

S.D.E

B.C.A- (2004 course)

I TO VI-Sem

Summer- 2017

Subject : Fundamentals of Information Technology

Day : Thursday
Date : 01/06/2017

S.D.E.



Time : 10.00 AM TO 1.00 PM
Max Marks : 80 Total Pages : 1

N. B. :

- 1) Attempt **ANY FIVE** questions from **Section – I** and attempt **ANY TWO** questions from **Section - II**.
- 2) Answers to both the sections should be written in the **SAME** answer book.
- 3) Figures to the right indicate **FULL** marks.

SECTION - I

- Q.1** List the various computer generations along with the key characteristics of computer of each generation? (10)
- Q.2** Differentiate between the characteristics of primary & secondary storage of a computer system? (10)
- Q.3** Explain the following HTML tags (10)
- i) 1234_9
 - ii) $A2B.D4_{16}$
 - iii) 247.65_6
 - iv) 2573_6
 - v) 111.02_2
- Q.4** Add binary number 1010110_2 and 1011010_2 and Subtract binary number 0110111_2 and 1101110_2 (10)
- Q.5** Differentiate between a sequential access and random access storage devices? Write one example of each? (10)
- Q.6** What is data processing? How do they help in improving data accuracy as compared to keyboard devices? (10)
- Q.7** What is printer? What are commonly used types of printer? (10)

SECTION – II

- Q.8** What is magnetic disk? Draw and explain 3 ½ inch floppy disk drive in detail? (15)
- Q.9** What is batch processing? How jobs are typically executed in a batch processing system? (15)
- Q.10** Write short note on **ANY THREE** of the following : (15)
- a) Storage hierarchy
 - b) Barcode reader
 - c) Mouse
 - d) Multiprogramming

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Subject : Algorithm and Program Design

Day : Saturday
Date : 03/06/2017

S.D.E.



Time : 10.00 AM TO 1.00 PM
Max Marks : 80 Total Pages : 1

N.B.:

- 1) Attempt **ANY FIVE** questions from Section – I and attempt **ANY TWO** questions from Section – II.
- 2) Answers to both the sections should be written in the **SAME** answer book.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

- Q.1** What is Flow Chart? Explain algorithm representation through flow chart. [10]
- Q.2** Design an algorithm to calculate factorial of 5 to 10 numbers and display sum of that factorials. [10]
- Q.3** Write a C program to calculate sum of following series: [10]

$$x = \frac{1}{2} + \frac{2}{3} + \frac{3}{4} + \dots + \frac{9}{10}.$$
- Q.4** How structured programming and procedure oriented programming are beneficial in solving problems? Explain. [10]
- Q.5** Explain following terms with suitable examples: [10]
 a) Operators b) Expressions.
- Q.6** Write a C program to display all prime numbers between 1 to 100. [10]
- Q.7** Write short notes on **ANY TWO** of the following: [10]
 a) Application areas of C language
 b) Merge
 c) Function

SECTION – II

- Q.8** Write a procedure for Bubble Sort with appropriate example. [15]
- Q.9** Write a program to calculate sum of digit of accepted number (e.g., 12345 = 15). [15]
- Q.10** Write a procedure of selection sort with appropriate example. [15]

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Subject : Office Automation

Day : Tuesday

Date : 06/06/2017

S.D.E.



Time : 10.00 AM TO 1.00 PM

Max Marks : 80 Total Pages : 1

N.B:

- 1) Solve any **FIVE** questions from Section-I. Each question carries **10** marks.
- 2) Solve any **TWO** questions from Section-II. Each question carries **15** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION-I

- Q.1** What is data processing? How data is processed? Explain with suitable example. (10)
- Q.2** Explain purpose of formula in MS-Excel worksheet. Discuss subtotal & grand total with suitable example. (10)
- Q.3**
- a) Differentiate between internet & intranet. (05)
 - b) Describe different elements of windows. (05)
- Q.4** How to prepare charts using MS-Excel? Explain with suitable example. (10)
- Q.5**
- a) Describe Desktop Publishing in brief. (05)
 - b) Explain features of MS-Windows Operating System. (05)
- Q.6** Describe following functionalities in MS-Word : (10)
i) Bold ii) Italic iii) Underline iv) Bullet v) Alignment
- Q.7** Write short notes on (ANY TWO) (10)
- a) Paintbrush
 - b) Notepad
 - c) Control Panel

SECTION-II

- Q.8** Explain following functionalities from edit menu of notepad: (15)
i) Cut ii) Copy iii) Paste iv) Find v) Replace
- Q.9**
- a) Discuss page setup & page formatting in brief with suitable example. (07)
 - b) What are different data types in MS-Access? Explain with suitable example. (08)
- Q.10** Describe the steps required to create table in MS-Access. (15)

Subject : Business Organisation & Systems

Day : Thursday
Date : 08/06/2017

S.D.E.



Time : 10.00 AM TO 1.00 PM
Max Marks : 80 Total Pages : 1

N.B.

- 1) Attempt any **FIVE** questions from Section – I and attempt any **TWO** questions from Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SAME** answer book.

SECTION – I

- Q.1** What is meant by Business? Differentiate between National Business and International Business. (10)
- Q.2** Trace with examples the development in Indian Business during the Colonial period. (10)
- Q.3** Explain various Sub-sectors of Goods Producing Sector with suitable examples. (10)
- Q.4** Explain Legal, Economic as well as Business aspects of a Merger and an Acquisition. (10)
- Q.5** State the problems and prospects of Small Scale Industries in India at present. (10)
- Q.6** Discuss the present trends in business world. (10)
- Q.7** Write short note on any **TWO**: (10)
- a) Merits and demerits of a Joint Stock Company
 - b) Types of Mergers
 - c) Advantage and Disadvantages of Franchising

SECTION – II

- Q.8** Mr. Ashok is a Production Engineer and has 10 years of experience in a reputed Limited Company. He wants to start a Sole Trading Business on his own. Explain for him the merits and demerits of sole trading business. (15)
- Q.9** Define Sole Proprietorship and Partnership and differentiate between these two forms of Business. (15)
- Q.10** Discuss about the Challenges faced by Indian Business in the new millennium. (15)

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AMOOR – I (2004 COURSE) : SUMMER – 2017
SUBJECT : ENVIRONMENTAL STUDIES

Day : Saturday
Date : 10/06/2017

Time : 10.00 A.M. TO 1.00 P.M.
Max. Marks : 80

N. B. :

- 1) Attempt **ANY FIVE** questions from Section – I and attempt **ANY TWO** question from Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION - I

- Q. 1 Explain the importance of people awareness for environmental sustenance. (10)
- Q. 2 Compare the renewable and non-renewable energy resources. (10)
- Q. 3 What do you mean by bio – diversity? (10)
- Q. 4 Discuss the role of an individual in conservation of natural resources. (10)
- Q. 5 Explain in detail the causes and consequences of water pollution. (10)
- Q. 6 Elaborate on, the land as a resource. How do desertification and land-slides occur? (10)
- Q. 7 Write short notes on **ANY TWO** of the following: (10)
- a) Poaching wild life
 - b) Mineral resources
 - c) Noise pollution

SECTION - II

- Q. 8 Prepare a suitable action plan for controlling industrial waste. (15)
- Q. 9 How does environment protection act ensures the sustenance of ecology. (15)
- Q.10 “Construction of dams is dangerous for the cities and towns in the vicinity.” (15)
Do you agree? Justify.

Subject : Mathematical Foundations

Day : Tuesday
Date : 13/06/2017

S.D.E.



Time : 10.00 AM TO 1.00 PM
Max Marks : 80 Total Pages : 1

N.B.:

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

Q.1 If $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13\}$, $A = \{2, 4, 6, 8, 9\}$, $B = \{3, 4, 7, 9, 11\}$ then find: **[10]**

a) $n(\overline{A \cup B})$ b) $n(\overline{A \cap B})$

Q.2 Find the value of x if: **[10]**

a) $\log_x 8 + \frac{1}{4} \log_x 16 = 1$ b) $\begin{bmatrix} 2 & -3 \\ 4 & 2 \end{bmatrix} \begin{bmatrix} x \\ 2 \end{bmatrix} = \begin{bmatrix} 12 \\ 16 \end{bmatrix}$

Q.3 Three fair coins are tossed simultaneously. Find the probability that: **[10]**

- a) all the three coins show head. b) at least 2 tail appear.
c) only one head appears. d) at most one head appears.

Q.4 State whether the following statement pattern is a tautology, contradiction or neither by using the truth table: **[10]**

a) $(p \vee q) \wedge (q \vee r) \wedge (p \vee r)$ b) $(\sim p \rightarrow q) \vee (q \rightarrow \sim r)$

Q.5 Explain the following terms: **[10]**

- a) Partitions of a set b) One-to-one function
c) Division algorithm d) Complexity of algorithm
e) Binomial distribution

Q.6 If $A = \begin{bmatrix} 3 & 2 & 1 \\ 4 & 6 & 2 \\ 3 & 2 & 9 \end{bmatrix}$, $B = \begin{bmatrix} x \\ y \\ z \end{bmatrix}$ and $C = \begin{bmatrix} -12 \\ -22 \\ -11 \end{bmatrix}$ **[10]**

and if $AB = C$ then find the values of x , y and z by using matrix method .

Q.7 Explain Euclidean algorithm with suitable example. **[10]**

SECTION – II

Q.8 a) State and prove distributive law of sets by using Venn diagram. **[08]**

b) Find gof and fog if $f(x) = \frac{2x+1}{x+1}$, $g(x) = x^2 - 2$. **[07]**

Q.9 In a survey of 600 people, it was found : 250 read Newsweek magazine. 260 read Time. 260 read Fortune. 90 read both Newsweek and Fortune. 110 read both Newsweek and Time. 80 read both Time and Fortune. 30 read all three magazines. **[15]**

- a) Find the number of people who read exactly one of the magazines.
b) Find the number of people who read at least one of the three magazines.

Q.10 Find the probability of getting exactly two red balls when three balls are drawn one each from three bags A, B and C containing (8 red balls, 4 white balls), (5 red balls, 3 white balls) and (3 red balls, 2 white balls) respectively. **[15]**

