

Code: AC19

Subject: INTERNET & JAVA PROGRAMMING

AMIETE – CS (OLD SCHEME)

Time: 3 Hours

OCTOBER 2012

Max. Marks: 100

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

Q.1 Choose the correct or the best alternative in the following: (2×10)

- a. What will be the value of p, q and r after execution of the following statements?

```
int p,q,r ;
q= 10;

r=15;
p= ++ q+ r++;
```

- (A) p=25, q=10, r=15 (B) p=27, q=10, r=15
(C) p=26, q=11, r=16 (D) p=27, q=11, r=16

- b. What will be the content of array table after executing the following code?

```
for (int i=0; i<3; i++)
    for (int j=0; j<3; j++)
        if (j= =i) table [i] [j]=2;
        else table [i] [j] = 1;
```

- (A) 111 (B) 211
 111 221
 111 222
(C) 112 (D) 211
 121 121
 211 112

- c. When we invoke repaint () for a component, the AWT invokes the method:

- (A) draw () (B) Show ()
(C) update () (D) paint ()

- d. Which of the following command lines options generates documentation for all classes and methods?

- (A) – protected (B) – public
(C) – private (D) – verbose.

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- e. The set Background() method is part of the class
 (A) Graphics (B) Applet
 (C) Component (D) Container
- f. The methods wait () and notify () are defined in
 (A) Java.lang.string (B) Java.lang Runnable
 (C) Java.lang.object (D) Java.lang.Thread
- g. Which of the following TCP/IP protocol is used for file transfer with minimal capability and minimal overhead?
 (A) RARP (B) FTP
 (C) TFTP (D) TELNET
- h. Which of the following TCP/IP protocol is used for transferring electronic mail messages from one machine to another?
 (A) FTP (B) SNMP
 (C) SMTP (D) RPC
- i. A machine that connects to two or more electronic mail systems and transfers mail messages among them is known as
 (A) Gateways (B) Mail gateway
 (C) Bridges (D) User Agent
- j. ICMP (Internet Control Message Protocol) is
 (A) a TCP/IP protocol used to dynamically bind a high- level IP address to a low-level physical hardware address.
 (B) a TCP/IP high level protocol for transferring files from one machine to another.
 (C) a protocol used to monitor Computers.
 (D) a protocol that handles error and control messages.

**Answer any FIVE Questions out of EIGHT Questions.
 Each question carries 16 marks.**

- Q.2** a. Discuss briefly about Subnet and Classless Addressing. (6)
 b. State briefly three basic categories of Address resolution algorithms. (6)
 c. Write brief notes on IP Encapsulation, Fragmentation and Reassembly. (4)
- Q.3** a. Describe the client-server paradigm. Write down various characteristics of clients and servers. (10)
 b. The HTML pages can be divided into three general categories. Explain briefly each category. (6)
- Q.4** a. What is the purpose of HTTP? Discuss about various activities initiated by its each transaction. (8)

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- b. Determine the class of each of the following IP address: (6)
- (i) 5.34.200.85
 - (ii) 228.57.58.90
 - (iii) 169.45.70.12
 - (iv) 200.76.9.25
- Q.5** a. Discuss briefly about application builder tools while working with Java beans. Also explain its capabilities. (6)
- b. Create an applet to display a welcome message and embed it in a web page. (6)
- c. Why is Java important to the internet? (4)
- Q.6** a. Servlets offer several advantages in comparison with CGI, Discuss them briefly. (6)
- b. Write a Java applet that (6)
- (i) draws a big ×.
 - (ii) draws a pair of perpendicular line segments
- c. Write a short note on 'Fundamentals of Exception Handling'. (4)
- Q.7** a. Write a program in JAVA to sort out the following cities in ascending order: (10)
- Ambala, Delhi, Chennai, Agra, Lucknow
- b. What are the classes available in Java for implementing collection framework? Differentiate between vector and array list. (6)
- Q.8** a. Write a program in Java which gives the following output when you execute it on the computer. (10)
- ```
0
0 1
0 2 4
0 3 6 9
0 4 8 12 16
0 5 10 15 20 25
```
- b. How many layout managers are available in Java? Discuss briefly. (6)
- Q.9** a. Push button is one of the most widely used controls supported by Abstract Window Toolkit (AWT). Explain briefly. (8)
- b. Give brief notes on any **TWO** of the following: (2×4)
- (i) The delegation Event Model
  - (ii) Applet class
  - (iii) Remote Method Invocation (RMI)
  - (iv) DNS