

BCA-XI-Part-III

2010

BCA

ELEVENTH PAPER

Full Marks : 60

Pass Marks : 27

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

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

SECTION—A

1. State True or False : $1 \times 12 = 12$

- (a) The 'import' statement tells the compiler where to search for classes to compile a JAVA program.
- (b) In JAVA, inheritance is used for extending classes by adding new variables and methods and modifying inherited members.
- (c) Public members of a superclass are accessible only by methods of the superclass while private members of a superclass are accessible by all methods in the program.

- (d) The exceptions are objects in JAVA derived from java.io.throwable class.
- (e) Input stream and output stream in JAVA are designed for character streams.
- (f) Try, throw and catch method detects, indicates and handles exception occurring during the execution of JAVA program.
- (g) Typecasting means explicit or implicit conversion of a datatype to another datatype.
- (h) Transmission from earth to satellite is known as downlink.
- (i) HTTP uses uniform resource locator to facilitate the access of documents (webpages) throughout the Internet world.
- (j) JPEG and MP3 are the two standards used for video compression.
- (k) Unguided media transports electromagnetic waves without using a physical conductor.
- (l) In HTML, images can be aligned left, right or centred using VALIGN attribute.

2. Fill in the blanks : 1×6=6

- (a) In JAVA, multiline comment must begin with ~~/*~~ and end with ~~*/~~ symbol.
- (b) In JAVA, through — it is possible to define two or more methods with same name within the class as long as they have different sets of parameters.
- (c) A class can be inherited by incorporating the definition of one class into another by using — keyword.
- (d) A set of predefined rules that governs data communication between two entities is known as —.
- (e) The ~~HF~~ layer in OSI model is responsible for source to destination delivery of a packet across different networks.
- (f) The — tag is used to incorporate a table in HTML document.

3. Match the following : 1×6=6

- | | |
|---|--|
| (a) Pipe | (i) Physical or logical layout of devices in a network |
| 1✓ | |
| (b) Finalizer | (ii) Transmission mode |
| 2✓ | |
| (c) Stream | (iii) Transmission impairment |
| 3✓ | |

(4)

- (d) Attenuation (iv) An abstraction that either produces or consumes information
(u)
- (e) Duplex (v) A method in each class that returns resources to the system
(u)
- (f) Topology (vi) Synchronised communication channel between threads
**

SECTION—B

Answer any four questions : $3 \times 4 = 12$

4. Briefly explain exception handling in JAVA.

5. Write a JAVA program to sort a list of five numbers.

6. Write short notes on FTP and SMTP protocols.

7. Write short notes on Frequency division multiplexing and Time division multiplexing.

8. Explain briefly :

(a) DOCTYPE declaration

(b) tag

MSA—600/121A

(Continued)

9. Differentiate between the following :

(a) == and equals ()

(b) this and this ()

SECTION—C

Answer any four questions : 6×4=24

10. Explain different components of JVM briefly.

11. Explain various transport layer protocols.

12. What is threads? Briefly describe the creation of threads. What are the different states of a thread?

13. What is MODEM? Briefly describe its categories/types.

14. Develop an applet that receives three numeric values as an input from the user and displays the largest of the three on the screen. Write an HTML page and test the applet.

15. What is a list? Explain briefly the types of lists in HTML.

★ ★ ★

2011

BCA

ELEVENTH PAPER

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own words as far as practicable

SECTION-A

$$1 \times 12 = 12$$

i. State True or False :

i. Java is an object-oriented programming

(a) Java is an object-oriented programming
language. T

(b) Java bytecodes are machine language
instructions understood by JVM and
usually generated as a result of
compiling Java language source code. T

(c) Java was developed as a programming
language solely for the internet. T D

(d) A panel in Java is generally not used
to group many smaller components

- (e) To handle events, we first associate the class with the appropriate listener interface. T
- (f) The default layout of an applet is border layout. F
- (g) A catch block can exist without the try block. F
- (h) Threads run in a space that is separated from the application process space. T
- (i) A protocol is a set of rules defining a standard of communication. T
- (j) Individual documents that make up a Web site are called Web pages. T
- (k) HTTP is used for creating Web pages for the WWW. T
- (l) IP address is a numeric address given to each computer connected to the internet. T

$$1 \times 6 = 6$$

2. Fill in the blanks:

- (a) The Applet viewer is used to view and test applets. Web browser
- (b) The Swing is a set of classes that allow you to create a graphical user interface and allow you to accept user input through the keyboard and the mouse. JAVA.awt
- HTTP is a set of protocols for computer communication across

(3)

- (d) The programming language to create Web page is — HTML
- (e) For a computer to be connected to a LAN, you use a device called HUB/SWITCH
- (f) Modem are devices, which converts digital signals into analog and vice-versa for transmission over telephone lines.

$$1 \times 6 = 6$$

3. Match the following :

- 5 (a) Java applet (i) Move bits between machines
- 6 (b) Java application (ii) Smallest unit of executable code that performs a particular task
- 4 (c) Subnet (iii) To add image into Web page
- 3 (d) (iv) Carry message from host to host
- 1 (e) Transmission lines (v) Applets are Java programs that are executed by a Java compatible Web browser
- 2 (f) Thread (vi) Applications are Java programs that are designed to work on the local system and do not need a browser to execute

SECTION-B

Answer any four questions

$$3 \times 4 = 12$$

4. Write a Java program to find the smallest number in an array of integer.
5. Describe Java Virtual Machine

(Turn Over)

JVM, compnt. of JVM

- v) Prog.: - exception, finally
- vi) Try, catch, throw
- vii) Thread, lifecycle
- viii) List
- ix) HTML & its various tag

- i) OSI/TCP/IP
- ii) Bridge, HUB, Router
- iii) multiplexing
- iv) various transport layer
- v) Topology
- vi) Router

(4)

6. Write short notes on :

(a) Frame

(b) Panel

7. What is the disadvantage of networking?
8. Describe radio waves, microwaves and infrared.
9. How many types of list tags are supported in HTML? Describe them briefly.

SECTION-C

Answer any four questions:

$$6 \times 4 = 24$$

10. Explain various OSI reference models.

11. Explain different types of networking. Also explain wireless network.

12. Write a program to design an applet having a textbox, a listbox and a button. On typing the text in the textbox and clicking on the button, the text should be added to the listbox.

2012

BCA

ELEVENTH PAPER

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SECTION—A

1. State True or False : $1 \times 12 = 12$

- (a) Applets are Java programs that are executed by Web browser. T
- (b) Super-keyword is used for polymorphism. F
- (c) Thread is a full-fledged process rather than light-weight process. T
- (d) Socket is used for networking. T
- (e) Hash tables are parts of Java.util package.

- (f) There are three types of methods used in Form tag of HTML.
- (g) Currently IPv6 is used in Internet.
- (h) There are two types of protocol.
- (i) Default layout of an applet is flow layout.
- (j) IIS is a Web browser.
- (k) TCP is a connectionless protocol.
- (l) UDP is a connection-oriented protocol.

2. Fill in the blanks : $1 \times 12 = 12$

- (a) Java is developed solely for all platforms.
- (b) JVM stands for Java virtual machine.
- (c) Java compiler converts source code into byte code.
- (d) DNS works on — layer.
- (e) IP works on Application layer.
- (f) Capping is a part of — tag.
- (g) block is the smallest unit of executable code that performs a particular task.
- (h) bus network topology is extremely reliable.

(3)

- (i) Secured version of HTTP is XML SSL
- (j) SSL stands for —.
- (k) TCP/IP does not define Physical layer layer.
- (l) IP address is of 16 bits.

SECTION—B

Answer any four questions : $3 \times 4 = 12$

- 3. Explain various wireless media.
- 4. Explain the purpose of presentation layer.
- 5. Write a program in Java to find whether a given number is prime number.
- 6. Explain the features of Java programming language.
- 7. Explain various network topologies.
- 8. Explain Form and Input tags in HTML.

SECTION—C

Answer any four questions : $6 \times 4 = 24$

- 9. Explain the Java applet life cycle with example.
- 10. Write a program using applet to find the factorial of a number.

11. Explain the functions of network layer and data-link layer of OSI.

12. What is Multithreading? Explain various thread classes.

13. Explain TCP and UDP along with header formats.

14. Explain the following :

(a) Panel

(b) Bridge

(c) Switch

(d) Layout Manager

```

if (For i=2 ; i=***; i++)){}
    b = a mod i
    if (b!=0)
        break;
    else
        cout ("Enter No. is Not Prime");
}
else
    cout ("Prime No.");
}

```

BCA-XI-Part-III

2013

BCA

ELEVENTH PAPER

Full Marks: 60

Pass Marks: 27

Time: 3 hours

UTM

The figures in the margin indicate full marks for the questions

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

Section-A

1. State true or False:

1x12=12

- (a) Interfaces cannot be instantiated—they can only be *implemented* by classes or *extended* by other interfaces. T
- (b) String objects are constants. StringBuffer objects are not constants. T
- (c) The default value of a string type is NULL. T
- (d) A package statement must appear as the first line in a source code file. T
- (e) Server should be configured with a static IP address. T
- (f) FTP is an Internet tool used for copying files from one computer to another. T
- (g) A router can connect two LANs. T
- (h) The network connecting devices-repeater and hub operate at the physical layer. T
- (i) A data frame contains the MAC address of the destination computer. T
- (j) Hub does not amplify the incoming signal. T
- (k) NIC work at both the data link layer and physical layer of the OSI reference model. T
- (l) The common protocols used in star topology are Ethernet, Token Ring and Local Talk. T

2. Fill in the blanks:

1x12=12

- a) The Java programming language does not permit multiple inheritance.
- b) The name of the method used to start a thread execution is start().
- c) Synchronize is capability to control the access of multiple threads to shared resources.
- d) The Panel and Applet classes use the form layout as their default layout.
- e) When a thread terminates its processing it enters the dead state.
- f) The set layout method is used to specify a container's layout.

- g) The `java.lang` package is always imported by default.
- h) The default value of the Boolean type is `false (0)` `True`
- i) TCP/IP is the communication protocol for the Internet.
- j) domain name is text-based string corresponding to numeric IP addresses.
- k) modem is a broadband connection that allows connecting to Internet over the existing telephone.
- l) leased line is a dedicated phone line that connects a computer to Internet.

Section B

Answer any three questions

3X4=12

3. What is the difference between DSL and ADSL?
4. What is the purpose of the DNS server?
5. What are the features of a coaxial cable? ✓
6. Write a java program to replace each vowel in a string by a character 'z'.
7. Explain the usage of Java packages.
8. What's the difference between the methods sleep() and wait().

Section - C

Answer any four questions

6X4=24

9. What's the difference between an interface and an abstract class? Also discuss the similarities.
10. Explain the structure of telephone system.
11. How is wireless networking different from wired networking.
12. Describe life cycle of a thread. What is the purpose of finalization?
13. Describe briefly the function of each layer of the OSI model.
14. Write short notes on the followings
 - a. Repeater and Bridge ✓
 - b. Multiplexing
 - c. Cellular radio
 - d. Protocol hierarchies

(4)

6. Explain the Java Applet life cycle with example.

7. What is transmission media? Explain the base band coaxial cable.

8. Explain the input form tags in HTML.

Section—C

Answer any four questions :

4×6

The figures in the right-hand margin indicate marks

Time : 3 hours

Full Marks : 60
Pass Marks : 27

2014

Answer all Sections

9. Explain the functions of network layer and data link layer of OSI.

10. What is telephone system? Explain the structure of telephone system.

11. Write a program using Applet to find the factorial of a number.

12. Explain try block, catch blocks and throw block.

13. What is thread? Describe the creation of threads. What are the different states of the thread?

14. Write short notes on the following :

- (a) Router
- (b) MODEM
- (c) Multiplexor
- (d) Bridges.

Section—A
(Compulsory)

1. State True or False of the following : 12×1

(a). Java compiler is named Javae. F.

(b). Java is the extension of the source file in Java. T

(c) Multithreading process automatically removes objects that are not being referenced. T

(d) Sleep is not a method of an Applets life. T

(e) Update() method is used to remove the flickering effect. F

(f) Grid layout is a default layout for the Applet. F

(Turn Over)

(2)

(g) Servlet is a Java program where HTML tag are embedded in Java code or HTML responses are generated through Java. \checkmark

(h) Applets are Java programs that executed by web browser. \checkmark

(i) Socket is used for networking. \checkmark

(j) DNS works on application layer. \checkmark

(k) Java compiler converts source code into byte code. \checkmark

(l) Star topology is extremely reliable. \checkmark

12×1
2. Fill in the blanks :

(a) IP address is of 8 bits.

(b) SSL stands for secure secure socket layer

(c) JVM stands for JAVA Virtual machine

(d) TCP is the basic protocol of communication over Internet.

(e) A Web browser is a server that serves up web pages upon request.

(f) Modem is a device that allows computers to communicate over telephone lines.

- (g) The layer that handles error detection and error correction is Data link layer
- (h) Optical cables supports the highest bandwidth and faster transmission rate. Fibre optics

(i) Bits are packaged into frames at Physical layer of OSI model.

(j) The Java programming language multiple inheritance does not permits inheritance.

(k) The Java language package is import Keyword always imported by import

(l) DNS(Domain Name System) text-based string corresponding to numeric IP addresses.

Section—B

4×3
Answer any four questions :

3. What are LAN topologies? Explain the various types of LAN topology.

4. Explain the function of TCP/IP.

5. Write a program in Java to find whether a given number is prime number.

(Turn Over)

K/4(10)

(Continued)

K/4(10)

2015

Time : 3 hours

JAVA

Full Marks : 60

Pass Marks : 27

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

The figures in the margin indicate full marks.

Answer all the Sections as directed.

Section - A

1. State 'True' or 'False' of the following : $1 \times 12 = 12$

(a) Applets are Java programs that are executed

by web browsers. T

(b) Sockets are used for networking. T

(c) Thread is a full-fledged rather than light
wieght process. T

(d) A router can connect two LANS. T

(e) Java was developed as a programming
language solely for Internet. T

- (f) Java is an oop's language. T
- (g) Java compiler converts source code into by the code. T
- (h) The default value of string type is NULL. T
- (i) Star topology is not extremely reliable. F
- (j) Hub does not amplify the incoming signal. T
- (k) MODEM stands for modulator and Demodulator. T
- (l) HTTP stands for Hypertext transfer Protocol. T

2. Fill in the blanks : $1 \times 12 = 12$

- (a) FTP stands for File transfer protocol
- (b) Modem is a device that allows computers to communicate over telephone lines.
- (c) An IP Address consists of set of 4 integers.
- (d) Fibre optics cables support the highest bandwidth and faster transmission rate.
- (e) The layer that handles error detection and error correction is Data link layer

FY-3/3

(2)

Contd.

FY - 3/3

(3)

(Turn over)

- (f) A set of predefined rules that govern data communication between two entities is known as Protocol
- (g) The Transport layer in OSI model is responsible for source to destination delivery of packet across different networks..
- (h) The programming language to create web page is HTML
- (i) HTML is a Web Designing language.
- (j) JVM stands for JAVA virtual machine
- (k) IP Address is of 32 bits bits.
- (l) JPEG is the acronym for Joint pixel expert group

Section - B

3. Answer any four questions of the following :

$3 \times 4 = 12$

- (a) What are the features of a coaxial cable.
- (b) Write a program in Java to find prime the LCM of two integers.
- (c) Explain the features of Java Programming Language.

(d) Briefly explain exception Handling in Java.

(e) What are the differences between the methods sleep () and wait ().

(f) Explain features of HTML.

Section - C

4. Answer any four questions of the following :

$$6 \times 4 = 24$$

(a) Write a program using applets to find the factorial of a number.

(b) Explain various OSI reference models.

(c) Explain the different components of JVM.

(d) Explain the various guided media with examples.

(e) What is multithreading ? Explain the various thread classes.

(f) Write short notes on the following :

(i) Bridge

(ii) Repeaters

(iii) HUB

(iv) HTTP



2016

Time : 3 hours

Full Marks : 60

Pass Marks : 27

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

The figures in the margin indicate full marks.

Answer any five questions in which

Q. No. 1 is compulsory.

Section – A

(Compulsory)

1. (a) State 'True' or 'False': $1 \times 12 = 12$

- (i) Java is an object-oriented programming language. **T**
- (ii) Java compiler is named Javae.
- (iii) FTP is an internet-tools used for copying files from one computer to another.
- (iv) Applets are Java programs that are executed by web browser. **T**

AP – 8/3

(Turn over)

- (v) Java compiler converts source code into byte code.
- (vi) Ethernet is not used in Bus topology.
- (vii) IP Address is of 32 bit.
- (viii) MODEM converts Digital signals to Analog signals.
- (ix) HTTP is a basic protocol of internet.
- (x) DNS works on Application Layer.
- (xi) Internet is a world wide network of computer.
- (xii) In fiber optics, the signal source is light waves.
- (b) Fill in the blanks of the following : $1 \times 12 = 12$
- HTTP stands for _____.
 - A set of predefined rules, that governs data communication between two entities is known as _____.
 - XML stands for _____.
 - A world wide web contains web pages residing in many computers linked together using _____.
 - Java programming language does not permit _____ inheritance.

- (vi) Encryption and Decryption are the functions of _____ the layer.
- (vii) FDDI is a _____ Network.
- (viii) In OSI Network Architecture, the routing is performed by _____ layer.
- (ix) _____ Cable uses a very thin glass or plastic fiber through which pulses of light travel.
- (x) MAN refers to _____.
- (xi) NIC stands for _____.
- (xii) TCP stands for _____.

Section – B

2. Answer any four questions of the following :

$$3 \times 4 = 12$$

- Write a program in Java whether a given number is a prime number.
- What is Topology ? Explain the various types of topology with diagram.
- Explain the Java Applet life cycle with example.
- Explain form and input tag in HTML.
- Explain different components of JVM.
- Write a program using applet to find the factorial of a number.

AP – 8/3 (3) (Turn over)

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Section - C

3. Answer any four questions of the following :

$$6 \times 4 = 24$$

(a) Distinguish between package and interface.

How is Interface implemented ? Explain with an example.

(b) Explain try block, catch block and throw block.

(c) Explain the function of transport-layer and network-layer of OSI Model.

(d) Differentiate between Swing and AWT components.

(e) Develop an Applet to find the sum of digits of a given number. Write an HTML page and test the Applet.

(f) Describe radio waves, microwaves and infrared waves.

(g) Write short notes on the following :

(i) MODEM

(ii) ROUTER

(iii) Java Architecture

AP - 8/3 (500)

(4) Voc(H-3) — BCA (11)

44372

45500

65859

66813

- (a) Repeater
 - (b) Bridges
 - (c) Routers

Write a Java program to generate the following

卷之三

$1 - 1/3 + 2/5 - 3/7 + \dots$, upto n terms, where n will

be accepted by user.

Differentiate between swing and AWT component.

Develop an applet to find the sum of digits of a given number. Write an HTML page and test the applet.

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Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

(c) Rollers

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卷之三

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200

Full Marks : 60

Section - A

1. (1) Fill in the blanks

(a) JPEG is the acronym for Joint Photographic Exchange Group.

the devices or stations can transmit and receive

simultaneously.

(2) Free topology consists

P-22530 [TurnOver