2020
HAPPY NEW YEAR

THE BYTE

NOV-DEC
2019

COMPUTER SCIENCE & ENGINEERING DEPARTMENT

"Today a reader, tomorrow a leader."
– Margaret Fuller

IMS ENGINEERING COLLEGE

NH-24, Adhyatmik Nagar, Near Dasna,
Distt: Ghaziabad. Uttar Pradesh-201009.

This is the monthly e-magazine released by Computer Science Department for sharing of information & updating students with information useful to them and helpful in their development.

THE BYTE

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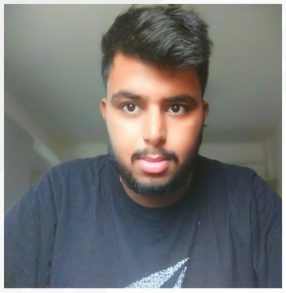

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INSTITUTE

Vision -

Our vision is to impart vibrant, innovative and global education to make IMS the world leader in terms of excellence of education, research and to serve the nation in the 21st century.

Mission -

- To develop IMSEC as a centre of Excellence in Technical and Management education.

- To inculcate in its students, the qualities of Leadership, Professionalism, Executive competence and corporate understanding.

- To imbibe and enhance Human Values, Ethics and Morals in our students.

- To transform students into Globally Competitive professionals.

DEPARTMENT

Vision -

To be recognized as a Centre of Excellence imparting quality education and creating new opportunities for students to meet the challenges of technological development in Computer Science Engineering.

Mission -

- To promote technical proficiency by adopting effective teaching learning processes.

- To provide environment opportunity for students to bring out their inherent talents for all round development.

- To promote latest technologies in Computer Science Engineering and across disciplines in order to serve the needs of Industry, Government, Society and the scientific community.

- To educate students to be Successful, Ethical and Effective problem solvers and Life Long learners who will contribute positively to the society.

PROGRAM EDUCATIONAL OBJECTIVES

• Graduates of the program will be able to apply fundamental principles of mathematics, engineering, management, basic programming languages in problem understanding formulating its solutions. They will be aware of the role of computing in multiple disciplines.

• Graduates will learn to apply the principles of advanced computer programming approaches, software engineering, project management, emerging techniques tools while developing real world computational solutions and projects.
Graduates should also learn to collaborate apply innovative aspects in problem solving.

• Graduates will enhance their technical, aptitude, communication professional skills through value addition programs, project based learning, engineering events, self learning, research, interaction with industry alumni. Help our graduates to establish a productive Computer Science and Engineering career in Industry, Government or Academia.

• To promote the understanding of professionalism, ethics, social responsibilities among graduates. They will contribute to the society through activ e engagement with professional societies, schools, civic organizations or other

PROGRAM SPECIFIC OUTCOMES (PSO'S)

• Student should learn to demonstrate the basic understanding of Computer Science Engineering fundamentals, programming, and professional/ social ethics and apply mathematical foundations to design solve computational problems.

• Student should learn to apply analysis, design, development, testing management principles in the development of computational solutions software systems. He/she is expected to function effectively in development teams.

• Student is expected to gain enough value addition and technical expertise on latest industry specific skills through self learning training. They are expected to have good communication skills with correct attitude and aptitude.

• Students are expected to inspire for lifelong learning do well in their professional careers. They are also expected to act as a good citizen by inculcating in them moral values ethics.

Message by Head of the Department . . . . .

Dear students,

On behalf of the department I wish you a very happy & healthy new year 2020. I would advise you all to focus on your technical & interpersonal skills. The competition today is very fierce and unless you have additional feathers on your cap, things will become very difficult tomorrow. Do not just aim at getting a job in the industry, think about how you will be able to survive in this competition for longer duration. Rewards never come easy in life; you need to earn them and sometimes you also need to go an extra mile.

Wishing you all the success ahead

Dr. Pankaj Agarwal

HOD, CSE

From editorial desk.....

It is with immense happiness that we place in the hands of our readers this edition of 'THE BYTE'. This magazine is a platform that exhibits the literary skills, innovative ideas of teachers and students. It was crazy when we stated it but when it all come together, we were more than happy.

I would like to thank to Dr. Pankaj Agarwal (HOD CSE), editorial team members and all student coordinators for helping us pull this through.

We express our considerable appreciation to all the authors of the articles in this magazine. These contributions have required a generous amount of time and effort. We hope you enjoy reading these articles, as seen through the TMS student's journalistic eye.

I hope you've enjoyed the last 5 Years of 'THE BYTE' Magazine, while you are about to dig into 2020, I wanted to send you very hearty New Year's wishes from everyone here at THE BYTE Magazine.

Thank You all!!

Chief Editor

THE BYTE

INSIDE.....

Glimpse of Department Activities in 2019

Alumni sports meet on 26th Jan 2019

Interaction with Mr. Ayush Agarwal,CEO, Trinity Apps Private Ltd


Industrial Visits




Coding Contest on Hackerrank by **CodeRaiders** Programming Club (18 Feb 2019)

Workshop on "Machine Learning with Python"
(9th Feb 2019)

Winners of the Battle of Bands event at A.K.T.U. State Level Cultural Fest (Pravah 2k19) on 8th March 2019

Successful completion of AKTU funded project "Multipurpose Drone"

Principal investigators: Dr. Pankaj Agarwal & Mukesh Singh

National Conference on Innovative Computing 20 April 2019




One week FDP on "Data Analytics with special focus on Python" during 22July 2019 to 26 July 2019 in collaboration with Electronics & ICT Academy of IIT Roorkee


ALUMNI MEET ON 28 SEP 2019

Spark 2019- the annual student Innovative Project Contest

ABHIVYAKTI 2019-A Techno Cultural Event by BYTE Club

RUNNER-UP in FOOTBALL
At CHRIST UNIVERSITY Delhi-NCR

BOT Mania - an Inter College Robo-Race Competition on
11th Oct 2019

Cyber Security Awareness Program on 23rd Oct 2019

Research Publications 2019

Student Research Publications 2019

1. Labeeb Ahmed, Naveen Singh, Imran Khan, Himendra Kumar, "***Developers Community-DEVCOM***", International Research Journal of Engineering and Technology (IRJET) Volume:6 Issue:4 ISSN: 2395-0056 (2019)
2. Vyom Madhur,Varun Tyagi, Rakshit Chaudhary,Rudransh Sharma," ***kissan Vraddhi App***", International journal of advanced research and development. Volume:4 Issue: 4 (2019)
3. Sonali Rawat, Shalvika Shrotriya, Juhi Chaudhary, "***HMM Application In Isolated Word Speech Recognition***", International Journal of Innovative Research in Advanced Engineering (IJIRAE) Volume: 6 Issue:4, ISSN: 2349-2163 (2019)
4. Akshat Pathak ,Aviral Ruhela , Anshu K Saroha , Anant Bhardwaj, "***Examining Robustness of Google Vision API Based on the Performance on Noisy Images***", International Journal of Computer Sciences and Engineering IJCSE Volume:7 Issue: 3 ISSN: 2347-2693 (2019)
5. Yash Pratap Singh ,Vrinda Sharma, Tushar chaudhary,Vipin Singh; "***Plagiarism Detection***",National Conference on Innovative Computing (2019)
6. Saurabh kumar, Anand Kumar Singh, Shubhi garg, Iram abid; "***Brain Tumor Detection Using Image Processing***" , International journal of information science and application (2019)
7. Manish Kumar Pandey, Suryaprakash Shukla, Sandeep Pal ,Ravi Kashyap; "***Food and Medicine delivery in Train***", IJRASET (2019)
8. Harashit Mitra , Neha Sharma , Pradeep Yadav , Nitin Sahu , Vishan Kumar Gupta ; "***Brain Controlled Wheelchair And Cursor Control***", International Journal of Information Sciences and Application (2019)
9. Avneesh Jha, Ajay Singh Chahar, Abhishek Singh Chauhan; "***Opinion mining and trend analysis on twitter data***"; IMSEC National Conference On Innovative Computing (2019)
10. Diksha Khurana, Abhishek Gupta; "***Health Prediction System Using Data Mining***" , National Conference On Innovative Computing 2019,
11. Chandan Misra, Abhishek Kr. Singh, Abhishek Kr. Sonkar, Akshay Gaur; "***Cotton Crop Disease Detection System***" , National Conference On Innovative Computing 2019,
12. Abhinav singh, Arpit garg, Astha bansal; "***Digitization of Attendance Routine***" , Information Sciences and Application ,
13. Komal Singh,Harshit Gupta,Pranjul Singhal ; "***Development Of Lan Chat Server***" , International Research Journal of Engineering and Technology IRJET Volume:6 Issue:4 ISSN 2395-0056 (2019)
14. Salman Mushtaque, Shreya Singh, Srishti Robin, Vaibhav Gupta; "***Talkversity***", International Journal of Advance Research and Development IJARND Volume:4 Issue:4 (2019)
15. Deeksha Pal, Amrita Pratap, Anurag Shakya; "***Helper Bot***" , International Journal of Advance Research and Development IJARND Volume:4 Issue: 4 (2019)
16. Yachana singh , Kunal bansal , Jagveer singh , Satish gupta; "***Online transparent charity system***", National Conference On Innovative Computing 2019
17. Akshat Pathak , Aviral Ruhilla ,Anshul Saroha, Anant Bhardwaj; "***Examining Robustness of Google Vision API Based on the Performance on Noisy Images***" , International Journal of Computer Sciences and Engineering, (2019)
18. Vishal Agrawal, Nitin Chauhan, Dr.Suveg Moudgil; "***Attributed-based Encyption with Key Policy***" , International Journal of Research in Electronics and Computer Engineering(IJRECE) (2019)
19. Saurabh Kumar,Anand Kumar Singh,Shubhi Garg,Iram Abid,Vivek Jain; "***Brain Tumor Detection Using Image Processing***" National Conference On Innovative Computing IMSEC (2019)
20. Divyansh Tiwari, Arpit Kumar, Ayush Tripathi ; "*Virtual Doctor*" , INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY Volume:5 Issue: 2 (ISSN: 2454-132X) (2019)

Student Research Publications 2019

21. Suryansh Singh, Saurabh Verma, Shivani Chaudhary, Shourya Gupta; "***BANANA HUNT USING AUGMENTED REALITY***", IJARND (International Journal for Advance Research and Development. Volume:4 Issue:4 (2019)
22. Ashwani Kumar,Divyanshu Srivastava,Abhishek Sethi,Govind narayan jha; "***Android And Web Based Lecture Notes Application***" , National Conference Innovative Computing (2019)
23. Swarnim Varshney ,Anjali Sharma ; "***Vehicle Recognition Using Optical Character Reader***", National Conference On Innovative Computing, (2019)
24. Sanchit Gupta,Shivam Kaul ,Syed Abbas Haider; "***Image Steganography Using C#"*** , International Journal of Advance Research and Development, (2019)
25. Harshit Kumar Singh, Neetish Singh, Rajat Yadav, Shavani Agarwal; "***Human Aativity Recognition Using Smartphone Sensors***" , National Conference Innovative Computing, IMSEC (2019)
26. Anmol Jindal , Aman Gupta; "***Road Detection and Segmentation from Aerial Images using CNN based System***" , National Conference Innovative Computing ,IMSEC. (2019)
27. Sudhanshu, Suraj, Vaibhav Anish;"***Twitter Data Analysis for Indian Elections***", International Journal of Advance Research, Ideas and Innovations in Technology. (2019)
28. Abhishek Sachan, Abhishek Rai, Mansi Varshney; "***IMS COMMUNE: A better Connectivity***", National Conference on Innovative Computing, National Conference On Innovative Computing IMSEC (2019)
29. Aman Rathore, Adarsh Kumar Singh, Ayush agarwal, Anuj Agarwal; "***Fittrax–AI Diet Consultant***", National Conference Innovative Computing, IMSEC (2019)
30. Pranjul Singhal,Harshit Gupta,Komal Singh; "**Development of LAN Chat Server**", International Research Journal of Engineering and Technology.
31. Manish Bansal, Praveen Tyagi, Rohan Singhal; "***Aerial Crop Analysis***", International Journal for Research & Development in Technology, Volume-11,Issue-5, ISSN: 2349-3585 (May-2019)
32. Vaibhav Anand pandey, Utkarsh Upadhyay, Prashant Chauhan, Hritik Agrawal; "***Property System***", International Journal of Advance Research and Development. (2019)
33. Harshit Gupta, Lokesh kr. Tiwari, Kartik, Lav Agarwal, Atul Kumar; "***Sentiment Analysis on Online Product Review***", International Journal of Innovative Science and Research Technology. Volume:4 Issue:3 ISSN: 2456-2165 (2019)
34. Navya,Vaishnavi,Uddeshya,Vikalp; "**Railway Food Delivery System**", National Conference On Innovative Computing IMSEC (2019)
35. Harshit Gupta,Komal Singh,Pranjul Singhal; "***Development of Lan Chat Server***", International Research Journal of Engineering and Technology (IRJET). (2019)
36. Rupal Raturi, Soumya Gupta , Shrishty Maheshwary ,Vishal Singh; "***Restaurant Digitalization***", National Conference Innovative Computing IMSEC (2019)
37. Diksha khurana ,Abhishek Gupta; "**Health Prediction System using Data Mining**", National Conference Innovative Computing ,IMSEC (2019)
38. Rajat Yadav, Neetish Singh, Harshit Singh; "***Human activity recognition using smartphone sensors***", National Conference Innovative Computing, IMSEC (2019)
39. Pradeep yadav, Harashit mitra, Neha sharma, Nitin Sahu, Vishan kumar gupta; "***Brain Controlled Wheel Chair And Cursor Control***", National Conference Innovative Computing, IMSEC (2019)
40. Prashant Sisodiya; "***Live Crime Reporter***", International General of Innovations in Engineering and Science. (2019)
41. Maghvendra Singh,Harshit Saran; "***Air Pollution Prediction Using Machine Learning***", International Journal of Innovations in Engineering and Science. Volume:4, ISSN: 2456-3463 (2019)
42. Shreya Agarwal , Vikash Kumar Mishra, Sourav Pratap Singh, Shivam Sharma; "***Reality Editor***", International Journal Of Advance Research and Development. (2019)
43. Shivam kaul, Sanchit Gupta, Syed Haider Abbas; "***Image Steganography Using C#***", International Journal For Advanced Research and Development (IJARD). (2019)
44. Mukesh Yadav,Rishabh singh,Priyavart Raghav,Rahul Kumar; "***Fake News Detection System***", National Conference Innovative Computing ,IMSEC (2019)

Student Research Publications 2019

45. Vineet Yadav , Ujjawal Goel , Tanuj Kumar , Utkarsh lakhera; "***Drug Activity Prediction of Small Drug Molecules using Random Forest Model***", International Journal of Advance Research and Development Volume: 4 Issue:4 (2019)

46. Akash Roshan Chaurasia, Abhishek Gupta, Anand; "***BLOOD VESSEL SEGMENTATION IN RETINAL IMAGES USING MATLAB***",International Research Journal of Engineering and Technology (2019)

47. Pranshul Goel, Ranjeet kumar Maurya, Mitali Chauhan, Jyoti Chaurasia; "***Gate Security System***", International journal of innovations in engineering and science. Volume 4, ISSN: 2456-3463 (2019)

48. Nitika Kapoor, "KINETIC ***MONTE-CARLO SIMULATION FOR GROWTH OF NANOWIRE***", International Journal for scientific research and development. (2019)

49. Mohd Shariq Ansari,Mohd Salman,Kajal, Nimisha Sachan, "***Semantic Segmentation For Brain Tumour MRI Image Segm Entation***" International Journal of Innovations In Engineering and Science. Volume: 4, ISSN: 2456-3463 (2019)

50. Sajjan Kumar Singh, Sambhav Mishra, Satyam Sharma; "***Virtual Classroom***", International Research Journal of Engineering and Technology. (2019)

51. Yachna,Kunal,Jagveer,Satish; "***Online transparent charity system***", National Conference On Innovative Computing (2019)

52. Rajarshi sahu, Mannat Yadav; "***Object recognition in live video feed***", International Journal of Innovations in Engineering and Science. (2019)

53. Shubham Chaurasia, Manvendra Singh, Sachin Gupta, Vibhav Kumar; "***Data Analysis, Visualization and Predictive Modeling***" , National Conference on Innovative Computing (2019)

54. Hari Shankar Tiwari, Kumari Swati Gupta, Mitali Srivastava, Nitin Sharma, Vishan Gupta; "**Activity Prediction Of Pre-Clinical Trial Drugs Of Estrogen Receptors Using Machine Learning**", International Journal of Innovations in Engineering and Science. Volume: 4, ISSN: 2456-3463 (2019)

55. Vikash Kumar Mishra,Shreya Agrawal,Sourav Pratap Singh,Shivam Sharma; "***REALITY EDITOR***", International Journal of Advance Research and Development. (2019)

56. Vaibhav Gangwar , Vaibhav Patel; "***Data leakage detection and Security Strategies***" International Journal of Advance Research And Development Volume:4 Issue:4 (2019)

57. Arpit Kumar,Divyansh Tiwari,Ayush Tripathi; "***VIrtual Doctor***:, International Journal of Computer Trend and Technology (IJCTT) (2019)

58. Shashank Nath Yadav,Shivam Rai,Shivansh Srivastava,Shivang Bhatnagar; " ***Stock Market Prediction using Big Data Analytics***"; National Conference on Innovative Computing IMSEC (2019)

59. Ranjeet Rai, Urvashi Tyagi, Vikas Kumar Mishra, Vishal Singh; "Effect of using Online Discussion Forums on Students" , National Conference on Innovative Computing 2019.

60. Nishant Srivastava ,Roopak Singh, Rishabh Gupta, Mandeep Singh; "***Detecting Distracted Driver***", International Journal for Scientific Research & Development (IJSRD) Volume: 7 Issue:2 ISSN: 2321-0613

61. Shreya Singh, Srishti Robin, Vaibhav Gupta, Salman Mushtaque; "Talkverity" , IJARND.

Student Research Publications 2019

62. Ojas Modi, Abhishek Singh Chauhan, Aditya Pandey, Siddharth Mohan ; "Campus Connect: ***A training scheduling System***" , International Journal of Advanced Research and Development Volume:4 Issue: 5

63. A.Rupali, Akhilesh Kumar; "***Malignant Melanoma Detection Using Digital Image Processing***", National Conference on Innovative Computing IMSEC (2019)

64. Vishal Agrawal, Nitin Chauhan, Dr. Suveg Moudgil ; "***Attribute-based Encryption with Key Policy***" , International Journal of Research in Electronics and Computer Engineering.

65. Suraj Gupta, Anish Anand, Vaibhav Kapil,Sudhanshu Singh ; "Twitter data analysis for Indian election" , Internaltional Journal Of Advance Research Ideas and Innovations In Technology .

66. Saurabh Kumar ,Anand kumar Singh, Shubhi Garg, Iram Abid, Vivek Jain ; "***Brain tumor detection using image processing***, International journal of information sciences and application.

67. Aditya Pratap Singh, Anubhav Kumar Verma, Dushyant Singh, Akash Jaiswal "***Multi Level Marketing***" National Conference On Innovative Computing (May 2019)

68. Archit Chaturvedi, Ayush Kaushik, Saurabh Kumar Singh, Shivansh Srivastava ***"Over Speeding Dectection And Control"*** International Journal Science Research Development (2019)

69. Nitika Kapoor, Reedam Chaudhary "***Simulation of Nanowire Growth Using Monte-Carlo Method***" International Journal for Scientific Research & Development Volume:7 Issue 03 ISSN: 2321-06113 (2019)

70. Abhilash Patel, Raj Kunwar Singh; "***A Dynamic Real Time Car Sharing System***" International Journal for Scientific Research & Development ISSN: 23210613 (2019)

71. Sagar Saini, Vineet Singh, Sanjeet Singh, Shadil Khan; "***Alzheimer's Virtual Caregiver***" National Conference On Innovative Computing in IMSEC (2019)

72. Nikunj Raj; "***Working and Use of the Crie APP***" (2019)

73. Nitin Sahu, Harashit Mitra, Neha Sharma, Pradeep Yadav; "***Brain Controlled Wheel Chair And Cursor Control***" (2019)

74. Yachana Singh, Kunal Bansal, Jagveer Singh, Satish Chand; "***Online Tranparent Charity System***" (2019)

75. Rupal Raturi, Shristy Maheshwari, Soumya gupta, Vishal Singh; " ***Restaurant Digitalization***" (2019)

76. Vishal Agarwal, Nitin Chauhan; " ***Attribute-based Encryption with Key Policy***" International Journal of Research in Electronics and Computer Engineering. Volume:7 Issue: 1 ISSN: 2393-9028 (2019)

77. Abhishek Sachan, Abhishek Rai, Mansi Varshney " ***IMS Commune: A Better Connectivity***" National Conference On Innovative Computing IMSEC (2019)

78. Mohammad Wasiuddin, Mohd. Hilal Husain, Nupoor Mittal, Pratiyakshi Kapil "***Online Programming Environment***" International Research Journal of Engineering and Technology, Volume:6 Issue:4 ISSN 2395-0056 (2019)

79. Mohammad Aquib, Nishant Pandey, Prashant Kumar,Roman Aziz, " ***Medical Diagosis***" ISSN: 2321-0613. (2019)

80. Abhishek Gupta, Diksha Khurana " ***Health Prediction System Using Data Mining***" National Conference On Innovative Computing IMSEC (2019)

Student Research Publications 2019

81. Amit Ranjan, Abhishek Trivedi, Abhijeet Shukla, Akhil " ***Secure Sharing of Personal Health Record***" International Journal of Advance Research and Development Volume:4 Issue: 4 (2019)

82. Anivesh Tiwari, Prashant Gupta, Himanshu Chauhan, Vasu Awasthi " ***Student Smart Card***" National Conference On Innovative Computing IMSEC (2019)

83. Kshitij Pratap Srivastava, Abhishek Singh, Satyam Chaurasia, Divyanshu Sachan " ***Face Recognition Based Attendance Mangaement System"*** International Journal of Scientific Research and Development (2019)

84. Navneet Singh Malik, Navdeep Tomar, Omvesh Chaudhary " ***Online Quiz Application***" International Journal of Advance Research and Development, Volume:4 Issue:5 (2019)

Faculty Research Publications 2019

1. Vishan Kumar Gupta, Prashant Singh Rana, "Activity Assessment of Small Molecules in Estrogen Receptor using Multilevel Prediction Model", IET System Biology, 13(3): 147-158, 2019. [SCIE Indexed, IF 1.392]

2. Pankaj Agarwal& Mukesh Kr. Singh, "A multipurpose drone for water sampling & video surveillance", Second IEEE International Conference on Advanced Computational and Communication Paradigms, Sikkim (2019)

3. Vishan Kumar Gupta, Prashant Singh Rana, "Toxicity prediction of small drug molecules of aryl hydrocarbon receptor using proposed ensemble model", Turkish Journal of Electrical Engineering and Computer Science, 27(4): 2833-2849, 2019. [SCIE Indexed, IF 0.625]

4. Vishan Kumar Gupta, Prashant Singh Rana, "Toxicity prediction of small drug molecules of androgen receptor using multilevel ensemble model", Journal of Bioinformatics and Computational Biology, World Scientific Publishers, 2019. [SCIE Indexed, IF 0.991, In Major Revision]

5. Vishan Kumar Gupta, Prashant Singh Rana, "Ensemble Technique for Toxicity Prediction of Small Drug Molecules of the Antioxidant Response Element Signalling Pathway", The Computer Journal, Oxford University Press, 2019. [SCIE Indexed, Impact Factor 0.792, Communicated]

6. Ujjawal Goel, Tanuj Kumar, Utkarsh Lakhera, and Vishan Gupta. "Drug Activity Prediction of Small Drug Molecules Using Random Forest Model," International Journal of Advance Research and Development, 2019.

7. Shivani Agarwal, "By using MADALINE learning with back propagation and Keras to predict the protein Secondary Structure", International Journal of Recent Technology and Engineering (IJRTE),RACCCS-2019; Springer book Series, SCOPUS, Google Scholar,2019

8. Shivani Agarwal, "Prediction of Secondary Structure of Proteins Using Sliding Window and Backpropagation Algorithm"; Applications of Artificial Intelligence Techniques in Engineering; Springer, Singapore, SCOPUS, Google Scholar, 2019

9. Suveg Moudgil, "Effect of Multiple Test Case Sets and Reduced Test Data of a Test Case Set on Mutation Testing", Vivechan International Journal of Research, Vol. 10, Issue 1, 2019.

10. Pankaj Agarwal, Sapna Yadav, "Predictive Model for Analyzing PM 2.5 level of Air quality", communicated in International Innovations in Computational Intelligence and Computer Vision (ICICV-2020) January 17-19, 2020.

11. Khan, N.U., "Handwritten Digits Recognition using Machine learning" Internal Journal of Information Science and Application (IJISA, ISSN 0974-2255) 2019, Vol 11, No 1 Special Issue, pp. 110-113, 2019

12. Khan, N.U., "Self-driving Car Using Soft Computing" Internal Journal of Information Science and Application (IJISA). ISSN 0974-2255) 2019, Vol 11, No 1 Special Issue, pp. 214-219, 2019


ARTICLES

A NOVEL HYPER-HEURISTIC FOR THE BI-OBJECTIVE REGIONAL LOW-CARBON LOCATION-ROUTING PROBLEM WITH MULTIPLE CONSTRAINTS

A Novel Hyper-Heuristic for the Bi-objective Regional Low-Carbon Location-Routing Problem with Multiple Constraints

With the aim of reducing cost, carbon emissions, and service periods and improving clients' satisfaction with the logistics network, Algorithm investigates the optimization of a variant of the location-routing problem (LRP), namely the regional low-carbon LRP (RLCLRP), considering simultaneous pickup and delivery, hard time windows, and a heterogeneous fleet. In order to solve this problem, First construct a bi objective model for the RLCLRP with minimum total cost consisting of depot, vehicle rental, fuel consumption, carbon emission costs, and vehicle waiting time.

This article further proposes a novel hyper-heuristic (HH) method to tackle the biobjective model. The presented method applies a quantum-based approach as a high-level selection strategy and the great deluge, late acceptance, and environmental selection as the acceptance criteria.

By examine the superior efficiency of the proposed approach and model by conducting numerical experiments using different instances. Additionally, several managerial insights are provided for logistics enterprises to plan and design a distribution network by extensively analyzing the effects of various domain parameters such as depot cost and

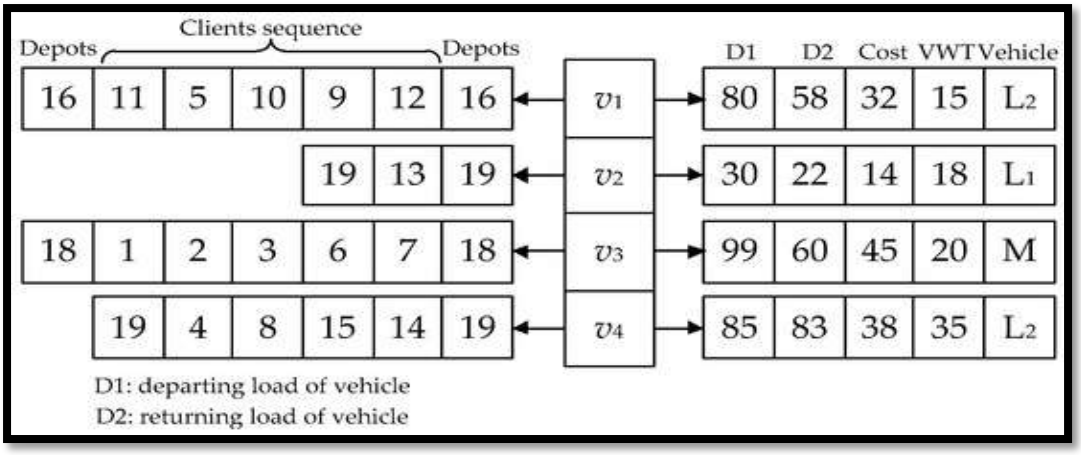
location, client distribution, and fleet composition on key performance indicators including fuel consumption, carbon emissions, logistics costs, and travel distance and time.

CONCLUSIONS:-

This article concerned a variant of the location-routing problem, namely, the regional low-carbon location-routing problem considering a city in which goods need to be picked up and delivered from depots to clients located in nested zones characterized by different speed limits. Several real-world conditions were also taken into consideration: simultaneous pickup and delivery, hard time windows, and a heterogeneous fleet. To solve the proposed problem, a biobjective model was developed by viewing total logistics cost as the primary objective and vehicle waiting time as the secondary objective. The total logistics cost consists of three parts: depots cost, vehicles cost, and travel cost, with the latter defined as FCCE cost. A novel approach was designed to tackle the proposed problem: a quantum-inspired hyper-heuristic.

Extensively experiments were performed to

(1) Verify the efficiency of the proposed algorithm and model.



(2) Analyze the effects of domain parameters on the key performance indicators. The results show that algorithm and model are efficient, providing the best results compared to other algorithms and models for benchmark instances. also analyzed the effects of the domain parameters, such as depot cost and location, client distribution, and fleet composition, on the significant performance indicators, such as total logistic cost, vehicle waiting time, opened depot cost, fleet cost, fuel consumption and carbon emission cost, travel distance, and travel time. Moreover, several constructive suggestions are deduced from simulations to promote the sustainable development of the economy, society, and the environment.

Mr. MANISH SINGH
ASSISTANT PROFESSOR
CSE DEPARTMENT

HUMANOID ROBOT

THE FUTURE IS HERE!!!

What is a Humanoid Robot?

Humanoid may be defined as something that resembles or looks like a human being and has certain human characteristics. In the present era of Technological development and advancements, Humanoid is being implemented in Robotics and these robots are called as "HUMANOID ROBOTS ".

A humanoid robot is a robot which has a similar shape as that of a human body. In general, a humanoid robot has a torso, a head, two arms, and two legs. These robots vary depending upon the material they are made of and the design. Generally, humanoid robots come in three variations small sized humanoids, medium sized humanoids, and large sized Humanoids. Some humanoids may also have a face, eyes, mouth and are categorized as male humanoids and female humanoids. The purpose of such robots may vary depending upon its biomechanics, functional capacity, production cost and complexity involved.

What are Humanoid Robots made of?

Though an extensive research is necessary before building a personal robot with anthropomorphic features that is accessible and appealing to the general user. To make the robot behave like a human being, sensors play a big role. The use of sensors in robotics has taken them to the new heights of creativity.

Most importantly, the sensors have increased the performance of robots to a large extent. These sensors allow robots to perform various intellectual functions like a human being does making it unique. The present technology is able to offer many solutions to the different issues that
generate regularly in the development of actuators and sensors, which are key factors in the achievement of the final goal in Robotics.
Different types of sensors used in the present day robots are

- Proprioceptive sensors: for sensing position, speed, and orientation
- Proximity sensor: to detect the presence of nearby objects
- Range sensor: to measure distances
- Tilt sensors: to measure inclination
- Accelerometers: to measure the acceleration

Such advanced humanoid robots are capable of multiple activities that are mere reflexes of a human being and do not require high intellectual efforts. These robots are fully automated as they can adapt to its surroundings and continue with its direction or

command. Depending upon the size and weight, these robots have the capability of self-maintenance and an advanced feature of autonomous learning.

thus they avoid harmful situations to people, property and themselves.
An advanced humanoid robot categorized as **Android** has human-like-behavior. It can talk like a human being in a computerized voice, run, jump or even climb stairs in a very similar way as a human being does. These humanoids perform a variety of jobs ranging from complex factory jobs to household solutions.

Some of the advanced Humanoid Robots available in the market are:

Sophia: Sophia is a very popular super advanced humanoid robot which was introduced in 2016 to mimic social behaviour and emotions in human. Sophia represents the State of the Art artificial intelligence. Sophia the robot is capable of showing over 60 different human expressions. She can easiliy interact with human and she has already appeared in many public interviews. On October 11, 2017, Sophia became the first robot to get citizenship of any country after the kingdom of Saudi Arabia granted the citizenship. Sophia is very active in social media with more than 135k followers on Twitter and 85k followers on Facebook. Take a look at the following video of well-known actor, Will Smith going on a date with Sophia the robot.

DARwln-OP (ROBOTICS OP) – it is created at Virginia Tech's Robotics and Mechanisms Laboratory (RoMeLa) in collaboration with Purdue University, University of Pennsylvania and Korean manufacturer ROBOTIS. This Humanoid can be used for household purposes, built with the main aim of education and research.

DARwln Mini (ROBOTICS Mini) – DARwIn Mini is a very lightweight robot and it is much smaller humanoid robot kit that aims at makers and hobbyists. The 27cm (10.6 inch) tall robot is completely open source and the parts of this robot are 3D printable, which makes this an ideal and cost-effective development platform.

NAO Evolution – it is developed by French company Aldebaran Robotics which was released in 2014. This 58cm tall robot has 25 DOF and is packed with very distinctive kinds of sensors such as tactile sensors, sonar, and pressure, not to mention cameras and other standard equipment, being able to perform highly complex motions and tasks.

Pepper – it is a cute faced humanoid robot designed by Aldebaran in collaboration with Japanese communications giant SoftBank. The robot is designed in such a way which delivers high-level human interaction, therefore featuring few high-tech capabilities. The robot is equipped with a highly cloud-backed voice recognition engine that has the capacity to identify not only speech but also expressions, tonality and subtle variations in the human voice. The robot has the capability to absorb from its interactions, information about the environment and humans interacting with it are provided with the help of its 25 sensors and cameras.

Romeo – it is a cute-faced character from plastic and metal with a height of 143 cm. This is under the process of continuous development and advancement with new features being added as we speak. Romeo is fully customizable according to people need. The idea of developing a robot that helps people with requiring physical aid or providing health solutions is not new, but Romeo is one of a kind in robotics built specially for these tasks. Besides the care shown to people, it can be a real family member. It can have a conversation or even work in the kitchen, or it can also empty the garbage. The interaction between people and Romeo is done in a natural way using words or gestures.

UBTECH Alpha 1S – An intelligent humanoid robot is up for sale on Amazon. It can demonstrate yoga moves, exercise moves, kung fu moves, dancing moves etc. Alpha 1S is highly flexible and can move just like a human. Alpha 1S can be controlled easily through Android OS or IOS app via Bluetooth 4.0.

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Future Scope:-

A few years ago there was only experimental research in humanoid robotics mainly in the field of the automobile industry, whereas now with a faster rate of development humanoid robots are used in many fields varying from medical to transport, industrial to recreation. There has been a boom in the demand of these humanoids as they make the human task or effort even simpler, works can now be done within limited time thus saving human effort.

Humanoid robotics is an emerging and challenging research field, which has received significant attention during the past decade, researchers are striving to increase the functional capacities so that these humanoids can be used in various fields apart from heavy industries. They are continuously studying human mechanism in order to simplify the interaction between robots and human being. These humanoids will surely continue to play a significant role in robotics research as it is a futuristic concept.

What Krazytech thinks about Humanoid Robots?

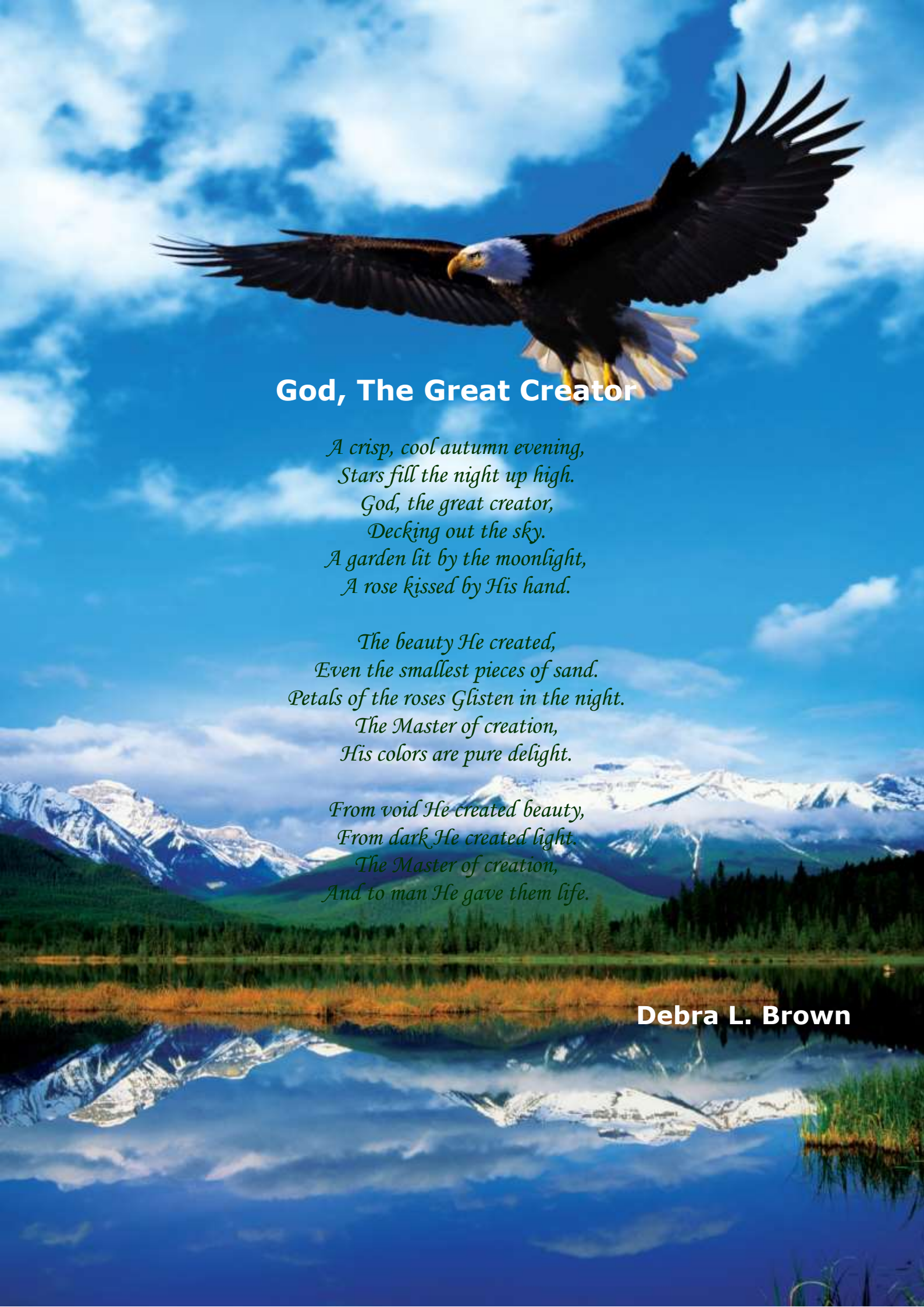
When we consider the aggressive progress in the field of Technology, we can predict the future of Humanoid Robots as a complete replacement for most of human being's day-to-day activities. The humanoid robots would be able to drive us home, help in

housekeeping, prepare food for us, help children to put on clothes etc. The factors like use of expensive sensors, rust-free hardware, advanced programming have made these robots much expensive to be affordable for many people.

Apart from easing our work, there is something else to think about. The Humanoid robots can pull away many jobs of common people. Already in the field of construction, we see people replaced with field robots for various activities. Microsoft co-founder and world's richest man Bill Gates recently mentioned that the companies which replace employees with robots should pay extra taxes so that government can invest this amount for unemployed.

In the recent past, we have come across many revolutionary technologies like driverless cars, Electric cars, Flying Cars, 5G Technology (yet to come) likewise we can think of Humanoid Robots as a game changer.

Ms. ANJALI SARDANA
ASSISTANT PROFESSOR
CSE DEPARTMENT



God, The Great Creator

A crisp, cool autumn evening,
Stars fill the night up high.
God, the great creator,
Decking out the sky.
A garden lit by the moonlight,
A rose kissed by His hand.

The beauty He created,
Even the smallest pieces of sand.
Petals of the roses Glisten in the night.
The Master of creation,
His colors are pure delight.

From void He created beauty,
From dark He created light.
The Master of creation,
And to man He gave them life.

Debra L. Brown

From Laziness wont get you anywhere

"In ancient times, a king had his men place a boulder on a roadway. He then hid in the bushes, and watched to see if anyone would move the boulder out of the way. Some of the king's wealthiest merchants and courtiers passed by and simply walked around it.

Many people blamed the King for not keeping the roads clear, but none of them did anything about getting the stone removed.

One day, a peasant came along carrying vegetables. Upon approaching the boulder, the peasant laid down his burden and tried to push the stone out of the way. After much pushing and straining, he finally managed.

After the peasant went back to pick up his vegetables, he noticed a purse lying in the road where the boulder had been. The purse contained many gold coins and note from the King explain that the gold was for the person who removed the boulder from the road."

Priyanka

CS2 III Year

PLACEMENT & EXPERIENCE SHARING

CONGRATULATIONS TO OUR PLACED STUDENTS

S.NO.	ROLL NO.	STUDENT	COMPANY
1	1614310001	AAYUSHI SINGH	TCS NQT, MIRKETA, QA INFOTECH
2	1614310002	ABHAY MUDGAL	TCS NQT
3	1614310004	ABHIJEET KUMAR	TCS NQT, COGNIZANT
4	1614310009	ABHISHEK KUMAR	TCS NQT
5	1614310010	ABHISHEK KUMAR	BVS
6	1614310012	ABHISHEK SHARMA	COGNIZANT
7	1614310013	ABHISHEK SINGH	VVDN TECHNOLOGIES
8	1614310015	ADITYA DWIVEDI	QA INFOTECH
9	1614310016	AGRAJ SINGH	TCS CODEVITA
10	1614310017	AGRIMA GAUR	TCS NQT
11	1614310018	AHMAD AFFAN	TCS NQT
12	1614310020	AKAANKSHA GUPTA	TCS NQT, TO THE NEW
13	1614310025	AKSHANSH MALIK	TCS NQT
14	1614310027	AKSHAT BANDOONI	VVDN TECHNOLOGIES
15	1614310031	AMAN KUMAR SINGH	XCEEDENCE
16	1614310032	AMAN PATEL	TO THE NEW
17	1614310033	AMAN RASTOGI	TCS CODEVITA, COGNIZANT, XORIANT
18	1614310034	AMIT KUMAR PANDEY	10 TIMES
19	1614310040	ANSHUMAN TIWARI	TCS NQT
20	1614310041	ANUGRAH SINGH	VINOVE SOFTWARE LTD
21	1614310043	ANUJ MISHRA	QA INFOTECH, TCS
22	1614310044	ANURAG SINGH	VVDN TECHNOLOGIES

CONGRATULATIONS TO OUR PLACED STUDENTS

S.NO.	ROLL NO.	STUDENT	COMPANY
23	1614310045	ANUSHKA CHAUHAN	TCS NQT
24	1614310048	ARJUN PALIWAL	QA INFOTECH
25	1614310049	AROHI RASTOGI	VVDN TECHNOLOGIES
26	1614310050	ARPIT JAIN	TCS NQT
27	1614310051	ARYAN SINGHAL	QA INFOTECH
28	1614310052	ASHI GOEL	MIRKETA, COGNIZANT
29	1614310054	ASHUTOSH PIPLANI	TCS NQT
30	1614310055	ASHUTOSH SINGH	TO THE NEW
31	1614310058	ASTHA GUPTA	TCS NQT
32	1614310059	ASTHA SINGH	TO THE NEW
33	1614310061	AVANISH PARASHAR	MOBILIZEON
34	1614310064	AYUSHI .	MOBILIZEON
35	1614310065	BHARAT .	TO THE NEW, TCS CODEVITA
36	1614310067	DEEPAK JAIN	TCS CODEVITA, COGNIZANT, AVIS E SOLUTION
37	1614310069	DEEPALI SRIVASTAVA	TCS NQT, TO THE NEW
38	1614310070	DEEPANSHU CHAUDHARY	TCS NQT
39	1614310074	DIVYAM SRIVASTAVA	VINOVE SOFTWARE LTD
40	1614310075	DIVYANSH SHEKHAR GAUR	TCS CODEVITA, NCR CORPORATION
41	1614310077	ESHA BANSAL	VVDN TECHNOLOGIES
42	1614310080	GAURAV SINGH	TCS NQT, INFOSYS
43	1614310082	GURPREET SINGH UPPAL	VVDN TECHNOLOGIES
44	1614310083	HARDIK BANSAL	NIIT

CONGRATULATIONS TO OUR PLACED STUDENTS

S.NO.	ROLL NO.	STUDENT	COMPANY
45	1614310085	HARSHAL GARG	TCS NQT
46	1614310086	HARSHIT BANSAL	TCS NQT
47	1614310088	HARSHIT GUPTA	TCS NQT, XORIANT
48	1614310090	HIMANSHU KUSHWAHA	TCS CODEVITA, INFOSYS, AVIS E SOLUTION
49	1614310092	HIMANSHU SIDHU	NIIT
50	1614310094	HIMANSHU KUMAR	PROLITUS TECHNOLOGIES
51	1614310095	HIMANSHU SINGH	TCS NQT, COGNIZANT, XORIANT
52	1614310096	HONEY GOYAL	TCS NQT
53	1614310098	JYOTI MAURYA	COGNIZANT, NIIT, VINOVE SOFTWARE LTD
54	1614310099	KAJAL GARG	MIRKETA
55	1614310101	KAMAL SINGH BISHT	VVDN TECHNOLOGIES
56	1614310102	KANISHKA THAKUR	VVDN TECHNOLOGIES, COGNIZANT
57	1614310103	KESHAV GUPTA	TCS NQT
58	1614310105	DIVI GUPTA	NUCLEUS SOFTWARE
59	1614310107	KRATI SINGH	MOBILIZEON
60	1614310109	LOVE AGGARWAL	XCEEDENCE
61	1614310110	MANSI RAGHAV	MOBILIZEON
62	1614310112	MANSI SINGH	VINOVE SOFTWARE LTD
63	1614310113	MEDHA GUPTA	QA INFOTECH
64	1614310114	MEGHA DIXIT	QA INFOTECH
65	1614310115	MEHUL GOYAL	VINOVE SOFTWARE LTD
66	1614310116	MIMANSHA SINGH	TCS NQT, TO THE NEW, NIIT

CONGRATULATIONS TO OUR PLACED STUDENTS

S.NO.	ROLL NO.	STUDENT	COMPANY
67	1614310119	MOHIT KUMAR	TO THE NEW
68	1614310122	MUSKAN GOEL	TCS NQT
69	1614310123	NAMAN TYAGI	TCS NQT
70	1614310129	NIKHIL SHARMA	TCS NQT, TO THE NEW
71	1614310130	NITISH SINGH	TCS NQT
72	1614310131	OMPRAKASH DWIVEDI	TCS NQT
73	1614310134	PRAGATI SHARMA	MIRKETA
74	1614310136	PRASHANT KUMAR	TO THE NEW, MIRKETA, AVIS E SOLUTION, COLORTOKENS
75	1614310139	PRATEEK UPADHYAY	VINOVE SOFTWARE LTD
76	1614310140	PRIYA PATEL	TCS NQT, TO THE NEW
77	1614310141	PRIYANSH GUPTA	MOBILIZEON, COGNIZANT
78	1614310142	PRIYANSHU YADAV	COGNIZANT, NIIT, K SOLVES
79	1614310143	PULKIT SINGH	COGNIZANT, GLOBAL LOGIC
80	1614310150	RAVI PAL	TCS NQT
81	1614310151	RENUKA SINGH	TCS NQT
82	1614310152	RISHAB GUPTA	NIIT, VINOVE SOFTWARE LTD
83	1614310155	RISHABH GUPTA	QA INFOTECH
84	1614310160	ROHAN SINGHAL	TCS NQT, COGNIZANT
85	1614310166	SAMRIDDHI SRIVASTAVA	VINOVE SOFTWARE LTD, XCEEDANCE
86	1614310167	SANCHIT SINGHAL	TCS CODEVITA
87	1614310170	SANKALP PATERIYA	NIIT
88	1614310171	SAPNEET KAUR HORA	TCS NQT

CONGRATULATIONS TO OUR PLACED STUDENTS

S.NO.	ROLL NO.	STUDENT	COMPANY
89	1614310172	SAURABH SHUKLA	TCS NQT
90	1614310173	SHAGUN SAMANT	TCS NQT
91	1614310175	SHASHANK SHUKLA	NIIT
92	1614310178	SHIVAM SINGH	VVDN TECHNOLOGIES
93	1614310180	SHIVAM GUPTA	COGNIZANT, GLOBAL LOGIC
94	1614310186	SHRISHTI RAGHAV	VVDN TECHNOLOGIES
95	1614310187	SHRUTI GUPTA	VINOVE SOFTWARE LTD
96	1614310188	SHUBHAM MISHRA	QA INFOTECH, COGNIZANT, WIPRO
97	1614310191	SHWETANK TRIPATHI	VVDN TECHNOLOGIES
98	1614310192	SIDDHANT SHUKLA	COGNIZANT, GLOBAL LOGIC
99	1614310194	SIDDHARTH SINGH	TCS NQT
100	1614310199	SUJATA MISHRA	TCS NQT
101	1614310200	SURAJ DUBEY	TO THE NEW
102	1614310201	TANYA GOEL	QA INFOTECH, COGNIZANT
103	1614310202	TEJAS GUPTA	TCS NQT, COGNIZANT
104	1614310203	TRIPTI GUPTA	TCS NQT, NIIT
105	1614310204	TUSHAR BANSAL	TO THE NEW
106	1614310205	UJJWAL KUMAR	TO THE NEW
107	1614310206	UMANG RASTOGI	NIIT, COGNIZANT
108	1614310209	VAISHALI GUPTA	XCEEDANCE
109	1614310210	VAISHNAVI VATS	MIRKETA, VINOVE SOFTWARE LTD
110	1614310211	VANSH VERMA	VVDN TECHNOLOGIES, COGNIZANT

CONGRATULATIONS TO OUR PLACED STUDENTS

S.NO.	ROLL NO.	STUDENT	COMPANY
111	1614310212	VARTIKA SINGH	MIRKETA
112	1614310215	VIBHAV CHATURVEDI	TCS NQT, MIRKETA, XORIANT
113	1614310216	VIJAY MITTAL	TCS NQT, COGNIZANT
114	1614310220	VISHAL MALHOTRA	SUCCESSIVE SOFTWARE, NUCLEUS SOFTWARE
115	1614310221	VISHAL SHARMA	TCS NQT, TO THE NEW, COGNIZANT
116	1614310230	WAQAR AHMAD	TCS NQT
117	1614310231	YASH BANSAL	TO THE NEW, INFOSYS, TCS
118	1614310232	YASH GUPTA	*TCS CODEVITA, INFOSYS*
119	1614310233	YASH RAJ TRIPATHI	TCS NQT, COGNIZANT
120	1614340021	AMAN MAHAL	XCEEDANCE

PRIYANSHU YADAV

CS2 IV Year

Company placed: Ksolves

First of all, there are lots of companies and opportunities for you to get. So, never stop trying, go for the best by doing your best.

I was first interviewed by **TCS.** After I cleared the TNQT (TCS National Qualifier Test), they called me for an interview, venue was IMS Engineering College.

One important thing to make sure prior to the interview is that your paperwork is correct. Students from many colleges participated in the Placement Drive.

The interview that I gave was not what I had imagined it was going to be. I went for a technical round and I was not asked even a single technical question most of them were related to willing to work in night shifts, preferences of working, about the company. So, interview can go in any direction and I didn't get the job offer any way I learned a lot from that interview.

I gave test for some companies but never got through the first round, all the rounds in placement drives are elimination rounds and one have to give his all, otherwise he won't get through.

The second company I got the chance for interview was **MobilizeOn**. This Placement from the start to end took only one working day. After clearing the first round we were called in the auditorium for the further process. MobilizeOn was recruiting for a .NET developer and Software Tester. After telling us more about the company we were divided in to 3 groups, the testers, the coders and the front-end developers. Each student in the groups was given different tasks to complete, like write a program and build a front end with some specification.

This was an elimination round and those who passed on the next stage were asked to write a rough plan how they will create a software for a company, just a rough idea about the process, features and time. More than 20 students were selected for interview and I was one of them. Interview started with an introduction and after that he questioned on the basis of the software solution that I wore in the previous stage. Then there were some questions on the fundamentals of coding. I was also asked where I see myself in next 5 years. Interview was fun but I didn't secure the job.

The next placement drive I participated was of **Ksolves.** It was in the end of September and the venue was IMS Lal Quan Campus. More than 200 students participated in this drive. First round was MCQ based technical questioner. This round had two set of questions one based on programming language java and other one was on C. Question were about outputs, pointers the fundamentals of the language. As this was also an elimination round and the student who passed were called for the next round.
The next round was of coding and we were given three questions to complete in an hour. To pass this level one has to complete the entire question and get them checked, the coding was on printing patterns and calculation. Around 10 students passed and were called for interviews. Interviews were about 30-45 mins long. Technical interview started with introduction and after that we dived into coding, I was asked to write a program on a piece of paper which was followed by the questions based on the programming language I wrote the program in. there were puzzles and programming fundamental question. Technical interview was followed by an HR round which also started with a general introduction.

The students selected in this round were called to the company the next day and there was one more technical interview there. In this interview I was asked questions from DBMS and SQL queries with the idea of developing a website. They also asked about what all needs to be done in building a database. After clearing that I secured the job and had my last interview with the CEO of the company in which I introduced myself .

There are many things that I learned from interviews and here are some of them: -

- There are always some setbacks but one should never stop trying.
- To get the best you have to do your best.
- Aptitude is also important because it's the first thing most companies will evaluate the students.
- Always be calm and confident during interviews.
- Everything you did in past will help you achieve the future you want.
- Be prepared for everything because interviews can go anywhere and keep your fundamentals clear.

DEEPAK JAIN

CS1 IV Year

Placement season is always exciting but sometimes little stressful too. Placements are the conclusion of the four years you spend in your graduation. It gives you true results and a new way to your life. It is like entry ticket to your new life or in other words corporate world.

For getting a decent job one must be very attentive, responsive and flexible. I am a student of "IMS Engineering College, Ghaziabad" from 2016-2020 batch. I am already placed in **seven companies which are TCS, Wipro, Cognizant, 10Times, Xoriant Solutions, QA Infotech, Avis E Solution.**

If you are also looking for a job this year, you should be very focussed. Don't miss any opportunity and start preparing as soon as possible. In terms of prepartion, I would say put your main focus on the subjects like DBMS, Java(core), Operating Systems and Data Structures and Algorithms.

Apart from these subjects, give your appropriate attention to one of the programming language (prefer python or java) and get stick to one of the competitive coding platform like "Codechef" or "Hackerrank".

Most of the questions that are asked in campanies like TCS, Wipro, Cognizant are from Java and DBMS which includes basic SQL queries like "Find second highest salary from a column in a database table", OOPs concepts with their real life examples.

In companies like Xoriant, question was little tricky and coding based. They asked about some Machine learing implementation problems (may be because Machine Learning was there in my resume), sort the numbers in O(n) time (count sort can be solution), diference between groupby and having clause in sql queries etc.

In companies lie 10Times, QA Infotech, and Avis E Solutions, questions was simple.They asked most of the questions from sql queries, some basic puzzles like water jug problem (asked in 10Times) , stacks and queues, and gave some coding problems to solve.

Some Tips-

1. Write your resume wisely as most of the interviews are resume oriented only.

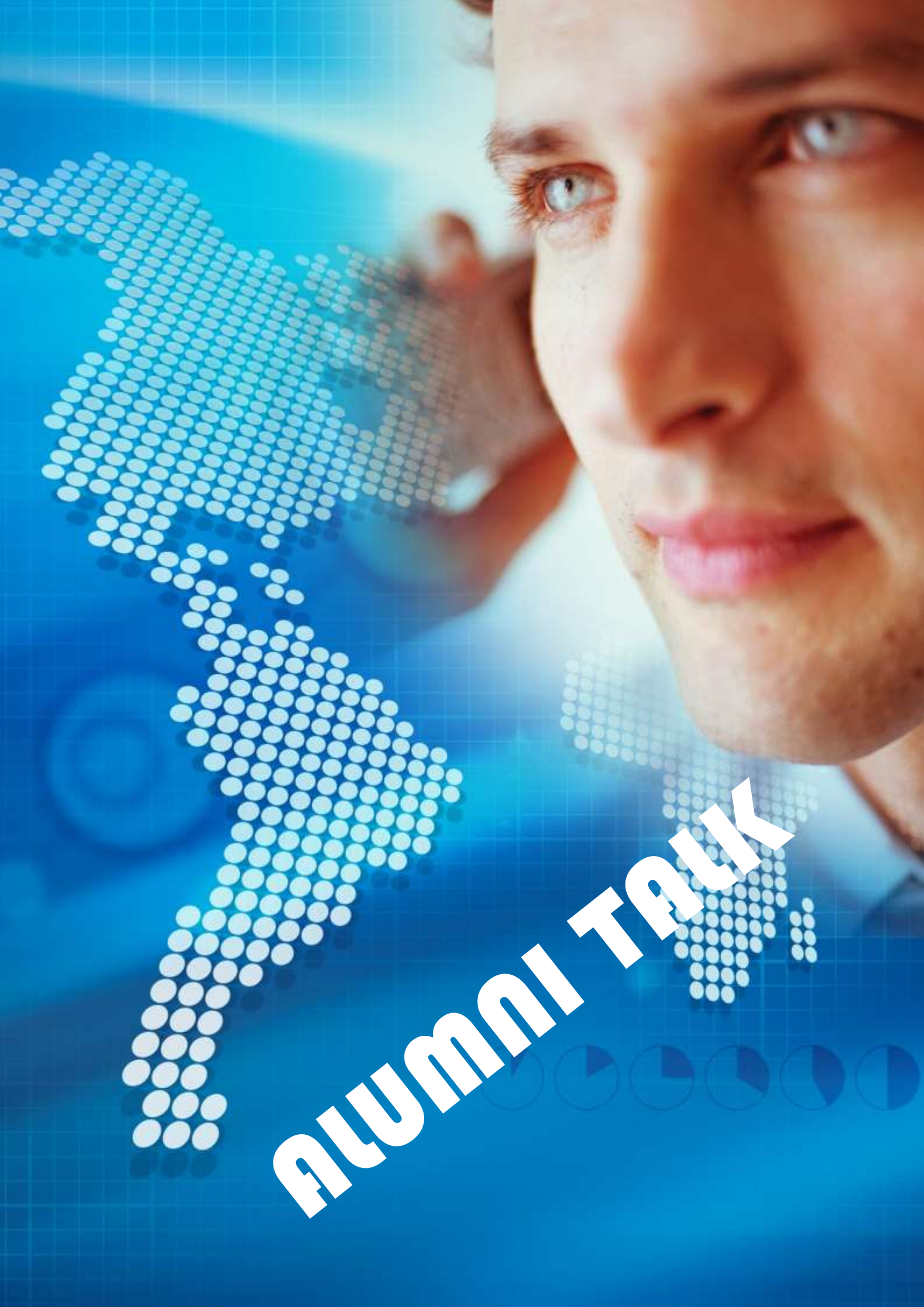
2. Doing internship is very important as you can direct your interviewer to your intenship easily. I have given some of my interviews on my internship's topic only.

3. Prepare your "Tell me something about yourself" answer smartly because, in most of the cases It decides which question the interviewer is going to ask next.

4. Prepare well about your projects that you have mentioned in the resume.

5. For cracking the pre-interview exams, you should be very foccussed in competitive programming and aptitude.

6. For Hr round, be calm and express youself clearly.Inspite of saying "Yes" or "No" directly, try to answer the critical HR questions in a descriptive manner.


ALUMNI TALK

Manish Pandey, Oracle, USA (2002-2006)

" Since the first moment I came to IMSEC in 2002 I was met with nothing but energy and enthusiasm. I found welcoming classmates, engaged faculty, they all wanted their students to do well. Working with the professors and support staff at IMSEC has been one of the best experiences of my professional development. Special thanks to Prof Atul Kumar sir. I really believe it is a privilege to come to this College and I am so glad I made that decision

In the end My Experience in IMCEC make below line true

विद्या ददाति विनयं विनयाद्याति पात्रताम् । पात्रत्वाद्धनमाप्नोति धनाद्धर्मं ततः सुखम्
((true/complete) knowledge gives discipline, from discipline comes worthiness, from worthiness one gets wealth, from wealth (one does) good deeds, from that (comes) joy). "

Viyoma Sachdeva, ETSY.com, New York (2002-2006)

"IMS has given me the bright future and provided me the skills to pursue a strong career in IT. I am proud to be from the first batch that graduated from IMS and elated to see the success my batch mates have received over the years."

Javed Khan , Tata power Delhi distribution LTD (2002-2006)

"Learning is a key of success. What I learn at IMS Engineering college is totally a transform in my career not only technically but a complete person who keeps learning and achieving goals."

Kushal Jouhari, Topwise communication (Comio) (2002-2006)

"Imsec a college when we get transform from boys to mens. A great college with good infra along with good faculty have given me a right direction to focus on my goal. From a decade the college have been recoganised as a brand in Uttar pradesh and students are doing great wonders at the present time."

Pankaj Parashar, Appdynamics Inc (Cisco) (2002-2006)

"Being part of the founding batch of my Alma matter, I grew up along with my college. IMSEC never taught me to light a candle rather I have been educated to make fire, and that's how I learned enlightenment."

Coding Questions

CODING QUESTIONS

Q1

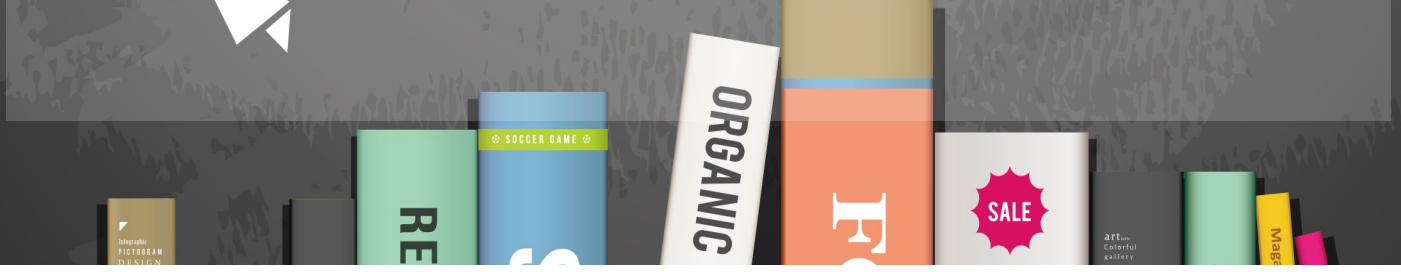
```
class Helper {
        private int data;
        private Helper() {
                data = 5;
        }
}
public class Test {
        public static void main(String[] args) {
                Helper help = new Helper();
                System.out.println(help.data);
        }
}
```

a) Compilation error
b) 5
c) Runtime error
d) None of these

Q2.

```
class Base
{
        public static String s = " Super Class ";
        public Base() {
                System.out.printf("1");
        }
}
public class Derived extends Base
{
        public Derived() {
                System.out.printf("2");
                super();
        }

        public static void main(String[] args) {
                Derived obj = new Derived();
                System.out.printf(s);
        }
}
```

a) 21 Super Class
b) Super Class 21
c) Compilation error
d) 12 Super C...



CODING QUESTIONS

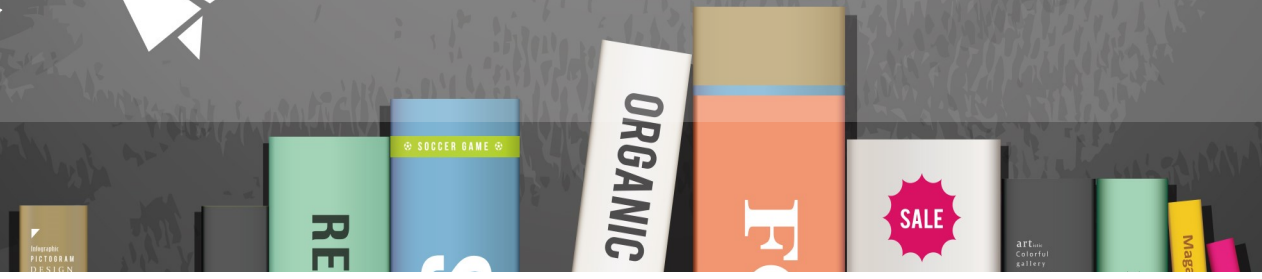
Q3.

```
public class Outer
{
	public static int temp1 = 1;
	private static int temp2 = 2;
	public int temp3 = 3;
	private int temp4 = 4;
	public static class Inner {
		private static int temp5 = 5;

		private static int getSum() {
			return (temp1 + temp2 + temp3 + temp4 + temp5);
		}
	}
	public static void main(String[] args) {
		Outer.Inner obj = new Outer.Inner();
		System.out.println(obj.getSum());
	}
}
```

a) 15 b) 9 c) 5 d) Compilation Error

Q4.

```
class Grandparent {
	public void Print() {
		System.out.println("Grandparent's Print()");
	}
}
class Parent extends Grandparent {
	public void Print() {
		System.out.println("Parent's Print()");
	}
}
class Child extends Parent {
	public void Print() {
		super.super.Print();
		System.out.println("Child's Print()");
	}
}
public class Main {
	public static void main(String[] args)	{
		Child c = new Child();
		c.Pri
	}
}
```



CODING QUESTIONS

Q5.

```
public class Test
{
    public static void main(String[] args)
    {
        System.out.println((100/25.0)*Integer.parseInt("5") + 50);
    }
}
```

a) Compilation error
b) 70
c) 70.0
d) Runtime error

Q6.

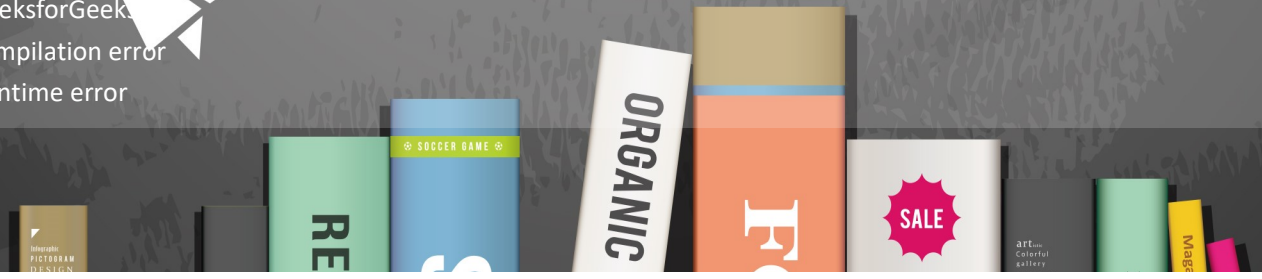
```
public class Test
{
    public static void main(String[] args)
    {
        int value = 554;
        String var = (String)value; //line 1
        String temp = "123";
        int data = (int)temp; //line 2
        System.out.println(data + var);
    }
}
```

a) 677
b) Compilation error due to line 1
c) Compilation error due to line 2
d) Compilation error due to line 1 and line 2

Q7.

```
public class Test
{
    private String function(String temp, int data) {  return ("GFG");          }
    private String function(int data, String temp) {  return ("GeeksforGeeks");  }
    public static void main(String[] args)      {
        Test obj = new Test();
        System.out.println(obj.function(4, "GFG"));
    }
}
```

a) GFG
b) GeeksforGeek
c) Compilation error
d) Runtime error



Coding Questions

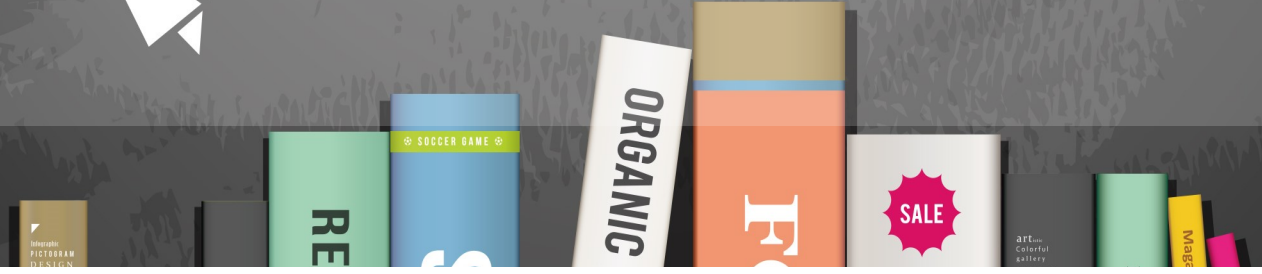
Q8.

```
class Derived
{
	public void getDetails()
	{
		System.out.printf("Derived class ");
	}
}

public class Test extends Derived
{
	public void getDetails()
	{
		System.out.printf("Test class ");
		super.getDetails();
	}
	public static void main(String[] args)
	{
		Derived obj = new Test();
		obj.getDetails();
	}
}
```

a) Test class Derived class
b) Derived class Test class
c) Compilation error
d) Runtime error

Q9.

```
import java.util.*;

public class priorityQueue
{
	public static void main(String[] args)
	{
		PriorityQueue<Integer> queue = new PriorityQueue<>();
		queue.add(11);
		queue.add(10);
		queue.add(22);
		queue.add(5);
		queue.add(12);
		queu
```



CODING QUESTIONS

```
while (queue.isEmpty() == false)
                System.out.printf("%d ", queue.remove());

        System.out.println("\n");
    }
}
```

a) 11 10 22 5 12 2
b) 2 12 5 22 10 11
c) 2 5 10 11 12 22
d) 22 12 11 10 5 2

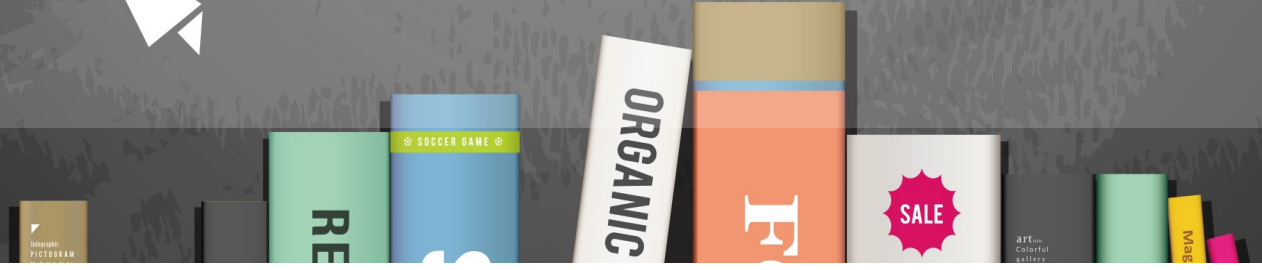
Q10.

```
// filename Main.java
class Test {
    protected int x, y;
}

class Main {
    public static void main(String args[]) {
        Test t = new Test();
        System.out.println(t.x + " " + t.y);
    }
}
```

Q11.

```
class Test {
int i;
}
class Main {
public static void main(String args[]) {
    Test t = new Test();
    System.out.println(t.i);
}
}
```

(A) garbage value
(B) 0
(C) compiler error
(D) runtime error



CODING QUESTIONS

Q12.

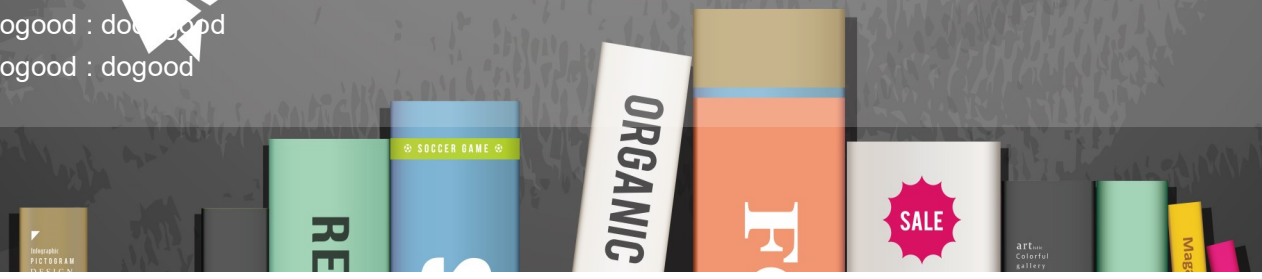
```
class Test
{
    int a = 1;  int b = 2;
    Test func(Test obj)  {
        Test obj3 = new Test();
        obj3 = obj;
        obj3.a = obj.a++ + ++obj.b;
        obj.b = obj.b;
        return obj3;
    }
    public static void main(String[] args)  {
        Test obj1 = new Test();
        Test obj2 = obj1.func(obj1);
        System.out.println("obj1.a = " + obj1.a + " obj1.b = " + obj1.b);
        System.out.println("obj2.a = " + obj2.a + " obj1.b = " + obj2.b);

    }
}
```

(A)
obj1.a = 1 obj1.b = 2 obj2.a = 4 obj2.b = 3
(B)
obj1.a = 4 obj1.b = 3 obj2.a = 4 obj2.b = 3
(C) Compilation error

Q13.

```
Class Test {
    public static void main(String[] args) {
        Test obj = new Test();
        obj.start();
    }
    void start() {
        String stra = ”do”;
            String strb = method(stra);
        System.out.print(“: ”+stra + strb);
    }
    String method(String stra) {
        stra = stra + ”good”;
        System.out.print(stra);
        return“ good”;
    } }
```

(A) dogood : dogoodgood
(B) dogood : g[illegible]od
(C) dogood : do[illegible]od
(D) dogood : dogood

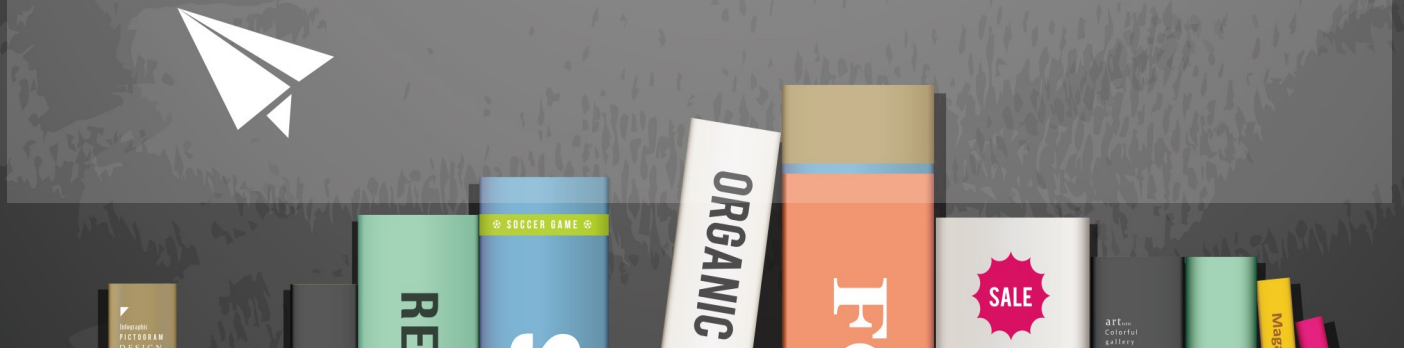


CODING QUESTIONS

Q14.

```
class simple
{
public static void main(String[ ] args)
{
simple obj = new simple( );
obj.start( );
}
void start( )
{
long [ ] P= {3, 4, 5};
long [ ] Q= method (P);
System.out.print (P[0] + P[1] + P[2]+":");
System.out.print (Q[0] + Q[1] + Q[2]);
}
long [ ] method (long [ ] R)
{
R [1]=7;
return R;
}
} //end of class
```

(A) 12 : 15
(B) 15 : 12
(C) 12 : 12
(D) 15 : 15



SOLUTIONS

1.
Ans. (a)
Explanation: A private constructor cannot be used to initialize an object outside the class that it is defined within because it is no longer visible to the external class.

2.
Ans. (c)
Explanation: Constructor call to super class must be the first statement in the constructor of the Derived class.
Private

3.
Ans. (d)
Explanation: static inner classes cannot access non-static fields of the outer class.

4.
Output: Compiler Error in super.super.Print()
Explanation: In Java, it is not allowed to do super.super. We can only access Grandparent's members using Parent.

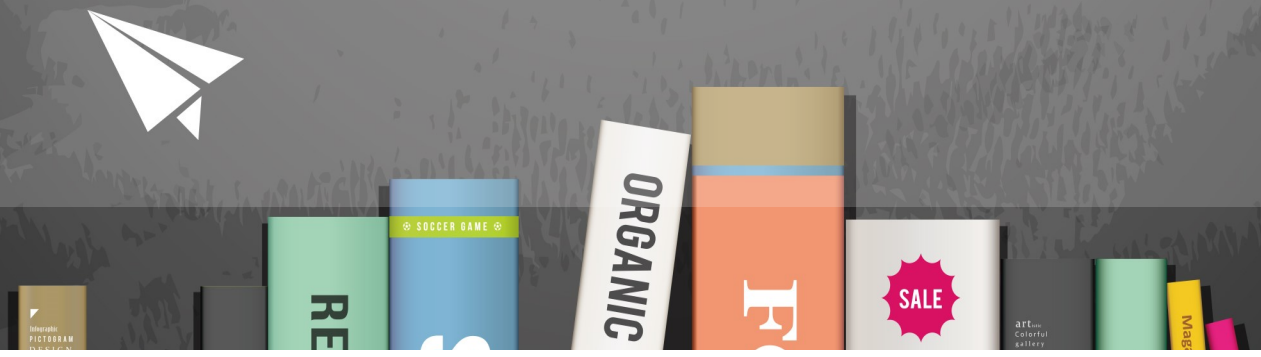
5.
Ans. (c)
Explanation: If a double value is used in an expression then the output is returned in double format rather than an int.

6.
Ans. (d)
Explanation: Converting from int to String as well as converting from String to int is not allowed in java.

7.
Ans. (b)
Explanation: The order of argument are an important parameter for determining method overloading. As the order of attributes are different, the methods are overloaded.

8.
Ans. (a)
Explanation: super keyword is used to invoke the overridden method from a child class explicitly.

9.
Ans. (c)
Explanation: Priority queue always outputs the minimum element from the queue when remove() method is called, no matter what the sequence of input is.



SOLUTIONS

10.

ANS:Output

0 0

In Java, a protected member is accessible in all classes of same package and in inherited classes of other packages. Since Test and Main are in same package, no access related problem in the above program. Also, the default constructors initialize integral variables as 0 in Java. That is why we get output as 0 0.

11.

Answer: (B)

Explanation: In Java, fields of classes and objects that do not have an explicit initializer and elements of arrays are automatically initialized with the default value for their type (false for boolean, 0 for all numerical types, null for all reference types). Local variables in Java must be definitely assigned to before they are accessed, or it is a compile error.

12.

Answer: (B)

Explanation:

obj1 and obj2 refer to same memory address.

13.

Answer: (D)

14.

Answer: (D)

Explanation: When above program complied and run on ide then it will produce 15:15.

CURRENT AFFAIRS

QUESTIONS:

1. Who has been conferred with Indira Gandhi Prize for Peace, Disarmament and Development 2019?
a) David Attenborough
b) David Parker
c) Bill Gates
d) Greta Thunberg

2. Which among the following countries has introduced visa exemptions for foreigners seeking medical treatment?
a) Pakistan
b) UK
c) India
d) China

3. The Union Territory of Jammu and Kashmir has constituted an administrative council to fulfil all the government functions. Who will chair the council?
a) GC Murmu
b) RK Mathur
c) Amit Shah
d) Rajnath Singh

4. Who announced that the NRC process will be carried out across India and cover all citizens?
a) PM Narendra Modi
b) Defence Minister Rajnath Singh
c) President Ram Nath Kovind
d) Home Minister Amit Shah

5. President's Colour was recently awarded to which institution on November 20?
a) Indian Naval Academy
b) Indian Air Force
c) Indian Army
d) All of the above

6. Who has been sworn in as the new Prime Minister of Sri Lanka?
a) Gotabhaya Rajapaksa,
b) Sajith Premadasa
c) Maithripala Sirisena
d) Mahinda Rajapaksa

7. Who topped the list of Fortune's Businessperson of the Year 2019?
a) Satya Nadella
b) Bjorn Gulden
c) Fabrizio Freda
d) Ajay Banga

8. Which place does India have in the recently released Global Terrorism Index?
a) Fifth
b) Sixth
c) Seventh
d) Eighth

9. Who among the following has been selected as PETA person of the year?
a) Maneka Gandhi
b) Hritik Roshan
c) Virat Kohli
d) Alia Bhatt

10. Which cricket stadium hosted India's first-ever pink ball day/ night test match against Bangladesh?
a) Eden Gardens
b) Arun Jaitley Stadium
c) Wankhede Stadium
d) DY Patil Stadium

11. Who won India's first gold at 2019 ISSF World Cup?
a) Yashaswini Deswal
b) Manu Bhaker
c) Rahi Sarnobat
d) Heena Sidhu

12. Google has launched a new cloud-based game streaming service. What is the name of the gaming service?
a) Google Arcadia
b) Google Stadia
c) Google playmates
d) Google Nixplay

13. Who has been sworn in as the new Prime Minister of Sri Lanka?
a) Gotabhaya Rajapaksa,
b) Sajith Premadasa
c) Maithripala Sirisena
d) Mahinda Rajapaksa

14. Who won India's first gold at 2019 ISSF World Cup?
a) Yashaswini Deswal
b) Manu Bhaker
c) Rahi Sarnobat
d) Heena Sidhu

15. The Union Cabinet has approved the establishment of National Institute of Sowa Rigpa in India. The institute will be set up in which district?
a) Darjeeling
b) Gangtok
c) Leh
d) Ladakh

16. When is the World Fisheries Day celebrated every year?
a) 19th November
b) 20th November
c) 21st November
d) 22nd November

17. Which among the following is the Country of Focus at IFFI 2019?
a) Italy
b) Russia
c) China
d) Japan

18. Which space agency recently completed the first global geologic mapping of Saturn's moon?
a) ISRO
b) NASA
c) JAXA
d) Roscosmos

19. Who among the following has been selected as PETA person of the year?
a) Maneka Gandhi
b) Hritik Roshan
c) Virat Kohli
d) Alia Bhatt

20. What is the name of first Hindi newspaper launched in Arunachal Pradesh?
a) Hind Bhumi
b) Parvat Nama
c) Poorvoday Times
d) Arun Bhoomi

Answers:

1. (a) David Attenborough

2. (c) India

3. (a) GC Murmu

4. (d) Home Minister Amit Shah

5. (a) Indian Naval Academy

6. (d) Mahinda Rajapaksa

7. (a) Satya Nadella

8. (c) Seventh

9. (c) Virat Kohli

10. (a) Eden Gardens

11. (b) Manu Bhaker

12. (b) Google Stadia

13. (d) Mahinda Rajapaksa

14. (b) Manu Bhaker

15. (c) Leh

16. (c) 21st November

17. (b) Russia

18. (b) NASA

19. (c) Virat Kohli

20. (d) Arun Bhoomi

UPCOMING EVENTS

Upcoming Engineering Events

Start Date	Fest Name	College Name	City/State
Sun, 05 Jan '20	Techfest Workshop Alexa Everywhere	IIT Bombay (Indian Institute of Technology), Bombay, Maharashtra EVENT TYPE Workshop	Techfest, SAC, IIT, IIT Area, Powai, Mumbai, Maharashtra, India
Fri, 28 Feb '20	Biznest	O P Jindal Global University, Sonipat, Haryana EVENT TYPE Fun & Other Events, Conferences, Online Events, Management, Concert, Cultural	O.P. Jindal Global University, Sonipat, Haryana, India
Fri, 24 Jan '20	Spring Fest, IIT Kharagpur	IIT Kharagpur (Indian Institute Of Technology), Kharagpur, West Bengal EVENT TYPE Literature, Hobbies & Interest, Fun & Other Events, Online Events, Workshop, Accommod...more	IIT kharagpur, Kharagpur, West Bengal, India
Fri, 10 Jan '20	ZEAL	Guru Nanak College of Arts, Science and Commerce. EVENT TYPE Fun & Other Events, Hobbies & Interest, Gaming, Cultural, Sports	Mumbai, Maharashtra, India
Fri, 28 Feb '20	UHackathon2.0	University Of Petroleum and Energy Studies. EVENT TYPE Technical	University of petroleum and energy studies, bidholi campus, Deheradun Township- Bidholi-Majhaun Road, Township, Misraspatti, Uttarakhand, India

Google's Coding Competitions

hash code

Registration Jan 2, 2020

A team programming competition – you pick your team and programming language to solve an engineering problem. Are you up for the challenge?
https://codingcompetitions.withgoogle.com/hashcode

code jam

Registration March 3, 2020

Put your skills to the test as you work your way through multiple rounds of algorithmic puzzles for the title of Code Jam Champ and $15,000. Do you have what it takes?
https://codingcompetitions.withgoogle.com/hashcode

kick start

Registration Feb 4, 2020

Hone your coding skills with algorithmic puzzles meant for students and those new to coding competitions. Participate in one round or join them all. What are you waiting for?

Dear Readers,

Editorial Board welcomes articles for the next issue of "THE BYTE", January 2020. Please send your articles @:

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