

Code No:131AJ

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B .Tech I Year I Semester Examinations, December - 2018****PROFESSIONAL COMMUNICATION IN ENGLISH****(Common to EEE, ECE, 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) **Fill in the blanks with the right article wherever necessary.** [2]  
i) \_\_\_\_\_ tea of Assam is of good quality.  
ii) The preferential voting system ensures \_\_\_\_\_ truly representative winner.
- b) **Fill in the blanks with the right preposition given in brackets.** [3]  
i) The ball sailed \_\_\_\_\_ (with/through/over) his head.  
ii) Tourists sail \_\_\_\_\_ (through/on/over) the canals, eat lunch on board; walk through the muddy paddy fields and meet with the villagers.  
iii) We need to change the way crackers are used. We need to agree \_\_\_\_\_ (on/with/to) an overall cap.
- c) **Fill in the blanks with suitable form of the word given in brackets.** [2]  
i) The result was shocking. It was simply \_\_\_\_\_ (believe).  
ii) The plane went into a stall and the pilot could not control it. It was a problem of \_\_\_\_\_ (function).
- d) **Fill in the blanks with the right homophone given in brackets.** [3]  
i) He is a trusted \_\_\_\_\_ (confidant/confident) of the President.  
ii) We \_\_\_\_\_ (rowed/rode) down the river all day.  
iii) She \_\_\_\_\_ (sowed/sewed) the seams and hemmed the border.
- e) **Fill in the blanks with the right phrasal verb given in brackets.** [2]  
i) If you \_\_\_\_\_ (play on/play down) your part in the project, you won't get the credit you deserve.  
ii) You cannot \_\_\_\_\_ (get along/get around) the fact that smoking kills.
- f) **Fill in the blanks with suitable forms of the verbs given in brackets.** [3]  
i) By the time you finish this programme, you \_\_\_\_\_ (overshoot) into others' slot.  
ii) Wait! I \_\_\_\_\_ (write) a letter now.  
iii) Let's \_\_\_\_\_ (not, pollute) the rivers in the name of rituals. We have to follow them in their right spirit of promoting eco-friendliness too.
- g) **Fill in the blanks with the right question tag given in brackets.** [2]  
i) I love listening to classical songs, \_\_\_\_\_ (aren't I/don't I)?  
ii) Let's enjoy ourselves, \_\_\_\_\_ (shall we/shan't we)?
- h) **Fill in the blanks with the right word given in brackets.** [3]  
i) A short introduction to the book, typically written by a person other than the author is called \_\_\_\_\_ (foreword/forward).  
ii) Rahul has \_\_\_\_\_ (Already/all ready) submitted his project.  
iii) Drainage schemes have helped to \_\_\_\_\_ (mitigate/militate) this problem.

- i) **Fill in the blanks with suitable idiom given in brackets.** [2]  
 i) I was about to get a hike in my salary But it didn't happen due to the merger.  
 Well, there was a slip between \_\_\_\_\_(the body and the legs/the cup and the lips.)  
 ii) There is \_\_\_\_\_(a neck to neck/a chip on his shoulder). He keeps being angry today  
 because something has occurred in the past.
- j) **Fill in the blanks with the right one word substitute given in brackets.** [3]  
 i) A person who believes that people are self-centred and insecure is  
 \_\_\_\_\_(cynic/stoic)  
 ii) Pathological fear of high places is \_\_\_\_\_(xenophobia/acrophobia).  
 iii) A person coming to a foreign land to settle there is \_\_\_\_\_(emigrant/immigrant).

### PART - B

( 50 Marks)

- 2.a) What is the significance of empowering a child, a teacher, an individual in the vision of developed India? Justify your answer with reference to Dr. A.P.J. Kalam's Presidential Address.
- b) Write a paragraph on any one of the following in about 150 words. [5+5]  
 • Advantages of learning a foreign language  
 • B.Sc., vs. B .Tech course and their career opportunities.

**OR**

- 3.a) How did Dr. Kalam have an unparalleled career as a defence scientist and what is the message that you can infer from his Presidential Address?
- b) What are the essential characteristics of a good paragraph? Exemplify. [5+5]
- 4.a) According to Nadella, what are the unique selling points of Microsoft?
- b) What are the key points to be considered while drafting a cover letter to accompany a Resume? [5+5]

**OR**

- 5.a) How did Satya paraphrase a quote from Oscar Wilde that we need to believe in the impossible and remove the improbable? Explain.
- b) Send in an e-mail of complaint to the Sales Manager of the company asking for repair or replacement or compensation. [5+5]
- 6.a) As a student coordinator, write a letter to your friends inviting them to the technical fest in your college by providing necessary details.
- b) What are the parts of a formal letter? Explain. [5+5]

**OR**

7. Write a letter of application along with your resume for the post of System Analyst in TCS, Hyderabad. [10]

- 8.a) How did J.C. Hill prove the point that 'whenever you are arguing with someone about a point, remember that there is quite a good chance that you are wrong, however confident you feel about it'? Narrate the experiment on the picture of a bull-fight.
- b) Make a precis of the following passage and give a suitable title.

When we survey our lives and efforts we soon observe that almost the whole of our actions and desires are bound up with the existence of other human beings. We notice that whole nature resembles that of the social animals. We eat food that others have produced, wear clothes that others have made, live in houses that others have built. The greater part of our knowledge and beliefs has been passed on to us by other people though the medium of a language which others have created. Without language and mental capacities, we would have been poor indeed comparable to higher animals.

We have, therefore, to admit that we owe our principal knowledge over the least to the fact of living in human society. The individual if left alone from birth would remain primitive and beast like in his thoughts and feelings to a degree that we can hardly imagine. The individual is what he is and has the significance that he has, not much in virtue of the individuality, but rather as a member of a great human community, which directs his material and spiritual existence from the cradle to grave. (192 words). [5+5]

**OR**

- 9.a) Where do good manners ultimately come from? Present your argument with relevant examples from 'Good Manners' by J.C. Hill.
- b) What are the stages involved in making a precis of any passage? [5+5]
- 10.a) What are the characteristics of an efficient reader? Explain the do's and don'ts of reading skills.
- b) What are the parts of a report written in manuscript format? Explain the do's and don'ts of a formal report writing. [5+5]

**OR**

11. Submit a report in the manuscript format on the feasibility of establishing a Sports Complex in your college. [10]

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Code No: 51004

**R09**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.Tech I Year Examinations, December - 2018**

**ENGINEERING PHYSICS**

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

**Time: 3 hours**

**Max. Marks: 75**

**Answer any five questions  
All questions carry equal marks**

- 1.a) Explain various types of bonding in the solids with suitable example.  
b) Deduce the packing factor for simple cubic, BCC and FCC structures. [7+8]
- 2.a) Explain Bragg's law and its uses. Derive Bragg's law.  
b) Explain Schottky and Frankel defects with the help of suitable figures. [7+8]
- 3.a) Explain the de-Broglie hypothesis.  
b) Derive time independent Schrödinger's wave equation for a free particle. [7+8]
- 4.a) Discuss the salient features of Kronig-Penny model of a crystal.  
b) Define density of states with an example and state its importance. [7+8]
- 5.a) Derive an expression for the density of holes in an intrinsic semiconductor.  
b) What is the Hall Effect? Obtain an expression for Hall coefficient for p-type of semiconductor. [7+8]
- 6.a) What is meant by polarization mechanism in dielectrics? Discuss the different types of polarization mechanisms in dielectrics.  
b) Explain Clausius-Mosotti relation in dielectrics subjected to static fields. [7+8]
- 7.a) What is population inversion? How is it achieved?  
b) Describe the construction and working of Ruby laser? [7+8]
- 8.a) What are the basic requirements of an acoustically good hall?  
b) Explain the various factors that affect architectural acoustics. What are their remedies? [7+8]

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**R16****Code No:131AD****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD****B.Tech I Year I Semester Examinations, December - 2018****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) | Write about Computer Systems in detail.         | [2] |
| b)   | Explain flowchart symbols with an example.      | [3] |
| c)   | Explain about scope rules.                      | [2] |
| d)   | Write the array applications in brief.          | [3] |
| e)   | Write about Pointer Arithmetic with an example. | [2] |
| f)   | Explain arrays of strings in C.                 | [3] |
| g)   | Explain self referential structures in brief.   | [2] |
| h)   | Write short note on Enumerations.               | [3] |
| i)   | Write about File streams.                       | [2] |
| j)   | Write a program for Opening and Closing files.  | [3] |

**PART-B****(50 Marks)**

- |           |   |       |
|-----------|---|-------|
| 2.a)      | Explain in detail about Selection Statements in C.                |       |
| b)        | Discuss about string integers and real numbers.                   | [5+5] |
| <b>OR</b> |   |       |
| 3.a)      | Explain in detail about Computer Languages.                       |       |
| b)        | Discuss about Expressions, operator precedence and associativity. | [5+5] |
| 4.a)      | Explain types of Functions.                                       |       |
| b)        | Explain multidimensional arrays in detail.                        | [5+5] |
| <b>OR</b> |   |       |
| 5.a)      | Write a program to implement bubble sort.                         |       |
| b)        | Explain about recursive functions in detail.                      | [5+5] |
| 6.a)      | Discuss about Pointers for inter function communication.          |       |
| b)        | Explain about String manipulation functions.                      | [5+5] |
| <b>OR</b> |   |       |
| 7.a)      | Explain in detail about void pointer with examples.               |       |
| b)        | Explain String Concepts in detail.                                | [5+5] |

- 8.a) Define Structure and explain initialization of structures with an example.  
b) Discuss about Pre-processor commands. [5+5]

**OR**

- 9.a) Write a C program to implement unions.  
b) Explain structures and functions with an example program. [5+5]

- 10.a) Explain Binary File modes in brief.  
b) Write a C program to implement feof() and ferror() functions . [5+5]

**OR**

- 11.a) Explain about fseek(), ftell() and rewind() file functions with examples.  
b) Write a C program reverse the contents of a given file. [5+5]

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**R18**

Code No: 151AH

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B.Tech I Year I Semester Examinations, December - 2018

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) **Provide prefixes to the following words:** [2]  
i) lead ii) judge
- b) **Provide synonyms to the following words:** [2]  
i) skinny ii) admire
- c) **Provide meanings to the following suffixes:** [2]  
i) -cide ii) -logy
- d) **Provide meanings to the following words:** [2]  
i) amicable ii) ironical
- e) **Provide full forms to the following Abbreviations:** [2]  
i) NATO ii) WHO
- f) **Provide antonyms by using prefixes to the following words:** [3]  
i) capable ii) acceptable iii) connect
- g) **Provide antonyms to the following words:** [3]  
i) appreciate ii) definite iii) heavy
- h) **Correct the following sentences:** [3]  
i) He is coming to college regularly.  
ii) John is working in TCS since 2001.  
iii) Certainly , I complete the project by 2020.
- i) **Identify and delete the redundant words in the following sentences.** [3]  
i) She went to ATM machine to draw money.  
ii) He has seen an anonymous stranger near his house.  
iii) He is the younger of the two twins.
- j) **Use the following prepositions in your own sentences:** [3]  
i) across ii) before iii) along

**PART - B****(50 Marks)**

2. Discuss C.V. Raman discovery of scattering of light. [10]
- OR**
3. Give an account of C.V. Raman's contribution to science. [10]

4. Write a detail note on the school of art and architecture in India. [10]
- OR**
5. List out the places known for ancient architectures in southern India? [10]
6. Explain skimming and scanning method of reading. [10]
- OR**
7. Describe your favorite location in your own words. [10]
8. Discuss the benefits of eating natural food. [10]
- OR**
9. Discuss the health effects of refined grains in your diet. [10]
10. What are the elements of a good report? [10]
- OR**
11. Write a report on college day celebrations in your college. [10]

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Code No:111AF

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD****B.Tech I Year Examinations, December - 2018****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) Define variable. [2]
- b) Explain the syntax of 'for' loop with an example. [3]
- c) Explain about 'auto' storage class. [2]
- d) What is an array? Explain. [3]
- e) How to use pointers? [2]
- f) What is String ? [3]
- g) Define union. [2]
- h) Explain a syntax for printf() function. [3]
- i) What is queue? [2]
- j) What is Dequeue? [3]

**PART - B****(50 Marks)**

- 2.a) Briefly explain about Bitwise operators.
- b) Write a C Program to swap two numbers. [5+5]
- OR**
- 3.a) Briefly explain about switch statement.
- b) Write a C Program to demonstrate the break statement. [5+5]
- 4.a) Write a short note on recursive functions with an example.
- b) What are the limitations of recursion? [5+5]
- OR**
- 5.a) Describe the Pre Processor commands.
- b) Write a C Program to find the multiplication of two matrices. [5+5]
- 6.a) Write a procedure to increment a pointer.
- b) Write a short note on Pointer to pointer. [5+5]
- OR**
7. Write a short note on following
  - a) string output functions
  - b) strcmp(s1,s2). [5+5]
8. Write a C Program to demonstrate Pointer to structures. [10]
- OR**
9. Briefly explain about getchar() and putchar() functions. [10]
10. Write a C program to demonstrate push and pop operations. [10]
- OR**
- 11.a) Explain the bubble sort technique. [5+5]
- b) Write a short note on binary search.

**R18**

Code No: 151AD

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD****B.Tech I Year I Semester Examinations, December - 2018****ENGINEERING GRAPHICS****(Common to CE, ME, EIE, MCT, MMT, AE, MIE, PTM)****Time: 3 hours****Max. Marks: 75****Answer any five questions****All questions carry equal marks**

1. A stone is thrown from a 4 m high building and at its highest flight, the stone just crosses the top of a 10 m high tree from the ground. Trace the path of the projectile, if the horizontal distance between the building and the tree is 5 m. Find the distance of the point from the building where the stone falls on the ground. [15]

**OR**

2. Draw a hypocycloid generated by a rolling circle of 60 mm diameter for one complete revolution. The radius of the directing circle is 100 mm. draw a tangent and a normal to the hypocycloid at 50 mm from the centre of the directing circle. [15]
- 3.a) Draw the projection of two points on the same reference line, point C being 15 mm below HP and 50 mm in front of VP and point D being 25 mm above HP and 40 mm behind VP.
- b) The top view of a 75 mm long line measures 50 mm. the end P is 15 mm above HP and 50 mm in front of VP. The end Q is 20 mm in front of VP and above the HP. Draw its projections and determine its true angles and apparent angles with the reference planes. [5+10]

**OR**

4. A triangular plane ABC has its 70 mm long base AB, and a 100 mm long altitude. The base is on the HP and inclined at  $30^\circ$  to the VP. The plane is inclined to the HP in such a manner that AC lies on a plane perpendicular to both the HP and VP. Draw the projections of the plane and find its inclination with HP. [15]
5. A hexagonal prism having a base with 25 mm edge and 60 mm long axis, has an edge of its base in the VP and is inclined at  $60^\circ$  to HP. Draw its projections when the edge of the other base farthest away from the VP is at a distance of 70 mm from the VP. [15]
6. A square pyramid having a base with a 40 mm side and 60 mm long axis rests on one of its triangular faces on the ground. The top view of the axis makes an angle of  $30^\circ$  with the VP. Draw the final projections of the square pyramid. [15]
7. A square prism, having a base with a 40 mm side and a 70 mm axis, rests on its base on the H.P. with edges of the base equally inclined to the V.P. Draw front view, sectional top view and true shape of the section when it is cut by an A.I.P., such that the true shape of section is Equilateral triangle with a 45 mm side. [15]

**OR**

8. A vertical square prism having its faces equally inclined to VP is completely penetrated by a horizontal cylinder, the axis of which is parallel to VP and 6 mm away from that of the prism. Draw the projections of solids showing curves of intersection. The length of the side of the base of the prism is 50 mm and the diameter of the cylinder is 40 mm. [15]

- 
- Isometric view of a mechanical part. The part has a base with a rounded front edge (R13) and a vertical back edge (R15). The base is 35 units wide and 30 units high. A central vertical slot is 10 units wide and 10 units deep. The top surface is 25 units wide and 10 units high. The front edge of the base is rounded with a radius of R13. The back edge of the base is rounded with a radius of R15. The part is shown with a perspective view of the front face.

OR

- 
- Orthographic projections of a mechanical part:
- Front View:** Shows a base of 100 units. The top surface is sloped, rising from the left. The sloped surface has a horizontal run of 40 units and a vertical rise of 20 units. The top surface is 20 units wide. The base is divided into three sections: 25 units, 20 units, and 30 units.
  - Side View:** Shows a base of 45 units and a height of 50 units.
  - Top View:** Shows a base of 100 units and a height of 30 units. A section labeled 'A' is indicated.

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Code No:111AF

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD****B.Tech I Year Examinations, December - 2018****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.

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**PART - A****(25 Marks)**

- |      |   |     |
|------|---|-----|
| 1.a) | Define variable.                                  | [2] |
| b)   | Explain the syntax of 'for' loop with an example. | [3] |
| c)   | Explain about 'auto' storage class.               | [2] |
| d)   | What is an array? Explain.                        | [3] |
| e)   | How to use pointers?                              | [2] |
| f)   | What is String ?                                  | [3] |
| g)   | Define union.                                     | [2] |
| h)   | Explain a syntax for printf() function.           | [3] |
| i)   | What is queue?                                    | [2] |
| j)   | What is Dequeue?                                  | [3] |

**PART - B****(50 Marks)**

- |           |   |       |
|-----------|---|-------|
| 2.a)      | Briefly explain about Bitwise operators.                      |       |
| b)        | Write a C Program to swap two numbers.                        | [5+5] |
| <b>OR</b> |   |       |
| 3.a)      | Briefly explain about switch statement.                       |       |
| b)        | Write a C Program to demonstrate the break statement.         | [5+5] |
| 4.a)      | Write a short note on recursive functions with an example.    |       |
| b)        | What are the limitations of recursion?                        | [5+5] |
| <b>OR</b> |   |       |
| 5.a)      | Describe the Pre Processor commands.                          |       |
| b)        | Write a C Program to find the multiplication of two matrices. | [5+5] |
| 6.a)      | Write a procedure to increment a pointer.                     |       |
| b)        | Write a short note on Pointer to pointer.                     | [5+5] |
| <b>OR</b> |   |       |
| 7.        | Write a short note on following                               |       |
| a)        | string output functions                                       |       |
| b)        | strcmp(s1,s2).  | [5+5] |

8. Write a C Program to demonstrate Pointer to structures. [10]  
**OR**
9. Briefly explain about getchar() and putchar() functions. [10]
10. Write a C program to demonstrate push and pop operations. [10]  
**OR**
- 11.a) Explain the bubble sort technique.  
b) Write a short note on binary search. [5+5]

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