

Code No: 151AH

R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year I Semester Examinations, May/June - 2019

ENGLISH

(Common to EEE, CSE, IT)

Time: 3 hours

Max. Marks: 75

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A

(25 Marks)

- 1.a) i) Give the meaning of the prefix 'pre'. Use the word formed with the prefix in a sentence.  
ii) Give the meaning of the prefix 'im'. [2]
- b) Complete the sentences with correct prepositions:  
i) We are sorry ---- having disturbed you.  
ii) The woman ---- the car is my neighbour. [2]
- c) Choose the correct antonym for the word 'Delineate' and use it in a sentence [2]  
i) Define ii) Outline iii) Demarcate iv) Expand
- d) Correct the following sentences: [2]  
i) My father knows to teach English well.  
ii) I cannot cope up with this pressure.
- e) Define the term technical vocabulary with examples? [2]
- f) Identify the tense form in the sentences given. [3]  
i) They repented of their mistakes.  
ii) He teaches psychology
- g) The architecture of India is rooted in its history, culture and religion. Explain briefly. [3]
- h) How are blue jeans inspected after they are completed? [3]
- i) What is the role of eating healthy carbohydrates in one's diet? [3]
- j) What are the processes that glass is put through in the factory? [3]

PART-B

(50 Marks)

- 2.a) Which incident really struck CV Raman to explore the blue colour of the sea?
- b) Join the sentences using conjunctions  
i) You can have peach ice cream ---- a brownie sundae.  
ii) Neither the black dress ---- the gray one looks right on me
- c) Write the meanings of the phrasal verbs and use them in a sentence. [3+3+4]  
i) Paid off-----  
ii) Chip off-----  
iii) Drop in-----  
iv) Break out-----

OR

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- 3.a) What were the three major areas that Raman initiated research after returning to India?  
b) Write a paragraph on 'the use of e-seva center in the society'  
c) Complete the sentences using appropriate conditional clauses. [4+4+2]  
i) As a result of seismic testing, -----  
ii) As long as I am capable -----

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- 4.a) What is the significance of travel and tourism in our culture?  
b) What is a Jataka story?  
c) Write a letter of requisition to seek scholarship. [3+3+4]

OR

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- 5.a) How did the Gandhara style emerge?  
b) Name any two indigenous styles of architecture?  
c) What is the importance of writing a job application letter while sending your resume? [4+3+3]

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- 6.a) Explain in brief the initial process of reserving a slot for applying for passport?  
b) What are sub skills of reading?  
c) What were the steps 'Denim' went through before being used as pants? [3+3+4]

OR

- 26 26 26 26 26 26 26
- 7.a) Write the meanings of the following connectives (adverbials) and use them in a sentence.  
i) Substantially -----  
ii) Mockingly -----  
iii) Anonymously -----  
iv) Apparently -----  
b) Describe the evolution of blue jeans?  
c) What kind of raw materials are used in making denim? Who invented 'riveted pants'? [4+3+3]

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- 8.a) 'It's a myth that all fats should be avoided' interpret ?  
b) Write an essay about a memorable journey made to a historical place in your life?  
c) What is the connection between whole grains and insulin? [3+4+3]

OR

- 26 26 26 26 26 26 26
- 9.a) What is the difference between 'extensive reading' and 'intensive reading'?  
b) Identify redundancies in the following sentences.  
i) The reason is because -----  
ii) Continue on -----  
iii) During the course of -----  
c) Identify clichéd words in the following sentences [4+3+3]  
i) Add an additional: -----  
ii) Added bonus: -----  
iii) Advance notice/planning/reservations/warning: -----

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- 10.a) Imagine you organise a sports day your institute. Draft the highlights of the programme and prepare a report of the same. Assume relevant data.  
b) According to you what are the two main factors that change your body weight?  
c) How is your body affected when you consume sugary drinks excessively? [4+3+3]

OR

- 26 26 26 26 26 26 26
- 11.a) List foods that contain high amounts of sodium?  
b) Why should dairy products be consumed in moderation?  
c) Read the text below and write a precis in about 100 words.

[2+3+5]

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The fossil remains of the first flying vertebrates, the pterosaurs, have intrigued paleontologists for more than two centuries. How such large creatures, which weighed in some cases as much as a piloted hang glider and had wingspans from 8 to 12 meters, solved the problems of powered flight, and exactly what these creatures were- reptiles or birds- are among the questions scientist have puzzled over. Perhaps the least controversial. The anatomy of their wings suggests that they did not evolve into the class of birds. In pterosaurs a greatly elongated fourth finger of each forelimb supported a wing like membrane. The other fingers were short and reptilian, with sharp claws. In birds the second finger is the principle strut of the wing, which consists primarily of features. If the pterosaur walked or remained stationary, the fourth finger, and with it the wing, could only turn upward in an extended inverted V-shape along side of the animal's body. The pterosaurs resembled both birds and bats in their overall structure and proportions. This is not surprising because the design of any flying vertebrate is subject to aerodynamic constraints. Both the pterosaurs and the birds have hollow bones, a feature that represents a saving in weight. In the birds, however, these bones are reinforced more massively by internal struts.

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Although scales typically cover reptiles, the pterosaurs probably had hairy coats. T.H. Huxley reasoned that flying vertebrates must have been warm - blooded because flying implies a high internal temperature. Huxley speculated that a coat of hair would insulate against loss of body heat and might streamline the body to reduce drag in flight. The recent discovery of a pterosaur specimen covered in long, dense, and relatively thick hair like fossil material was the first clear evidenced that his reasoning was correct. Efforts to explain how the pterosaurs became air-borne have led to suggestions that they launched themselves by jumping from cliffs, by dropping from trees, or even by rising into light winds from the crests of waves. Each hypothesis has its difficulties. The first wrongly assumes that the pterosaur's hind feet resembled a bat's and could served as hooks by which the animal could bang in preparation for flight. The second hypothesis seems unlikely because large pterosaurs could not have landed in trees without damaging their wings. The birds calls for high waves to channels updrafts. The wind that made such waves however, might have been too strong for the pterosaurs to control their flight once airborne.

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Code No: 131AD

R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year I Semester Examinations, May/June - 2019

COMPUTER PROGRAMMING IN C

(Common to CE, ME, MCT, MMT, AE, MIE, PTM, CEE, MSNT)

Time: 3 hours

Max. Marks: 75

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A**

(25 Marks)

- 1.a) How real numbers and integers are stored. [2]
- b) Explain about identifiers and types in 'C'. [3]
- c) Discuss the limitations of recursion. [2]
- d) Write and explain the time complexity of bubble sort. [3]
- e) Explain how to define pointer to a function. [2]
- f) What are the string output functions? [3]
- g) Distinguish between structure and union. [2]
- h) What is meant by self referential structures? [3]
- i) What is meant by a binary file? [2]
- j) Discuss about fseek and ftell functions. [3]

**PART-B**

(50 Marks)

- 2.a) Write a 'C' program to print all prime numbers from 1 to N using while loop.
  - b) Write a program to demonstrate 'goto' statement. [6+4]
- OR**
- 3.a) Explain the significance of 'break' and 'continue' statement with a sample program.
  - b) Explain about type conversion in 'C'. [5+5]
- 4.a) What are scope rules in 'C'?
  - b) Explain static and extern storage classes with a sample program. [5+5]
- OR**
5. Write a 'C' program to multiply two non square matrices and explain it with a suitable example. [10]
  6. What is meant by arrays of strings? When it will be used? Explain with a 'C' program. [10]
- OR**
- 7.a) What are the memory allocation functions? Explain them clearly.
  - b) Write a 'C' program to read a string from keyboard and print the numbers of uppercase letters, lower case letters, digits, spaces and special characters. [3+7]

8. With a sample 'C' program explain the concept of passing structures through pointers. [10]

OR

- 9.a) How we can define structure with in a structure? Explain with a sample program.  
b) Write brief notes on command line arguments. [5+5]

- 10.a) Write a 'C' program to read the content of source file and convert all upper case letters in source file into lower case letters.  
b) Compare text files and binary files. [7+3]

OR

11. What are the file status functions? Explain their usage with a sample 'C' program. [10]

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Code No: 121AF

R15

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year Examinations, May/June - 2019

COMPUTER PROGRAMMING

(Common to CE, EEE, ME, ECE, CSE, EIE, IT, MCT, MMT, AE, AME, MIE, PTM)

Time: 3 hours

Max. Marks: 75

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.  
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A

(25 Marks)

- 1.a) Give the list of basic data types in "C" language and explain. [2]
- b) Distinguish between a keyword and a reserved word. [3]
- c) Distinguish between a function declaration and definition. [2]
- d) Give the list of preprocessor directives in "C" language. [3]
- e) Why is the void pointer useful? When would you use it? [2]
- f) Distinguish between calloc() and malloc() functions in "C" language. [3]
- g) What are self-referential structures? Give an example. [2]
- h) Give the syntax for bit-field declaration and explain. [3]
- i) Distinguish between a stack and a queue. [2]
- j) Give the applications of linked lists. [3]

PART-B

(50 Marks)

- 2.a) Distinguish among 'while', 'do-while' and 'for' statements in "C" language.
  - b) Write a program that prints the binary equivalent of a decimal number. [5+5]
- OR
- 3.a) Demonstrate nested if-else statements in "C" language using an example.
  - b) Demonstrate the usage of break and continue statements using an example. [5+5]
4. Give an overview of storage classes in "C" language. [10]
- OR
5. Explain the following:
    - a) Multi-dimensional arrays in "C".
    - b) Structured programming. [5+5]
- 6.a) Distinguish between a constant pointer and a pointer to constant.
  - b) Write a "C" program to find length of a string and concatenation of two strings without using string handling functions. [3+7]
- OR
7. What is a function pointer? Give the syntax and applications of a function pointer. Demonstrate how to initialize function pointers and use them in the program. [10]

- 8.a) Write a program to add two complex numbers by passing structure to a function.  
b) Demonstrate the following operations using examples:  
i) fwrite ii) fseek

[5+5]

- 9.a) Write a "C" program to find number of lines in a file.  
b) Give an overview of standard I/O in "C" language.

[5+5]

- 10.a) Demonstrate bubble sorting using an example.  
b) Write a program to reverse a word using a stack.

[5+5]

OR

- 11.a) Write a program to demonstrate operations on a linked list.  
b) Write a program to demonstrate the operations on a queue.

[5+5]

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Code No: 111AF

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year Examinations, May/June - 2019

COMPUTER PROGRAMMING

(Common to CE, EEE, ME, ECE, CSE, EIE, IT, MCT, MMT, AE, AME, MIE, PTM, AGE)

Time: 3 hours

Max. Marks: 75

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A

(25 Marks)

- 1.a) Give the list of basic data types in "C" language and explain. [2]
- b) Distinguish between a keyword and a reserved word. [3]
- c) Distinguish between a function declaration and definition. [2]
- d) Give the list of preprocessor directives in "C" language. [3]
- e) Why is the void pointer useful? When would you use it? [2]
- f) Distinguish between calloc() and malloc() functions in "C" language. [3]
- g) What are self-referential structures? Give an example. [2]
- h) Give the syntax for bit-field declaration and explain. [3]
- i) Distinguish between a stack and a queue. [2]
- j) Give the applications of linked lists. [3]

PART-B

(50 Marks)

- 2.a) Distinguish among 'while', 'do-while' and 'for' statements in "C" language.
  - b) Write a program that prints the binary equivalent of a decimal number. [5+5]
- OR
- 3.a) Demonstrate nested if-else statements in "C" language using an example.
  - b) Demonstrate the usage of break and continue statements using an example. [5+5]
4. Give an overview of storage classes in "C" language. [10]
- OR
5. Explain the following:
    - a) Multi-dimensional arrays in "C".
    - b) Structured programming. [5+5]
  - 6.a) Distinguish between a constant pointer and a pointer to constant.
  - b) Write a "C" program to find length of a string and concatenation of two strings without using string handling functions. [3+7]
- OR
7. What is a function pointer? Give the syntax and applications of a function pointer. Demonstrate how to initialize function pointers and use them in the program. [10]



8.a) Write a program to add two complex numbers by passing structure to a function.

b) Demonstrate the following operations using examples:

i) fwrite

ii) fseek

OR

9.a) Write a "C" program to find number of lines in a file.

b) Give an overview of standard I/O in "C" language.

[5+5]

[5+5]

10.a) Demonstrate bubble sorting using an example.

b) Write a program to reverse a word using a stack.

[5+5]

OR

11.a) Write a program to demonstrate operations on a linked list.

b) Write a program to demonstrate the operations on a queue.

[5+5]

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Code No: 51004

R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year Examinations, May/June - 2019

ENGINEERING PHYSICS

(Common to CE, EEE, ME, ECE, CSE, CHEM, EIE, BME, IT, AE, BT, AME, MIE)

Time: 3 hours

Max. Marks: 75

Answer any five questions  
All questions carry equal marks

- 1.a) What are the properties of ionic bond solids?  
b) Classify the Bravais lattices on the basis of lattice parameters.  
c) Calculate the radius of the atom for SC, BCC and FCC lattices. [4+6+5]
- 2.a) What are the applications of X-ray diffraction.  
b) Derive the formula for concentration of Schottky defects.  
c) Write a note on surface and volume defects. [4+6+5]
- 3.a) What are the salient features of Bose – Einstein statistics?  
b) Describe Thomson's experiment and explain the results.  
c) State Wien's law and Rayleigh – Jeans law? [5+6+4]
- 4.a) State and explain Block theorem.  
b) Derive an expression for effective mass of an electron.  
c) On the basis of band theory, distinguish between good, semi and bad conductors. [5+6+4]
- 5.a) Derive the carrier concentration of an n-type semiconductor.  
b) Discuss the energy diagram of PN junction diode.  
c) Discuss the working principle of LED and Photo diode. [6+4+5]
- 6.a) Explain the theory of origin of magnetic moment.  
b) Derive the expression for internal fields in a dielectric.  
c) Explain the principle of magnetic levitation and mention the applications of superconductors. [5+5+5]
- 7.a) What are the main parts of a Laser?  
b) Describe the construction and working of He – Ne laser.  
c) Derive the relation for numerical aperture and acceptance angle of a fiber. [4+6+5]
- 8.a) What are the basic requirements of an acoustically good hall.  
b) Derive expression for time of reverberation using suitable formula.  
c) What is acoustic quieting? What are different methods of quieting? [6+5+4]

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