7. Visualize a universal harmonious order in society-undivided society (Akhand Samaj).

15

Unit IV

8. Draw a detailed chart showing different categories of units in nature in co-existence with space. What is your role in existence ?

15

9. Write short notes on the following : 15

   (a) Natural acceptence of human values

   (b) Definitiveness of Ethical Human conduct.

A-211

B.C.A. EXAMINATION, Dec. 2015

(First Semester)

(Main & Re-appear)

HUMAN VALUES AND PROFESSIONAL

ETHICS

BCA-101-B

Time : 3 Hours]   *[Maximum Marks : 75*

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Q. No. **1** is compulsory. Attempt total four questions from four units, selecting at least *one* question from each Unit.

Compulsory question

1. (a) What do you understand by Human values and professional Ethics ?

   (b) Explain ethical dilemma with example.

   (c) Differentiate between the needs of the "Self" and the "Body".

   (d) Explain the difference between animal conciousness and human conciousness.

   (e) What should be the basic goudelines for values education ?   3×5=15

Unit I

2. Define trust and explain the natural outcome of having trust in a relationship. Use an example of a situation that a student may encounter in a professional institution to illustrate your point.   15

3. (a) How will you differentiate between respect and disrespect ? Which of the two is naturally acceptable to you ?   5

   (b) What is ethical human conduct ? Explain in terms of values, policies and character.   10

Unit II

4. There are four orders in nature. How does each order participate in the harmony in the nature ? Give few example.   15

5. (a) How does the feeling of Sanyam ensure health of the body ? List two program of Sanyam.   8

   (b) What should be the content of value education to make it complete ? How do values relate to our day to day living ?   7

Unit III

6. Critically examine the state of the society with the fulfilment of comprehensive human goal.   15

7. (a) What is JK Flip-Flop ? How race condition is removed from JK-FF ? Explain. **10**

   (b) Differentiate between RAM and ROM. Also give classification of memories based on principles of operation. **10**

8. What is Ring Counter ? Draw its circuit diagram and explain its working. **20**

A-162

B.C.A. EXAMINATION, Dec. 2015

(First Semester)

(Main & Re-appear)

BCA-103

DIGITAL ELECTRONICS

Time : 3 *Hours*]   [*Maximum Marks* : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Q. No. **1** is compulsory. Attempt any *Four* questions from Sections A, B, and C by selecting at least *one* question from each Section.

1. Answer the following questions : 20
   (a) What is expanded form of EBCDIC ?
   (b) What is the use of De-Morgan's Theorems in Boolean algebra ?
   (c) Draw the Truth Table for AND and OR gates.
   (d) What do you mean by product of sums form of a Boolean expression ?
   (e) What is the base of Hexadecimal number system ?
   (f) Why do we call NAND and NOR gates a universal logic gates ?
   (g) Draw the truth table of D Flip-Flop.
   (h) Draw the diagram of D Flip-Flop.
   (i) What are edge triggered flip-flops ?
   (j) What is ROM ?

Section A

2. Perform the following operatings : 20
   (a) $(1111.1111)_2 \rightarrow (?)_{10}$
   (b) $(FFFF.FF + 9F)_{16} \rightarrow (?)_{16}$
   (c) $(425)10 \rightarrow (?)_2$
   (d) $(42)_{BCD} \rightarrow (?)_{10}$

3. Draw the truth table and Combinational Circuit diagram for :
   (a) Half Adder 10
   (b) NOR and XOR Gates 10

4. Write notes on the following : 20
   (a) 8421 weighted codes
   (b) Gray Codes
   (c) Multiplexer.

Section B

5. (a) What are K-Maps ? Draw the K-Map for the following Boolean function : 10

   $$F(X, Y, Z) = (X' + Y) . Z' + Z$$

   (b) Draw the truth table for the following Boolean function : 10

   $$F(X, Y, Z, W) = (X' Y W + Z) . W' + Z$$

6. Using K-map method minimise the following expression : 20

   $$F(W, X, Y, Z) = m \Sigma(1,4, 9, 10, 13, 14) + d \Sigma (2, 6)$$

A-212

B.C.A. EXAMINATION, Dec. 2015

(First Semester)

(Main & Re-appear)

MATHEMATICS-I

BCA-103-B

Time : 3 Hours]   [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.
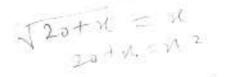
1. (a) Express 39^g $51'$ $10"$ in sexagesimal system.

(b) Expand $\left(-3x - \dfrac{1}{3x}\right)^3$ using Binomial theorem.

(c) Find the value of :

$$\sqrt{20 + \sqrt{20 + \sqrt{20 + \ldots \infty}}}$$

(d) Using section formula, prove that $(1, 1)$, $(2, 1)$ and $(4, 5)$ are collinear.

(e) Evaluate :

$$45 + 47 + 49 + \ldots + 99.$$

Unit I

2. (a) Prove that $\dfrac{\cos x}{1 - \sin x} + \dfrac{1 - \sin x}{\cos x} = 2\sec x$

(b) Find all the angles between $0°$ and $360°$ which satisfy the equation $\sin^2 \theta = \dfrac{3}{4}$

3. (a) Show that $\tan 75° + \cot 75° = 4.$

(b) Show that $\sin 10° \sin 50° \sin 70° = \dfrac{1}{8}$

Unit II

4. (a) Using Binomial theorem, find the values of :

$$\left(\sqrt{x} + \sqrt{y}\right)^6 + \left(\sqrt{x} - \sqrt{y}\right)^6$$

(b) Find the coefficient of x^4 in the expansion of $(1 + x)^n (1 - x)^n$ and deduce that $C_2 = C_0 C_4 + C_1 C_3 + C_2 C_2 - C_3 C_1 + C_4 C_0.$

5. (a) Solve the equation :

$$\frac{x-1}{x-2} + \frac{x-3}{x-4} = \frac{x-5}{x-6} + \frac{x-7}{x-8}$$

(b) If the ratio of the roots of the equation $lx^2 + nx + n = 0$ is equal to $p : q$, show that :

$$\sqrt{\frac{p}{q}} + \sqrt{\frac{q}{p}} + \sqrt{\frac{n}{l}} = 0$$

Unit III

6. (a) An equilateral triangle has one vertex at $(3, 4)$ and another at $(-2, 3)$. Find the Co-ordinates of the third vertex.

   (b) A quadrilateral has vertices $(4, 1)$, $(1, 7)$, $(-6, 0)$ and $(-1, -9)$. Show that the mid-points of the sides of this quadrilateral forms a parallelogram.

7. (a) Find the equation of the line joining the points $(3, -1)$ and $(2, 3)$. Also find the equation of the other line which is perpendiculer to this line and passing the point $(5, 2)$.

   (b) Show that the line $5x - 2y -1 = 0$ is mid – parallel to the lines $5x - 2y - 9 = 0$ and $5x - 2y + 7 = 0$.

Unit IV

8. (a) Wrie down the series whose rth term is $\frac{1}{3}r + \frac{1}{6}$. Is it an arithmetic series ?

   (b) Find n such that $\frac{a^n + b^n}{a^{n-1} + b^{n-1}}$ may be the A. M between distinct numbers a and b.

9. (a) How many terms of the G. P $\sqrt{3}, 3, 3\sqrt{3},...$sum up to $39 + 13\sqrt{3}$?

   (b) If $\frac{a+b}{2} = n\sqrt{ab}$, find the ratio of a and b.

A-213

B.C.A. EXAMINATION, Dec. 2015

(First Semester)

(Main & Re-appear Only)

BCA-105-B

PERSONAL COMPUTING SOFTWARE AND HARDWARE

Time : 3 Hours]   [*Maximum Marks : 75*

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, Q. No. **1** is compulsory, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-81) M-A-213

P.T.O.

1. (a) Define the following : $3 \times 5 = 15$

    Hardware, Software and Firmware.

   (b) What is the difference between warm and cold reboot of Computer system ?

   (c) Write the syntax for XCOPY command in DOS.

   (d) Write steps for creating notepad text file.

   (e) What is Virus ?

Unit I

2. Discuss the history of Computer. Also list various applications of computers. **15**

3. Write a short note on Interpreters, Compilers and Assemblers. **15**

Unit II

4. Explain directory commands in DOS. **15**

5. List any *five* basic commands in DOS and explain their uses. **15**

Unit III

6. Explain file management through windows : Copy, move delete files or directories, creating directories, renaming files or directories. **15**

7. List any *five* DOS utility commands and explain their uses. **15**

Unit IV

8. Explain the functional description of various modules of computer hardware. **15**

9. List any *three* hardware devices attached to computer system and draw their functional diagrams. **15**

(v) Vice-Chancellor

(vi) Recommend

(vii) Phonetics.

(b) Transcribe any *five* of the following words for their weak forms :   5

(i) Have

(ii) Who

(iii) The

(iv) Were

(v) Can

(vi) And.

(c) Mark the appropriate tone on any *ten* of the following :   10

(i) I think you were late.

(Uninterested)

(ii) Best of journey !

(Cheerful good wishes)

(iii) If it rains, stay back in the ho....

(iv) Why can't you solve the problem ?

(Expressing anger)

(v) Life is beautiful.

A-164

B.C.A. EXAMINATION, Dec. 2015

(First Semester)

(Main & Re-appear)

BCA-107

COMMUNICATION SKILLS-I

Time : 3 Hours]   [*Maximum Marks* : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory. Attempt other *four* questions selecting at least one question from each Section

Note : Attempt any ten questions : 10×2=20

1. Which can not be cancelled

   (Substitute with one word)

2. One who believes easily

   (Substitute with one word)

3. Value–price (Differentiate paires of words so as to express the finer shades of meaning in sentences)

4. Judicial-judicious (Differentiate pairs of words so as to express the finer shades of meaning in sentences)

5. Peanut Butter (Mark Stress)

6. Accurancy (Transcribe using IPA)

7. I tell my prayers before the meals.

   (Correct in after tracing the error/s if any)

8. He only lost his friend in bomb blast.

   (Correct it after tracing the error/s if any)

9. I don't scrarcely think so.

   (Correct it after tracing the error/s if any)

10. Roughage (Mark Stress)

11. Politicisation (Transcribe using IPA)

12. E-mail stands for :
    (a) Electronic Mail
    (b) Electric Mail
    (c) Essential Mail
    (d) Elementary Mail.

13. Phonology (Transcribe using IPA)

14. Business Letter is :
    (a) Impersonal Letter
    (b) Professional Letter
    (c) Unfriendly Letter
    (d) Commerce Letter.

Section A

2. (a) Change the voice of any *ten* of the following : 10
   (i) She runs the auto vary fast.
   (ii) Why did you miss your bus ?
   (iii) He will go tomorrow.

(iv) One should be honest.

(v) You can see me working.

(vi) I wanted her to be my partner.

(vii) You are note missed at all.

(viii) Life must be respected at any cost.

(ix) How can you give this land to me ?

(x) I am not convinced.

(xi) She lost her keys.

(xii) They will be waiting for you.

(b) Correct any *ten* of the following sentences after tracing the error/s if any : **10**

(i) He does not himself play nor he allows others to play.

(ii) She had killed herself almost.

(iii) This play is more better than the earlier one.

(iv) They invite us on phone dinner.

(v) The delay nearly drove her mad.

(vi) Unless we are note united, we will not win our freedom.

(vii) If any one listens to my story, you will surely like it.

(viii) A text is always more legible which is neatly types.

(ix) The student finishing the job will first get a prize.

(x) I prefer walking than jogging.

(xi) She said that she is living in Hyderabad.

(xii) He acts as if he was ill.

3. (a) Explain the axact meaning of any *five* of the following idiomatic expressions/ phrases given below. Also use them in sentences : **10**

(i) To get on someone's nerves

(ii) To blow hot and cold

(iii) Break out

(iv) To keep one's fingers crossed

(v) A good Samaritan

(vi) A Pep talk.

(b) Differentiate any *five* of the following pair of words by using them in sentences :

(i) Careful–Cautious

(ii) Flaur–Flare

(iii) Continual–Continuous

(iv) Famous–Notorious

(v) Able–Capable

(vi) Suspect–Doubt   10

Section B

4. (a) Transcribe any *ten* the following words using International Phonetic Alphabet :

10

(i) Quotation

(ii) Account

(iii) Innocent

(iv) Singing

(v) Plough

(vi) Slumber

(vii) Whistle

(viii) Yelp

(ix) Suite

(x) Utopia

(xi) Vision

(xii) Talk

(xiii) Choose.

(b) Develop a conversation between a would-be paying guest who desperately needs a house but is not getting any and a landlord who is very fussy about keeping students as paying guests. Both of them keep back certain kinds of information from each other.   10

5. (a) Mark stress/es on the right syllable of any *five* of the following :   5

(i) Bookshelf

(ii) Convict

(iii) Career

(iv) Academician