GOVERNMENT COLLEGE OF ENGINEERING AND CERAMIC TECHNOLOGY

Established 1941

Accredited by NAAC with Grade A

(2015)

Special programmes to cater differential learning needs of the student-some examples

73, Abinash Chandra Banerjee Lane

Kolkata-700010

West Bengal, India

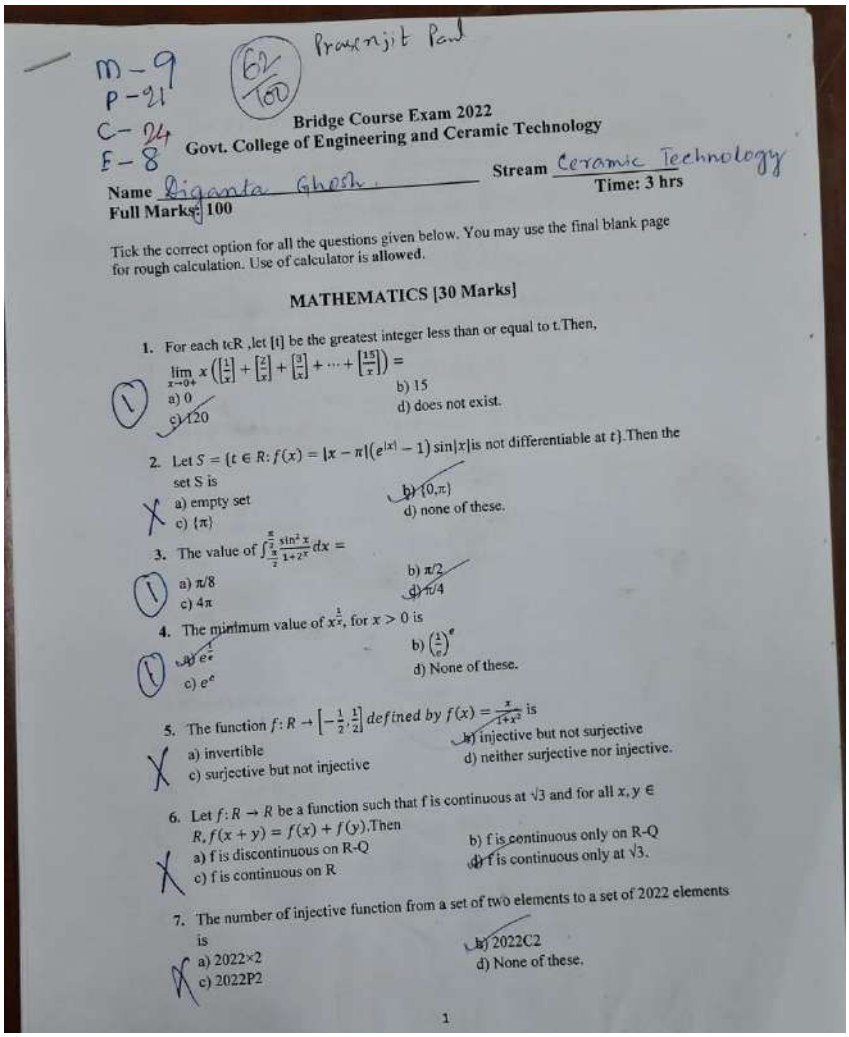
E-mail: gcectwb@gmail.com

The institution assesses the learning levels of the students and organises special Programmes to cater to differential learning needs of the student

1. Diagnosing learners' abilities:

There are several methods of identifying slow learners and advanced learners.

Methods to classify slow learners and advanced learners of first year students. During induction program, lecture session of physics, chemistry, mathematics and English were conducted to brush up their knowledge of 10+2 level. After the bridge course, an examination was conducted. After evaluation of answer scripts, students scoring more than 60% are classified as advanced learner and students soring less than 60% are classified as slow learners. After this classification, remedial measures were taken to improve the level of slow learners. The sample question paper is attached as reference.



M-9
P-21
C-24
E-8

62/100

Pranajit Paul

Bridge Course Exam 2022
Govt. College of Engineering and Ceramic Technology

Name Diganta Ghosh **Stream** Ceramic Technology
Full Marks: 100 **Time: 3 hrs**

Tick the correct option for all the questions given below. You may use the final blank page for rough calculation. Use of calculator is allowed.

MATHEMATICS [30 Marks]

1. For each t∈R ,let [t] be the greatest integer less than or equal to t.Then, $\lim_{x\to 0+} x\left(\left[\frac{1}{x}\right]+\left[\frac{2}{x}\right]+\left[\frac{3}{x}\right]+\cdots+\left[\frac{15}{x}\right]\right)=$
   a) 0 b) 15
   c) 120 d) does not exist.

2. Let $S=\{t\in R: f(x)=|x-\pi|(e^{|x|}-1)\sin|x|$ is not differentiable at $t\}$.Then the set S is
   a) empty set b) $\{0,\pi\}$
   c) $\{\pi\}$ d) none of these.

3. The value of $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}}\frac{\sin^2 x}{1+2^x}dx=$
   a) $\pi/8$ b) $\pi/2$
   c) 4π d) $\pi/4$

4. The minimum value of $x^{\frac{1}{x}}$, for $x>0$ is
   a) $e^{\frac{1}{e}}$ b) $\left(\frac{1}{e}\right)^e$
   c) e^e d) None of these.

5. The function $f: R\to\left[-\frac{1}{2},\frac{1}{2}\right]$ defined by $f(x)=\frac{x}{1+x^2}$ is
   a) invertible b) injective but not surjective
   c) surjective but not injective d) neither surjective nor injective.

6. Let $f: R\to R$ be a function such that f is continuous at √3 and for all $x, y\in R, f(x+y)=f(x)+f(y)$.Then
   a) f is discontinuous on R-Q b) f is continuous only on R-Q
   c) f is continuous on R d) f is continuous only at √3.

7. The number of injective function from a set of two elements to a set of 2022 elements is
   a) 2022×2 b) 2022C2
   c) 2022P2 d) None of these.

1

8. If $f(x) + 2f\left(\frac{1}{x}\right) = 3x, x \neq 0$ and $S = \{x \in R: f(x) = f(-x)\}$, then S is
   a) an empty set
   b) contains exactly one element
   c) contains exactly two elements
   d) contains more than two elements.

9. A value of θ for which $\frac{2+3i\sin\theta}{1-2i\sin\theta}$ is purely imaginary is,
   a) $\pi/3$
   b) $\pi/6$
   c) $\sin^{-1}\left(\frac{1}{\sqrt{3}}\right)$
   d) $\sin^{-1}\left(\frac{\sqrt{3}}{4}\right)$

10. The probability of a man A of living 10 more years is 1/4 and that of his wife is 1/3. What is the probability that both of them will die within 10 years?
   a) 1/3
   b) 5/6
   c) 1/2
   d) 7/12

11. For a 3×3 matrix A, if A×adj A$=\begin{pmatrix} 2022 & 0 & 0 \\ 0 & 2022 & 0 \\ 0 & 0 & 2022 \end{pmatrix}$, then det A=
   a) 2022×3
   b) 2022
   c) 2022^3
   d) 1/2022.

12. For any natural number n, $11^{n+2} + 12^{2n+1}$ is divisible by
   a) 132
   b) 133
   c) 121
   d) 144

13. If A$=\begin{bmatrix} 2 & -1 \\ -1 & 2 \end{bmatrix}$, then $A^2 - 4A + 4I_2 =$
   a) $-I_2$
   b) $2I_2$
   c) I_2
   d) None of these.

14. If period of an odd function f be 2, then f(4)=
   a) 3
   b) 4
   c) 2
   d) 0

15. $\int_{-1}^{4}\{|x-2| + |x-3|\}dx =$
   a) 4/3
   b) 5
   c) 6
   d) 5/2

16. If number of elements of a set A be n, then the no of mapping defined from A×A to A is
   a) $(n^2)^n$
   b) $n \times n^2$
   c) n^{n^2}
   d) $(2^n)^n$

17. The last digit of $(2023)^{2022}$ is

a) 1 b) 2
c) 3 d) 9

18. Let $I_n = \int \tan^n x\, dx\ (n > 1)$. If $I_4 + I_6 = a\tan^5 x + bx^5 + c$, where c is constant of integration ,then the ordered pair (a,b) is equal to

a) (-1/5,1) b) (1/5,0)
c) (1/5,-1) d) (-1/5,0)

19. If $5(\tan^2 x - \cos^2 x) = 2cos2x + 9$, then the value of cos(4x) is

a) -3/5 b) 1/3
c) -7/9 d) None of these.

20. $\lim_{x\to\frac{\pi}{2}} \frac{cotx-cosx}{(\pi-2x)^3} =$

a) 1/24 b) 1/16
c) 1/8 d) None of these.

21. $\lim_{n\to\infty} \left(\frac{(n+1)(n+2)....3n}{n^{2n}}\right)^{\frac{1}{n}} =$

a) $\frac{18}{e^4}$ b) 3log3-2
c) $\frac{9}{e^2}$ d) None of these.

22. Let y(x) be the solution of the differential equation $xlogx\frac{dy}{dx} + y = 2xlogx, (x \geq 1)$, then y(e)=

a) e b) 0
c) 2e d) 2

23. Three positive numbers form an increasing G.P. If the middle term is doubled, then new numbers are in A.P. The common ratio of the G.P is

a) $\sqrt{2}+\sqrt{3}$ b) $3+\sqrt{2}$
c) $2-\sqrt{3}$ d) $2+\sqrt{3}$

24. If g is the inverse of a function f and $f'(x) = \frac{1}{1+x^5}$, then $g'(x) =$

a) $1 + x^5$ b) $5x^4$
c) $\frac{1}{1+\{g(x)\}^5}$ d) $1 + \{g(x)\}^5$

25. A MCQ exam have 5 questions. Each question has three alternative options of which exactly one is correct. The probability that a student will get 4 or more correct answers just by guessing is

a) $\frac{17}{3^5}$ b) $\frac{13}{3^5}$
c) $\frac{11}{3^5}$ d) None of these.

26. The variance of the first 50 even natural numbers is

a) 833/4 b) 833/8
c) 437/4 d) None of these.

27. The area of the region enclosed by the circle $x^2 + y^2 = 2$, which is not common to the region bounded by the parabola $y^2 = x$ and the straight line $y = x$, *is*

a) 1/3(12π-1) b) 1/6(12π-1)
c) 1/3(6π-1) d) 1/6(24π-1)

28. The distance of the point (1,3,-7) from the plane passing through the point (1,-1,-1) having normal perpendicular to both the lines $\frac{x-1}{1} = \frac{y+2}{-2} = \frac{z-4}{3}$ and $\frac{x-2}{2} = \frac{y+1}{-1} = \frac{z+7}{-1}$

a) 20/√74 unit b) 10/√83 unit
c) 5/√83 unit d) 10/√74 unit

29. The Boolean expression $(p \wedge \sim q) \vee q \vee (\sim p \wedge q)$ is equivalent to

a) p∨q b) p∧q
c) ~q d) None of these.

30. The equation $e^{sinx} - e^{-sinx} - 4 = 0$ has

a) infinite number of real roots b) no real roots
c) exactly one real root d) exactly four real roots.

PHYSICS [30 Marks]

1. A body attached to the lower end of a vertical spring oscillates with time period of 1 sec. The time period when two such springs are connected one below another is approximately

a) 0.7 sec b) 1 sec c) 1.4 sec d) 2 sec

2. The minimum and maximum capacitance, which may be obtained by the combination of three capacitors each of capacitance 6 μF are

a) 6 μF and 18 μF b) 2 μF and 18 μF c) 2 μF and 12 μF d) 6 μF and 12 μF

3. If a Young's double slit experiment were conducted inside water instead of air, the fringe width would

a) Increase b) decrease c) remains same d) become zero

4. The ratio of the masses of two planets is 2:3 and the ratio of their radii is 3:2. The ratio of acceleration due to gravity on these two planets is

a) 9 : 4 b) 11 : 9 c) 8 : 27 d) 3 : 2

5. The dimension of co-efficient of viscosity η is

a) $[MLT^{-2}]$ b) $[M^{-1}LT^{-1}]$ c) $[M^{-1}LT^{-2}]$ d) $[ML^{-1}T^{-1}]$

6. An explosive of mass 9 kg is divided in two parts. One part of mass 3 kg moves with velocity of 16 m/s. The kinetic energy of other part will be

a) 192 J b) 162 J c) 150 J d) 200 J

7. Two sound waves of wavelengths 50 cm and 51 cm produce 12 beats per second. The velocity of sound is

a) $306ms^{-1}$ b) $331\ ms^{-1}$ c) $340\ ms^{-1}$ d) $360ms^{-1}$

8. Air is expanded from 50 litre to 150 litre at 2 atmospheric pressure (1 atm pressure = $10^5\ kgm^{-2}$). The external work done is

a) 200 J b) 2000 J c) 2×10^4 J d) 2×10^4 J [2×10^7 J]. ($P\Delta V$).

9. When a body moves in a circular orbit its total energy is

a) positive b) negative c) zero d) infinite

10. The ionization potential of hydrogen is –13.6 eV. The energy required to excite the electron from the first to the third orbit is approximately

a) 10.2 J b) 12.09×10^{-6} J c) 19.94 J d) 19.34×10^{-19} J

11. Assume that the Earth rotates in a circular orbit round the Sun in 365 days. If the mass of the sun gets doubled but the radius of the orbit remains unchanged, the length of the year would be approximately

a) 183 days b) 258 days c) 516 days d) 730 days

12. In a mercury thermometer, the ice point is marked as 10^0 and the steam point is marked as 130^0. At a temperature of 40^0C, what will this thermometer read?

a) 100^0 b) 80^0 c) 62^0 d) 58^0

13. A particle is rotating in a circular orbit of radius a with uniform speed v. Then its projection on x-axis at an instant of time t is given by

a) x=a cos(vt/a) b) x=a sin(vt/a)

c) x=a d) x=a cos(vt/a+δ) where δ.is the initial phase.

14. Mark the correct option

a. If the incident rays are converging, we have a real object.
b. If the final rays are converging, we have a real image.

c. The image of a virtual object is called a virtual image.
d. If the image is virtual, the corresponding object is called a virtual object.

15. When two waves with the same frequency and constant phase difference interfere,

a. There is a gain in energy
b. There is a loss of energy
c. The energy is redistributed and the distribution changes with time.
d. The energy is redistributed and the distribution remains constant in time.

16. The properties of the surface of a liquid are different from those of bulk liquid because the surface molecules

a. are smaller than other molecules.
b. are larger than other molecules.
c. Find different types of molecules in their range of influences.
d. Feel a net force in one direction.

17. Two identical point charges are placed at the two ends A and B of a straight line. Let O be the midpoint of AB. Then at O,

a. The electric potential is zero.
b. The electric ~~potential~~ [field] is zero.
c. Both the potential and the field are zero.
d. Neither the potential nor the field is zero.

18. In an elastic collision between two particles

a) The total linear momentum is conserved.
b) The total Kinetic energy is conserved.
c) Both the linear momentum and kinetic energy are conserved.
d) Neither of them is conserved.

19. A vertical wire carries a current in upward direction. An electron beam sent horizontally towards the wire will be deflected

a) towards right b) towards left

c) upwards d) downwards

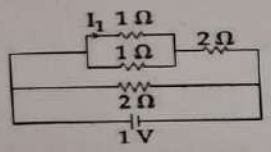
20. A wire of resistance 10 Ω is bent in the form of a circle. The resistance between two diametrically opposite points is

a) 2.5 Ω b) 5 Ω c) 7.5 Ω d) 10 Ω

21. The time period of revolution of electron in its ground state orbit in a hydrogen atom is 1.6×10^{-16} sec. The frequency of revolution of the electron in its first excited state is:

a) 1.6×10^{14} b) 7.8×10^{14} c) 3.2×10^{14} d) 6.4×10^{14}

22. The current I_1 flowing through 1Ω resistor in the following circuit is:



a) 0.5 A b) 0.25 A c) 0.2 A d) 0.3 A

23. A Carnot engine operates between two reservoirs of temperatures 900 K and 300 K. The engine performs 1200 J of work per cycle. The heat energy (in J) delivered by the engine to the low temperature reservoir, in a cycle is:

a) 200 J b) 600 J c) 400 J d) 800 J

24. The cutting voltage of a semiconductor diode is 6 V. What will happen if a forward bias of 5 V is applied across the junction?

a) Current flows due to forward bias b) Current flows due to reverse bias

c) Current doesn't flow at all d) None of the above

25. In blackbody radiation characteristic the peak shifts towards the shorter wavelengths as the

a) temperature decreases b) temperature increases

c) temperature remains constant d) none of these

26. The energy of a photon of wavelength 350 nm is:

a) 7 eV b) 5.5 eV c) 3.5 eV d) 10 eV.

27. If forward bias is applied across the p-n junction diode then the depletion region:

a) increases b) decreases c) remains same d) can't be predicted.

28. A Germanium crystal becomes *n*-type after which of the following material is doped:

a) Phosphorus b) Aluminium c) Boron d) Galium

29. If a magnet is dropped vertically through a copper coil then current will flow in:

a) clockwise direction from upper side b) anti-clockwise direction from upper side

c) clockwise direction from lower side d) clockwise direction from lower side.

30. The full form of LASER is:

a) Light amplification by stimulated emission of radiation

b) Light amplification by spontaneous emission of radiation,

c) Light amplification by special emission of radiation

d) Light amplification by sustained emission of radiation.

CHEMISTRY [30 Marks]

1. o-nitro toluene and p-nitro toluene are example of:

a) functional isomers b) positional isomers c) tautomers d) chain isomers

2. Nitrobenzene when reacted with mixture of H_2SO_4(Conc.) and HNO_3(Conc.) at 120° C, then the major product obtained is:

a) 1,3,5-trinitro benzene b) 1,4-dinitro benzene c) 1,3-dinitro benzene d) 1,2-dinitro benzene

3. When propene is reacted with hydrobromic acid the Markonikoff's addition product is:

a) 1,2- dibromo propane b) 1,2,3-tri bromo propane c) 1- bromo propane d) 2-bromo propane.

4. o/p directive influence is exhibited by:

a) –CHO b) $-CO_2Et$ c) $-CCl_3$ d) -Cl

5. The equivalent weight of K2Cr2O7 in acidic medium is expressed in terms of its molecular weight (M) as

a) M/3 b) M/4 c) M/6 d) M/7

6. The stable bivalency of Pb and trivalency of Bi is

a) due to d orbital contraction of Pb and Bi

b) due to relativistic contraction of the 6s orbitals of Pb and Bi leading to inert pair effect

c) due to screening effect

d) due to attainment of noble gas configuration

7. When benzene is reacted with alkylchloride in presence of anhydrous $AlCl_3$ the product is:

a) Alkyl bezene b) Aryl benzene c) Acyl benzene d) Vinyl benzene

8. What will be the major product when toluene is reacted with Br2/ FeBr3?

a) o-Bromotoluene b) m-Bromotoluene c) p-Bromotoluene d) o, p-Dibromotoluene

9. Which one of the following is correct

a) Radius of $Ca^{+2} < Cl^- < S^{-2}$ b) Radius of $Cl^- < S^{-2} < Ca^{+2}$

c) Radius of $Ca^{+2} = Cl^- = S^{-2}$ d) Radius of $S^{-2} < Cl^- < Ca^{+2}$

10. The diamagnetic species is-

a) $O_2[PtF_6]$ b) Na_2O_2 c) KO_2 d) Na_2FeO_4

11. Which of the following is not a chelating ligand?

a) ethylene di amine b) cyanide c) DMG d) EDTA

12. The criteria for triclinic crystal system is-

a) $\alpha=\beta=\gamma=90°$, $a=b\neq c$ b) $\alpha\neq\beta\neq\gamma=90°$, $a\neq b\neq c$

c) $\alpha\neq\beta\neq\gamma\neq90°$, $a\neq b\neq c$ d) $\alpha\neq\beta\neq\gamma=90°$, $a=b\neq c$

13. The useful reagent to identify Ni^{2+} in chemical analysis is-

a) EDTA b) $KMnO_4$ c) DMG d) permutit

14. What will be the major product when propene is reacted with hydrobromic acid in presence of hydrogen peroxide?

a) 1-bromo propane. b) 2- bromo propane.

c) 1,2- dibromo propane. d) 1,2,3-tribromo propane.

15. What will be the product when toluene is reacted with chlorine in diffused sunlight?

a) Benzyl chloride. b) 1,1- dichloro methyl benzene.

c) 1,1,1-trichloro methyl benzene. d) All a, b and c.

16. An example of flexidentate ligand is

a) EDTA b) SCN^- c) DMG d) NO_2^-

17. The hybridization state of Xe in XeF_2 is

a) sp^3 b) sp^3d c) sp^3d^2 d) sp^2

18. Choose the extensive property of a system-

a) viscosity b) density c) heat capacity d) molar heat capacity

19. The useful reagent to estimate the hardness of water is-

a) EDTA b) $KMnO_4$ c) DMG d) permutit

20. The d-orbital present in sp3d hybridization is

a) d_{xy} b) d_{yz} c) d_{x2-y2} d) d_{z2}

21. $_{11}Na^{24}$ and it decays to:

a) $_9F^{20}$ and alpha particles b) $_{13}Al^{24}$ and positron

c) $_{11}Na^{23}$ and neuron d) $_{12}Mg^{24}$ and beta particles

22. A 100 mL 0.1(M) solution of ammonium acetate is diluted by adding 100 mL of water. The pH of the resulting solution will be (pKa of acetic acid is nearly equal to pKb of NH4OH)

a) 4.9 b) 5.0 c) 7.0 d) 10.0

23. In 2 – butene, which one of the following statements is true

a) C1-C2 bond is a sp3-sp3 sigma bond b) C2-C3 bond is a sp3-sp2 sigma bond

c) C1-C2 bond is a sp3-sp2 sigma bond d) C1-C2 bond is a sp2-sp2 sigma bond

24. The well-known compounds (+)- lactic acid and (-) – lactic acid has the same molecular formula C3H6O3 the correct relationship between them is

a) constitutional isomerism b) geometrical isomerism

c) identicalness d) optical isomerism

25. The stability if Me2C=CH2 is more than that of MeCH2CH=CH2 due to

a) inductive effect of the Me groups

b) resonance effect of the Me groups

c) hyperconjugative effect of the Me groups

d) resonance as well as inductive effect of the Me groups

26. Which one of the following characteristics belong to an electrophile?

a) It is any species having electron deficiency which reacts at an electron rich centre

b) It is any species having electron enrichment that reacts at an electron deficient centre

c) It is cationic in nature

d) It is anionic in nature

27. Equal weight of CH4 and H2 are mixed in an empty container at room temperature. The fraction of the total pressure exerted by H2 is

a) 1/9 b) 1/2 c) 8/9 d) 16/17

28. In a reversible chemical reaction at equilibrium, if the concentration of any one reactants is doubled, then the equilibrium constant will

a) also be doubled b) be halved

c) remains the same d) becomes one-fourth

29. Identify the correct statement from the following in a chemical reaction:

a) The entropy always increases

b) The change in entropy along with suitable change in enthalpy decides the rate of the reaction

c) The enthalpy always decreases

d) Both the enthalpy and the entropy remain constant

30. Which one of the following is wrong about molecularity of a reaction

a) It may be whole number or fractional

b) It is calculated from reaction mechanism
c) It is the number of molecules of the reactants taking part in a single step chemical reaction
d) It is always equal to the order of the elementary reaction

ENGLISH [10 Marks]

1. Catalysts are substances that alter the rate of chemical reaction____
   i) without undergoing themselves any overall chemical change
   ii) without undergoing any overall chemical change themselves
   iii) without themselves undergoing any overall chemical change

2. Chemical reactions are accompanied_____
   i) with energy changes ii) by energy changes iii) for energy changes

3. Equilibrium is always attained_____
   i) through a closed system ii) into a close system iii) in a closed system

4. Washing soda has been used____
   i) for very early times ii) since very early times iii) from very early times

5. The resistance of a material____ an important role in electric circuit.
   i) marks ii) consists of iii) plays iv) shows

6. All the plant food is_____the process of photosynthesis.
   i) consisting of ii) taken iii) originated iv) derived through

7. CO_2 ____infrared radiation.
   i) keeps away ii) keeps iii) displays iv) absorbs

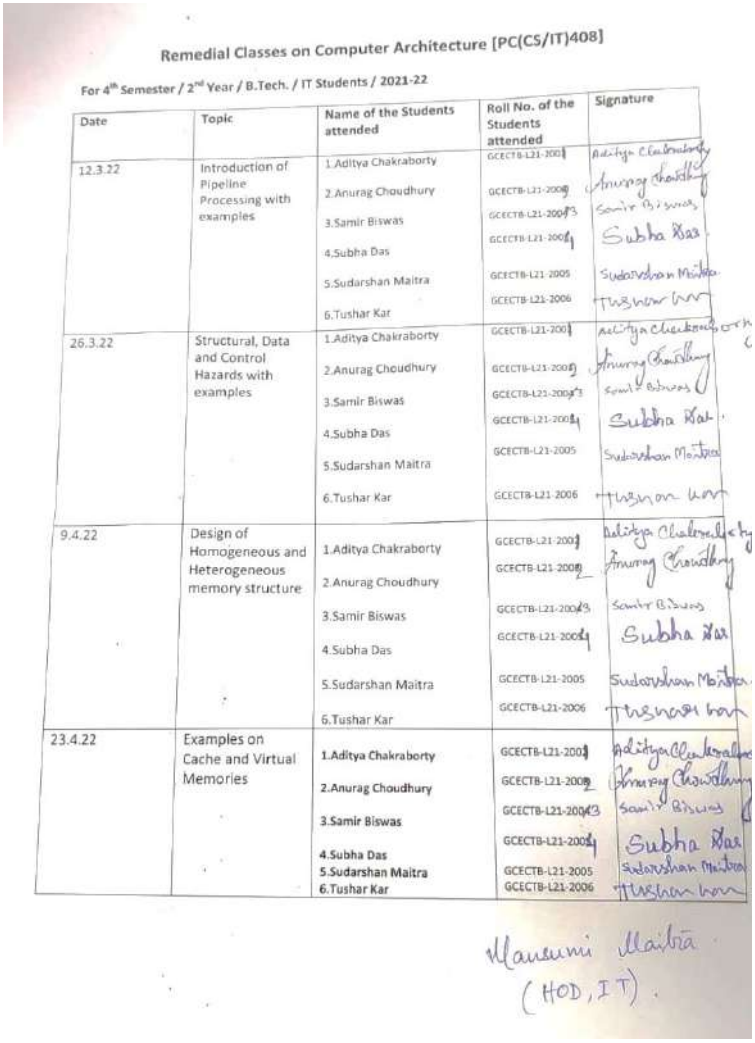
8. Most electrochemical cells cannot be recharged after they_____.
   i) break open ii) run down iii) break away iv) run out

9. Petroleum is an extremely _____ mixture of hydrocarbon compounds.
   i) positive ii) difficult iii) sophisticated iv) complex

10. A telescope is an_____instrument used for magnifying distant object.
    i) initial ii) optical iii) mechanical iv) absorbing

2. Catering the needs of slow Learners:

- Slow learners are provided with the remedial classes and peer tutorials by subject experts, to overcome their difficulties in specific courses.



Remedial Classes on Computer Architecture [PC(CS/IT)408]

For 4th Semester / 2nd Year / B.Tech. / IT Students / 2021-22

Date	Topic	Name of the Students attended	Roll No. of the Students attended	Signature
12.3.22	Introduction of Pipeline Processing with examples	1.Aditya Chakraborty 2.Anurag Choudhury 3.Samir Biswas 4.Subha Das 5.Sudarshan Maitra 6.Tushar Kar	GCECTB-L21-2001 GCECTB-L21-2002 GCECTB-L21-2003 GCECTB-L21-2004 GCECTB-L21-2005 GCECTB-L21-2006	Aditya Chakraborty Anurag Choudhury Samir Biswas Subha Das Sudarshan Maitra Tushar Kar
26.3.22	Structural, Data and Control Hazards with examples	1.Aditya Chakraborty 2.Anurag Choudhury 3.Samir Biswas 4.Subha Das 5.Sudarshan Maitra 6.Tushar Kar	GCECTB-L21-2001 GCECTB-L21-2002 GCECTB-L21-2003 GCECTB-L21-2004 GCECTB-L21-2005 GCECTB-L21-2006	Aditya Chakraborty Anurag Choudhury Samir Biswas Subha Das Sudarshan Maitra Tushar Kar
9.4.22	Design of Homogeneous and Heterogeneous memory structure	1.Aditya Chakraborty 2.Anurag Choudhury 3.Samir Biswas 4.Subha Das 5.Sudarshan Maitra 6.Tushar Kar	GCECTB-L21-2001 GCECTB-L21-2002 GCECTB-L21-2003 GCECTB-L21-2004 GCECTB-L21-2005 GCECTB-L21-2006	Aditya Chakraborty Anurag Choudhury Samir Biswas Subha Das Sudarshan Maitra Tushar Kar
23.4.22	Examples on Cache and Virtual Memories	1.Aditya Chakraborty 2.Anurag Choudhury 3.Samir Biswas 4.Subha Das 5.Sudarshan Maitra 6.Tushar Kar	GCECTB-L21-2001 GCECTB-L21-2002 GCECTB-L21-2003 GCECTB-L21-2004 GCECTB-L21-2005 GCECTB-L21-2006	Aditya Chakraborty Anurag Choudhury Samir Biswas Subha Das Sudarshan Maitra Tushar Kar

Mausumi Maitra
(HOD, IT)

- The institute publishes the teacher mentor list for the students at the beginning of each semester. The teacher mentors are always in touch with the students to assess the academic progress of the student. A sample mentoring sheet is attached herewith.

Name: ARGHADIP NANDI. CT/IT/CSE (Please tick) ✓

Roll No.: 6ICECTB-R20-2006 Year: 2nd Semester: 4th

Mobile: 6296439964 Mobile no. Of guardian: 9800257425

Feedback within one month of semester

1. Are you facing any problem in classes? NO.
2. Can you follow the class lectures? YES.
3. Are you regular in practical classes? YES.
4. Have you opted for MOOCS courses? NO.
5. Are you facing any problem in your place of stay? NO.
6. Are you comfortable with your classmates? YES.
7. Are you comfortable with your seniors? YES.
8. (a) Are you aware of scholarship and financial supports available? YES.

   (b) If yes, are you a beneficiary? YES. (SVMCM Scholarship)
9. Do you have any problem other than above mentioned points that you like to share? NO.

Signature with date

Arghadip Nandi
21.07.2021

M. Maitra.
21.1.22.

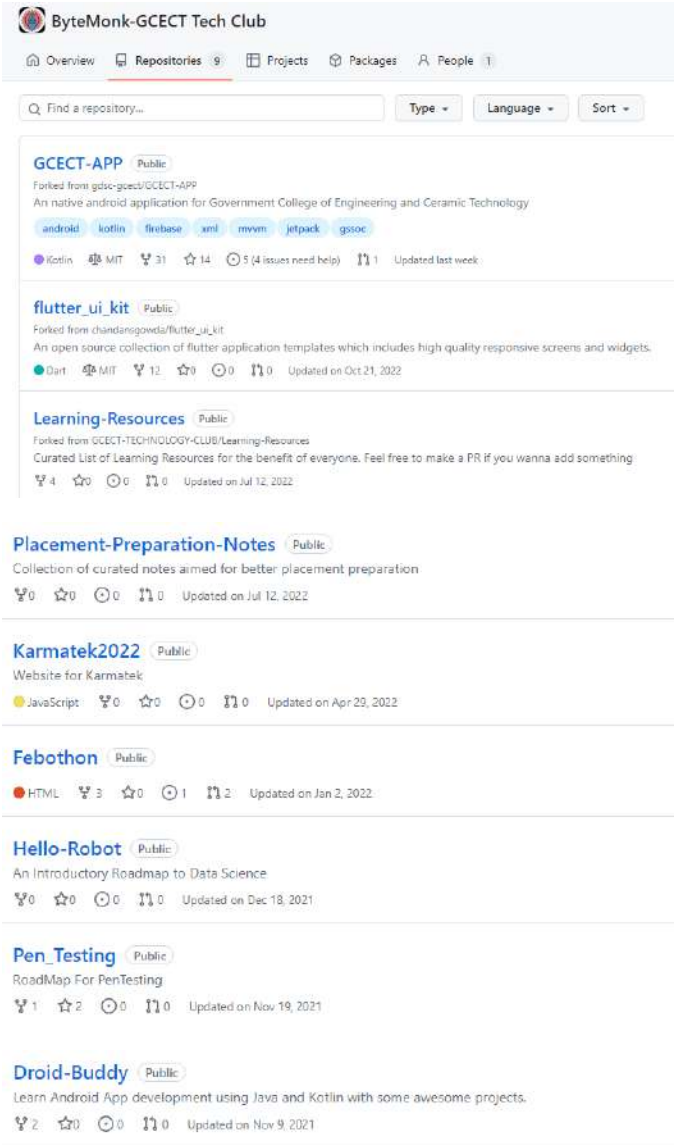
- Tutoring by peers and senior students:

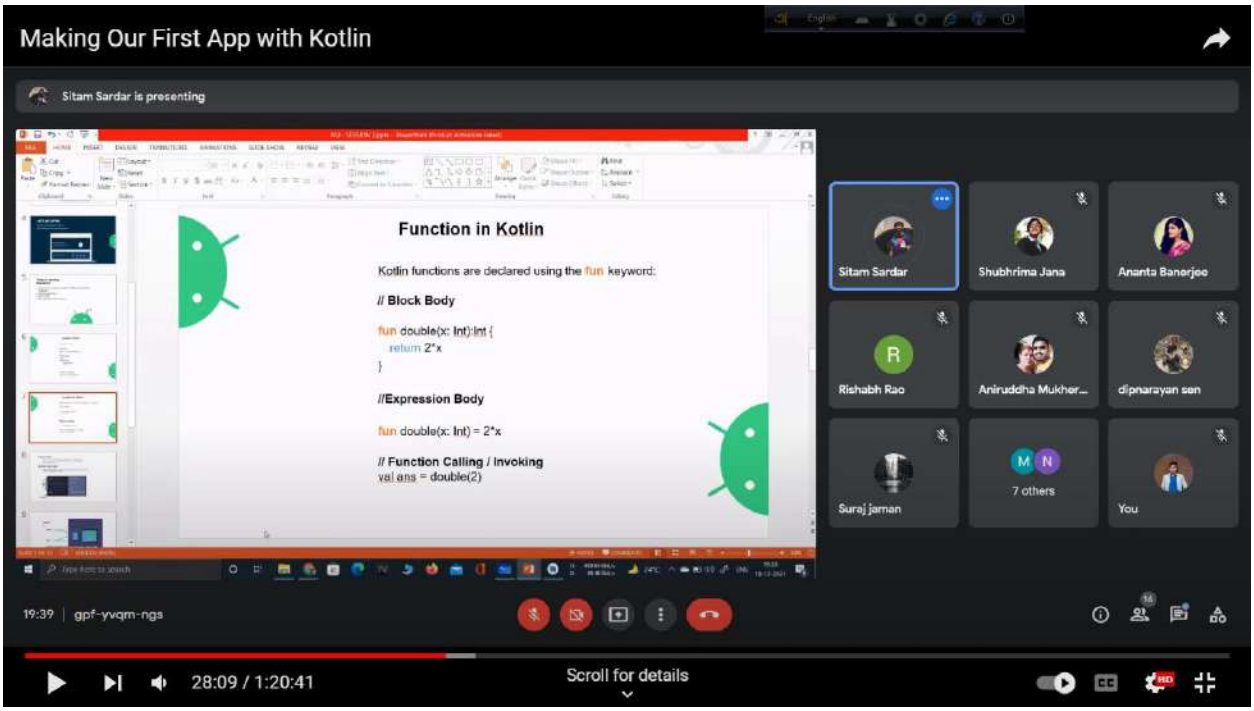
The students of the institute have developed a technical club where they discuss about the cutting edge technologies. The seniors take the opportunity to share their learnings to the juniors. From the following link one can find the relevant videos. The screenshot is showing that one of our student, Sitam Sardar is taking a class for the juniors where Sitam is helping the juniors to make the first APP using the Kotlin.

https://www.youtube.com/@gdscgcect1426/videos

Many such event records can be found from the following link.

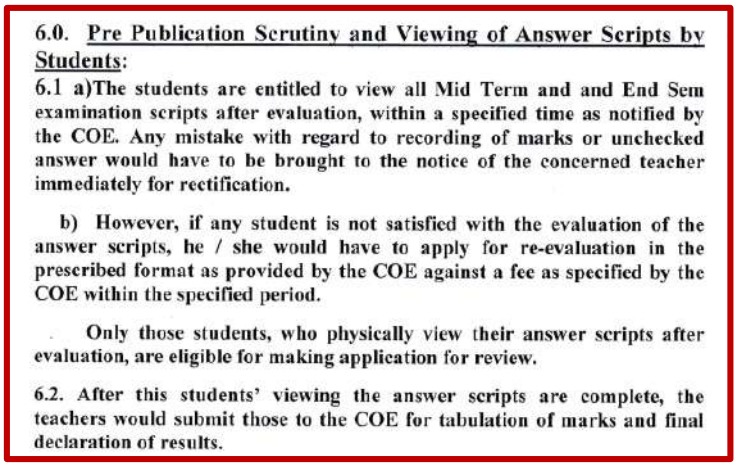
https://github.com/orgs/ByteMonk-GCECT/repositories




Making Our First App with Kotlin
Sitam Sardar is presenting
Function in Kotlin
Kotlin functions are declared using the fun keyword:
// Block Body
fun double(x: Int):Int {
return 2*x
}
//Expression Body
fun double(x: Int) = 2*x
// Function Calling / Invoking
val ans = double(2)
Sitam Sardar
Shubhrima Jana
Ananta Banerjee
Rishabh Rao
Aniruddha Mukher...
dipnarayan sen
Suraj jaman
7 others
You
19:39 | gpf-yvqm-ngs
28:09 / 1:20:41
Scroll for details

- Special class on the English Communication Skills are conducted for the students who are less proficient in English.

- Corrected assignments and answer scripts are shared with each student and discussed to enable students to recognize their weakness to improve. This rule is according to the academic regulation of the institute and the screenshot from the relevant portion of academic regulation is attached below. The screenshot of two sample front page of answer script is given here from where it can be seen that the student has signed after viewing the answer-script.



6.0. Pre Publication Scrutiny and Viewing of Answer Scripts by Students:

6.1 a)The students are entitled to view all Mid Term and and End Sem examination scripts after evaluation, within a specified time as notified by the COE. Any mistake with regard to recording of marks or unchecked answer would have to be brought to the notice of the concerned teacher immediately for rectification.

b) However, if any student is not satisfied with the evaluation of the answer scripts, he / she would have to apply for re-evaluation in the prescribed format as provided by the COE against a fee as specified by the COE within the specified period.

Only those students, who physically view their answer scripts after evaluation, are eligible for making application for review.

6.2. After this students' viewing the answer scripts are complete, the teachers would submit those to the COE for tabulation of marks and final declaration of results.

Debdoot Roy Chaudhury
15/07/2022

Script Code :	Script Code :
S. Samadder. 30/5.	*Complete this portion carefully and follow the instructions printed below :*
Signature of the Invigilator with date	Candidate's Roll Number GCECTB-R19-3014
Baldar	Registration number 018191 OF 2019-20
Signature of the Controller of Examinations	Examination B.TECH. Stream CSE
	Paper Code PEC (CS) 603A Paper MACHINE LEARNING
	Semester 6TH Date 30/05/2022
	Signature of the candidate Debdoot Roy Chaudhury

GOVT. COLLEGE OF ENGG. & CERAMIC TECHNOLOGY

[An Autonomous Institute Under MAKAUT (Formerly known as WBUT)]

Serial No. of Question	Marks awarded
1	9
2	5
3	5
4	
5	4
6	
7	5
8	14
9	11
10	
11	
12	14
13	
14	
15	
TOTAL MARKS	67
Total Marks in words	

Examiner's Signature .....

Scrutineer's Signature .....

Reviewer's Signature .....
PPV/PPR/PPS

Instructions to Candidates

1. Candidates are required to produce the Admit cards and Registration certificates during examination.
2. In no circumstances, may you take away Answer Booklets, used or unused, from the examination room.
3. Write on both sides of the paper. Begin each answer on a fresh page.
4. Write the number of the question at the top of each page.
5. This booklet contains 18 pages excluding the cover page. You are required to write your answer in this booklet. Use any additional sheet or sheets; tie them with end of the booklet with threads supplied. Do not write answer on them until you have used all the pages in the supplied booklet.
6. Do all rough work in the back page of this answer booklet and cross it through. No loose paper will be provided for scribbling and no paper is to be brought in for this purpose, any candidate possessing loose paper or found copying or adopting unfair means will be subject to disciplinary action under the relevant rules of the Institute.
7. Use of mobile phone and programmable calculator is strictly prohibited in the examination rooms.

Sl. No.s of Loose Sheets attached

SERIAL No. A

on the whole.

Seen
Adrija Chatterjee.

Script Code :	Script Code :
30/5/22	*Complete this portion carefully and follow the instructions printed below :*
Signature of the Invigilator with date	Candidate's Roll Number GICECTB-R19-3001
Baldar	Registration number 018501 of 2019-20
Signature of the Controller of Examinations	Examination 6th semester exam Stream CSE
	Paper Code PEC(CS) 603A Paper Machine learning.
	Semester 6th Date 30/05/22
	Signature of the candidate Adrija Chatterjee

GOVT. COLLEGE OF ENGG. & CERAMIC TECHNOLOGY

[An Autonomous Institute Under MAKAUT (Formerly known as WBUT)]

Serial No. of Question	Marks awarded
1	10
2	5
3	5
4	5
5	5
6	
7	
8	11½
9	14
10	
11	
12	14
13	
14	
15	
TOTAL MARKS	69
Total Marks in words	

Examiner's Signature .....

Scrutineer's Signature .....

Reviewer's Signature .....
PPV/PPR/PPS

Instructions to Candidates

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4. Write the number of the question at the top of each page.
5. This booklet contains 18 pages excluding the cover page. You are required to write your answer in this booklet. Use any additional sheet or sheets; tie them with end of the booklet with threads supplied. Do not write answer on them until you have used all the pages in the supplied booklet.
6. Do all rough work in the back page of this answer booklet and cross it through. No loose paper will be provided for scribbling and no paper is to be brought in for this purpose, any candidate possessing loose paper or found copying or adopting unfair means will be subject to disciplinary action under the relevant rules of the Institute.
7. Use of mobile phone and programmable calculator is strictly prohibited in the examination rooms.

Sl. No.s of Loose Sheets attached

SERIAL No. A

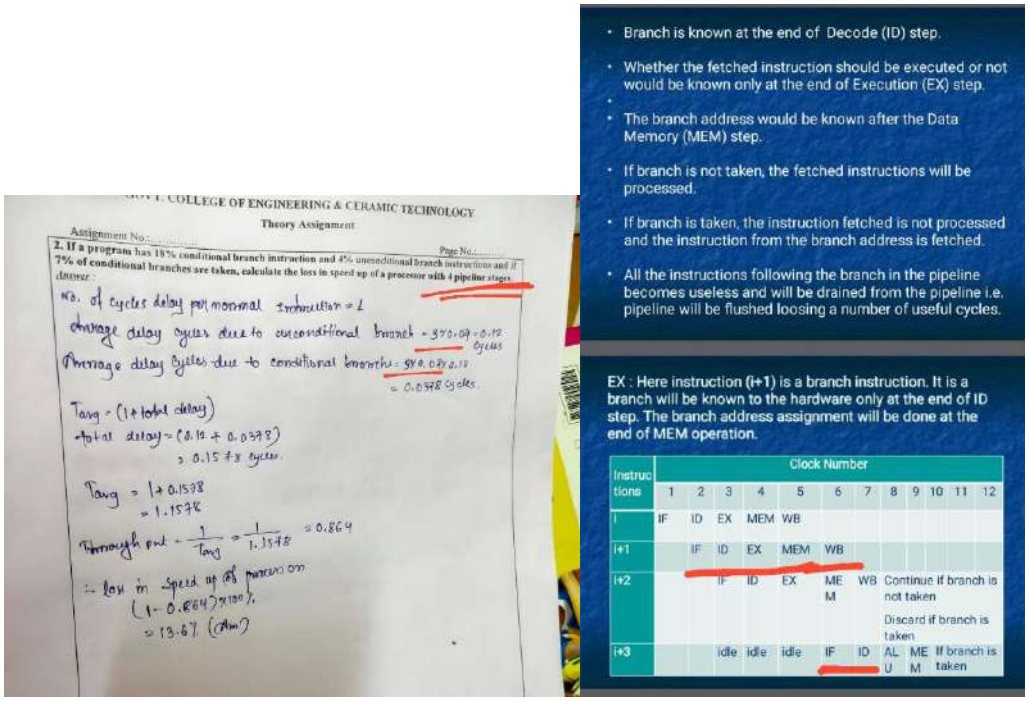
92

- Faculty makes it a point to be patient and accessible to students personally, over the phone, mail, and social apps.

  Another measure to improve the quality of Slow learner is to give them study material in their mother language so that they can understand the subject very easily. As an example of this initiative Dr. Partha Haldar has translated "Applied Thermodynamics for Engineers" offered by IIT Guwahati in Bengali language. Hours translated 5.75. Certificate awarded by NPTEL and Swayam on 19.11.2020. The copy the certificate received is also attached below.

For example Sourav Senapati, Student of B.Tech IT 4th sem asked one question to Prof. (Dr.) Mausumi Maitra through whatsapp. The teacher replied promptly to the student.

Question:



এটাতে 5 সেগমেন্ট ছিল , মেমোরি এর পর next instruction fetch হচ্ছে তাই 3 টে stall cycle লাগছে, কিন্তু ওই question টায় বুঝবো কি করে যে কোন stage এর পর next instraction fetch হবে???

Answer: Here also 3 cycles delay will be considered.

NPTEL

swayam

CERTIFICATE

OF APPRECIATION

This Certificate is presented to

Partha Haldar

for translating the files of the course

Applied Thermodynamics for Engineers (112103275)

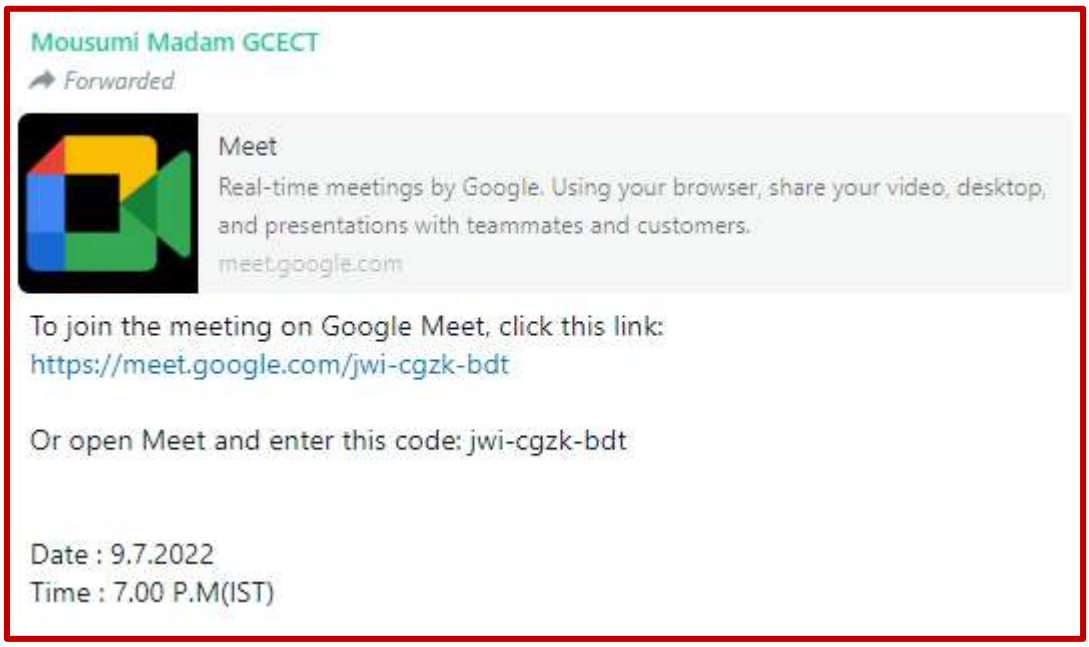
offered by **IIT Guwahati**

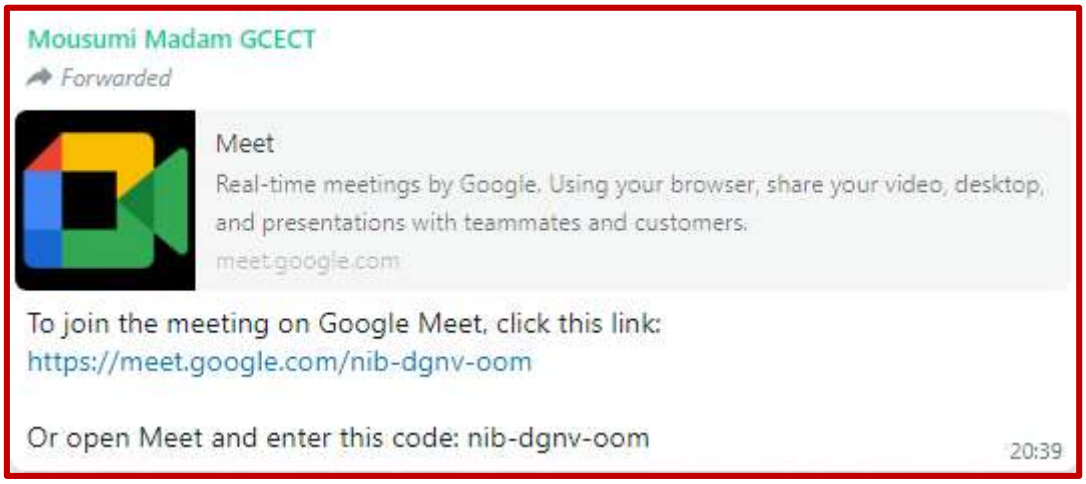
in **Bengali** *language. Hours translated:* **5.75**

Date : **19/11/2020**

Andrew Thangaraj
Coordinator, NPTEL

- Training and Placement Cell conducts grooming sessions and mock interviews for all students with special emphasis for slow learners to enhance their employability. Some of the online meeting links of such events are given for record.
- http://meet.google.com/wvh-ybpq-bfh
- http://meet.google.com/jwi-cgzk-bdt
- http://meet.google.com/nib-dgnv-oom





Forwarded

Placement Training program for CSE/IT 2023 (roadmap - decided together)

✅>Resume prepare (session): 1Week. (Submit through Google Drive)

👉>Basics cs: 2Week
1. OS basic 10-15Q
2. DBMS basic
3. Network || Software Engineering (at least basics)
4. OOps (Java, C++, C, Python, .Net)|| DS/Algo (Sorting, Searchin/ Stack, queue, tree)

>Project ** End date: July End?
>Competetive programming CP || *practice online interview in hackerrank\cocubes (1hr/day)
>Aptitude (prepare all topics) (1hr/day)

>Interview common question preparation [HR] (*): 1W
>(Mock interview - July mid)

20:45

Mousumi Madam GCECT

Forwarded

Meet

Real-time meetings by Google. Using your browser, share your video, desktop, and presentations with teammates and customers.

meet.google.com

http://meet.google.com/wvh-ybpq-bfh

20:49

3. Catering the needs of advanced Learners:

- Advanced learners are encouraged to study additional reference books on the subject of study. Gold, Silver and bronze medals are awarded to the toppers in the Graduate Day celebration to encourage them to perform better.

- Students are guided to take up additional courses viz. NPTEL courses

  Certificate link is attached below::

  https://gcect.ac.in/iqac-courses-training/

- Students are guided to take up additional courses in. Google Developer Student Clubs.

  https://gdsc.community.dev/government-college-of-engineering-ceramic-technology-kolkata/

- The advance learners are provided with training in Programming through internships in various companies of repute.

  Certificate link is attached below::

  https://gcect.ac.in/iqac-courses-training/

- Students are send to participate in Smart India Hackathon, CodeChef and other Coding contests, National and International Paper Presentations. Students are encouraged to participate in seminars, conferences and workshops to gain knowledge. As for example students participated in ISTE Chhatra Vishwakarma Awards-2018, All India seminar on Solid waste management, National conference, Mrittika 2.0, Engineering Fair 2018 held at BITM.

For example, Dr. Partha Haldar has acted as a mentor for a team which participated in the AICTE-ECI-ISTE Chhatra Vishwakarma Awards-2018 in both the Regional as well as the National Convention.

AICTE-ECI-ISTE Chhatra Vishwakarma Awards-2018

CERTIFICATE FOR PARTICIPATION IN REGIONAL CONVENTION

This is to certify that Dr. / Mr. / Ms. PARTHA HALDAR

from GOVERNMENT COLLEGE OF ENG. & CERAMIC TECHNOLOGY, WEST BENGAL participated as Mentor / Team Member in the **" Regional Convention"** of 2nd AICTE-ECI-ISTE **" Chhatra Vishwakarma Awards - 2018"** held on 02.11.2018 under ERO

The team presented an innovative solution / prototype under the theme of **"Empowerment of Villages Through Technologies".**

Member Secretary
Engineering Council of India

Executive Secretary
Indian Society for Technical Education

Member Secretary
All India Council for Technical Education

AICTE-ECI-ISTE Chhatra Vishwakarma Awards-2018

CERTIFICATE FOR PARTICIPATION IN NATIONAL CONVENTION

This is to certify that Dr. / Mr. / Ms. PARTHA HALDAR

from GOVERNMENT COLLEGE OF ENGG. & CERAMIC TECHNOLOGY participated as Mentor / Team Member in the "National Convention" of 2nd AICTE-ECI-ISTE "Chhatra Vishwakarma Awards-2018" held on 20-21 January 2019 at All India Council for Technical Education (AICTE), New Delhi. The team presented an innovative solution / prototype under the theme of "Empowerment of Villages Through Technologies".

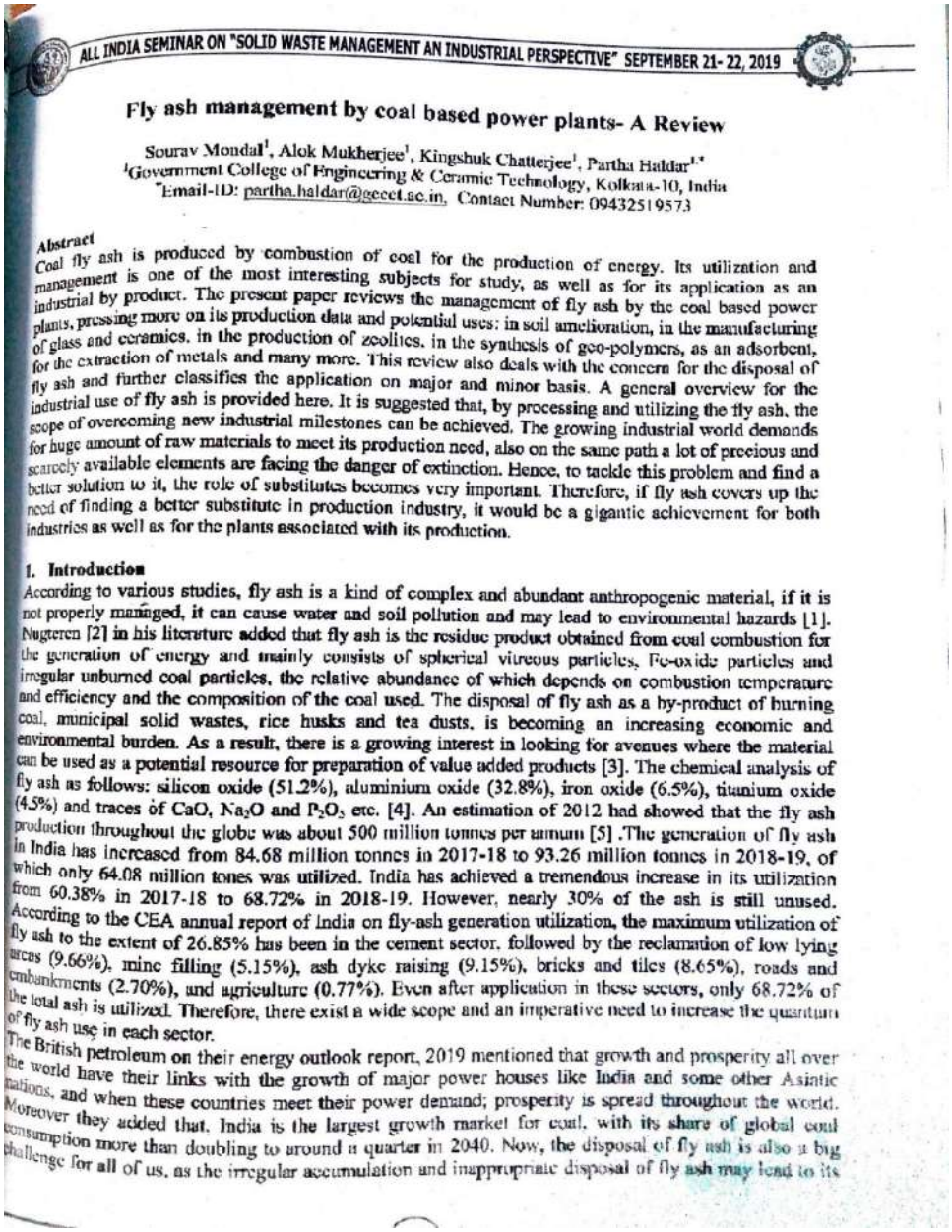
Member Secretary
Engineering Council of India

Executive Secretary
Indian Society for Technical Education

Member Secretary
All India Council for Technical Education

Students of CT 4th sem have participated in the National conference, Mrittika 2.0, organized by NIT Rourkela.

One of our student Sourav Mondal has participated in all India seminar on Solid waste management an industrial perspective, September 21-22, 2019 and presented a paper on Fly ash management by coal based power plant-A review.



Fly ash management by coal based power plants- A Review

Sourav Mondal[1], Alok Mukherjee[1], Kingshuk Chatterjee[1], Partha Haldar[1,*]
[1]Government College of Engineering & Ceramic Technology, Kolkata-10, India
*Email-ID: partha.haldar@gcect.ac.in, Contact Number: 09432519573

Abstract
Coal fly ash is produced by combustion of coal for the production of energy. Its utilization and management is one of the most interesting subjects for study, as well as for its application as an industrial by product. The present paper reviews the management of fly ash by the coal based power plants, pressing more on its production data and potential uses: in soil amelioration, in the manufacturing of glass and ceramics, in the production of zeolites, in the synthesis of geo-polymers, as an adsorbent, for the extraction of metals and many more. This review also deals with the concern for the disposal of fly ash and further classifies the application on major and minor basis. A general overview for the industrial use of fly ash is provided here. It is suggested that, by processing and utilizing the fly ash, the scope of overcoming new industrial milestones can be achieved. The growing industrial world demands for huge amount of raw materials to meet its production need, also on the same path a lot of precious and scarcely available elements are facing the danger of extinction. Hence, to tackle this problem and find a better solution to it, the role of substitutes becomes very important. Therefore, if fly ash covers up the need of finding a better substitute in production industry, it would be a gigantic achievement for both industries as well as for the plants associated with its production.

1. Introduction

According to various studies, fly ash is a kind of complex and abundant anthropogenic material, if it is not properly managed, it can cause water and soil pollution and may lead to environmental hazards [1]. Nugteren [2] in his literature added that fly ash is the residue product obtained from coal combustion for the generation of energy and mainly consists of spherical vitreous particles, Fe-oxide particles and irregular unburned coal particles, the relative abundance of which depends on combustion temperature and efficiency and the composition of the coal used. The disposal of fly ash as a by-product of burning coal, municipal solid wastes, rice husks and tea dusts, is becoming an increasing economic and environmental burden. As a result, there is a growing interest in looking for avenues where the material can be used as a potential resource for preparation of value added products [3]. The chemical analysis of fly ash as follows: silicon oxide (51.2%), aluminium oxide (32.8%), iron oxide (6.5%), titanium oxide (4.5%) and traces of CaO, Na_2O and P_2O_5 etc. [4]. An estimation of 2012 had showed that the fly ash production throughout the globe was about 500 million tonnes per annum [5] .The generation of fly ash in India has increased from 84.68 million tonnes in 2017-18 to 93.26 million tonnes in 2018-19, of which only 64.08 million tones was utilized. India has achieved a tremendous increase in its utilization from 60.38% in 2017-18 to 68.72% in 2018-19. However, nearly 30% of the ash is still unused. According to the CEA annual report of India on fly-ash generation utilization, the maximum utilization of fly ash to the extent of 26.85% has been in the cement sector, followed by the reclamation of low lying areas (9.66%), mine filling (5.15%), ash dyke raising (9.15%), bricks and tiles (8.65%), roads and embankments (2.70%), and agriculture (0.77%). Even after application in these sectors, only 68.72% of the total ash is utilized. Therefore, there exist a wide scope and an imperative need to increase the quantum of fly ash use in each sector.

The British petroleum on their energy outlook report, 2019 mentioned that growth and prosperity all over the world have their links with the growth of major power houses like India and some other Asiatic nations, and when these countries meet their power demand; prosperity is spread throughout the world. Moreover they added that, India is the largest growth market for coal, with its share of global coal consumption more than doubling to around a quarter in 2040. Now, the disposal of fly ash is also a big challenge for all of us, as the irregular accumulation and inappropriate disposal of fly ash may lead to its

For example, students are encouraged to participate in the science and Engineering Fair 2018 held at Birla Industrial and Technological Museum from 9 to 13 January 2018 and was awarded a prize for Best Applied Technology project.


CERTIFICATE OF MERIT

विज्ञान एवं अभियांत्रिकी मेला

SCIENCE & ENGINEERING FAIR 2018

Organised by

BIRLA INDUSTRIAL AND TECHNOLOGICAL MUSEUM

National Council of Science Museums, Ministry of Culture, Govt. of India

This is to certify that....Sulagna...Mukherjee.....

of Govt. College of Engineering & Ceramic Technology

participated in the Science and Engineering Fair 2018 held at

Birla Industrial and Technological Museum from 9 to 13 January 2018

and was awarded a prize for ~~his~~/her Best Applied Technology Project.

E. Islam

Director

Birla Industrial & Technological Museum

19A, Gurusaday Road, Kolkata – 700 019


CERTIFICATE OF MERIT

विज्ञान एवं अभियांत्रिकी मेला

SCIENCE & ENGINEERING FAIR 2018

Organised by

BIRLA INDUSTRIAL AND TECHNOLOGICAL MUSEUM

National Council of Science Museums, Ministry of Culture, Govt. of India

This is to certify that.....Subhasree...Mondal.....

of Govt. College of Engineering & Ceramic Technology

participated in the Science and Engineering Fair 2018 held at

Birla Industrial and Technological Museum from 9 to 13 January 2018

and was awarded a prize for ~~his~~/her Best Applied Technology Project.

E. Islam

Director

Birla Industrial & Technological Museum

19A, Gurusaday Road, Kolkata – 700 019

- The faculty facilitates students to publish their articles in renowned peer-reviewed journals. Some examples of such articles published in reputed journals are attached.

Neuroscience Informatics 2 (2022) 100060

Contents lists available at ScienceDirect

Neuroscience Informatics

journal homepage: www.elsevier.com/locate/neuri

Artificial Intelligence in Brain Informatics

MRI-based brain tumour image detection using CNN based deep learning method

Arkapravo Chattopadhyay*, Mausumi Maitra

Department of Information Technology, Government College of Engineering and Ceramic Technology, Kolkata-700010, West Bengal, India

ARTICLE INFO

Article history:
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Accepted 21 February 2022

ABSTRACT

Introduction: In modern days, checking the huge number of MRI (magnetic resonance imaging) images and finding a brain tumour manually by a human is a very tedious and inaccurate task. It can affect the proper medical treatment of the patient. Again, it can be a hugely time-consuming task as it involves a huge number of image datasets. There is a good similarity between normal tissue and brain tumour cells in appearance, so segmentation of tumour regions become a difficult task to do. So there is an essentiality for a highly accurate automatic tumour detection method.

Method: In this paper, we proposed an algorithm to segment brain tumours from 2D Magnetic Resonance brain Images (MRI) by a convolutional neural network which is followed by traditional classifiers and deep learning methods. We have taken various MRI images with diverse Tumour sizes, locations, shapes, and different image intensities to train the model well. Furthermore, we have applied SVM classifier and other activation algorithms (softmax, RMSProp, sigmoid, etc) to cross-check our work. We implement our proposed method using "TensorFlow" and "Keras" in "Python" as it is an efficient programming language to perform fast work.

Result: In our work, CNN gained an accuracy of 99.74%, which is better than the state of the result obtained so far.

Conclusion: Our CNN based model will help the doctors to detect brain tumours in MRI images accurately, so that the speed in treatment will increase a lot.

1. Introduction

Medical imaging refers to several techniques that can be used as non-invasive methods of looking inside the body [1]. The main use of medical image in the human body is for treatment and diagnostic purposes. So, it plays a significant role in the betterment of treatment and the health of the human.

Image segmentation is a crucial and essential step in image processing that determines the success of image processing at a higher level [2]. In this case we have mainly focused on the segmentation of the brain tumour from the MRI images. It helps the medical representatives to find the location of the tumour in the brain easily. Medical image processing encompasses the utilization and exploration of 3D image datasets of the physical body, obtained most typically from computed tomography (CT) or Magnetic Resonance Imaging (MRI) scanner to diagnose pathologies or guide medical interventions like surgical planning, or for research purposes. Medical image processing is applied by radiologists, engineers, and clinicians to understand the anatomy of either individual patients or population groups highly. Measurement, statistical analysis, and creation of simulation models which incorporate real anatomical geometries provide the chance for more complete understanding, as an example of interactions between patient anatomy and medical devices.

Tumour: The word "Tumour" is a synonym for the word "neoplasm" which is formed by an abnormal growth of cells. A tumour is significantly different from cancer [3].

1.1. Classification of tumour

There are three basic types of tumours: 1) Benign; 2) Pre-Malignant; 3) Malignant (cancer can only be malignant) [4].

1.1.1. Benign tumour

A Benign Tumour is not always Malignant or cancerous. It might not invade close tissue or unfold to alternative components of the body the way cancer can. In most cases, the outlook with

* Corresponding author.
E-mail addresses: arkapravo1998@gmail.com (A. Chattopadhyay), mou1232005@yahoo.com (M. Maitra).

https://doi.org/10.1016/j.neuri.2022.100060

New Heuristics to Minimize Makespan of Permutation Flowshop Scheduling Problem with Uniformly Distributed Processing Times

Rose Dhar, Alok Mukherjee, Kingshuk Chatterjee, and Partha Haldar

Nomenclatures

N, n	Number of Jobs
M, m	Number of Machines
$t_p\ (j, i)$	Processing Time of Job i on Machine j
$t_c\ (j, i)$	Completion Time of Job i on Machine j
π_x	x^{th} Sequence of all jobs
$C(\pi_i)$	Completion Time of a sequence π_i
PFSP	Permutation Flowshop Scheduling Problem
NEH	Nawaz-Enscore-Ham
FLM	Modified Framinan and Leisten
PH	Proposed Heuristic
H1	The Stochastic Method, proposed by Chakraborty et al.
PRE	Percentage Relative Error

R. Dhar · K. Chatterjee
Department of Computer Science and Engineering, Government College of Engineering and Ceramic Technology, Kolkata, India

A. Mukherjee
Department of Electrical Engineering, Government College of Engineering and Ceramic Technology, Kolkata, India

P. Haldar (✉)
Department of Mechanical Engineering, Government College of Engineering and Ceramic Technology and Ceramic Technology, Kolkata, India

S. K. Ghosh et al. (eds.), *Advances in Thermal Engineering, Manufacturing, and Production Management*, Lecture Notes in Mechanical Engineering,
https://doi.org/10.1007/978-981-16-2347-9_34

Alumina Based Cutting Tools—A Review

Sourav Mondal, Rajashi Chatterjee, and Partha Haldar

1 Introduction

Ceramic materials used in cutting tools today are based either on alumina (Al_2O_3) or silicon nitride (Si_3N_4). Alumina based cutting tools (ACT) are extensively used as the benchmark for its abundance, cheapness and excellent structural properties [1]. ACT exhibits spectacular mechanical and structural properties, as these can provide long tool life and can carry out machining in hard and tough work pieces like stainless and hardened steel. Its physical properties can be enhanced by various toughening methods like fiber toughening or transformation toughening. Evidently, the machining of most of the complex and hard materials is done through alumina-ceramics and cubic boron nitrides which resembles high hardness at high temperature, chemical stability and its resistance to wearing. There are various advantages associated with using ACT, as it can work out with complex and hard shapes and giving quality surface finish even in tough situations. Various improvements can be made in its tool properties like resistivity to thermal shock and wearing, increased fracture strength and hardness etc. ACT has been found to substitute grinding operations in finishing part of steels, with the help of machining [2]. Machining is carried out between tool and work piece leading to intense abrasion, adhesion and diffusion

S. Mondal
Department of Ceramic Technology, Government College of Engineering and Ceramic Technology, Kolkata, India

R. Chatterjee
Department of Computer Science and Engineering, Government College of Engineering and Ceramic Technology, Kolkata, India

P. Haldar (✉)
Department of Mechanical Engineering, Government College of Engineering and Ceramic Technology, Kolkata, India

S. K. Ghosh et al. (eds.), *Advances in Thermal Engineering, Manufacturing, and Production Management*, Lecture Notes in Mechanical Engineering,
https://doi.org/10.1007/978-981-16-2347-9_22

Scientific Voyage
Vol. 1, No. 4,
Page 28-33 (2020)

SCIENTIFIC VOYAGE
ISSN: 2395-5546

GCECT
Publication
Oct.-Dec.

Pneumonia Detection based on X-ray image classification using Convolutional Neural Network based Deep Learning Model

Subrata Sarkar [a1], Alok Mukherjee [a2], Kingshuk Chatterjee [a3], Partha Haldar [a4]

[a] *Government College of Engineering and Ceramic Technology, Kolkata 700010, West Bengal, India*

Abstract. Pneumonia is a disease that threat humanity to this day. Even though we have developed vaccines and medicines, many lives are still lost every year due to this disease. So we have made an effort to develop an algorithm which would be able to detect this disease in an early stage to help people with the diagnosis. We have developed a Convolutional Neural Network (CNN) based Deep Learning (DL) model that detects pneumonia from the X-ray image of patients. This helps in classifying a given image, which, in turn, helps the physicians and other medical persons for easier diagnosis. In this study we have compared the outputs from two CNN based DL models: a 3 layered model and another 10 layered model. We have taken the chest x-ray images of different patients for developing and testing the proposed algorithm in Python platform.

Keywords: Pneumonia, X-ray image, Convolutional Neural Network (CNN), Deep Learning, Image classification.

1. Introduction

Pneumonia is an infection that inflames the alveoli in one or both lungs. These may be filling up with fluid or pus, causing cough with phlegm or pus; causing fever and difficulty breathing. Tuberculosis is a potentially infectious disease usually caused by Mycobacterium tuberculosis bacteria. Tuberculosis generally affects the lungs, but can also affect other parts of the body. Accurate diagnosing of pneumonia is thus extremely important. Chest radiograph (CXR) or chest X-ray is usually examined by trained specialists. Handling of the huge number of patients every day in the hospitals and clinics would greatly be assisted by a technique, which would perform a basic screening for Pneumonia detection.

Machine learning based solutions are developing every day for helping the clinicians and physicians more efficiently in correct prediction. So we have tried to develop two deep learning based models. These two designed Convolutional Neural Network (CNN) based models are found to predict pneumonia with a high accuracy of 90% approximately. This proposed method is intended to enable technicians to increase their efficiency, as well as, reduce their effort. At the same time, this would enable fast initial prediction of the disease and allow patients to consult with a physician immediately on detecting any positive result from the algorithm. We have used Keras with tensorflow backend to create the proposed convolutional neural network model. This is followed by training the proposed deep learning model using the open source image data from Kaggle. Finally, the model is validated using images from the same source. We have tried to develop a model which doesn't possess any addition computational intricacy apart from the CNN based deep learning method, which is used as the basic computational tool. Simultaneously, we have tried to retain an acceptable accuracy level, with high specificity so that it can be used as a everyday computation devices or can be handled by weaker computers very easily. These would also help diagnosis in the rural areas especially, where deficiency of computers with superior computational features or high level medical facility is a major hindrance to medical treatment.

[1] E-mail: *subrotosarkar32@gmail.com*
[2] E-mail: *alokmukherjee.ju@gmail.com*
[3] E-mail: *kingshukchaterjee@gmail.com*
[4] E-mail: *partha.jumech@gmail.com*