

(Pages : 3)

M – 2721

Reg. No. :

Name :

Second Semester B.Sc./B.C.A. Degree Examination, December 2021

Career Related First Degree Programme under CBCSS

Group 2(b) – Computer Science/Computer Applications

Foundation Course/Core Course

CS 1221/CP 1241 : ENVIRONMENTAL STUDIES

(2015 - 2017 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer all questions in one or two sentences. Each question carries 1 mark.

1. Write down the meaning of poaching of wildlife.
2. What do you mean by ecological pyramids?
3. What is overgrazing?
4. What do you mean by pollutant?
5. How does energy flows in an eco-system?
6. Name any one endangered species.
7. What do you mean by landslides?
8. What is nuclear holocaust?
9. Give the meaning of hotspots of Bio -diversity.
10. What is food chain?

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

Answer any **eight** questions in not exceeding **one** paragraph. Each question carries **2** marks.

11. Give the meaning of solid waste management.
12. Define sustainable development.
13. What is environmental ethics?
14. What is wasteland reclamation?
15. What are the various levels of bio diversity?
16. What is rain water harvesting?
17. Give any two effect of air pollution on plants.
18. Distinguish between biotic and abiotic components.
19. Give the meaning of Ex-situ conservation.
20. What cause wildlife conflict?
21. What is desertification?
22. What is population explosion?

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions in not exceeding **one** pages each. Each question carries **4** marks.

23. Explain the types of natural resources?
24. What are the sources of air pollution?
25. Explain the cause and effect of flood?

26. Discuss control measures on industrial waste.
27. Give a brief account of various family welfare programmes.
28. Explain the value of bio diversity
29. Write a detailed note on ozone layer depletion.
30. Discuss biogeographic classification of India.
31. Write a note on role of individual in prevention of pollution.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions in not exceeding **four** pages each. **Each** question carries **15** marks.

32. Discuss the structure and function of an eco-system
33. Briefly explain the threats to bio diversity.
34. What are the cause, effect and controls of noise pollution?
35. How does human population affect the environment

(2 × 15 = 30 Marks)

(Pages : 4)

M – 2736

Reg. No. :

Name :

Second Semester B.C.A. Degree Examination, December 2021

Career Related First Degree Programme under CBCSS

Group 2(b) — Computer Applications

Core Course

CP 1242 : OBJECT ORIENTED PROGRAMMING

(2020 Admission Regular)

Time : 3 Hours

Max. Marks : 80

SECTION – A (Very short answer)

(one Word to Maximum of two Sentences. Answer all Questions).

1. What is an object?
2. What is meant by polymorphism?
3. What does public inheritance mean?
4. Explain the use of getline() function.
5. Which function is used to detect end of file?
6. Define constant variable.
7. What is containership?

P.T.O.

8. Define Dynamic binding.
9. What are Keywords?
10. How is late binding implemented in C++?

(10 × 1 = 10 Marks)

SECTION – B (Short answer type)

(Not to Exceed **One** Paragraph. Answer **any eight** Questions. Each question carries **2** marks).

11. Define Do-nothing function.
12. How do you declare an object in C++?
13. Name any two unformatted output functions frequently used with out object
14. What are the advantages of inheritance?
15. Explain any two applications of OOPs.
16. What are abstract classes?
17. Difference between private and protected access specifies.
18. Explain access limits of class members.
19. What is Multi path inheritance?
20. In what situations inline function does not work?
21. Write note on void pointer.
22. Explain the syntax and working of 'for loop'?
23. Explain any two advantages of OOPS.

24. What is the use of seekp() function?
25. What is the purpose of a function prototype?
26. Write note on stream classes.

(8 × 2 = 16 Marks)

SECTION – C (Short essay type)

(Not to Exceed **120** words. Answer **any six** Questions. Each question carries **4** marks).

27. Write note on exception handling in C++.
28. Explain insertion and extraction operator with suitable example.
29. Explain with a neat diagram of data members and member functions in memory.
30. Explain conversion from one class type to another class type with the support of an example.
31. Explain while and do-while loops in C++.
32. Explain the rules for overloading operators.
33. Explain hybrid inheritance with an example.
34. Explain default argument with suitable example.
35. What is a virtual base class? Explain with suitable.
36. Explain the operators that cannot be overloaded using friend function.
37. Write note on file modes.
38. Differentiate multiple and multi level inheritance.

(6 × 4 = 24 Marks)

SECTION – D (Long essay type)

(Answer **any two** Questions. Each question carries **15** marks).

39. Describe types of constructors with suitable example.
40. Explain data types in C++.
41. Discuss unary operator overloading using friend function with an example.
42. Write a note on virtual function with an example program.
43. Explain decision making statements in C++.
44. What are the methods used to pass values to a function.

(2 × 15 = 30 Marks)

(Pages : 3)

M – 2737

Reg. No. :

Name :

Second Semester B.C.A. Degree Examination, December 2021

Career Related First Degree Programme Under CBCSS

Group 2 (b) – Computer Applications

Core Course

CP 1243 — DATA STRUCTURES

(2020 Admission Regular)

Time : 3 Hours

Max. Marks : 80

SECTION – A

(Very Short Answer) (**one** word to maximum of **two** sentences. Answer **all** questions)

1. In _____ sort, adjacent pair of elements is compared.
2. Space Complexity of stack is _____
3. An infix expression can be converted into postfix using _____ data structure.
4. An element in a list called _____.
5. Define dummy node.
6. Define child node.
7. _____ is node which doesn't have a parent.
8. Binary tree is a tree with degree _____.
9. In $G = \langle V, E \rangle$, V stands for _____.
10. Expand DFS.

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

[Short Answer Type] (not to exceed **one** paragraph. answer any **eight** questions. each question carries **two** marks)

11. Write a note on analysis of linear search.
12. What do you mean by column-major-order in two dimensional array?
13. Define hash table.
14. Write a note on FIFO.
15. Write a note on RPN.
16. What are the three steps involved in insertion of a node in linked list?
17. List the components of a node in Singly linked list.
18. Write the role of TOP pointer in stack.
19. Compare height and depth of a tree.
20. Define complete binary tree.
21. Write a note on Expression Tree.
22. What are the methods to notate a binary tree?
23. Write in short about undirected graph.
24. What do you mean by self loop in terms of graph?
25. Write the role of adjacency list.
26. Write a note on deletion operation on graph.

(8 × 2 = 16 Marks)

SECTION – C

[Short Essay Type] (Not to exceed **120** words. Answer any **six** questions. Each question carries **4** marks)

27. Write a note on complexity of Binary Search.
28. Describe hashing in short.

29. Discuss the condition for overflow in Circular Queue.
30. Write a note on Input Restricted Deque.
31. What are Static Data Structures? Explain.
32. What are the disadvantages of array data structure?
33. Explain about heap trees.
34. Write a note on full binary tree.
35. Explain in detail about linear representation of a Binary Tree.
36. Write a note on DFS.
37. Elaborate the linked representation of a graph in detail.
38. Differentiate with the support of example: Directed graph, Undirected graph.

(6 × 4 = 24 Marks)

SECTION – D

[Long Essay Type] (answer any **two** questions. each question carries **15** marks)

39. Discuss the Binary Search algorithm in detail.
40. Write a note on operations on queue.
41. Explain in detail about applications of linked list.
42. Write a detailed note on Circular Linked List.
43. Explain the algorithm for searching in a Binary Search Tree.
44. Explain about different type of representations of graph.

(2 × 15 = 30 Marks)

(Pages : 4)

M – 2727

Reg. No. :

Name :

Second Semester B.Sc./B.C.A. Degree Examination, December 2021

Career Related First Degree Programme under CBCSS

Group 2(b)–Computer Science/Computer Applications

Foundation Course/Core Course

CS 1221/CP 1241: ENVIRONMENTAL STUDIES

(2020 Admission Regular)

Time : 3 Hours

Max. Marks : 80

SECTION – A

(Very Short Answer type)

(One word to maximum of **two** sentences, Answer **all** questions)

1. Define environment
2. What are abiotic resources?
3. Define biodiversity.
4. What is the meaning of extinct species?
5. What is environmental pollution?
6. Name the sources of air pollution.
7. What is an acid rain?

P.T.O.

8. What are the natural factors for floods?
9. Define population.
10. Define fire.

(10 × 1 = 10 Marks)

SECTION – B

(Short Answer)

(Not to exceed one paragraph, Answer any **eight** questions. **Each** question carries **2** marks.

11. What is manmade environment?
12. What are the four categories of environment?
13. What is wind energy?
14. Distinguish between abiotic and biotic substances.
15. Explain the following a) Species diversity b) Ecosystem diversity.
16. Name any five endangered species in India.
17. What is In-Situ conservation?
18. What is the ethical value of biodiversity?
19. What are the various sources of soil pollution?
20. What is ozone depletion?
21. What are the objectives of Water Act -1974?
22. Differentiate between biodegradable wastes and non biodegradable wastes.
23. What are the effects of earthquakes?

24. Classify the various classes of fire.
25. Outline the role of information technology in environment and health.
26. What is food web?

(8 × 2 = 16 Marks)

SECTION – C

(Short essay)

(Not to exceed 120 words, answer any **six** questions. **Each** question carries **4** marks)

27. What are environmental studies?
28. What are renewable and non renewable resources? Explain with suitable examples.
29. Explain the usefulness of surface and ground water. Discuss their environmental importance.
30. Write a note on genetic diversity.
31. India is one of the meg-diversity countries. Why?
32. Describe the various method of conservation.
33. What are the different types of pollutants?
34. Explain the sources and effect of water pollution. How can we control water pollution?
35. Explain on climate change and global warming.
36. Discuss on cyclone.
37. Describe the effect of environment on the health of human beings.
38. Enumerate on environmental ethics.

(6 × 4 = 24 Marks)

SECTION – D

(Long essay)

(Answer any **two** questions. **Each** question carries **15** marks)

39. Explain the multidisciplinary nature of environment studies.
40. Write an essay on different types of forest ecosystem.
41. Write briefly about biosphere reserves, national parks and wildlife sanctuaries in India.
42. Write an essay on types of pollution.
43. Explain a nuclear accident with a case study.
44. Write an essay on Chipko movement and Silent valley movement.

(2 × 15 = 30 Marks)

(Pages : 24)

M – 2653

Reg. No. :

Name :

**Second Semester B.Sc./B.Com./B.B.A./B.C.A./B.S.W./B.Voc./B.M.S. Degree
Examination, December 2021**

Career Related First Degree Programme Under CBCSS

Language Course – English

EN 1211.4/EN 1211/EN 211 : ENGLISH FOR CAREER

(Common for Career Related 2(b)/B.Voc. Programmes)

(2020 Admission Regular)

Time : 3 Hours

Max. Marks : 80

- I. Answer **all** the followings questions. Follow the instructions given in the brackets wherever needed.
1. The correct spelling of the word 'Sicossor' is _____.
 2. The word that is the antonym of 'Impressive' is _____.
 3. _____ is the noun form for 'invent'.
 4. _____ is the same word for 'Amazing'.
 5. Salim said if he was going to sleep early. (Correct the sentence).
 6. He _____ TV most evenings. (Write the correct form of the verb 'Watch').
 7. You like him. Didn't you? (Underline the error and correct the sentence.)
 8. An _____ is a person whose job is to keep, inspect and analyse financial accounts.

P.T.O.

9. It is very hot today. _____?
10. Franny _____ with Kristin. (Use the appropriate phrasal verb which means 'to be friendly with one another'.)

(10 × 1 = 10 Marks)

II. Answer any **eight** of the following questions.

11. Provide one word substitutes for any **two** of the phrases :

- (a) A person who promotes the welfare of others.
- (b) Fraudulent emails that make us reveal personal data.
- (c) A person who walks in sleep.
- (d) An account of someone's life written by someone else.

12. Give the antonyms of **two** of the following words :

- (a) Escalating
- (b) Tentative
- (c) Conserved.

13. Make sentences of your own with any **two** of the following phrasal verbs :

- (a) make up
- (b) Call off
- (c) Look after
- (d) Put up with

14. Choose the correct option from the brackets :

- (a) His decision to relocate to his native town was a _____
(judicious/judicial).
- (b) Surprisingly, very few guests _____ for the wedding.
(turned up, turned in).

15. Fill in the blanks using a collective noun from those given below.
(school, assembly, crowd, bunch, jury, fleet, mob)
- (a) The _____ found the prisoner guilty.
- (b) A _____ of fishes died in the pool as the water was contaminated.
16. Fill in the blanks using the suitable degree of the adjective given in brackets.
- (a) Ramu is the _____ of my uncle's five sons. (elder).
- (b) I think Matthew is _____ than his brother. (courage)
17. Choose the error in the words given in *Italics* :
- (a) A thing of *beautiful* is a joy forever.
- (b) The matter needs your *considerable*.
18. Correct the following sentences :
- (a) Every girl must bring their own lunch.
- (b) There is numerous issues with our system.
19. Identify the errors and rectify them :
- (a) Better later than never.
- (b) What is the signifying of the problem?
20. Correct the sentences :
- (a) Three of my tooth are infected.
- (b) A herd of ox are grazing in the field.
21. Change the Gender :
- (a) A goose is swimming in the lake.
- (b) The peacock looked very beautiful and elegant.

22. Read the paragraphs and answer the question below :

The Voice had to be listened to, not only on account of its form but for the matter to which it delivered. It gave a message to the country that it needed greatly. It brought to the common people a realisation of their duty to concern themselves with their affairs. The common people were made to take an interest in the manner in which they were governed, in the taxes they paid, in the return they got from those taxes. This interest in public affairs — politics as you may call it — was to be the concern no longer of the highly educated few but of the many — the poor, the property less, the working men in the town and the country. Politics was not to be the concern of a small aristocracy of intellect or property of the masses. And with the change in the subjects of politics that Voice brought about also a change in the objects of politics. Till then politics had busied itself mainly with the machinery of Government towards making its personnel more and more native, with proposals for a better distribution of political power, with protests against the sins of omission and of commission of the administration. This voice switched politics on to concern for the needs of common people. The improvement of the lot of poor was to be the main concern of politics and politician. The improvement, especially of the lives of the people of the neglected villages, was to be placed before Government's and political organisations as the goal of all political endeavour.

- (a) Why had people to take an interest in politics?
- (b) What was the change brought about in the objects of politics?
23. Philosophy of Education is a label applied to the study of the purpose, process, nature and ideals of education. It can be considered a branch of both philosophy and education. Education can be defined as the teachings and learning of specific skills, and the imparting of knowledge, judgement and wisdom, and is something broader than the societal institution of education we often speak of.

Many educationalists consider it a weak and woolly field, too far removed from the practical applications of the real world to be useful. But philosophers dating back to Plato and the Ancient Greeks have given the area much thought and emphasis, and there is little doubt that their work has helped shape the practice of education over the millennia.

Plato is the earliest important educational thinker, and education is an essential element in "The Republic" (his most important work on philosophy and political theory, written around 360 B.C.). In it, he advocates some rather extreme method : removing children from their mothers care and raising them as wards of the state, and differentiating children suitable to the various castes, the highest receiving the most education, so that they could act as guardians of the city and care for the less able. He believed that education should be holistic, including facts, skills, physical discipline, music and art. Plato believed that talent and intelligence is not distributed genetically and thus is be found in children born to all classes, although his proposed system of selective public education for an educated minority of the population does not really follow a democratic model.

Aristotle considered human nature, habit and reason to be equally important forces to be cultivated in education, the ultimate aim of which should be to produce good and virtuous citizens. He proposed that teachers lead their students systematically, and that repetition be used as a key tool to develop good habits, unlike Socrates' emphasis on questioning his listeners to bring out their own ideas. He emphasized the balancing of the theoretical and practical aspects of subjects taught, among which he explicitly mentions reading, writing, mathematics, music, physical education, literature, history, and a wide range of sciences, as well as play, which he also considered important.

During the Medieval period, the idea of Perennialism was first formulated by St. Thomas Aquinas in his work "De Magistro". Perennialism holds that one should teach those things deemed to be of everlasting importance to all people everywhere, namely principles and reasoning, not just facts (which are apt to change over time), and that one should teach first about people, not machines or techniques. It was originally religious in nature, and it was only much later that a theory of secular perennialism developed.

During the Renaissance, the French skeptic Michel de Montaigne (1533 - 1592) was one of the first to critically look at education. Unusually for his time, Montaigne was willing to question the conventional wisdom of the period, calling into question the whole edifice of the educational system, and the implicit assumption that university-educated philosophers were necessarily wiser than uneducated farm workers, for example.

- (a) What is the difference between the approaches of Socrates and Aristotle?
- (i) Aristotle felt the need for repetition to develop good habits in students; Socrates felt that students need to be constantly questioned.
 - (ii) Aristotle felt the need for rote-learning Socrates emphasized on dialogic learning
 - (iii) There was no difference
 - (iv) Aristotle emphasized on the importance of paying attention to human nature; Socrates emphasized upon science
- (b) Why do educationists consider philosophy a 'weak and woolly' field?
- (i) It is not practically applicable
 - (ii) Its theoretical concepts are easily understood
 - (iii) It is irrelevant for education
 - (iv) None of the above

24. Find the meaning of the words/phrases in italics :

- (a) He was *lauded* for his significant contributions to Aeronautics.
- (i) Appreciated
 - (ii) defeated
 - (iii) rewarded
 - (iv) ridiculed
- (b) Several animal species have been *annihilated* due to human encroachment upon forest areas.
- (i) Created
 - (ii) Threatened
 - (iii) Discovered
 - (iv) Eradicated

25. Fill in the blanks with suitable words from those given in brackets :

{Necessary, inevitable, abolishing, assessment, appropriate}

For many students exams seem a _____ evil. Time consuming got _____ rather than _____ exams, we should instead we asking what mix of _____ tasks is most _____ for each subject.

26. Correct the following sentences :

(a) Kishore will come. Don't he?

(b) He didn't paint it himself.

(8 × 2 = 16 Marks)

III. Answer any **six** of the following :

27. Fill in the blanks with the correct option from the bracket :

{All ready, Already}

(a) Dinner was _____ when the guests arrived.

(b) The chicken was _____ burned when the guests arrived.

{cite, site}

(c) I _____ ten quotes from the same author in my paper.

(d) The new office building was built on the _____ of a cemetery.

28. Choose the correct answer from the brackets and fill in the blanks :

(a) (compliment, complement)

(i) Man and women should _____ each other.

(ii) The Professor _____ Betty on her completion of the thesis.

(b) (elicit, illicit)

(i) The teacher _____ the correct response from the student.

(ii) The Columbian drug lord was arrested for his _____ activities.

29. Fill in the blanks with suitable phrases from those given in brackets. Change the tenses if necessary.

(Get rid of, give away, put up with, break into)

(a) The fireman had to _____ the room to rescue the children.

(b) Jeff had to _____ with Jenny's attitude.

(c) Chinnu _____ her prized doll collection.

(d) Our sofa is really old. We need to _____ of it.

30. Write any **two** phrasal verbs that begin with :

(a) Call

(b) Look

31. Correct the following in **four** of the following sentences :

(a) He sold all furnitures.

(b) She requested for my help.

(c) The house, with its contents, were insured.

(d) Our happiness or our sorrow are largely due to our own actions.

(e) There is no real difference between you and I.

32. Correct the errors in the *italicized* words of any **four** of the following sentences :

(a) The lion and the unicorn fought *to* the crown.

(b) He worked *for* morn till night.

(c) Has he come *by*?

(d) Let us move *off*.

(e) Don't loiter *in* the street.

33. Fill in the blanks with suitable pronouns from those given in brackets :
(He, who, yours, mine)
- (a) Mr. Ram _____ is a doctor is staying in the next house.
 - (b) Hari is absent because _____ is ill.
 - (c) This book is _____.
 - (d) The idea of _____ is excellent.
34. Complete the sentences using the suitable 'Wh' questions provided in the brackets.
(Who, whom, which, what, where, when)
- (a) Do you know by _____ this music has been composed.
 - (b) _____ is the best athlete in your team?
 - (c) Sakuntala has not yet found the ring _____ she had lost.
 - (d) _____ is your wedding anniversary?
35. Correct the error in the sections in Italics :
- (a) *Are I* supposed to finish reading this book by evening?
 - (b) You aren't busy. *Aren't you?*
 - (c) Its raining. *Is it?*
 - (d) She can't swim. *Could'nt she?*
36. Fill in the blanks choosing the correct order of adjectives from the options :
- (a) My brother bought me a _____ pen for my birthday this year.
 - (i) new brand writer
 - (ii) new writer brand
 - (iii) brand new writer
 - (iv) none of the above

- (b) Hema was wearing a _____ kimono that suited her very well.
- (i) brightly coloured Japanese (ii) Japanese brightly coloured
(iii) bright coloured Japanese (iv) none of the above
- (c) The cities of the Harappan civilization had clusters of _____ buildings.
- (i) non-residential large (ii) large non-residential
(iii) non large residential (iv) none of the above
- (d) Bachendri Pal is _____ to climb Mount Everest.
- (i) the Indian woman first (ii) First Indian woman
(iii) First the India woman (iv) none of the above

37. Fill in the blanks with the correct comparative/Superlative degree :

- (a) Of the two projects, Arjun's is _____. (the best/better)
- (b) Vani is _____ all other girls in her class. (as tall as, taller)
- (c) Of the live Pandava brothers, Bhima was _____ (the bigger and the more powerful/the biggest and the most powerful)
- (d) It was _____ evening by the time we returned. (Later/late).

38. Fill in the blanks with suitable modal auxiliaries from the list given below :

(Will, would, should, can, might, must, need, dare, used to)

- (a) Sara _____ to do some exercises for her shoulder, otherwise she _____ need a surgery.
- (b) You _____ have spoken rudely to her, otherwise she _____ not have left so soon.
- (c) _____ you sing a song for Tara's birthday? You _____ sing so well when we were in school.
- (d) I _____ not climb up the hill, it _____ be slippery after such heavy rain.

(6 × 4 = 24 Marks)

IV. Answer **any two** of the following questions, choosing one from each group.

GROUP A

39. Read the following passage and answer the questions below:

In the morning a smart-looking young man came for me. At first he looked pleased; but when he saw my knees, he said in a disappointed voice:

'I didn't think, sir, you would have recommended my ladies a blemished horse like that.' "Handsome is that handsome does", 'said my master; 'you are only taking him on trial, and I'm sure you will do fairly by him, young man. If he is not as safe as any horse you ever drove send him back.'

I was led to my new home, placed in a comfortable stable, fed, and left to myself. The next day, when the groom was cleaning my face, he said:

'That is just like the star that "Black Beauty" had; he is much the same height, too. I wonder where he is now.'

A little further on he came to the place in my neck where I was bled and where a little knot was left in the skin. He almost stared, and began to look me over carefully, talking to himself.

'White star in the forehead, one white food on the offside, this little knot just in that place': then looking at the middle of my back-' and, as I am alive, there is that little patch of white hair that John used to call "Beauty's three- penny bit." It must be "Black Beauty"! Why, Beauty! Beauty! do you know ME? - little Joe green, that almost killed you?' And he began patting and patting me as if he was quite overjoyed.

I could not say that I remembered him, for now he was a fine grown young fellow, with black whiskers and a man's voice, I was sure he knew me, and that he was Joe Green, and I was very glad. I put my nose up to him, and tried to say that we were friends. I never saw a man so pleased.

'Give you a fair trial! I should think so indeed! I wonder who the rascal was that broke your knees, my old Beauty! You must have been badly served out somewhere; well, well, it won't be my fault if you haven't good times of it now. I wish John Manly was here to see you.

In the afternoon I was put into a low park chair and brought to the door. Miss Ellen was going to try me, and Green went with her. I soon found that she was a good driver, and she seemed pleased with my paces. I heard Joe telling her about me, and that he was sure I was Squire Gordon's old 'Black Beauty'.

When we returned the other sisters came out to hear how I'd had behaved myself. She told them what she had just heard, and said:

'I shall certainly write to Mrs. Gordon, and tell her that her favourite horse has come to us. How pleased she will be!'

After this I was driven every day for a week or so, and as I appeared to be quite safe, Miss Lavinia at last ventured out in the small closed carriage. After this it was quite decided to keep me and call me by my old name of 'Black Beauty'.

(a) Choose the correct answer :

(i) The word 'blemished' in the passage is closest in meaning to

- | | |
|---------------|-----------------|
| (1) tarnished | (2) mottled |
| (3) disabled | (4) incompetent |

(ii) The phrase 'do fairly by' means:

- | | |
|-------------|----------------|
| (1) pleased | (2) anxious |
| (3) kind | (4) affordable |

(iii) The word / phrase which has a similar meaning to the word 'set out' in the passage is

- | | |
|--------------|-----------------|
| (1) ventured | (2) recommended |
| (3) led | (4) decided |

- (iv) Identify the statement which is true
- (1) The smart looking young man who came for 'Black Beauty' was disappointed to see the horse
 - (2) The smart looking young man was happy to recommend the horse to the lady's
 - (3) 'Black Beauty' could recognize the groom Joe Green
 - (4) The little patch of white hair was called 'Beauty's three- penny bit.'
- (v) You must have been badly served out somewhere.' why does Joe Groom say so?
- (1) Black Beauty had gone missing for a long time.
 - (2) Black Beauty had broken knees.
 - (3) Black Beauty could not recognize him.
 - (4) None of the above

(5 × 1 = 5 Marks)

(b) Answer the following questions in **one** or **two** sentences each :

- (i) 'Handsome is that handsome does'. What did the master mean by those words?
- (ii) How did the groom guess 'it must be "Black Beauty"?'
- (iii) Why does Miss Ellen say that Mrs. Gordon would be pleased?
- (iv) When did the sisters decide that they would keep the horse and call him by his old name of 'Black Beauty'?
- (v) Comment on the ethical aspects of the story.

(5 × 2 = 10 Marks)

OR

40. Answer **all** questions.

(a) Match the parts in column A with those in column B to form appropriate sentences.

A	B
(i) I have never heard of such a	(1) each month
(ii) Sreedhar's mother is coming to the	(2) wonderful idea
(iii) Jaya is the	(3) daybreak every day and goes to work
(iv) You will be paid Rs.30,000	(4) oldest among all her classmates
(v) Vijay wakes up at	(5) school today to meet his class teacher

(b) Spot the error in the underlined sections of the sentences and circle the appropriate letter. If there is no error, the answer is d.

(i) This is the biggest diamond I have ever seen. No error.
A B C D

(ii) Telephone was invented by Alexander Graham Bell. No error.
A B C D

(iii) Can you tell me the story of King Ashoka? No error
A B C D

(iv) The cars crashed with the noise like a big explosion. No error.
A B C D

(v) Sri Aurobindo graduated from the King's College, Cambridge University.
A B C

No error.
D

- (c) Complete the sentences with suitable phrasal verbs/prepositions from the list given below.

To, over, of, in, at, off, by, from, up, into

- (i) Akbar ruled _____ a vast empire. He was a ruler who stood _____ the principles _____ secularism and tolerance.
- (ii) A baby girl was born _____ Mr. and Mrs. Kurian _____ 10:15 _____ the morning _____ the district hospital.
- (iii) Where are you _____ to _____ this time _____ the night?
- (iv) I am badly _____ need _____ a good assistant _____ help me _____ the typing _____ the notes.
- (v) Please refrain _____ looking _____ your neighbor's answer sheet, but you may refer _____ the logarithm book.

(15 × 1 = 15 Marks)

OR

41. Answer the following :

(a) Fill in the blanks with suitable prepositions :

- (i) He warned you _____ the danger, but you did not listen _____ him.
- (ii) France is famous _____ its perfumes. You are looking _____ some _____ the most expensive brands available _____ this country.
- (iii) This company deals _____ electronic goods. Ajay's been working here as a manager _____ two years now. Earlier he was _____ Godrej.
- (iv) The student was debarred _____ appearing in the examination _____ a period _____ three years.
- (v) The activists protested _____ the injustice meted out _____ the tribal people living _____ the edge of the forest.

- (b) Complete the sentences with suitable prepositions / phrasal verbs from the list given below :

(*Command over, went ahead with, availed of, despite, in accordance with, consistent with, agreed with, look up*) The prepositions *of, in, for, with, by* to appear more than once.

- (i) The question paper was defined _____ the guidelines provided _____ at the University.
- (ii) If you don't know the meaning _____ the word, why don't you _____ the dictionary?
- (iii) John _____ medical leave _____ a period _____ months last year.
- (iv) Prabha was very good _____ Carnatic music.
- (v) 'His explanations are not _____ the available proof', said the Judge.

- (c) Complete the sentences by using the suitable option :

- (i) They had to _____ the meeting yesterday due to the sudden bus strike.
- (1) call up
(2) called for
(3) the call off
(4) none of the above
- (ii) I hope you _____ well with your mother-in-law.
- (1) get up
(2) get on
(3) get at
(4) none of the above

(iii) The new store keeper is very honest and can be depended _____ to _____ the store in my absence.

- (1) upon, look after
- (2) look after, for
- (3) look for, up
- (4) none of the above

(iv) The people of a nation _____ those who work _____ its welfare.

- (1) lookup, to
- (2) look after, for
- (3) look for, up
- (4) none of the above

(v) Despite the guide's warning, they _____ their plans of climbing _____ the top of the Mountain.

- (1) went for, up to
- (2) went ahead with, up to
- (3) went with, up
- (4) none of the above

(15 × 1 = 15 Marks)

GROUP – B

42. Read the following passage and answer the questions given below.

The student of arithmetic who has master the first four rules of his art, and successfully striven with money sums and fractions, finds himself confronted by an unbroken expanse of questions known as problems These are short stories of adventure and industry with the end omitted, and through betraying a strong family resemblance, are not without a certain element of romance.

The characters in the plot of a problem are three people called A, B, and C. The form of the question is generally of this sort: 'A, B, and C do a certain piece of work. A can dig as much in one hour as B in two, or C in four. Find how long they work at it'. Or thus: 'A, B, and C are employed to dig a ditch. A can dig as much in one hour as B can dig in two, and B can dig twice as fast as C. Find how long, etc. etc.'

Or otherwise:

'A lays a wager that he can walk faster than B or C. A can walk half as fast again as B, and C is only an indifferent walker. Find how far, and so forth.'

The occupations of A B and C are many and varied. In the older arithmetic they contented themselves with doing 'a certain piece of work.' This statement of the case however, was found too sly and mysterious, or possibly lacking in romantic charm. It became the fashion to define the job more clearly and to set them at walking matches, ditch-digging, regattas, and piling cord wood. At times, they became commercial and entered into partnership, having with their old mystery a 'certain' capital. Above all they revel in motion. When they tire of walking - matches-A rides on horseback, or borrows a bicycle and competes with his weaker - minded associates on foot.

Now they race on locomotives: now they row; or again they become historical and engage stage coaches; or at times they are aquatic and swim. If their occupation is actual work they preferred to jump water into cisterns, two of which leak through holes in the bottom and one of which is water -tight. A, of course, has the good one.

He also takes the bicycle and the best locomotive, and the right of swimming with the current. Whatever they do they put money on it being all three sports.

In the early chapters of arithmetic their identity is concealed under the names John, William, and Henry, and wrangle over the decision of marbles. In algebra they are often called X, Y, Z. But these are only their Christian names, and they are really the same people.

Now to one who has followed the history of these men through countless pages of problems, watch them in their leisure hours dallying with cord wood, and seeing their panting sides heave in the full frenzy of filling a cistern with the leak in it, they become something more than mere symbols. They appear as creatures of flesh and blood, living men with their own passions, ambitions, and aspiration like the rest of us.

(a) Choose the correct answer :

(i) The word 'be trained' in the passage is closest in meaning to

- | | |
|--------------|---------------|
| (1) cheating | (2) revealing |
| (3) hiding | (4) assuming |

(ii) The phrase 'first four rules' means

- (1) guidelines
- (2) life-problems
- (3) characters
- (4) basic mathematical operations

(iii) The word/ phrase which has a similar meaning to the word 'challenged' in the passage is

- | | |
|---------------|----------------|
| (1) mastered | (2) concealed |
| (3) contented | (4) confronted |

(iv) Identify the statement which is not true

- (1) The mathematical problems have a certain element of romance in them
- (2) The mathematical problems have characters as in stories
- (3) The mathematical problems show remarkable variety
- (4) Contemporary mathematical problems define the job more clearly

(v) What are the 'short stories of adventure and industry with the end omitted?'

- | | |
|------------------------|---------------------------|
| (1) Literary works | (2) Mathematical problems |
| (3) Mathematical rules | (4) Algebra. |

(5 × 1 = 5 Marks)

(b) Answer the following questions in **one** or **two** sentences each.

- (i) What makes the mathematical problems appear sly, mysterious and lacking and romantic charm?
- (ii) Name a few interesting story-like plots employed in mathematical problems.
- (iii) Why does the author say that 'they revel in motion'?
- (iv) How do the mathematical characters become more than mere symbols?
- (v) Comment on the use of humour in the passage.

(5 × 2 = 10 Marks)

OR

43. (a) Choose the most suitable verb form from the options given

(i) I usually _____ to college by bus, but today I _____
With my friend as my father said he _____ in his car.

- | | |
|------------------------------|--------------------------|
| (1) Will go, am going, takes | (2) Went, go, might take |
| (3) Go, am going, will take | (4) None of these |

(ii) Mr Pai's family _____ (live) here for the past 20 years.

- | | |
|----------------|----------------------|
| (1) Is leaving | (2) Has been living |
| (3) Will live | (4) Both (a) and (b) |

(iii) '_____ ' you _____ (buy) the textbook I _____
(want)? Lekha asked Anne.

- (1) Did, buy, wanted (2) Will, buy, will want
(3) Will, buy, want (4) Both (a) and (c)

(iv) _____ you _____ (wait) for long? I was _____
(catch up) in a traffic jam.

- (1) Did, wait, catching up
(2) Have, been waiting, catches up
(3) Have, been waiting, caught up
(4) None of the above

(v) When _____ you _____ (reach) chennai tomorrow? Ravi
_____ (leave) by then.

- (1) Will, reach, will be leaving
(2) Will , reach, will have left
(3) do, reach, will leave
(4) None of the above

(b) Fill in the blanks with the correct tense form of the verb given in brackets.

(i) The earth _____ (move) round the sun.

(ii) The soup _____ (taste) good.

(iii) Abdul _____ (want) to be a doctor.

(iv) The baby _____ (cry) all morning.

(v) He _____ (go) out five minutes ago.

(c) Complete the passage with suitable verb form:

- (i) *Passenger* : Excuse me. Sir, _____ me when the train to Trivandrum will _____?
- (ii) *Railway clerk* : The Parasuram Express _____ in half an hour. Do you _____ a ticket?
- (iii) *Passenger* : Yes, Please I _____ two tickets of Trivandrum.
- (iv) *Railway Clerk* : Do you _____ sleeper class or general compartment.
- (v) *Passenger* : I _____ a sleeper, please.

(15 × 1 = 15 Marks)

OR

44. Answer the following :

(a) Fill in the blanks using articles wherever necessary

- (i) _____ elephant is _____ largest of all _____ living animals, and _____ native of _____ Asia.
- (ii) _____ number of trees in _____ world, according to _____ 2015 estimate, is around _____ 3.04 trillion.
- (iii) _____ owner and _____ manager of das _____ company, Mr. Shah, is coming over for _____ meeting today at 5 p.m.
- (iv) _____ United States of _____ America is _____ largest exporter of _____ machinery in _____ world, which includes _____ computers.
- (v) _____ Alps are _____ the highest and _____ largest mountain range that is located in _____ Europe, stretching over eight countries and measuring _____ distance of _____ 1200 kilometers.

(b) Spot the error in the sections given in italics and choose the correct option :

(i) Twelve inches *make the foot*, and twelve hours make half a day.

- | | |
|------------------|---------------|
| (1) make a foot | (2) make foot |
| (3) makes a foot | (4) no error |

(ii) I had to attend the meeting on time, so *I called for a taxi*, instead of going by bus.

- | | |
|----------------------|-------------------|
| (1) took a taxi | (2) called a taxi |
| (3) both (a) and (b) | (4) no error |

(iii) Free speech is the right of every citizen in *a free country*.

- | | |
|----------------------|---------------|
| (1) free country | (2) a country |
| (3) the free country | (4) no error |

(iv) The British were originally the Celtic race.

- | | |
|----------------------|-----------------|
| (1) a Celtic race | (2) Celtic race |
| (3) both (a) and (b) | (4) no error |

(v) The strike by the nursing staff of the hospital was *unexpected decision*

- | | |
|-----------------------------|----------------------------|
| (1) the unexpected decision | (2) an unexpected decision |
| (3) unexpected decision | (4) no error. |

(c) Fill in the blanks with the most suitable option :

(i) _____ are famous for their elegant cuisine.

- | | |
|----------------|----------------------|
| (1) French | (2) France |
| (3) The French | (4) all of the above |

- (ii) My aunt Sally goes to _____ every Sunday.
- (1) a church (2) church
(3) the church (4) none of the above
- (iii) The children are allowed to play games for _____ hour after _____ lunch.
- (1) an (2) a, the
(3) an, the (4) none of the above
- (iv) Wordsworth believe that _____ nature is _____ man's Best teacher.
- (1) a, the (2) no article
(3) the (4) none of the above
- (v) _____ Mr. Koshy is waiting outside to see you.
- (1) No article (2) The
(3) A (4) None of the above

(15 × 1 = 15 Marks)

(Pages : 6)

M – 2738

Reg. No. :

Name :

Second Semester B.C.A. Degree Examination, December 2021

Career Related First Degree Programme under CBCSS

Mathematics

Complementary Course

MM 1231.9 MATHEMATICS – II

(2020 Admission Regular)

Time : 3 Hours

Max. Marks : 80

SECTION – I

Answer **all ten** questions. They carry 1 mark each.

1. Give an example for a false proof.
2. Define Boolean Dictionary.
3. Define multiset and give an example.
4. What is null string?
5. Define Algebra.
6. Define 'subgroup' of a group.
7. What do you mean by weight of a path?

P.T.O.

8. What is the basic idea behind 'depth-first search'?
9. Explain the ambiguity of a Context free grammar.
10. Define A^* of a set A .

SECTION – II

Answer **any eight** questions from among the questions 11 to 26. They carry **2** marks each.

11. Give a direct proof for the statement "If x and y are odd integers, then $x + y$ is even".
12. Define
 - (a) Conjunction
 - (b) Disjunction.
13. Construct the truth table for " $(p \wedge q) \vee \neg p$ ".
14. Define 'resolution' with an example.
15. Let $A = \{3, 8, 11, 13\}$, $B = \{4, 7, 8, 15\}$ and $U = \{1, 2, 3, \dots, 20\}$. Find
 - (a) $A \oplus B$
 - (b) $A \times B$
 - (c) A^2
16. (a) Define Reflexive closure of A
 - (b) Show that
 - (i) \cap, \oplus are commutative and associative.
 - (ii) \times is neither commutative nor associative.

17. With the help of an example, prove that the composition of relations will be associative but not commutative.
18. Define Ring with an example.
19. Let a, b, c be any elements in a Boolean algebra, then show that $(a * b) * c = a * (b * c)$.
20. Check whether the set of all natural numbers under ordinary multiplication forms a group or not.
21. Define the terms :
 - (a) Biconnected components
 - (b) Strongly connected components.
22. Define adjacency matrix of a graph and illustrate it with an example.
23. Which are the four classes into which a depth-first search partitions the edges of a directed graph?
24. Define :
 - (a) Type 0 Grammar
 - (b) Regular Grammar
25. Describe 'decision problem' with an example.
26. What do you mean by 'concatenation'?

SECTION – III

Answer **any six** questions from among the questions 27 to 38. They carry **4** marks each.

27. By using the Principle of Mathematical Induction, prove that " $\forall n \in \mathbb{N}, n \geq 0, 6$ divides $(n^3 - n)$ ".

28. What is truth value assignment? Explain.

29. When do we say that an argument is

(a) Valid?

(b) Vacuously true?

Explain each with an example.

30. (a) State addition principle. Verify addition principle for $A = \{1, 2, 3, 4\}$ and $B = \{3, 4, 5, 6, 7, 8\}$

(b) Prove that $f_{A \oplus B} = f_A + f_B - 2f_A f_B$.

31. Prove that the transitive closure of a relation R is the set $S = \{(a, b): \text{there is a walk from } a \text{ to } b \text{ in } R\}$.

32. Prove that Equality modulo m is an equivalence relation.

33. Let G be the set of all non-zero real numbers and let $a * b = \frac{ab}{2}$. Then show that $(G, *)$ is an abelian group.

34. Write a note on 'Hamming Codes'.

35. Define DAG. When does a Partial order become a DAG and vice versa?

36. Explain simple graph propagation algorithm with an example.

37. Explain the following terms with an example:

- (a) Alphabet
- (b) String
- (c) Σ^*

38. What is DFA? Give an example.

SECTION – IV

Answer **any two** questions from among the questions 39 to 44. They carry **15** marks each.

39. (a) Obtain Disjunctive Normal Form of $\neg(P \vee Q) \Leftrightarrow P \wedge Q$.

(b) Obtain the Principal Disjunctive Normal Form of

(i) $P \rightarrow Q$

(ii) $(P \wedge Q) \vee (Q \wedge R)$

(c) Obtain the Principal Conjunctive Normal Form of $(\neg P \neg R) \wedge (Q \Leftrightarrow P)$

40. (a) State and Prove Inclusion- Exclusion Theorem.

(b) Show that Congruent modulo 4' is an equivalence relation.

41. (a) Prove that the set $[a]$ for $a \in A$ constitute a partition of A .

(b) Define Poset with an example. Give an example for a set which is not a poset.

42. (a) Write a note on Communication system.

(b) Prove that a code can detect all combinations of k or fewer errors if and only if the minimum distance between any two code words is atleast $k + 1$.

43. (a) (i) What is a topological sort?
(ii) When does a poset become a topological sort? Explain.
- (b) State and prove the Correctness of breadth-first search.
44. (a) Define Grammar. Give two examples.
- (b) Prove that $\forall x \in \Sigma^*$, $\hat{\delta}_3((p, q), x) = (\hat{\delta}_1(p, x), \hat{\delta}_2(q, x))$.
- (c) What is transition function?
-

Reg. No. :

Name :

Second Semester B.C.A. Degree Examination, December 2021

Career Related First Degree Programme under CBCSS

Core Course

CP 1242 : OBJECT ORIENTED PROGRAMMING

(2018 and 2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A [Very short answer type]

One word to maximum of **one** sentence. Answer **ALL** questions

1. What is *namespace*?
2. Define *class*.
3. What is *variable*?
4. What do you mean by *source code*?
5. Write the symbol of the *insertion operator*.
6. What you mean by *object*?
7. What is the use of *scope resolution operator*?
8. What is *virtual base class*?
9. What is *early binding*?
10. What do you mean by *identifier*?

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B [Short answer]

Not to exceed **one** paragraph, Answer any **eight** questions. Each question carries **2** marks

11. Write an algorithm to check the given number is even.
12. Write a C++ program to compute $n!$, where $n! = 1*2*3*...*n$.
13. Distinguish *cin* and *cout* objects.
14. What do you mean by *syntax error*?
15. What are the uses of *new* and *delete* operators?
16. Write a short note on C++ stream classes.
17. Write down the structure of a C++ program.
18. Explain *dynamic binding*.
19. Write notes on operators in C++.
20. Write a note on *continue* statement.
21. What do you mean by Procedure Oriented Programming?
22. Write a short paragraph on *inline function*.

(8 × 2 = 16 Marks)

SECTION – C [Short essay]

Not to exceed **120** words. Answer any **six** questions. Each question carries **4** marks.

23. Explore the concept *function overloading*.
24. What do you mean by *friend function*? Explain.
25. Explain the concept of *this pointer* with the support of an example.

26. What is *multiple inheritance*? Explain the concept with an example.
27. Explain different *loop control structures* in C++.
28. Explain the concept of *operator overloading*.
29. What do you mean by *constructor*? Explain with an example.
30. Explain in detail about *exception handling* in C++.
31. Write a paragraph on *dynamic memory allocation*.

(6 × 4 = 24 Marks)

SECTION – D [Long essay]

Answer any **two** questions. **Each** question carries **15** marks.

32. Explain the features of Object Oriented Programming in detail.
33. (a) Distinguish between *encapsulation* and *polymorphism*.
(b) Write a C++ program to demonstrate polymorphism.
34. Write a C++ program to add two matrixes.
35. What do you mean by *inheritance*? Explain various types of inheritances with an example.

(2 × 15 = 30 Marks)

(Pages : 3)

M – 2735

Reg. No. :

Name :

Second Semester B.C.A. Degree Examination, December 2021

Career Related First Degree Programme Under CBCSS

Group 2(b) – Computer Applications

Core Course

CP 1243 : DATA STRUCTURES

(2018 and 2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A (Very Short Answer Type)

(One word to maximum of one sentences. Answer all questions)

1. Name any two linear data structures.
2. Name the operations on stack.
3. What is an array?
4. What is queue?
5. Give the syntax for declaring a two-dimensional array.
6. Name the different tree traversals.
7. What do you mean by a pointer?
8. What is a circular singly linked list?
9. What is a tree?
10. Name a LIFO and FIFO data structure.

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B (Short Answer)

Not to exceed **one** paragraph, answer any **eight** questions. Each question carries **2** marks.

11. What do you mean by linear search?
12. What is a hash table?
13. What is depth first search?
14. What do you mean by prefix notation?
15. What is bubble sort?
16. What is doubly linked list?
17. What is a binary search tree?
18. What are the operations that can be implemented in a linked list?
19. Write the prefix and postfix notation of $(A + B) * (C - D)$.
20. What do you mean by traversing a linked list?
21. What is a graph?
22. What is an expression tree?

(8 × 2 = 16 Marks)

SECTION – C (Short Essay)

Not to exceed **120** words, answer any **six** questions. Each question carries **4** marks.

23. Explain selection sort with illustration.
24. Explain binary search algorithm.
25. Explain the components of a graph data structure.

26. Write a note on hash functions with examples.
27. What are the advantages of a linked list over an array?
28. Explain the linked list implementation of inserting an element into stack.
29. Differentiate directed and undirected graphs.
30. Compare static and dynamic data structures.
31. Write an algorithm to perform search operation in a doubly linked list.

(6 × 4 = 24 Marks)

SECTION – D (Long Essay)

Answer any **two** questions. Each question carries **15** marks.

32. Explain the insertion and deletion operation in queues.
33. Explain the different binary tree traversals.
34. Explain the insertion and deletion operations on stack.
35. Explain the concept of insertion and deletion in a singly linked list with diagrams.

(2 × 15 = 30 Marks)

(Pages : 3)

M – 2722

Reg. No. :

Name :

Second Semester B.Sc./B.C.A.. Degree Examination, December 2021

Career Related First Degree Programme under CBCSS

Group 2(b) – Computer Science/Computer Applications

Foundation Course/Core Course

CS 1221/CP 1241 : ENVIRONMENTAL STUDIES

(2018 and 2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Write short answers to the below **ten** questions in **one** or **two** sentences. **Each** question carries 1 mark.

1. List out the various disciplines that give input to environmental studies.
2. What is renewable energy? Give examples.
3. What are the three causes of deforestation?
4. When is a biodiversity termed as a hotspot?
5. Define man-wildlife conflict.
6. What are biogeography zones?
7. Define pollution.
8. What does air pollution mean?

P.T.O.

9. What is a biological disaster?
10. Define rehabilitation.

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions in not exceeding **one** paragraph. **Each** question carries **2** marks.

11. Mention the scope of environmental studies in short.
12. Mention the biotic components of an ecosystem.
13. How are natural resources classified on the basis of availability?
14. List out and explain the types of desert ecosystem.
15. Explain the Nitrogen Cycle.
16. What are manmade and natural pollutants?
17. Write a short note on environmental impact of dams.
18. List out some of the cultural and social services provided by biodiversity.
19. What are the major causes and consequences of ozone layer depletion?
20. What are the various acts related to air pollution?
21. What are the objectives and nature of Chipko movement?
22. What are the different types of fire protection systems?

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions in not exceeding **120** words. **Each** question carries **4** marks.

23. List out and explain the importance of environmental studies.
24. What are the functions of an ecosystem?
25. What are the functions of aquatic ecosystem?
26. Explain the significance of a healthy biodiversity.
27. List out and explain the causes of soil erosion.

28. Write the 7R's of Recycling.
29. List out the various acts related to water pollution.
30. What are the five stages of rehabilitation? Explain them in short.
31. Write about the role of Indian culture in environmental conservation.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions in not exceeding four pages each.. **Each** question carries **15** marks.

32. Write a detailed note on types of ecosystem.
33. What are trophic levels in a food chain? Explain them in detail.
34. Write a detailed note on water pollution control.
35. What is the impact of population growth on environment?

(2 × 15 = 30 Marks)