation by 180°

    b) clockwise rotation by 90°

    c) clockwise rotation by 270°

    d) none of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 x 5 = 15

2. a) How many layers are there in TCP/IP model ? 2

    b) Describe connection-oriented and connectionless services provided by the transport layer. 3

3. Define the difference between IPv4 and IPv6. What is address space ? 4 + 1

4. Prove that the inverse of the rotation matrix is its transpose.

5. Write the tags for the following settings in HTML :

    a) Image tag

    b) Table

    c) Text Hyperlink.

6. Write the general form of a scaling with respect to a fixed point $P(h, k)$.

7. What is aspect ratio ? What do you mean by a resolution of a screen ? 2 + 3

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 x 15 = 45

8. a) Define the difference between Classful and Classless addressing. 5

    b) What is protocol ? Describe Java applet. 2 + 5

    c) Write a short note on SMTP protocol. 3

3130 3 [Turn over

9. a) What is an IP address ? State different IP address classes.   1 + 4

    b) What is cookie ? What do you mean by e-commerce ? How many types of e-commerce are there ?   2 + 3 + 2

    c) What are the differences between traditional business and e-business ?   3

10. a) Write and explain Bresenham's algorithm for drawing a straight line. How does it remove the drawbacks of 'DDA' algorithm ?   3 + 3

    b) What is the difference between parallel projection and perspective projection ?   4

    c) Why are homogeneous coordinates used for transformation computations in computer graphics ?   5

11. Write short notes on the following :   5 × 3

    a) Raster scanning display

    b) FTP

    c) Server side programming

    d) DNS

    e) Shadow masking.

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