

V/BCA/502 (R)

Student's Copy

Professional Course Examination, November 2018

(5th Semester)

BACHELOR OF COMPUTER APPLICATIONS

Course : BCA-502

(Computer Graphics and Multimedia)

(Revised)

Full Marks : 75

Time : 3 hours

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(Marks : 15)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. Picture definition stored in memory area is called

(a) refresh buffer ()

(b) pel ()

(c) HDD ()

(d) register ()

2. A special purpose processor called the _____ is used to control the operation of the display device.

(a) display processor ()

(b) display coprocessor ()

(c) display controller ()

(d) display device ()

3. The translation distance pair (t_x, t_y) is called a

(a) translation pair ()

(b) translation vector ()

(c) translation distance ()

(d) translation shift ()

4. Two-dimensional scaling equation in the matrix form is

(a) $P' = S + T$ ()

(b) $P' = S \cdot T$ ()

(c) $P' = S \cdot P$ ()

(d) $P' = S - T$ ()

5. Digital differential analyzer algorithm is the ____ generation algorithm.

(a) straight line ()

(b) point ()

(c) circle ()

(d) ellipse ()

6. When line segments are scanned and converted in raster system ____ position must be calculated.

(a) pixel screen ()

(b) line length ()

(c) column of pixel ()

(d) frame buffer ()

7. SPLINE approximation method was developed by

(a) Pierre Bezier ()

(b) Sutherland ()

(c) Hodgeman ()

(d) Bresenham ()

8. The quadric surfaces are described with

- (a) first-degree equation ()
- (b) second-degree equation ()
- (c) third-degree equation ()
- (d) None of the above ()

9. MIDI message includes a status byte and up to ____ data bytes.

- (a) two ()
- (b) three ()
- (c) four ()
- (d) eight ()

10. An analog colour video signal contains

- (a) luminance ()
- (b) brightness ()
- (c) chrominance ()
- (d) All of the above ()

Indicate whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark in the brackets provided : 1×5=5

1. In active-matrix display, thin-film transistor technology is used.
(T / F)
2. The region against which an object is to be clipped is called Clip Window.
(T / F)
3. Bresenham's algorithm is another incremental scan conversion algorithm.
(T / F)
4. Torus is a sphere shape object.
(T / F)
5. Cloning means giving life to any object in computer graphics.
(T / F)

SECTION—B

(Marks : 10)

Answer the following questions in short : 2×5=10

1. What are the applications of computer graphics?
2. Briefly explain the technique of text clipping.
3. Differentiate between points and lines.
- OR
4. What is ellipsoid?
5. What is hypertext?

(PART : B—DESCRIPTIVE)

(Marks : 50)

The figures in the margin indicate full marks for the questions

1. (a) What is computer graphics? List out the different input devices that are typically used with virtual reality systems. 1+4=5

- (b) With a neat diagram, explain raster-scan system. 5

OR

- (c) Explain flat-panel displays. 5

- (d) Draw a diagram of CRT and simply explain the operation of CRT. 5

2. (a) What is clipping? Explain Sutherland-Hodgeman algorithm. 1+4=5

- (b) What is translation? Explain the two-dimensional transformation of rotation and scaling. 5

OR

- (c) Explain mirror reflection. Show and explain the reflection of an object about the x - and y -axis. 5

- (d) Explain line clipping by showing binary region codes with respect to the clipping rectangle. 5

3. (a) Explain mid-point circle algorithm. 10

OR

- (b) Set up a parallel version of Bresenham's line algorithm for straight lines of any slope. 10

4. (a) Differentiate between open-uniform B-splines and non-uniform B-splines.

4

(b) Explain the properties of Beizier curves.

6

OR

(c) Write the properties of B-spline curve.

2

(d) Explain superellipse and superellipsoid.

8

5. (a) What is animation? Briefly explain the basic animation technique.

6

(b) Differentiate between analog audio and digital audio.

4

OR

(c) Explain the different applications of multimedia.

5

(d) What is image compression? Giving an example, explain the different image formats.

5

VI/BCA/6E6

Student's Copy

2018

(6th Semester)

BACHELOR OF COMPUTER APPLICATIONS

Paper No. : BCA-6E6

(Internet and E-commerce)

Full Marks : 75

Time : 3 hours

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(Marks : 15)

1. Tick (✓) the correct answer in the brackets provided :

1×10=10

(a) Which of the following describes e-commerce?

- (i) Doing business electronically ()
- (ii) Doing business ()
- (iii) Sales of goods ()
- (iv) All of the above ()

(b) Which one of the following is not one of the major types of e-commerce?

- (i) B2B ()
- (ii) C2B ()
- (iii) C2C ()
- (iv) All of the above ()

(c) Which segment do eBay, Amazon.com belong?

- (i) B2B ()
- (ii) B2C ()
- (iii) C2B ()
- (iv) C2C ()

- (d) Which of the following is not a key element of a business model?
- (i) Value proposition ()
 - (ii) Competitive advantage ()
 - (iii) Market strategy ()
 - (iv) Universal standard ()
- (e) Which of the following is an example of Web portal?
- (i) Amazon ()
 - (ii) eBay ()
 - (iii) Yahoo ()
 - (iv) Facebook ()
- (f) A strategy designed to compete in all markets around the globe is called a — strategy.
- (i) scope ()
 - (ii) differentiation ()
 - (iii) cost ()
 - (iv) focus ()
- (g) Unique value auction is mainly applies to
- (i) new products ()
 - (ii) second-hand product ()
 - (iii) engineering products ()
 - (iv) All of the above ()
- (h) Which of the following is a new and disruptive Web feature or service?
- (i) CDMA ()
 - (ii) XML ()
 - (iii) Postscript ()
 - (iv) Blogs ()
- (i) Which of the following is a useful security mechanism when considering business strategy and IT?
- (i) Firewall ()
 - (ii) Encryption ()
 - (iii) Decryption ()
 - (iv) All of the above ()
- (j) A business cannot be all things to all people. Instead, a business must
- (i) identify target customers ()
 - (ii) identify the value of products/services as perceived by the customers ()
 - (iii) identify the distribution of products ()
 - (iv) Both (i) and (ii) ()

2. State whether the following are True (T) or False (F) by putting a Tick (✓) mark : 1×5=5

(a) Encryption can be done on any bit string.

(T / F)

(b) Compared to B2C e-commerce, B2B e-commerce is smaller.

(T / F)

(c) Trust risk is not considered to be a drawback of Internet auctions.

(T / F)

(d) Paisapay is facilitated in flipkart.com.

(T / F)

(e) Using e-medias transactions occur in e-commerce.

(T / F)

SECTION—B

(Marks : 10)

Answer the following questions :

2×5=10

1. Define e-commerce.

2. What is physical commerce?

3. What is cryptography?

4. Define cloud computing.

5. What is IT Act, 2000?

(PART : B—DESCRIPTIVE)

(Marks : 50)

The figures in the margin indicate full marks for the questions

1. (a) Define transaction. What are the advantages of e-commerce?

2+3=5

(b) Differentiate between traditional commerce and e-commerce.

5

OR

- (c) Differentiate between technical and non-technical limitations of e-commerce. 5
- (d) Explain B2B and C2C business model of e-commerce with suitable diagram. 5
2. (a) What is Web auction? Write the characteristics of Internet payment system. 2+3=5
- (b) Describe the process of payment with a credit card and a debit card. 5

OR

- (c) Distinguish between macropayment system and micropayment system. 5
- (d) Explain e-commerce strategies for marketing. 5
3. (a) Differentiate between e-business and e-commerce. 5
- (b) Explain the impact of e-business. 5

OR

- (c) Explain strategic positioning. 5
- (d) Explain business process and collaboration. 5
4. (a) Explain loosely couple system. 5
- (b) Differentiate between Web portal and Web services. 5

OR

- (c) Explain enterprise application integration. 5
- (d) What is Web service security? 5
5. (a) What is digital signature? Differentiate between encryption and decryption. 2+3=5
- (b) What are the essential requirements for safe e-payments/transactions? 5

OR

- (c) What is Internet security? State the functions of Firewall. 2+3=5
- (d) Explain different e-commerce security threats. 5

VI/BCA/6E4

Student's Copy

2018

(6th Semester)

BACHELOR OF COMPUTER APPLICATIONS

(Elective)

Paper : BCA-6E4

(IT Act and Cyber Law)

Full Marks : 75

Time : 3 hours

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(Marks : 15)

1. Tick (✓) the correct answer in the brackets provided : 1×10=10

(a) The Information Technology (IT) Act, 2000 came into force on

(i) 17th December, 2000 ()

(ii) 9th June, 2000 ()

(iii) 1st June, 2000 ()

(iv) 17th October, 2000 (✓)

(b) The Information Technology Amendment Act, 2008 has come into force in

(i) October 2008 ()

(ii) January 2009 ()

(iii) October 2009 ()

(iv) None of the above ()

- (c) The Controller of Certifying Authorities (CCA) works under
- (i) the Prime Ministers Office ()
 - (ii) the Reserve Bank of India ()
 - (iii) the Ministry of Communication and IT ()
 - (iv) the Autonomous Body ()
- (d) Which of the following is not an example of intellectual property?
- (i) QR code ()
 - (ii) Trademarks ()
 - (iii) Copyright ()
 - (iv) Patent ()
- (e) Which Act provides legal framework for e-governance in India?
- (i) Indian Penal Code ()
 - (ii) IT Amendment Act, 2008 ()
 - (iii) IT Act, 2000 ()
 - (iv) Cyber Law ()
- (f) Which Section of the IT Act deals with the legal recognition of electronic records?
- (i) Section 4 ()
 - (ii) Section 2 ()
 - (iii) Section 5 ()
 - (iv) Section 6 ()
- (g) E-mail that appears to have been originated from one source when it was actually sent from another source is termed as
- (i) e-mail bombing ()
 - (ii) e-mail spoofing ()
 - (iii) e-mail spamming ()
 - (iv) junk mail ()
- (h) The first cyber crime in Mizoram happened in
- (i) 1998 ()
 - (ii) 2005 ()
 - (iii) 2009 ()
 - (iv) 2010 ()
- (i) The explicit portrayal of sexual subject matter is termed as
- (i) ponagraphy ()
 - (ii) pornography ()
 - (iii) sexual crime ()
 - (iv) sexual harassing ()
- (j) Which agency made the investigation related to India's First Cyber Crime Conviction?
- (i) Mumbai Police ()
 - (ii) Chennai Police ()
 - (iii) CBI ()
 - (iv) Kerala Police ()

2. State whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark : 1×5=5
- (a) The original term 'Cyber' came from Greek. (T / F)
 - (b) Hacking Web server and taking control on another person's Web site is called as Web hijacking. (T / F)
 - (c) The main purpose of the Data Protection Act is to increase the security of computer systems. (T / F)
 - (d) Legal recognition of digital signatures is not a component of the IT Act, 2000. (T / F)
 - (e) An example of intellectual property is copyright. (T / F)

SECTION—B

(Marks : 10)

Answer the following questions :

2×5=10

1. What is data protection and privacy?
2. Define Online Dispute Resolution (ODR).
3. What is the main object and scope of the IT Act?
4. Distinguish between E-mail spoofing and E-mail bombing.
5. What is Digital Signature Certificate?

(PART : B—DESCRIPTIVE)

(Marks : 50)

The figures in the margin indicate full marks for the questions

1. (a) Define Cyber Crimes and Cyber Law in the context of Indian Cyber Law. 5
 - (b) Write a short note on the evolution of cyber crime in India. 5
- OR**
- (c) Write the major needs of Cyber Laws for data protection and privacy. 5
 - (d) Explain with suitable example about Web hijacking and Web defamation. 5

2. (a) Write a short note on the essence of digital contracts. 5
- (b) Write the punishment for Cyber Fraud, Cyber Pornography and Intellectual Property Crimes under the IT Act. 5
- OR**
- (c) Explain the IT Act, 2000 and its major amendments. 5
- (d) Explain the certifying authorities and liabilities for law of digital contracts. 5
3. (a) Explain about copyright protection of content on the Internet. 5
- (b) Write any three Cyber Crimes and their punishments. 5
- OR**
- (c) Explain organizational issues and jurisdictional issues of Cyber Law. 5
- (d) Write the salient features of Law of Digital Contracts. 5
4. (a) Explain e-governance with the major applicability of the IT Act. 5
- (b) Explain with example about denial of service attack. 5
- OR**
- (c) Explain about the ownership of copyright under the IT Act, 2000. 5
- (d) Write the major issues addressed by the IT Act, 2000. 5
5. (a) Discuss about the License of Copyright. 5
- (b) Write the punishment under the IT Act, 2000. 5
- OR**
- (c) Write the major uses of electronic records and digital signatures in the government and its agencies. 5
- (d) Define the following cyber crimes : 1×5=5
- (i) Cyber stalking
- (ii) Cyber terrorism
- (iii) Salami attack
- (iv) Online gambling
- (v) Cyber pornography
