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(21216)

Roll No. ....

BCA - V Sem.

18022

B. C. A. Examination, Dec. 2016

Java Programming and Dynamic Webpage Design

(BCA-502)

(New Course)

Time : Three Hours]

[Maximum Marks : 75

Note: Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Answer all the five questions. Each question carries 3 marks. Very short answer is required. 3x5=15

- 1. Write a program in JAVA to convert a string totally into upper case. 3

- 2. What is byte-code in JAVA? Explain. 3
- 3. Design a webpage in HTML that contains special symbols. 3
- 4. What do you mean by connection pooling? Explain. 3
- 5. JAVA is not pure object-oriented programming language? Justify your answer. 3

Section-B

(Short Answer Questions)

Answer any two questions out of the following three questions. Each question carries 7½ marks. Short answer is required. 7½x2=15

- 6. Define JAVA servlets. How database connectivity is done in JAVA servlets? Explain. 7½
- 7. What do you mean by frame and frameset tag in HTML? Explain it with a suitable program. 7½
- 8. Write a program to count the number of objects created in a program. 7½

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**Section-C**

**(Detailed Answer Questions)**

Answer any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail.  $15 \times 3 = 45$

9. (a) What is an applet? Explain the life cycle of an applet? 5
- (b) Write an applet program in JAVA to create an event listener. 5
- (c) Explain the concept of handling image in Java GUI application with example. 5
10. Write short notes on the following :
- (a) Exception Handling in JAVA 8
- (b) Table Tag in HTML. 7
11. (a) Describe the delegation event model of event handling in JAVA. How is it a better approach than the other approaches? 7
- (b) What do you mean by a thread and multithreading? Explain the various methods to create a thread in JAVA. 8

12. (a) What do you mean by Constructor? Differentiate between default constructor and parameterized constructor with example. 7
- (b) What do you mean by datagram socket in JAVA? How to create a TCP and UDP connections using socket programming in JAVA? Explain. 8
13. (a) How many types of forms are available in HTML? Design an order-entry form that contains all the form controls and elements. 8
- (b) Define the concept of JAVA server page. How the dynamic content is generated in JSP? Explain. 7

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B.C.A.-V Sem.

**18023**

**B.C.A. Examination, Dec. 2016**

**Computer Network**

**(BCA-503)**

**(New Course)**

*Time : Three Hours*

*[Maximum Marks : 75*

**Note:** Attempt questions from all Sections as per instructions.

**Section-A**

**(Very Short Answer Questions)**

Attempt all the *five* questions. Each question carries 3 marks. Select the correct option from the given multiple choices for the following questions. 3×5=15

1. A protocol is really : 3
  - (a) A sets of demands
  - (b) A set of rules
  - (c) A translation book of diplomats
  - (d) A call with very high authorization.

2. Which of the following is used for modulation and demodulation? 3
  - (a) Modem
  - (b) Protocols
  - (c) Gateway
  - (d) Multiplexer
  - (e) None of the above.
3. Error detection at the data link level is achieved by : 3
  - (a) Bit stuffing
  - (b) Hamming codes
  - (c) Cyclic redundancy codes
  - (d) Equalization.
4. At what layer does a Gateway operate at? 3
  - (a) Data link layer
  - (b) Application layer
  - (c) Network layer
  - (d) None of the above.
5. Which of the following uses the greatest number of layers in the OSI model? 3
  - (a) Gateway
  - (b) Repeater
  - (c) Bridge
  - (d) Router.

**Section-B**

**(Short Answer Questions)**

Answer any *two* questions out of the following three questions. Each question carries 7½ marks. 7½×2=15

6. (a) What do you mean by network topology? Explain the advantages and disadvantages of bus, star and ring topology. 4
- (b) What do you mean by Hub, Repeaters and Bridges? 3½
7. (a) Discuss the major functions performed by the presentation layer and application layer of ISO-OSI model. 4
- (b) Write the concept of ALOHA. 3½
8. (a) What is computer networking? What are its benefits? 4
- (b) Discuss stop and wait protocol. 3½

**Section-C**

**(Detailed Answer Questions)**

Answer any *three* questions out of the following five questions. Each question carries 15 marks. 15×3=45

9. (a) Explain the different methods for error correction and detection.
- (b) State the advantages and disadvantages of TCP/IP. 5

10. Explain the following in detail : 5×3
- (a) ISDN
- (b) FDM
- (c) Routers.
11. (a) What are the major components of an optical communication system? 8
- (b) Write a short note on quality of service of transport layer. 7
12. (a) Explain packet switching in detail. 8
- (b) What are the criteria used to evaluate transmission media? Explain throughput and wavelength. 7
13. (a) What is Local Area Network (LAN)? What is the difference between LAN and WAN? 8
- (b) Write a short note on session layer. 7

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BCA- V Sem.

18021

B. C. A. Examination, Dec. 2016

Introduction to DBMS

(BCA-501)

(New Course)

Time : Three Hours]

[Maximum Marks : 75

Note: Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Answer all the five questions. Each question carries 3 marks. Very short answer is required. 3x5=15

1. Explain the various categories of data model.
2. What is the difference between subclass and super-class in object model?
3. What are the anomalies in 1NF?
4. Explain in detail about indexed sequential access file.
5. What are the different relational algebraic constraints?

Section-B

(Short Answer Questions)

Answer any two questions out of the following three questions. Each question carries 7½ marks. Short answer is required. 7½x2=15

6. How are the anomalies of 1NF are rectified? Explain with the help of example.
7. What are integrity rules? Explain with example.
8. What do you understand by mapping? Explain the different types of mapping.

Section-C

(Detailed Answer Questions)

Answer any three questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 15x3=45

9. What is the difference between file system approach and database approach? Also explain component of database system.
10. How are EER diagrams for specialization, generalization and aggregation drawn?
11. Explain the ACID property of a transaction and the usefulness of each with example.
12. Define normalization. Why do we need to normalize the database? Also differentiate 3NF and BCNF in detail.
13. What do you understand by E-R diagrams? Draw the E-R diagram for college management system with E-R functionalities.