Exam. Code : 107201
Subject Code :   2065

BCA Ist Semester

INTRODUCTION TO PROGRAMMING C

Paper—I

Time Allowed—3 Hours]   [Maximum Marks—75

Note :— Attempt any **five** questions. All questions carry equal marks.

1. What are the different types of operators available in C ? Explain giving examples.   15

2. What are the different input/output functions available in C? Explain with the help of examples.   15

3. What are the different iterative control structures in C? Explain giving examples.   15

4. Discuss the various storage classes available in C.   15

5. Define functions. What are the different methods of passing parameters to functions ? Explain giving examples.   15

6.   (a) Define array. Write the method of initializing a two dimensional array at the time of declaration.   7.5

     (b) Define and distinguish between structure and union.   7.5

531(2117)/BSS-30127   1   (Contd.)

7. (a) Define pointer. How pointers are better than arrays? Explain. 7.5

   (b) How a pointer is passed to a function ? Explain giving example. 7.5

8. Write a program to read n numbers using pointer and then display the average of these n numbers. 15

Exam. Code : 107201
Subject Code :   2066

BCA 1ˢᵗ Semester

Paper-II : INTRODUCTION TO COMPUTERS & IT

Time Allowed—3 Hours]   [Maximum Marks—75

Note :— Attempt any *five* questions. All questions carry
equal marks.

1. How block diagram of computer system interrelates
    Input unit and Central Processing Unit ? Explain with
    the help of diagram.   15

2. What are the major milestones in the development of
    hardware and software in the field of computers ?
    Explain.   15

3. Discuss the working mechanism of the following
    devices :

    (a) Keyboard   5

    (b) Touch Screen   5

    (c) MICR.   5

4. What is the role of secondary storage devices ?
    Differentiate between magnetic storage and optical
    storage devices.   15

5. Discuss the following :

    (a) Formatting features of Word Processor   7½

    (b) Table Handling.   7½

6. How presentation can be created ? Describe the procedure for insertion of animation and videos in the presentation.   15

7. Explain the step-by-step procedure :

    (a) For creation of spreadsheet   7½

    (b) Use of graphs in spreadsheet.   7½

8. Write short notes on the following :

    (a) Applications of computers   7½

    (b) Printing Devices.   7½

Exam. Code : 107201
Subject Code : 2067

BCA 1ˢᵗ Semester

APPLIED AND DISCRETE MATHEMATICS

Paper–III

Time Allowed—3 Hours]   [Maximum Marks—75

Note:– **Eight** questions are given. Candidates are required to attempt any **five** questions.

1. (a) If A = {1, 2, 3}, B = {4, 5, 6}, C = {7, 8, 9}, then verify that :

$$A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$$

   (b) In a school there are 20 teachers who teach mathematics or physics of these 12 teach mathematics and 4 teach physics and mathematics. How many teach physics ?

   (c) Let U = {1, 2, 3, 4, 5, 6}, A = {2, 3} and B = {3, 4, 5}. Find A^c, B^c, $A^c \cap B^c$, $A \cup B$ and hence show that $(A \cup B)^c = A^c \cap B^c$.

   (d) If A = {1, 3, 5, 7, 9}, B = {2, 4, 6, 8, 10}, C = {1, 2, 3, 4}, then find :

   (i)   A – C

   (ii) A ∩ (B – C)

   (iii) A – (B ∪ C)   3+4+3+5=15

533(2117)/BSS-30128   1   (Contd.)

2. (a) Find A Δ B, if A = {2, 3, 5, 7}, B = {3, 4, 6, 8, 10}

(b) Let A = $\left\{\frac{1}{2}, 2\right\}$, B = {2, 3, 5}, C = {-1, -2},

then verify that A × (B − C) = (A × B) − (A × C).

(c) Let A = {1, 2, 3, 4, 5} and B = {2, 4, 6, 8, 10}.

Let R = {(a, b) : a ∈ A, b ∈ B, a divides b} be

a relation from A into B. Find R. Show that domain

of R is A and range of R is B.   5+5+5=15

3. (a) Determine whether the relation represented by zero-

one matrix $\begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \\ 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{bmatrix}$ is an equivalence relation.

(b) Let x = {1, 2, 3, 4}, R = {< x, y > | x > y}. Draw

the graph of R and also give its matrix.

(c) Prove that (p ∧ q) → (p ∧ q) is a tautology but

(p ∨ q) → (p ∧ q) is not.

(d) Prove the validity of following arguments :

If man is a bachelor, he is unhappy

If a man is unhappy, he dies young

Therefore, bachelors die young   3+4+3+5=15

4. (a) Define two different types of quantifier with example.

(b) Define :

(i) Conjunction

(ii) Disjunction

(iii) Negation

all with truth table.

(c) Write the truth table of following statement :

[p → (q ∨ r)] ∨ [p ↔ ~ r]   5+5+5=15

5. (a) Prove that {[(p → q) ∨ p] ∧ q} → q is a tautology.

(b) Let R be a relation on a set A = {1, 2, 3} defined

by :

R = {(1, 1), (1, 2), (2, 3)}. Find the reflexive closure

of R and symmetric closure of R.

(c) Define different type of closure with example.

5+5+5=15

6. (a) Show that $(A + B)(\overline{A} + C) = AC + \overline{A}B$

(b) Minimize the function

$f(A, B, C) = \Sigma m(0, 3, 5, 6, 7) + d(2, 4)$

(c) Prove De-morgan law with the help of truth table.

5+5+5=15

7. (a) If $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$, then show that

$$A^3 - 6A^2 + 7A + 2I = 0$$

(b) Given that $A = \begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$.

Find AB. Use this to solve the following system of linear equations :

$$x - y + z = 4, \; x - 2y = 9, \; 2x + y + 3z = 1$$

$$7.5+7.5=15$$

8. (a) Solve the following system of linear equations by matrix method :

$$x + y + z = 6, \; x + 2z = 7, \; 3x + y + z = 12$$

(b) Find the rank of the matrix $\begin{bmatrix} 1 & -1 & 3 & 6 \\ 1 & 3 & -3 & -4 \\ 5 & 3 & 3 & 11 \end{bmatrix}$

$$7.5+7.5=15$$

533(2117)/BSS-30128   4   7500

Exam. Code : 107201
Subject Code : 2068

BCA Iˢᵗ Semester

COMMUNICATION SKILLS IN ENGLISH—I

Paper—IV

Time Allowed—3 Hours]   [Maximum Marks—50

Note :— **All** questions are compulsory.

I.   Read the passage below and answer the questions that follow :

Punctuality is a necessary habit in all public affairs of a civilized society. Without it nothing could ever be brought to a conclusion, everything would be in a state of chaos. Only in a sparsely populated rural community is it possible to disregard it. In ordinary living there can be some tolerance of unpunctuality. The intellectual, who is working on some abstruse problem, has everything coordinated and organized for the matter in hand. He is therefore forgiven, if late for the dinner party. But people are often reproached for unpunctuality when their only fault is cutting things fine. It is hard for energetic, quick-minded people to waste time, so they are often tempted to finish a job before setting out to keep an appointment. If no accidents occur on the way, like punctured tyres, diversion of traffic,

sudden descent of fog, they will be on time. They are often more industrious, useful citizens than those who are never late. The over-punctual can as much be a trial to others as the unpunctual. The guest who arrives half an hour too soon is the greatest nuisance. Some friends of my family had this irritating habit. The only thing to do was to ask them to come half an hour later than the other guests. Then they arrived just when we wanted them.

Questions :

(1) What is a necessary habit in the public affairs of a civilized society ?

    (a) A good banking system

    (b) Obedience to prescribed rules

    (c) Casting one's vote regularly

    (d) Punctuality

(2) Punctuality can be disregarded only

    (a) if one leads an uncivilized life in a jungle

    (b) in a sparsely populated rural community

    (c) if one does not have to do a job

    (d) in some government offices where no one is interested in his or her duty.

(3) Who can be forgiven if he is late for a dinner party ?

    (a) The shopkeeper who is busy making money

    (b) A school child

    (c) A government employee who has a family to look after

    (d) The intellectual, who is working on some abstruse problem.

(4) Who are often tempted to finish a job before setting out to keep an appointment ?

    (a) A doctor who is performing a surgical operation

    (b) A school child who has to finish homework

    (c) Energetic quick-minded people who do not want to waste time

    (d) None of these.

(5) Which guest is the greatest nuisance ?

    (a) One comes five minutes late

    (b) One who sends a message that he cannot come

    (c) One who comes half an hour earlier

    (d) One who does not turn up at all and does not bother to inform the host.   5×2=10

II. Read the comprehension and answer the questions that follow :

Here then is a first answer to the question, what is the aim of education ? Its aim is to know the first-rate in any subject that we study, with a view to achieving it as nearly as our powers allow. If we could fix this firmly in our minds, we should not stumble through a variety of lessons, lectures, and books like a drunk man, only partially aware where we are or what we are doing. We should cease to think that we go to school or college to pass examinations or to secure degrees or diplomas or to satisfy our teachers, though these may be and are incidental and limited objectives. We should have brought order into our education by realizing its true aim and we should have deepened in our minds through practice the sense that a worthy purpose in life is the desire for excellence, the pursuit of the first-rate.

So far, so good. But a very important question remains unanswered. We should desire excellence, pursue the first-rate. But in what fields ? The difficulty with education, as with life, is that it has so many fields. One would like to know the first-rate in all of them, but that is impossible for the limited mind and energy of man. Which, then, are the most important fields – or, narrowing the problem further, which are those in which every human being ought to know the first rate ? These should enter into the education of all.

The most obvious field is our job in life, our vocation in the usual sense of the world. Clearly, whatever it is, we ought to know the first-rate, the best methods to employ. In this field of vocational education, the modern world does well : we have a conscience about it or, at any rate, a sense of its importance; our provision of vocational education is good, and in engineering or medicine, commerce or technology, nursing or hotel-keeping, or any other of those activities which make up material civilization, we believe in quality, in the first-rate; we have a clear idea of what it means and we have vocational studies. It is perhaps the only branch of education in which we are entirely successful, and there is no risk of its being ignored.

An educated man should know what is first-rate in those activities which spring from the creative and intellectual faculties of human nature, such as literature, art, architecture, and music. I should like to add science and philosophy, but in these two subjects it is difficult for any but the expert to estimate quality, and many educated people have not the close knowledge necessary to judge work in them. On the other hand, everyone has close

and daily contact with the other four. Architecture surrounds him in every city, literature meets him on every bookstall, music assails his ears on his radio set and from every juke-box; and art in its protean aspects of form and colour is a part of daily life. The architecture may often be bad, the literature and music often puerile, the art often undeserving of the name; but that is all the more reason why we should be able, in all of them, to distinguish good from bad.

To judge by the literature offered us in hotel book-stands, and by most of the music played on the radio and by juke-boxes, we might be more discriminating in these fields than we are. If it be said that music and art and literature are not essentials of life but its frills, I would reply that, if so, it is curious that they are among the few immortal things in the world, and that, should a man wish to be remembered two thousand years hence, the only certain way is to write a great poem or book, compose a great symphony, paint a great picture, carve a great sculpture, or build a great building. If you have any doubts about this, consider why long-dead people like Plato and Shakespeare, Michelangelo and Raphael, Ictinus and Bramante, are remembered today.

I have argued that no one has the right to feel himself educated if he does not know what is first-rate in his daily occupation and (so far as this is possible) in those fields where the creative and intellectual powers of man are revealed. But there is another job much more difficult than teaching or nursing or business or medicine, in which we're all concerned – the job of living; and there surely, as much as in any other pursuit, we need to know what is first-rate. Is not our education very incomplete if we do not know what is excellent in human nature and in life; if in that field we are taken in by second-rate, shoddy stuff. Here our age is far less successful than in medicine, or engineering, or the sciences.

Read the above passage carefully and answer the following questions :

(1) Why is it important to be first-rate in any subject ?

(2) What are the difficulties faced in acquiring education ?

(3) Do you agree that music and art are only frills of life ? If not why ?

(4) Is education complete without knowledge of human nature ?

(5) Why is it tough to face the modern civilization ?

$5 \times 2 = 10$

III. Write a letter to your friend describing a tree plantation drive that you participated in.   10

IV. Make point wise notes of the given passage :

So often these days we hear and speak of the "conquest of nature", "the taming of a river", the "war against insects", and so on. Often these phrases are used without consciously attaching any values to them, but they have underlying in them an attitude of hostility towards Nature and Nature's creatures, a viewpoint which seems to assume Nature as an enemy that needs to be vanquished. Alternatively, Nature is seen merely as a "resource" to be "exploited" – take the maximum out of it, regardless of what this does to natural processes and to other creatures which depend on these processes. It is this attitude which sees fellow humans too as a resource to be exploited, or other human communities as enemies to be conquered.

There is a growing lack of sensitivity and respect for our fellow creatures. This attitude is being drilled into a child by social forces, which can only be countered by environmental education. Yet, sadly, in most cases this is not done. What is done is talk about the feed web and the energy cycles and ecological balance and how removal of any element disrupts the whole system, and how this

can affect human beings too. What this approach lacks is the essential interaction with Nature and with other humans. Indeed in many environmental activities the opposite takes place. A classic example of this is making a herbarium, or even worse, an insect collection, as common in both formal and non-formal education in India. A child is often encouraged to pluck leaves and flowers and run after butterflies with a net, and is part of a large group of children marauding a patch of Nature, or for the individual "specimens" pressed in the plant file or trapped in a jar. It is even worse when the activity is also competitive, i.e. who collects the maximum ? A lot of knowledge may be gained but it is gained in a value system which emphasizes exploitation and conquest, not sensitivity and respect. Learning under a tree (Santivna) rather than in a classroom, as indeed the Indian tradition, is far more effective and long lasting.

The alternative is to take up activities where eco-balances, ecological diversity, animal behaviour, human plurality and other such concepts and systems are introduced with the stress on their intrinsic worth. Materials, processes, living beings to do not exist only for human use but, more importantly, they are worthwhile in themselves.

A frog is as much in love with its life as the human child is with its; the feeling of the frog must be respected. The final thrust of environmental education seems to be embodied in the vital question, "Am I doing something which disrespects or violates some other creature's right to live and live freely". If I am, what can I do to minimize the damage I am causing ? Once again the Indian tradition of Ahimsa comes out as infinitely more relevant than much of what we learn in modern education.   10

V.   Do as directed :

(a) How is butter made ?   (Change the voice)

(b) They are building a new airport at the moment.

                                   (Change the voice)

(c) He said to me, "You did the right thing".

                                   (Change the narration)

(d) She says, "I like going to the seaside".

                                   (Change the narration)

(e) We _____ (enjoy) our holiday last year.

                                   (Put the verb in correct form)

(f) I _____ (go) now.

                                   (Put the verb in correct form)

(g) There was no money. The scheme fell through.

                                   (Combine the sentences)

(h) He is honest. He will not accept the bribe.

                                   (Combine the sentences)

(i) The Police (keep) a watch on her movements since July.   (Supply present perfect continuous)

(j) It seemed as if he _____ (not eat) for days.

                                   (Supply past perfect)

                                                        10

Exam. Code : 107201
Subject Code : 2069

BCA 1ˢᵗ Semester

PUNJABI COMPULSORY

Paper—V(i)

Time Allowed—Three Hours]   [Maximum Marks—50

ਨੋਟ :— ਸਾਰੇ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹਨ।

1. "ਭਰੂਣ ਹੱਤਿਆ ਦੇ ਦੋਸ਼ ਵਿੱਚ" ਨਿਬੰਧ ਦਾ ਸਾਰ ਆਪਣੇ ਸ਼ਬਦਾਂ ਵਿੱਚ ਲਿਖੋ।

ਜਾਂ

"ਨਾਰੀ ਸ਼ਕਤੀ" ਨਿਬੰਧ ਦਾ ਵਿਸ਼ਾ ਵਸਤੂ ਸਪੱਸ਼ਟ ਕਰੋ।   10

2. "ਹੁਣ ਘਰਾਂ ਨੂੰ ਪਰਤਣਾ" ਕਾਵਿ ਰਚਨਾ ਦਾ ਵਿਸ਼ਾ ਵਸਤੂ ਸਪੱਸ਼ਟ ਕਰੋ।

ਜਾਂ

"ਅੰਨਦਾਤਾ" ਕਾਵਿ ਰਚਨਾ ਦਾ ਵਿਸ਼ਾ ਵਸਤੂ ਸਪੱਸ਼ਟ ਕਰੋ।

10

3. ਹੇਠ ਲਿਖੇ ਵਿਸ਼ਿਆਂ ਵਿੱਚੋਂ ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ ਉੱਤੇ ਭਾਵ-ਪੂਰਤ ਪੈਰ੍ਹਾ ਰਚਨਾ ਕਰੋ :

(ੳ) ਸਾਡੀ ਪ੍ਰੀਖਿਆ ਪ੍ਰਣਾਲੀ

(ਅ) ਅਜੋਕੇ ਸੰਚਾਰ-ਸਾਧਨ

(ੲ) ਵਿਦਿਆਰਥੀ ਜੀਵਨ।   5

4. ਹੇਠ ਲਿਖਿਆ ਪੈਰਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦਿਓ :

ਪੰਜਾਬ ਦੀ ਮਿੱਟੀ ਵਿੱਚ ਧਰਮ ਦਾ ਖਮੀਰ, ਮੁੱਢ ਕਦੀਮ ਤੋਂ ਹੀ ਚੋਖੀ ਮਾਤਰਾ ਵਿੱਚ ਰਚਿਆ ਹੋਇਆ ਹੈ। ਸੰਸਾਰ ਵਿੱਚ ਸਭ ਤੋਂ ਪ੍ਰਾਚੀਨ ਧਰਮ ਗ੍ਰੰਥ ਰਿਗ ਵੇਦ ਇਸੇ ਪਵਿੱਤਰ ਭੋਇੰ ਉੱਤੇ ਰਚਿਆ ਗਿਆ। ਇਥੋਂ ਦੀਆਂ ਹਵਾਵਾਂ ਵਿੱਚ ਕਦੇ ਵੇਦ-ਬਾਣੀ ਤੇ ਕਦੇ ਗੁਰੂ ਬਾਣੀ ਦੀ ਧੁਨੀ ਗੂੰਜਦੀ ਰਹੀ। ਸੋ, ਪੰਜਾਬੀਆਂ ਵਿੱਚ ਧਰਮ ਦੀ

535(2117)/BSS-30203   1   (Contd.)

ਭਾਵਨਾ ਦਾ ਪ੍ਰਬਲ ਹੋਣਾ ਸਹਿਜ ਹੈ। ਪਰ ਪੰਜਾਬੀ ਖੁਲ੍ਹੇ-ਡੁਲ੍ਹੇ ਸੁਭਾਅ ਦੇ ਹੋਣ ਕਰਕੇ ਧਰਮ ਦੇ ਕਰੜੇ ਬੰਧਨ ਵਿੱਚ ਜਕੜੇ ਰਹਿਣਾ ਪਸੰਦ ਨਹੀਂ ਕਰਦੇ। ਧਰਮ ਦੇ ਉਹ ਮੋਢੇ ਚੜ੍ਹਦੇ ਹਨ, ਧਰਮ ਆਪਣੇ ਮੋਢਿਆਂ ਉੱਤੇ ਨਹੀਂ ਚੁੱਕੀ ਫਿਰਦੇ। ਉਹਨਾਂ ਲਈ ਧਰਮ ਸ਼ਕਤੀ ਹੈ, ਬੋਝ ਨਹੀਂ। ਧਰਮ ਨੂੰ ਉਹ ਸਦਾ ਮੇਲਾ ਸਮਝਦੇ ਆਏ ਹਨ। ਇਸੇ ਲਈ ਸ਼ਾਇਦ ਪੰਜਾਬ ਵਿੱਚ ਧਾਰਮਿਕ ਮੇਲੇ ਬਹੁਤ ਜੁੜਦੇ ਹਨ। ਅਜਿਹੇ ਮੇਲੇ ਮੁੱਢ ਵਜੋਂ ਭਾਵੇਂ ਧਾਰਮਿਕ ਹਨ, ਪਰ ਸੁਭਾਅ ਵਿੱਚ ਲੌਕਿਕ ਹੀ ਰਹੇ ਹਨ।

(i) ਪੰਜਾਬ ਦੀ ਮਿੱਟੀ ਦਾ ਧਰਮ ਨਾਲ ਕੀ ਸੰਬੰਧ ਰਿਹਾ ਹੈ ?

(ii) ਇਸ ਧਰਤੀ ਉੱਤੇ ਕਿਹੜੇ ਗ੍ਰੰਥ ਦੀ ਰਚਨਾ ਹੋਈ ਹੈ ?

(iii) ਇਥੋਂ ਦੀਆਂ ਹਵਾਵਾਂ ਵਿੱਚ ਕਿਹੜੀ ਧੁਨੀ ਗੂੰਜਦੀ ਹੈ ?

(iv) ਪੰਜਾਬ ਦੇ ਲੋਕਾਂ ਦਾ ਧਰਮ ਨਾਲ ਕੀ ਸੰਬੰਧ ਹੈ ?

(v) ਪੈਰ੍ਹੇ ਦਾ ਢੁਕਵਾਂ ਸਿਰਲੇਖ ਦੱਸੋ।   5

5. ਭਾਸ਼ਾ ਅਤੇ ਉਪ-ਭਾਸ਼ਾ ਦਾ ਅੰਤਰ ਸਪੱਸ਼ਟ ਕਰੋ।

ਜਾਂ

ਪੰਜਾਬੀ ਦੀਆਂ ਵਿਅੰਜਨ ਧੁਨੀਆਂ ਦਾ ਵੇਰਵਾ ਦਿਓ।   10

6. ਹੇਠ ਲਿਖੇ ਪ੍ਰਸ਼ਨਾਂ ਵਿੱਚੋਂ ਕਿਸੇ ਦੋ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦਿਓ :

(i) ਮਾਤ ਭਾਸ਼ਾ ਦਾ ਪਹਿਲੀ ਭਾਸ਼ਾ ਦੇ ਰੂਪ ਵਿੱਚ ਅਧਿਆਪਨ ਕੀ ਮਹੱਤਵ ਰੱਖਦਾ ਹੈ ?

(ii) ਦੂਜੀ ਭਾਸ਼ਾ ਦੇ ਰੂਪ ਵਿੱਚ ਮਾਤ ਭਾਸ਼ਾ ਦੇ ਅਧਿਆਪਨ ਦੀਆਂ ਸਮੱਸਿਆਵਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਕਰਾਓ।

(iii) ਮਾਤ ਭਾਸ਼ਾ ਤੋਂ ਕੀ ਭਾਵ ਹੈ ? ਇਸਦੇ ਅਧਿਆਪਨ ਲਈ ਕਿਹੜੀ ਵਿਧੀ ਉਚਿਤ ਹੋ ਸਕਦੀ ਹੈ ?

(iv) ਮਾਤ ਭਾਸ਼ਾ ਨੂੰ ਦੂਜੀ ਭਾਸ਼ਾ ਦੇ ਰੂਪ ਵਿੱਚ ਅਧਿਆਪਨ ਕਾਰਜ ਦਾ ਉਦੇਸ਼ ਕੀ ਹੋ ਸਕਦਾ ਹੈ ?   5×2=10

Exam. Code   : 107201
Subject Code :   2070

BCA Iˢᵗ Semester

MUDHLI PUNJABI

Paper–V(ii)

Time Allowed—3 Hours]   [Maximum Marks—50

ਨੋਟ : ਹਰ ਭਾਗ ਵਿੱਚੋਂ ਕਿਸੇ **ਇੱਕ** ਪ੍ਰਸ਼ਨ ਦਾ ਉੱਤਰ ਦਿਉ। ਹਰ ਪ੍ਰਸ਼ਨ 10 ਅੰਕਾਂ ਦਾ ਹੈ।

ਭਾਗ–ਪਹਿਲਾ

1. ਗੁਰਮੁਖੀ ਲਿੱਪੀ-ਚਿੰਨ੍ਹਾਂ ਦੀ ਤਰਤੀਬ ਪੇਸ਼ ਕਰੋ।

ਜਾਂ

2. ਗੁਰਮੁਖੀ ਵਰਣਮਾਲਾ ਨੂੰ ਕਿੰਨੇ ਵਰਗਾਂ ਵਿੱਚ ਵੰਡਿਆ ਜਾਂਦਾ ਹੈ ? ਚਰਚਾ ਕਰੋ।   10

ਭਾਗ–ਦੂਜਾ

3. ਪੈਰ ਵਿੱਚ ਬਿੰਦੀ ਵਾਲੇ ਵਰਣ ਕਿਹੜੇ ਹਨ ? ਉਦਾਹਰਨਾਂ ਸਹਿਤ ਚਰਚਾ ਕਰੋ।

ਜਾਂ

4. ਲਗਾਂ ਮਾਤਰਾ ਦੀ ਪਰਿਭਾਸ਼ਾ ਕਰੋ। ਗੁਰਮੁਖੀ ਲਿੱਪੀ ਦੀਆਂ ਲਗਾਂ ਮਾਤਰਵਾਂ ਬਾਰੇ ਉਦਾਹਰਨਾਂ ਸਹਿਤ ਚਰਚਾ ਕਰੋ।   10

ਭਾਗ–ਤੀਜਾ

5. ਲਗਾਖਰ ਤੋਂ ਕੀ ਭਾਵ ਹੈ ? ਗੁਰਮੁਖੀ ਲਿੱਪੀ ਵਿੱਚ ਵਰਤੇ ਜਾਂਦੇ ਲਗਾਖਰਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਉ।

ਜਾਂ

6. ਹੇਠਾਂ ਦਿੱਤੇ ਸ਼ਬਦਾਂ ਤੇ ਬਿੰਦੀ, ਟਿੱਪੀ ਅਤੇ ਅੱਧਕ ਦੀ ਵਰਤੋਂ ਕਰੋ :

ਆਡੇ, ਪਸਦ, ਮਸਮੀ, ਸਤਰੇ, ਅਗੁਰ, ਪੁਸਤਕਾ, ਬਚਾ, ਵਡਾ,
ਛਤਰੀਆ, ਖਙਾਂ   10

ਭਾਗ-ਚੌਥਾ

7. ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ ਕਿਸ ਨੂੰ ਆਖਦੇ ਹਨ ? ਪੰਜਾਬੀ ਵਿੱਚ ਵਿਸ਼ਰਾਮ
ਚਿੰਨ੍ਹ ਕਿੰਨੇ ਹਨ ? ਉਦਾਹਰਨਾਂ ਸਹਿਤ ਚਰਚਾ ਕਰੋ।

ਜਾਂ

8. ਹੇਠਾਂ ਦਿੱਤੇ ਪੈਰ੍ਹੇ ਤੇ ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹਾਂ ਦੀ ਵਰਤੋਂ ਕਰੋ :

ਇਕ ਵਾਰ ਇਕ ਅੜੀ ਖੋੜਾ ਜੱਟ ਵੀ ਆਪਣੀ ਘੋੜੀ ਭਜਾਨ ਲਈ
ਉਥੇ ਲੈ ਆਇਆ ਆਖੇ ਜਾਂ ਘੋੜੀ ਦੇ ਦੇਣੀ ਜਾਂ ਘੋੜਾ ਲੈ ਲੈਣਾ
ਦੋੜ ਹੋਈ ਘੋੜੀ ਹਾਰ ਗਈ ਘੋੜੀ ਵਾਲੇ ਜੱਟ ਨੇ ਘੋੜੀ ਆਲਾ
ਸਿੰਘ ਦੀ ਖੁਰਲੀ ਤੇ ਬੰਨ੍ਹ ਦਿੱਤੀ ਸਾਰੀ ਭੀੜ ਦੇ ਸਾਹਮਨੇ ਆਲਾ
ਸਿੰਘ ਨੇ ਉਸ ਦੇ ਮੋਢੇ ਤੇ ਹੱਥ ਧਰ ਕੇ ਆਖਿਆ ਗੱਲ ਸੁਣ ਭਰਾਵਾ
ਇਹ ਖੁਰਲੀ ਵੀ ਤੇਰੀ ਤੇ ਕਿੱਲੇ ਵੀ ਤੇਰੇ ਜੇ ਤਾਂ ਘੋੜੀ ਬੱਧੀ ਆ
ਆਪਣੀ ਕਰ ਕੇ ਤਾਂ ਜਮ ਜਮ, ਪਰ ਜੇ ਮੇਰੀ ਕਰ ਕੇ ਬੱਧੀ ਆ
ਤੇ ਹੁਣੇ ਖੋਲ੍ਹ ਲੈ ਮੈਂ ਕੋਈ ਤੇਰੀ ਘੋੜੀ ਦਾ ਬਪਾਰ ਤੇ ਨਹੀਂ ਕਰਨਾ
ਪਾਈ ਕੋਈ ਬਪਾਰੀ ਆਂ ਮੈਂ   10

ਭਾਗ-ਪੰਜਵਾਂ

9. ਕਿਰਿਆ ਦੀ ਪਰਿਭਾਸ਼ਾ ਕਰਦੇ ਹੋਏ ਇਸ ਦੀਆਂ ਕਿਸਮਾਂ ਦੱਸੋ।

ਜਾਂ

10. ਹੇਠਾਂ ਦਿੱਤੇ ਸ਼ਬਦਾਂ ਦੇ ਲਿੰਗ ਬਦਲੋ :

ਮਿੱਤਰ, ਭੂਆ, ਮਾਮਾ, ਨਾਇਕ, ਪੰਜਾਬੀ, ਖਿਡਾਰੀ, ਬੱਚਾ, ਮਾਸੀ,
ਚੂਹਾ, ਠੇਕੇਦਾਰ   10

536(2117)/BSS-22793   1500

Exam. Code : 107201
Subject Code : 2071

BCA 1ˢᵗ Semester

DRUG ABUSE

Paper–VII

Time Allowed—3 Hours]   [Maximum Marks—50

SECTION–A

Note : It will consist of **five** short answer type questions. Candidates will be required to attempt **three** questions, each question carrying **5** marks. Answer to any of the questions should not exceed **two** pages.

1.   What do you mean by a Drug ?

2.   What are drugs according to Drugs and Cosmetics Act of India ?

3.   Write the types of Drugs on the basis of Use.

4.   Write about Beginning of Drug.

5.   Explain reasons behind Drug Addiction. $3 \times 5 = 15$

SECTION–B

Note : It will consist of **four** essay type questions. Candidates will be required to attempt **two** questions, each question carrying **10** marks. Answer to any of the questions should not exceed **four** pages.

1. Write a note on reasons behind the problem of Drug Addiction in Punjab.

2. Write symptoms and signs of Cannabis.

3. Discuss short and long term effects of Cocaine.

4. Write about short and long term effects of use of Alcohol.

$$2 \times 10 = 20$$

SECTION–C

Note : It will consist of **two** questions. Candidates will be required to attempt **one** question only. Answer to the question should not exceed **five** pages.

1. Write about the problem of Drug Addiction in India.

2. Discuss about consequences of Drug Abuse in Punjab.

$$1 \times 15 = 15$$

537(2117)/BSS-30101   2   7000

Exam. Code : 107201

Subject Code : 9053

BCA Ist Semester (Old Sylb.—2016)

MATHEMATICAL FOUNDATION OF COMPUTER SCIENCE

Paper—III

Time Allowed—3 Hours]   [Maximum Marks—75

Note :– Attempt any **five** questions. All questions carry equal marks.

1. (a) Solve the system of equations :

$$x + 2y + z = 7$$
$$x + 3z = 11$$
$$2x - 3y = 1.$$

(b) Find the eigen value of matrix $A = \begin{bmatrix} 1 & 1 & 3 \\ 1 & 5 & 1 \\ 3 & 1 & 1 \end{bmatrix}$.

2. (a) Evaluate $\begin{vmatrix} b^2c^2 & bc & b+c \\ c^2a^2 & ca & c+a \\ a^2b^2 & ab & a+b \end{vmatrix}$.

(b) Let $f(x) = x^2 - 5x + 6$ find $f(A)$, if $A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$.

538(2117)/BSS-26910   1   (Contd.)

3. (a) If X = [2, 3, 5, 7, 9] be universal set A = [3, 7] B = [2, 5, 7, 9] prove that $(A \cup B)^c = A^c \cap B^c$.

   (b) In a group of students, 100 students know Hindi, 50 know English and 25 know both. Each of the students knows either Hindi or English. How many students are there in the group ?

4. (a) Define a relation R on the set N of natural numbers by R = [(x, y) y = x + 5], x is natural number less than 4 : x, y $\in$ N] ; write the :

   (i) Domain and range of relation

   (ii) Depict this relationship using roaster form.

   (b) A relation R is defined on the set Z of integers (x,y) $\in$ R $x^2 + y^2 = 25$ express R and R^{-1} as set of pairs and find their respective domains.

5. (a) If y = (sin x + x²)/ cot 2x   find dy/dx.

   (b) $y = \log\left(\dfrac{a + b\sin x}{a - b\sin x}\right)$ find dy/dx.

6. (a) Evaluate $\int \sin 3x \sin 2x \, dx$.

   (b) Evaluate $\int_1^2 \dfrac{dx}{(x+1)(x+2)}$.

7. (a) A pair of dice is thrown ; if the two numbers appearing on them are different, find the probability that :

   (i) Sum of the numbers is 6

   (ii) Sum of the numbers is 4 or less.

(b) A bag contains 10 white and 15 black balls. Two balls are drawn in succession without replacement. What is the probability that first is white and second is the black ?

8. (a) A = [1, 3, 5] B = [2, 3] and C = [2, 3, 4, 5] ; a fair die is rolled, find (i) P(A/B) and P(B/A) (ii) P(A/C) and P(C/A).

   (b) A man is known to speak truth 3 out of 4 times. He throws a die and repeat that there is six. Find the probability that it is actually a six.

Exam. Code : 107201

Subject Code :   9241

BCA Iˢᵗ Semester (Old Sylb. 2016)

INTRODUCTION TO PROGRAMMING C–I

Paper—I

Time Allowed—3 Hours]   [Maximum Marks—75

Note :— Attempt any **FIVE** questions. All questions carry
equal marks.

1. Define and distinguish between algorithm and flowchart.
    Write an algorithm for finding the smallest and the largest
    number from a list of numbers.   15

2. What are the different phases of problem solving ? Explain.
                                                      15

3. Write short notes on the following :

    (a) Identifier

    (b) Keyword

    (c) Constant

    (d) Variable

    (e) Symbolic constant.   5×3=15

4. What are the different methods of performing input and
    output in C ? Explain giving examples.   15

5. Define and distinguish between the following :

    (a) For and while loops

    (b) Break and continue statements

    (c) If and switch statements.   3×5=15

6. Write a program to print factorials of first n natural numbers in a sequence using recursion. 15

7. Define and distinguish between the following :

    (a) Function declaration and function definition

    (b) Call by value and call by address

    (c) Formal parameters and actual parameters.

$3 \times 5 = 15$

8. Write a program to add two matrices and store the result in third matrix. 15