Reg. No. : ....

Name : ....

First Semester B.Sc./B.C.A. Degree Examination, November 2018
Career Related FDP under CBCSS
Group 2 (b) – Computer Science/Computer Applications
Core Course
CS1141/CP1141
INTRODUCTION TO PROGRAMMING
(2014 – 2017 Admissions)

Time : 3 Hours

Total Marks : 80

SECTION – A

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

1. Who develop C language ?

2. What is meant by algorithm ?

3. Define object code.

4. Write about assignment operator.

5. Define scanf() and printf( ) statement.

6. Write a short note on pointers.

7. What is meant by recursive functions ?

8. Describe header files in C.

9. How structure is useful in programming ?

10. What is binary file ?

SECTION – B

Not to exceed **one** paragraph. Answer **any eight** questions. **(8×2=16 Marks)**

11. Write a short note on compilers.

12. Define object code.

13. What is enumerated data types in C ?

14. Briefly explain storage classes in C.

15. How to create simple array ?

16. Explain switch statement in C.

17. What is meant by library files ? How it is useful in program paradigms ?

18. What is meant by call by value ?

19. Describe '&' operator.

20. Write about array of pointers.

21. Differentiate between structure and union.

22. What is meant by key words ?

SECTION – C

Not to exceed **120** words. Answer **any six** questions.   **(6×4=24 Marks)**

23. Explain the general structure of C program with suitable example.

24. Explain various steps involve to run a C program.

25. What are the different data types available in C ? Explain with example.

26. Explain branching statement in C.

27. Write a C program for matrix multiplication.

28. Explain declaration and visualization of pointers with example.

29. Explain definition and scope of recursion with example.

30. Illustrate logical operators with suitable example.

31. Describe any three string handling function with example.

SECTION – D

Answer **any two** questions.   **(2×15=30 Marks)**

32. Using pointers write a C program to find N_{CR}.

33. Describe looping statement with suitable examples.

34. Briefly explain pointers. How the pointer variables are declared and initialized ?

35. Explain file handling in C with suitable program.

Reg. No. : ....

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First Semester B.Sc./B.C.A. Degree Examination, November 2018
(Career Related FDP under CBCSS)
Group 2(b) – COMPUTER SCIENCE /COMPUTER APPLICATIONS
Core Course
CS 1141/CP 1141
Introduction to Programming
(2018 Admission)

Time : 3 Hours   Max. Marks : 80

SECTION – A
(Very Short Answer Type)

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

1. Define Flowchart.

2. What is a source code ?

3. What is a header file ?

4. Define operator.

5. Who is the father of C language ?

6. What is entry controlled loop ?

7. Define pointer.

8. What is the use of & operator ?

9. What are increment and decrement operator ?

10. What do you mean by binary file ?

SECTION – B
(Short Answer)

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

11. What are the three control structures in algorithm ?

12. What are the benefits of declaring a variable as unsigned int instead of int ?

13. Differentiate Keyword and identifier.

14. Write a note on relational operator.

15. Write about print ( ).

16. Write a note on for loop.

17. Differentiate Library and user defined functions.

18. Write a note on pointer declaration.

19. Write a note on comments in C language.

20. What is array of pointers.

21. Write about strlen() function.

22. Explain syntaxof fogen().

SECTION – C

(Short Essay)

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

23. Write about program compilation.

24. Explain about storage classes.

25. Explain rules for forming identifiers.

26. Differentiate getchar and scanf with the suitable example.

27. Explain about multi dimensional array.

28. Write a recursive function to print Fibonacci series upto given number.

29. Explain dynamic memory allocation.

30. Differentiate String and Array.

31. Write a detailed note on Union.

SECTION – D

(Long Essay)

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

32. Discuss various data types in C.

33. Explain about operators in C.

34. Write a C program to explain difference between Call by value and Call by reference.

35. Write a C program to store contents into a file and count the number of characters using file.

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First Semester B.Sc./B.C.A. Degree Examination, November 2018
(Career Related FDP Under CBCSS)
Group 2(b) : Computer Science/Computer Applications
Group 2(a) : Physics with Computer Applications
Foundation/Vocational Course
CS 1121/CP 1121/PC 1171 : INTRODUCTION TO IT
(2014 Admission – 2017 Admission)

Time : 3 Hours   Total Marks : 80

SECTION – A
(Very short answer type)

One word to maximum of **two** sentences. Answer **all** questions.

1. Define software.

2. Describe leased lines.

3. Mention different computer characteristics.

4. Give short note on CPU.

5. Describe working principle of dotmatrix printers.

6. Define operating system.

7. What is a binary number ?

8. What are viruses ?

9. Expand ISP.

10. Describe the term dial up.   **(10×1=10 Marks)**

SECTION – B
(Short answer)

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

11. Differentiate software and hardware.

12. Describe Auxiliary storage.

13. Give short note on free software.

14. Describe features of word processors.

15. Give short notes on :
    a) Browser
    b) Email.

16. Write the use of (a) Switch (b) Router.

17. Differentiate a web page and a web site.

18. Describe multitasking.

19. Differentiate between free software and open source software.

20. Explain Time sharing system.

21. Describe application software.

22. Give short notes on spread sheets.   **(8×2=16 marks)**

SECTION – C
(Short essay)

Not to exceed **120** words, answer **any six** questions carries **four** marks.

23. How computers are classified ?

24. Briefly explain working principle of CRT.

25. What are the E-mail software features ?

26. Write short notes on :
    a) RAM   b) ROM   c) Auxiliary storage

27. Describe different types of operating system.

28. Compare the features of
    a) Optical storage devices
    b) Magnetic storage devices.

29. Describe :
    a) World Wide Web
    b) Browser
    c) WLL.

30. Give short notes on :
    a) Keyboard, mouse
    b) Scanner
    c) Digital camera.

31. Describe :
    a) Floppy disc
    b) Hard disc
    c) System software.

(6×4=24 Marks)

SECTION – D

(Long essay)

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

32. Explain in detail the working principle of a laser printer, an inkjet printer and a plotter.

33. a) What do you mean by a multiuser operating system ?
    b) Briefly explain about computer viruses and protection ?

34. What is electronic mail ? Briefly explain how electronic mail works.

35. Explain computer generation in detail.

(2×15=30 Marks)

Reg. No. : ....

Name : ....

First Semester B.Sc./B.Com./B.B.A./B.C.A./B.S.W./B.M.S. Degree Examination, November 2018
Career Related First Degree Programme Under CBCSS
Group 2(b)
Language Course – I
EN 1111.4 – LISTENING, SPEAKING AND READING
(2016 Admission Onwards)

Time : 3 Hours   Max. Marks : 80

I. Answer **all** questions, **each** in a word or sentence.

1) Write the syllable structure of the word 'tea'.

2) Write a word where /t/ is silent.

3) Write the pronunciation of 'ed' in 'kicked'.

4) Write the phonetic symbol of the letters 'or' in the word 'word'.

5) What is vocalisation ?

6) How many diphthongs are there in the English language ?

7) Identify the letter which is silent in the word 'clerk'.

8) How many syllables are there in the word 'humility' ?

9) Which is the diphthong used in the word 'hair' ?

10) What is the larynx ?   **(10×1=10 Marks)**

II. Answer **any eight**, **each** in a short paragraph **not** exceeding **50** words.

11) What is syllable structure ? Give an example.

12) What is previewing ?

13) Differentiate between skimming and scanning.

14) Transcribe the following words : 1) table 2) teacher.

15) Define received pronunciation.

16) Write polite requests for the following situations :

1) Pass the salt   2) Cross the road

17) Construct a dialogue between two fresher students who are introducing themselves to each other.

18) You have bought a birthday gift for your sister and you want the shopkeeper to gift wrap it. Construct a dialogue between the shopkeeper and yourself.

19) What are voiced sounds ? Give examples.

20) Why is English referred to as the *lingua franca* of the modern era ?

21) What is a nasal sound ?

22) What is sub-vocalisation ?   **(8×2=16 Marks)**

III. Answer **any six each** in a paragraph **not** exceeding **100** words.

23) Explain the concept of strong forms and weak forms.

24) What is skimming ? Give two examples of skimming.

25) Transcribe the following words : *allow, name, pride, change, grammar, woman, television, liquid.*

26) Complete the conversation given below :

Receptionist : Good morning. FM Dental Clinic.

Amy : _____

Receptionist : 4 o' clock appointment with Dr. Rachael ? Let me check.

Oh Yes, there you are _____

Amy : _____

Receptionist : Would you like me to reschedule your appointment ?

Amy : _____

Receptionist : _____

Amy : Can I come in at 4 o' clock ?

Receptionist : _____

Amy : All right. I'll be there at 5 tomorrow _____

Receptionist : _____

27) Imagine that you are Ravi who is interested in a tour of Jaipur. Construct a dialogue between the travel agent and Ravi about the details of the tour package.

28) How do graphics and visual aids promote reading ?

29) Imagine the roles viz those of a customer and a shopkeeper and do as directed.

Shopkeeper	Customer
Greets customer and offers assistance	Greets and informs that the jeans he bought yesterday appear damaged
Enquires about the problem	States that the zipper of the fly is not working
Offers a seat and checks the jeans and finds the zip jammed	Wants to exchange the pair of jeans
Apologies and informs that it cannot be exchanged because the customer had bought it from the discount sale pack	Protests and demands to see the Manager
Agrees to arrange the meeting and asks him to wait	Informs that he would wait for the Manager

30) Scan the following poem and find answer to the following question :

In my craft or sullen art

Exercised in the still night

When only the moon rages

And the lovers lie abed

With all their griefs in their arms

I labour by singing light

Not for ambition or bread

Or the strut and trade of charms

On the ivory stages

But for the common wages

Of their most secret heart.

Not for the proud man apart

From the raging moon I write

On these spindrift pages

Nor for the towering to dead

With their nightingales and Psalms

But for the lovers, their arms

Round the griefs of the ages.

Who pay no praise or wages

Nor heed my craft or art.

1) Comment on the theme of the poem.

2) What prompts the poet to write his poems ?

3) Consider the poem as the poetic manifesto of the poet.

4) What does 'towering to dead with their nightingales and Psalms' refer to in the poem ?

31) Read the passage intensively and answer **any four** questions :

Many believe that chocolate decays your teeth. True, because it contains a lot of sugar. However it can also prevent tooth decay. The husks of the cocoa beans from which chocolate is made contain an antibacterial agent that fights plaque. Chocolate can also fight heart diseases. Some studies have shown that if you eat chocolate three times a month, you will live almost a year longer. If you eat too many, you will gain weight and will become obese. If you have excess weight, you run the risk of heart diseases. Dark chocolates are considered to be better than milk chocolates. They help to increase the levels of HDL, a type of cholesterol that helps prevent fat clogging arteries.

1) Why is chocolate bad for your teeth ?

2) What are the advantages of dark chocolates ?

3) How is chocolate good for health ?

4) What are the ill-effects of eating too much chocolate ?   **(6×4=24 Marks**

IV. Answer **any two each** in about **three** hundred words.

32) Transcribe the following words : *union, sentence, twinkle, autumn, pressure, action, machine, shame, vision, height, heart, music, school, glass, room.*

33) Comment on the sub-skills of reading.

34) Write an essay on the impact created by Martin Luther King Jr's speech *I Have A Dream* on the readers.

35) You are organising an inter-collegiate literary fest in your college. You are visiting a neighbouring institution to request the participation of students in the literary fest. At first you meet a student in the campus who directs you towards the Principal. The Principal tells you to meet the Arts Club Coordinator of the college who is a faculty member of the Department of English and hand over the brochure and details of the literary fest. Construct the three dialogues.   **(15×2=30 Marks)**

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Name : ....

First Semester B.C.A. Degree Examination, February 2018
Career Related First Degree Programme under CBCSS
Group 2(b) : Complementary Course
MM 1131.9 : MATHEMATICS – I
(2013 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

All the **first 10** questions are **compulsory**. These questions carry **1** mark **each**.

1. Define coshx in terms of exponential function.

2. Find $\dfrac{dy}{dx}$ if $x^3 + y^3 = 3xy$.

3. Show that $\sinh(-x) = -\sinh x$.

4. State Rolle's Theorem.

5. State the order of the differential equation $\dfrac{d^2y}{dx^2} + 2\dfrac{dy}{dx} + 2y = 0$.

6. Solve the differential equation $\dfrac{dy}{dx} = \sin 3x$.

7. Prove that $L(2) = \dfrac{2}{s}$.

8. State Fermat's theorem.

9. Determine the principal value of the argument of the complex number $1 - i$.

10. Identify the objective function and the constraints in the following optimization problem :

   Maximize : $z = x_1 + x_2$

   Subject to

   $x_1 + 5x_2 \leq 5$

   $2x_1 + x_2 \leq 4$,

   $x_1 \geq 0, x_2 \geq 0.$

(10×1=10 Marks)

P.T.O.

Answer **any 8** questions from among the questions **11** to **22**. These questions carry **2** marks **each**.

11. Show that $\sinh(2x) = 2\sinh x\cosh x$.

12. Find $\dfrac{dy}{dx}$ when $y = \cosh^{-1}(x)$.

13. Find $\dfrac{dy}{dx}$ when $y = (\sin x)^x$.

14. Find the differential equation corresponding to the family of curves $x^2 + y^2 = 2hx$; where h is an arbitrary constant.

15. Solve the initial value problem $y'' + 4y' + 4y = 0$, $y(0) = 1$, $y'(0) = 1$.

16. Find $L(e^{-at})$.

17. Define inverse Laplace Transform and find the inverse transform of $\dfrac{1}{s-5}$.

18. Find the g.c.d. of 81 and 110 and express it as a linear combination of the two integers.

19. Compute $\phi(720)$.

20. Prove that $3^{4n+2} + 5^{2n+1}$ is divisible by 14.

21. Separate into real and imaginary parts $\sin(\alpha + i\beta)$.

22. Find the Fourier cosine series expansion for the function
    $f(x) = \pi - x$ in $0 < x < \pi$.   **(8×2=16 Marks)**

Answer **any 6** questions from among the questions **23** to **31**. These questions carry **4** marks **each**.

23. Find $\dfrac{dy}{dx}$ when $x^4 + y^4 - a^2xy = 0$.

24. Find the Laplace Transform of $\sinh(at)$.

25. Show that of all rectangles of given area, the square has the smallest perimeter.

26. Find the general solution of the differential equation $(D^2 - 2D - 8)y = e^{-4x}$.

27. Solve the p.d.e : $x^2p + y^2q = z^2$.

28. Express 960 in the standard form and find the number and sum of the divisors of 960.

29. Find all the values of $(1+i)^{\frac{1}{3}}$.

30. Find the Fourier series to represent $f(x) = e^x$ in $-\pi < x < \pi$.

31. Verify that $\dfrac{\partial^2 u}{\partial x \partial y} = \dfrac{\partial^2 u}{\partial y \partial x}$ where $u = \log(y\sin x + x\sin y)$. **(6×4=24 Marks)**

Answer **any 2** questions from among the questions **32** to **35**. These questions carry **15** marks **each**.

32. State Leibnitz's theorem and if $y = a\cos(\log x) + b\sin(\log x)$, prove that $x^2 y_{n+2} - (2n + 3) x y_{n+1} + (n^2 + 1) y_n = 0$.

33. a) Prove the Wilson's theorem. If p is a prime number, then $(p - 1)! + 1$ is divisible by p.

    b) Prove that $12! \equiv 25 \pmod{13}$.

34. Solve $(D^2 + 3D + 2) y = 2e^{-x} + \sin 2x$.

35. Using graphical method, solve the following L.P.P

    Maximize : $z = 5x_1 + 3x_2$

    Subject to

    $3x_1 + 5x_2 \le 15$

    $5x_1 + 2x_2 \le 10$

    $x_1 \ge 0, x_2 \ge 0$. **(2×15=30 Marks)**

Reg. No. : ....

Name : ....

First Semester B.Sc./B.C.A. Degree Examination, November 2018
Career Related FDP Under CBCSS
Group 2(b) : Computer Science/Computer Applications
Group 2(a) : Physics with Computer Applications
Foundation/Vocational Course
CS 1121/CP 1121/PC 1171
COMPUTER FUNDAMENTALS AND ORGANIZATION
(2018 Admission)

Time : 3 Hours   Max. Marks : 80

SECTION – A

Very short answer type. **One word** to maximum **one sentence**, answer all
questions.   **(10×1=10 Marks)**

1. BIOS is the short name of _____

2. Define input device.

3. Define SRAM.

4. What is an optical disk ?

5. Define Miss in Cache.

6. What is pipelining ?

7. Expand LEA instruction.

8. Define virtual memory.

9. What is a strobe ?

10. Define parallel data transi ·.

SECTION – B

Short answer. **Not** to exceed **one** paragraph, answer **any eight** questions.
Each question carries **two** marks. **(8x2=16 Marks)**

11. Write a note on Ribbon Cable.

12. What is the role of an SMPS ?

13. Write about CMOS.

14. Explain about Magnetic Tape.

15. Write about USB.

16. Write a note on Accumulator Register.

17. Write a note on instruction set.

18. Explain about SHL instruction.

19. Write a note on Micro Instruction.

20. Explain about serial communication.

21. Write about daisy chain.

22. Write a note on bus request in DMA.

SECTION – C

Short essay. **Not** to exceed **120** words, answer **any six** questions. **Each**
question carries **four** marks. **(6x4=24 Marks)**

23. Write a note on expansion cards.

24. Draw Von Neumann architecture.

25. Differentiate SRAM and DRAM.

26. Write a note on type of optical disks.

27. Explain PC and DR registers.

28. Write a note on advantages of RISC architecture.

29. Differentiate CD-R and CD-W.

30. Write about IOP.

31. Write about synchronous data transfer.

SECTION – D

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

(2×15=30 Marks)

32. Explain about components inside a computer in detail.

33. Write a detailed note on Memory Hierarchy.

34. Differentiate Interrupt and Instruction Cycle.

35. Write about Modes of Data Transfer in detail.

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Reg. No. : ....

Name : ....

First Semester B.C.A. Degree Examination, February 2018
Career Related FDP under CBCSS
Group 2(b) : Computer Applications
CP 1132 : DIGITAL ELECTRONICS
(2013 Admission)

Time : 3 Hours

Total Marks : 80

PART – A

Answer **all** questions. **Each** question carries 1 mark. **(10×1=10 Marks)**

1. What is the cut in voltage of a Germanium diode ?

2. Write down any three specifications of a resistor.

3. List any two important applications of a transistor.

4. Convert $(1101)_2$ to Decimal number.

5. Draw the truth table for a NOR gate.

6. Draw the symbol of an EX-NOR gate.

7. Write down the Demorgan's laws.

8. Draw the block diagram of a 4:1 Multiplexer.

9. Define propagation delay of a digital IC.

10. What is a Carbon nanotube ?

PART – B

Answer **any 8** questions. **Each** question carries 2 marks. **(8×2=16 Marks)**

11. Write a note on color coding of resistors.

12. Write down the features of an electrolytic capacitor.

P.T.O.

13. What are the advantages of LED ?

14. Compare half wave, full wave and bridge rectifiers.

15. Write the applications of 555 timer ICs.

16. Find the sum of binary numbers 10110111 and 1110101.

17. Draw an EXOR gate using NAND gates only.

18. What is the main difference between a latch and flip flop ?

19. Differentiate between min terms and max terms.

20. Differentiate between SSI, MSI, LSI and VLSI.

21. What are the IC's required to display numbers from 0 to 9 in a seven segment display ?

22. What are the applications of nanotechnology ?

PART – C

Answer **any 6** questions. **Each** question carries 4 marks. **(6×4=24 Marks)**

23. Describe the working of a simple inductor, with the help of figures.

24. Differentiate between Zener and Avalanche break down.

25. Explain the working of a bi stable multivibrator using 555 IC.

26. Explain floating point representation of numbers with the help of examples.

27. Compare different transistor configurations.

28. Convert the SOP expression $F = A'B'C' + A'BC' + A'BC + AB'C + ABC$ to equivalent POS expression.

29. State and prove Consensus theorem and Second distributive law of Boolean algebra.

30. Realize a half adder circuit using nand gate only.

31. Draw and explain 1 bit digital comparator circuit.

PART – D

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

32. Draw the block diagram of 555 timer. Explain how the 555 timer IC is connected as a monostable multivibrator. Show all waveforms.

33. Realize AND, OR, NOT and XOR gate using NAND gate only. Draw the truth table for each gate also.

34. Draw the SR flip flop. What is its limitation ? How it is over come in JK flip flop ? What is the advantage of Master Slave JK flip flop ?

35. With the help of diagrams explain the working of a BCD to seven segment decoder, which will display number 0 to 9 ?

First Semester B.Sc./B.C.A. Degree Examination, February 2018
Career Related First Degree Programme Under CBCSS
COMPUTER SCIENCE/B.C.A.
CP 1131/CS 1131 – Digital Electronics
(2014 Admn. Onwards)

Time : 3 Hours   Max. Marks : 80

SECTION – A (Very short answer type)

One word to maximum of 2 sentences. Answer all questions.   (10×1=10 Marks)

1. Define propagation delay.

2. What is the binary equivalent of the $(3F2)_{16}$?

3. What is an inductor ?

4. What is the difference between MSI and LSI ?

5. Write an example for SOP and POS expression.

6. List few important applications of LED.

7. What are the applications of register ?

8. What is a flip flop ?

9. What is an oscillator ?

10. What is the BCD equivalent of decimal number 8472 ?

SECTION – B (Short answer)

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

11. Write the logic expressions for the difference and borrow of a half adder.

12. Define 1's complement and 2's complement of a binary number.

P.T.O.

13. Discuss the difference between de-multiplexer and decoder.

14. Write short note on XOR gate.

15. Differentiate active components and passive components.

16. Find the decimal and hexadecimal equivalent of binary number 110101011.101_2.

17. Draw the truth table of a RS flip flop.

18. Define the following diode parameters
    (a) knee voltage and (b) reverse break down voltage.

19. Perform the operation $101011_2 - 1101_2 = ?$

20. Draw the logic diagram of a 1 line to 4 line de-multiplexer.

21. What do you mean by Min-term and Max-term ?

22. Write short note 555 timer.

SECTION – C (Short Essay)

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

23. Explain the concept of J K flip flop.

24. Explain the concept of ASCII and BCD codes.

25. Simplify using Karnaugh map $f(A, B, C, D) = \sum m$ (0, 1, 2, 4, 5, 6, 8, 9, 10, 13, 14, 15).

26. What are oscillators ? Explain their types and principle involved.

27. Simplify the following Boolean expression using Boolean algebra.
    i) $A + A'B + AB' = Y$
    ii) $(A'+B + C').(A' + B + C) = Y$.

28. Write short note on resistor and capacitor.

29. With diagram and truth table explain NAND gate and AND gate.

30. What is a multiplexer ? Draw and explain the logic diagram of 4 to 1 multiplexer.

31. Explain the operation of PN junction diode under forward and reverse bias condition.

SECTION – D (Long Essay)

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

32. With neat diagram explain 3 bit counter.

33. Explain the working of RC coupled feedback amplifier.

34. a) Convert $(6327.4051)_8$ into its equivalent decimal and binary numbers.

    b) Subtract 11011_2 from 10101_2 using 2's complement method.

35. Explain the concept of D and T flip flop.

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Reg. No. : ....

Name : ....

First Semester B.Sc./B.C.A. Degree Examination, February 2018
Career Related FDP Under CBCSS
Group 2(b) : COMPUTER SCIENCE / BCA
Core Course
CS 1141/CP 1141 : Introduction to Programming
(2014 Admission Onwards)

Time : 3 Hours

Total Marks : 80

SECTION – A

(**One** word to maximum of **one** sentences) :

(10×1=10 Marks)

1. Define object code.

2. What is a flow chart ?

3. Define constant.

4. Define Array.

5. Give the general format of if ... else statement.

6. What is the purpose of stdio.h, header file ?

7. What is a function ?

8. Define a file.

9. What is union ?

10. Define dynamic variable.

SECTION – B

(Short Answer)

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

11. Explain the symbols used in drawing a flow chart.

12. Distinguish between top-down design and bottom-up design.

13. What are logical operators ? Explain.

14. Distinguish between break and continue statements.

15. Write a C program to find the largest of 3 given numbers.

16. What is nested loop ? Give an example.

17. What is meant by modular programming ?

18. Distinguish between call by value and call by reference.

19. Explain malloc ( ) function.

20. What is a structure ? How it differ from union ?

21. Distinguish between scanf( ) and fscanf( ).

22. What is pre-processor directive ?

SECTION – C

(Short Essay)

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

23. Write an algorithm to find the nth power of a given number.

24. Discuss the concept of source program, object program, executable program related with the execution of a program.

25. Explain the various arithmetic and relational operators used in C programming language.

26. Write a C program to sum the series $1 + x + x^2 + x^3 + \ldots$, the first 10 terms.

27. Define a function and discuss its types.

28. Write a C program to multiply two matrices using a function with parameters as array variables.

29. Distinguish between static, local and global variables using suitable examples.

30. Define a pointer. Write a function to swap the content of two variables where the arguments are pointer type.

31. Write a C program to convert all lower case letters into upper case in a string of alphabets.

SECTION – D

(Long Essay)

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

32. Discuss the three loop structures in C, with suitable program to illustrate each.

33. Write a C program to sort a list of names in alphabetical order.

34. Write a C program to read a student data file containing register-no, mark1, mark 2, mark 3 and to display a report containing slno, register-no and total-mark.

35. Briefly explain any two header files and any 3 functions in each with suitable illustrative examples.

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