



Reg. No. :

Name :

**Second Semester B.Sc./B.Com./B.B.A./B.C.A. Degree
Examination, July 2014
(Career Related First Degree Programme Under CBCSS)
Group 2 (b) Language Course – II : English
EN 1211.4 : WRITING AND PRESENTATION SKILLS
(2013 Admn.)**

Time : 3 Hours

Max. Marks : 80

I. Answer **all** questions. **Correct** the following sentences. If the sentences are **correct**, write "**No Error**".

- 1) The assistant takes care of the laboratory equipments.
- 2) I have seen the film yesterday.
- 3) The organisation caters the needs of the people of the district.
- 4) I cannot put with such behaviour.
- 5) The increase in the number of vehicles and pedestrians are a cause of worry for the government.
- 6) He changed his date of birth recordically.
- 7) At Varanasi, the Ganga changes it's course.
- 8) He has submitted his dissertation yesterday.
- 9) Please find out if Raju or his sons is coming.
- 10) Ten days is enough to complete the work. (10×1=10 Marks)

II. Answer **any eight** of the following questions in **one** or **two** sentences **each**.

- 11) What is meant by composition ?
- 12) Structuring of material for writing.



- 13) What occasions the division of a composition into paragraphs ?
- 14) The difference between the audience for the spoken and written forms of communication.
- 15) What are the liberties one takes in composing a personal/informal letter ?
- 16) What is the use of a Thesaurus during writing ?
- 17) What is register ?
- 18) Write a catchy phrase to be used as copy in an advertisement for men's clothes.
- 19) Punctuate the following :
In that case I asked him why dont you leave her alone.
- 20) Rewrite in plain English :
As matters stand, I shall transmit the scribbles to you forthwith.
- 21) How will you establish a rapport with the audience on opening the presentation ?
- 22) How will you use pauses in your presentation ? **(8x2=16 Marks)**

III. Answer as directed :

- 23) Write a letter to the Municipal Chairman requesting him/her to look into the menace of stray dogs in your locality.
- 24) Write a précis of the following passage reducing it to one third of its length :
Both Aristotle and Plato were writing about figurative art, art that consists of recognisable images rather than abstraction. The viewer's response is thus formed by the appearance of the represented thing in the real world. Citing the example of a portrait (a likeness) Aristotle claimed that if viewers take pleasure in looking at the real person, then they will also take pleasure in looking at the portrait. Like the author of a tragedy, the good painter will represent people as better than they are. Arguing for figurative over non-figurative art, Aristotle asserted that a surface smeared with colour will not produce as much pleasure as a form clearly outlined in plain black and white.



- 25) Write a dialogue on the following topic in about **80** words.
Son meets father. Son explains to father his life in the college hostel.
- 26) Write five questions for a survey on drinking water supply in a housing colony.
- 27) Prepare a report on a pleasure trip undertaken by you.
- 28) Prepare a CV to apply for the post of a policy counsellor in an insurance firm.
- 29) How will you manage a technical snag during a presentation ?
- 30) How will you use figures to make your presentation effective ?
- 31) What is body language ? **(6×4=24 Marks)**

IV. Attempt **any two** of the following in about **two** or **three** pages :

- 32) Write an essay on **any one** of the following :
 - a) The importance of co-curricular activities during education.
 - b) Child labour.
 - c) Labourers from other states.
 - 33) Write a project report on **any one** of the following :
 - a) The need for career oriented academic programmes.
 - b) The use of insecticides in estates.
 - c) Uses and abuses of social networks.
 - 34) Create content for 15-20 slides on any one of the following for power point presentation.
 - a) Incidence and causes of cancer.
 - b) The devastation caused by down pour and floods.
 - c) The significance and celebration of Easter.
 - 35) Imagine you are incharge of purchases in your college. Write a letter to a firm detailing the requirements asking for various details in order to place an order for the purchase of fifteen computers. **(2×15=30 Marks)**
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Second Semester B.C.A. Degree Examination, July 2014
(Career Related FDP under CBCSS)
Group 2(b)
MM 1231.9 : MATHEMATICS – II

Time : 3 Hours

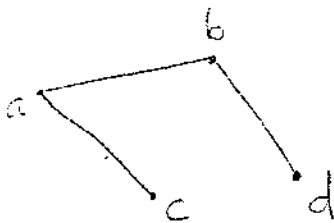
Max. Weights : 30

All the first 16 questions are **compulsory**. Four consecutive questions beginning with the **first** form a bunch. **Each** bunch carries 1 weightage.

1. What is the disjunction of the propositions p and q where p is the proposition ?
"Today is Friday" and q is the proposition "It is raining today".
2. Let p, and q be the propositions
p : Sam has the flu.
q : Sam miss the final examination.
Express the proposition $p \rightarrow q$ as an English sentence.
3. State the converse of the following implication :
"If I work hard, I will get distinction."
4. State True/False : $p \vee \neg p$ is a contradiction.
5. Find the power set of the set $\{0, \{0\}\}$.
6. State distributive laws in set theory.
7. If $A \cup B = A$, what can you say about the sets A and B ?
8. Is the set of even integers a group under addition ?
9. Give an example of a group which is not abelian.



10. When we say that an edge is a join of two vertex ?
11. Draw a graph with at least one loop.
12. Define a Pseudo graph.
13. Give the degree of the vertex a in the following graph :



14. Let $A = \{1, 2\}$, $B = \{a, b, c\}$, $C = \{c, d\}$. Find $A \times (B \cap C)$.
15. Let A be a set. Give the empty relation on A.
16. Define transitive relation.

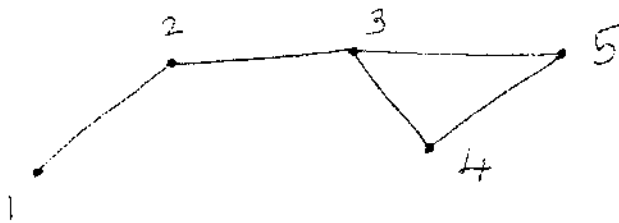
Answer **any 8** questions from among the questions **17 to 28**. They carry **1 weight each**.

17. Write each of the following statements in the form "if p, then q" in English.
 - a) It snows whenever the wind blows from the northeast.
 - b) The apple trees will bloom if it stays warm for a week.
18. Construct a truth table for the compound proposition $p \rightarrow \neg q$.
19. Prove or disprove : $\frac{p \wedge q}{\therefore p}$.
20. Let $S = \{a, b, c\}$. Draw the Hasse diagram for the following partial order relation R on $P(S)$, the power set of S :

$$R = \{\emptyset, \{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{a, b, c\}\}.$$
21. Determine whether the relation set inclusion \subseteq on a collection C of sets is an equivalence relation.



22. If G is a group with binary operation $*$, and if a and b are elements of G , then show that the linear equation $a * x = b$ has unique solution in G .
23. Give an example of a commutative ring.
24. Determine a spanning tree for the following graph :



25. Let $S = \{1, 2, 3, 4, 5, 6\}$. Determine whether each of the following is a partition of S :
- a) $\{\{1, 3, 5\}, \{2, 4\}, \{3, 6\}\}$
- b) $\{\{1, 5\}, \{2\}, \{3, 6\}\}$,
- c) $\{\{1\}, \{3, 6\}, \{2, 4, 5\}, \{3, 6\}\}$
- d) $\{\{1\}, \{2\}, \{3\}, \{4\}, \{5\}, \{6\}\}$
26. Consider the set \mathbb{Z} of integers. Define $a \sim b$ if $b = a^r$ for some positive integer r . Show that \sim is a partial ordering of \mathbb{Z} .
27. Let $X = \{1, 2, 3, 4\}$. Determine whether or not each relation below is a function from X into X .
- a) $f = \{(2, 3), (1, 4), (2, 1), (3, 2), (4, 4)\}$
- b) $g = \{(3, 1), (4, 2), (1, 1)\}$
- c) $h = \{(2, 1), (3, 4), (1, 4), (2, 1), (4, 4)\}$
28. Represent graphically the following function from \mathbb{R} into \mathbb{R} :

$$f(x) = \begin{cases} x+3 & \text{if } x \geq 1 \\ -1 & \text{if } x < 1 \end{cases}$$



Answer **any 5** questions from among the questions **29 to 36**. They carry **2** weights each.

29. Show that $(p \wedge q) \rightarrow (p \rightarrow q)$ is a tautology.

30. Prove that for each $n \in \mathbb{N}$, the sum of the first n natural numbers is given by

$$1 + 2 + \dots + n = \frac{1}{2}n(n + 1).$$

31. Obtain the principal disjunctive normal form of $\neg(p \wedge q)$.

32. Let A , B and C be sets. Show that $[A \cup (B \cap C)]^c = (C^c \cup B^c) \cap A^c$.

33. Let m be a fixed positive integer. Two integers a and b are said to be congruent modulo m , written $a \equiv b \pmod{m}$

If m divides $a - b$. Show that this relation of congruence modulo m is an equivalence relation.

34. Show that every cubic graph has an even number of points.

35. Show that every tree of n vertices contains exactly $n - 1$ edges.

36. Discuss briefly on the following operations In MATLAB :

$+$, $-$, $*$, $./$, $./$.

Answer **any 2** questions from among the questions **37 to 39**. These questions carry **4** weights each.

37. Prove the implication "If n is an integer not divisible by 3, then $n^2 \equiv 1 \pmod{3}$."

38. Let $A = \{a, b, c\}$ and let R be defined by

$$R = \{(a, a), (a, b), (b, c), (c, c)\}$$

Find : a) reflexive (R) b) transitive (R)

39. Explain briefly on hamming codes.



(Pages : 3)

3351

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Second Semester B.C.A. Degree Examination, July 2014
(Career Related First Degree Programme Under CBCSS)
Group 2(b)
Core Course
CP 1242 : OBJECT ORIENTED PROGRAMMING
(2013 Admn.)

Time : 3 Hours

Max. Marks : 80

SECTION – A

(Very Short Answer Type)

One word to maximum of one sentence. Answer all questions. (10×1=10 Marks)

1. What is Stream ?
2. When do you declare a member of a class static ?
3. What is static binding ?
4. Can we overload a destructor ?
5. What is an abstract class ?
6. What is default constructor ?
7. Why should the formal argument of the copy constructor be a reference object ?
8. What are static variables ?
9. Mention the role of file iostream. h in C++.
10. For a two dimensional array `int a [2] [2]`, which element is represented by `*(a + 1)`.



SECTION – B
(Short Answer)

Not to exceed one paragraph. Answer any eight questions. Each question carries two marks. (8×2=16 Marks)

11. What is 'this' ?
12. What are destructors ? When are they called ? What is their utility ?
13. What is manipulator in C++ ?
14. Distinguish b/w static casting and dynamic casting.
15. Write a declarator for main () that will enable command line arguments.
16. Distinguish b/w virtual function and pure virtual function. Justify your answer with example.
17. Short notes on symbolic constants with examples.
18. Differentiate b/w malloc () and new.
19. What are the difference b/w a structure in C and a class in C++ ?
20. Short notes on enumerated data type with examples.
21. A static member function is similar to a friend function. Comment.
22. What is a Constructor ? Explain copy constructor with an example.

SECTION – C
(Short Essay)

Not to exceed 120 words. Answer any six questions. Each question carries four marks. (6×4=24 Marks)

23. What is dynamic binding ? When do we use it ? Describe with example.
24. Distinguish b/w inline function and macro.
25. What do you mean by a reference variable ? Is there any difference b/w reference variable and pointer ? Explain with example.



26. Write down the difference b/w object-oriented programming languages and earlier (Non object-oriented) programming languages.
27. Write a C++ program to write into a file named 'test.txt' the text 'Department of Computer Science, University of Kerala' and without closing file, print the content of 'test.txt' on the console.
28. What is function overloading ? Explain with an example.
29. Explain in detail the access specifiers in C++ with examples.
30. Notes on Exception handling with examples.
31. Write a template function that returns the average of all elements an array. The arguments to the function should be the array name and size of an array. In main (), exercise the function with arrays of type int, double and char.

SECTION – D

(Long Essay)

Answer **any two** questions. **Each** question carries **15** marks. **(2×15=30 Marks)**

32. Write a program in C++ to implement a class called "String" for string manipulation. Overload +=, + and = operator, for string append, concatenation and assignment respectively.
 33. What is virtual base class ? Illustrate with proper examples. When and why is it required to inherit a base class as virtual ? Write a program in C++ to show the implementation of virtual base class.
 34. What is inheritance ? Mention some advantages of inheritance. Describe different types of inheritance with examples.
 35. Write a class to represent a vector (a series of float values). Include member functions to perform the following tasks :
 - a) To create the vector.
 - b) To modify the value of a given element.
 - c) To multiply by a scalar value.
 - d) To display the vector in the form (19, 20, 30,).
 - e) To add two vector objects.Write a program to test your class.
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