DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022
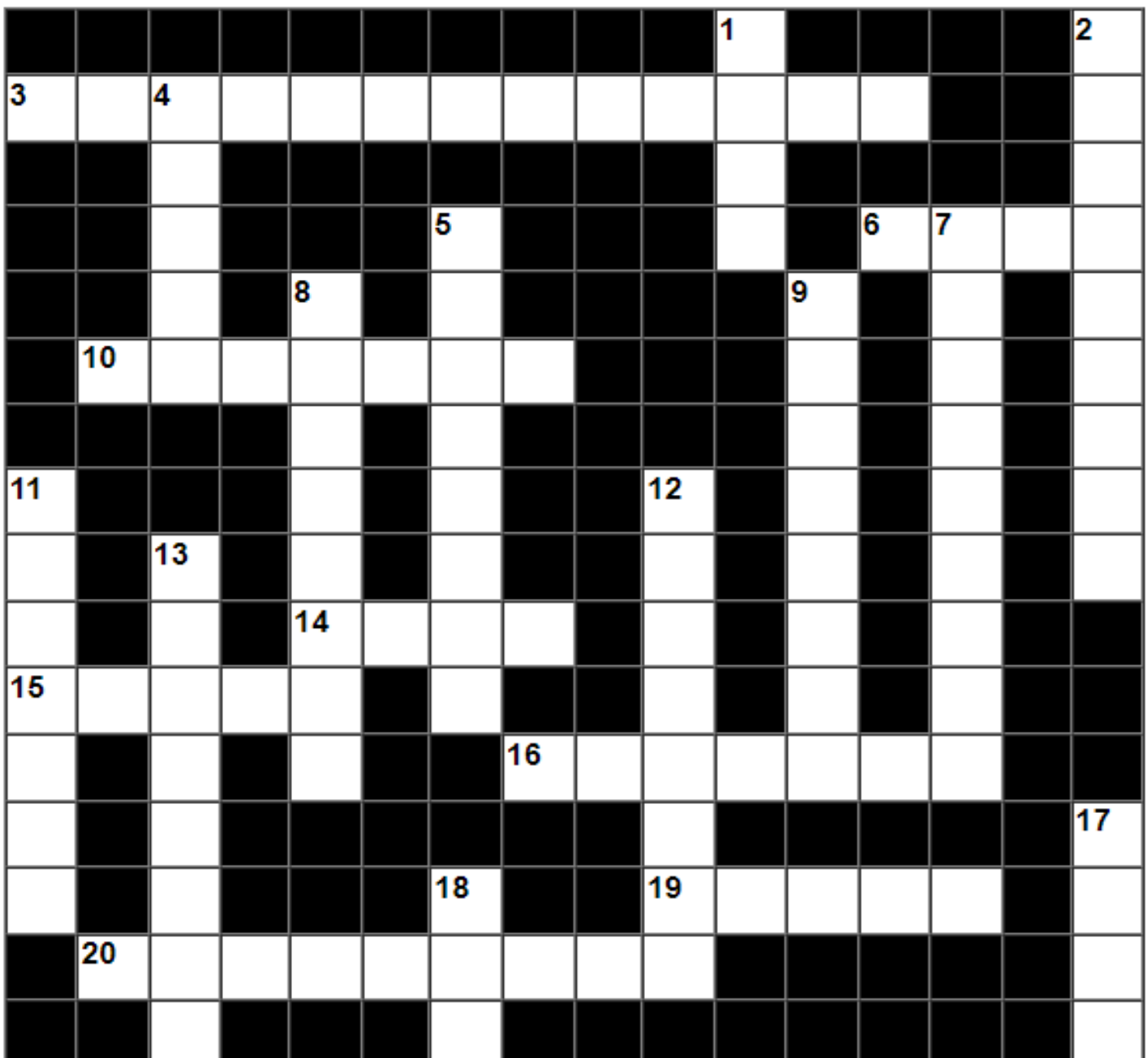
PROFESSIONAL CAREER ENHANCEMENT SKILLS

DEPATRMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2021-2022 (EVEN SEM)
CE8005 – AIR POLLUTION AND CONTROL ENGINEERING
PCE ACTIVITY 1- CROSSWORD

Name :		**Roll No** :	
Class : III Civil		**Date** :	
Maximum Marks : 20			

Across:

3 _____ refers to the rising of average temperature of Earth's atmosphere

6 In wind rose each spoke is broken down into color-coded _____ that show wind speed ranges

10 _____ is the major factor of mobile source of pollution.

14 In _____ sampling the sample is collected by filling an evacuated flask or an inflatable bag.

15 A _____ is a smoke, dust, fire or water of large quantity of it that rises into the air in tall objects.

16 Continuous exposure to air pollution, may cause _____ effects of breathing in human beings.

19 H = h + $\Box$h, here "h" denotes actual height of the _____

20 The _____ is defined as the rate of decrease with height for an atmospheric variable.
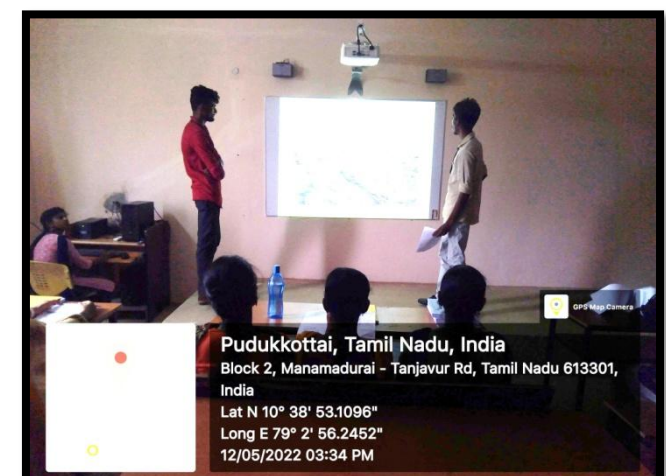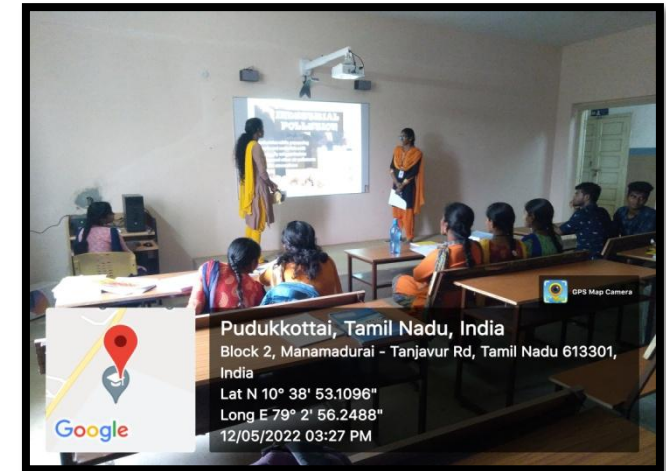
Down:

1 _____ is the primary factor for dispersion of particulate matters.

2 The symbol 'u' denotes _____ in the Effective stack height formula.

4 When 1 atomic oxygen molecule combines with 2 oxyegn molecules then _____ is formed.

5 _____ model uses a fixed three-dimensional Cartesian grid as a frame of reference

7 The rate of change in temperature of an air parcel with height is called as _____ lapse rate.

8 _____ gas is the major composition in the atmosphere

9 When pH of rain water drops anywhere below 5.6, it is said to be _____

11 Pollution that is released into an unstable atmosphere forms _____ plumes.

12 _____ is a graphic tool used by meteorologists to give a succinct view of how wind speed and direction are typically distributed at a particular location.

13 On the basis of Flick's law _____ dispersion model was developed

17 Shape and _____ of the particulate matter deceides the dispersion of the pollutant

18 If air parcel expands on cooling, then it is called as _____ adiabatic lapse rate.

File   Edit   Insert   Manage Grid   Options   Help

Title

PCE
ACTIVITY 1

Add Clues

Crossword grid words:

- GLOBAL WARMING
- WIND
- WINDSPEED
- OZONE
- BAND
- NITROGEN
- EULERIAN
- VEHICLE
- ACID RAIN
- DIABATIC
- LOOPING
- PLUME
- WINDROSE
- GRAB
- CHRONIC
- STACK
- LAPSE RATE
- DRY
- SIZE
- LAN
- GAUSSIAN

DEPATRMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2021-2022 (EVEN SEM)
CE8005 – AIR POLLUTION AND CONTROL ENGINEERING
PCE ACTIVITY 2: CROSSWORD

Name	:	T. S. JANANI
Class	:	III Civil
Maximum Marks	:	20

Roll No	: 19CE06
Date	: 29.04.22

Across:

3 __Global Warming__ refers to the rising of average temperature of Earth's atmosphere

6 In wind rose each spoke is broken down into color-coded _____ that show wind speed ranges

10 __Vehicle__ is the major factor of mobile source of pollution

14 In _____ sampling the sample is collected by filing an evacuated flask or an inflatable bag __Grab__

15 A _____ is a smoke, dust, fire or water of large quantity of it that rises into the air in tall objects. __Plume__

16 Continuous exposure to air pollution, may cause __chronic__ effects of breathing in human beings.

19 H = h + ∑h, here "h" denotes actual height of the __Stack__

20 The __Lapse rate__ is defined as the rate of decrease with height for an atmospheric variable.

Down:

1 _____ is the primary factor for dispersion of particulate matters.

2 The symbol 'u' denotes _____ in the Effective stack height formula.

4 When 1 atomic oxygen molecule combines with 2 oxygen molecules then _____ is formed. __Ozone__

5 _____ model uses a fixed three-dimensional Cartesian grid as a frame of reference

7 The rate of change in temperature of an air parcel with height is called as _____ lapse rate.

8 _____ gas is the major composition in the atmosphere

9 When pH of rain water drops anywhere below 5.6, it is said to be _____.

11 Pollution that is released into an unstable atmosphere forms _____ plumes.

12 _____ is a graphic tool used by meteorologists to give a succinct view of how wind speed and direction are typically distributed at a particular location.

13 On the basis of Flick's law _____ dispersion model was developed

17 Shape and __Size__ of the particulate matter decides the dispersion of the pollutant

18 If air parcel expands on cooling then it is called as __dry__ adiabatic lapse rate

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DEPATRMENT OF CIVIL ENGINEERING
CE8005 – AIR POLLUTION AND CONTROL ENGINEERING
PCE ACTIVITY 4 - SEMINAR

STUDENTS PRESENTATION

CE8005-
AIR POLLUTION & CONTROL ENGINEERING

PARTICULATE MATTER
AIR POLLUTION
AND
HEALTH RISKS

Presentation by
B.AGALYA,
R.MADHUMITHA
III Yr Civil

What is Particulate Matter?

Figure 1. Photomicrograph of Fly Ash Particles on an MCE filter

Image from http://www.epa.gov/eogapti1/module3/distribu/distribu.htm

Particulate matter (PM) describes a wide variety of airborne material. PM pollution consists of materials (including dust, smoke, and soot), that are directly emitted into the air or result from the transformation of gaseous pollutants. Particles come from natural sources (e.g., volcanic eruptions) and human activities such as burning fossil fuels, incinerating wastes, and smelting metals.

How is PM Regulated?

PM is one of the six EPA "criteria pollutants" that have been determined to be harmful to public health and the environment. (The other five are ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead.)

EPA is required under the Clean Air Act to set national ambient air quality standards (NAAQS) to protect public health from exposure to these pollutants. Areas that exceed the NAAQS are designated as nonattainment, and must institute air pollution control programs to reduce air pollution to levels that meet the NAAQS.

Where Does PM Originate?

Sources may emit PM directly into the environment or emit precursors such as sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and volatile organic compounds (VOCs), which are transformed through atmospheric chemistry to form PM.

$$\text{VOCs} \longrightarrow$$
$$\text{NO}_2 \xrightarrow{\text{Ammonia (NH}_3)} \text{PM}$$
$$\text{SO}_2 \xrightarrow{\text{Ammonia (NH}_3)}$$

Sources of PM and PM Precursors

Mobile Sources
(vehicles)
VOCs, NO$_2$, PM

Stationary Sources
(power plants, factories)
NO$_2$, SO$_2$, PM

Area Sources
(drycleaners, gas stations)
VOCs

Natural Sources
(forest fires, volcanoes)
PM

Determinants of PM Concentration

- Weather patterns
- Wind
- Stability (vertical movement of air)
- Turbulence
- Precipitation
- Topography
- Smokestack height and temperature of gases

Nearby natural and built structures may lead to downward moving currents causing aerodynamic or building downwash of smokestack emissions.

The Role of Inversions

Source: http://www.epa.gov/apti/course422/ce1.html
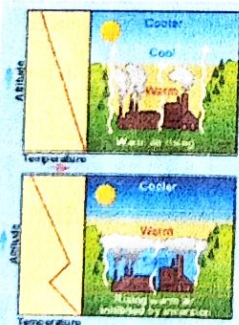
An inversion is an extremely stable layer of the atmosphere that forms over areas.

Temperature inversions trap pollutants close to the ground. These inversions involve layers of hot air sitting above cooler air near ground level. When particles accumulate in the air layer, they are unable to rise into the atmosphere where winds will disperse them.

Major Episodes of Severe Air Pollution due to Inversions

1930: Meuse River Valley, Belgium
- An inversion led to a high concentration of pollutants during a period of cold, damp weather
- Main sources: zinc smelter, sulfuric acid factory, glass manufacturers
- 60 deaths recorded

1948: Donora, Pennsylvania
- Similar inversion to Meuse River Valley
- Main sources: iron and steel factories, zinc smelting, and an acid plant
- 20 deaths observed

1952: London
- Killer fog (right)
- Primary source: domestic coal burning
- 4,500 excess deaths recorded during week-long period in December

The Great London Smog (1952)

Particulate Matter: Aerodynamic Diameter

Establishing a particle size definition for irregularly shaped particles necessitates the use of a standardized measure referred to as the aerodynamic diameter, measured in microns or micrometers (μm), a unit equal to one millionth of a meter. The graph at the right shows the distribution of the 4 main particle size categories, with the categories historically and currently regulated by EPA indicated below. By comparison, a human hair is approximately 70 microns in diameter.

Top: Modified from Online Reference Module by JR Richards et al. http://regidms.inc. ecen.edu/al, 2000.
Bottom: U.S. EPA, Office of Research and Development.
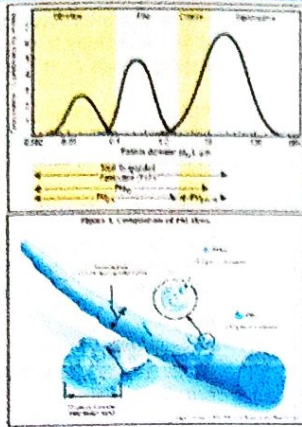
Particulate Matter: Size Matters

Size is important to the behavior of PM in the atmosphere and human body and determines the entry and absorption potential for particles in the lungs. Particles larger than 10 μm are trapped in the nose and throat and never reach the lungs. Therefore, particles 10 μm in diameter or less are of most concern for their effects on human health. Particles between 5 and 10 μm are removed by physical processes in the throat. Particles smaller than 5 μm reach the bronchial tubes, while particles 2.5 μm in diameter or smaller are breathed into the deepest portions of the lungs.

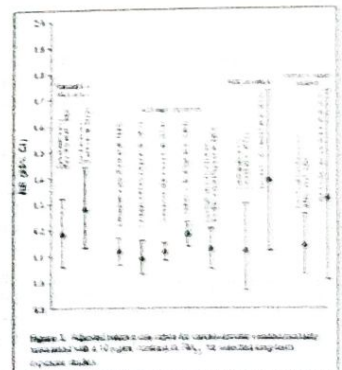Source: 2002, fig. 11. Harchos. From New York State Department of Environmental Conservation. http://www.dec.state.ny.us/website/dar/baqs/articles/pam.html

What Adverse Health Effects Have Been Linked to PM?

- Premature death
- Lung cancer
- Exacerbation of COPD
- Development of chronic lung disease
- Heart attacks
- Hospital admissions and ER visits for heart and lung disease
- Respiratory symptoms and medication use in people with chronic lung disease and asthma
- Decreased lung function
- Pre-term birth
- Low birth weight

## Increasing Evidence of Cardiovascular Effects

Until the mid 1990s, most research focused on the association of PM exposure with respiratory disease. Since then, there has been growing evidence of cardiovascular health effects from PM.

Figure 3. Adjusted relative risk ratios for cardiovascular morbidity/mortality associated with a 10 μg/m³ increase in PM$_{2.5}$ in various long-term exposure studies.

Source: Pope and Dockery, JAWMA, 2006

The Evolution of Air Pollution Research Methods - The London Fog

The London Fog event of 1952 provides a clear example of an early time-series analysis. The figure to the right shows the estimates of weekly mortality and average sulfur dioxide concentrations for London during the winter of 1952-53. Deaths in December increased approximately 2.5 times over comparable periods in 1947 to 1951, and remained elevated through February 1953.

Source: http://www.portfolio.mvm.ed.ac.uk/studentwebs/session4/27/greatsmog52.htm

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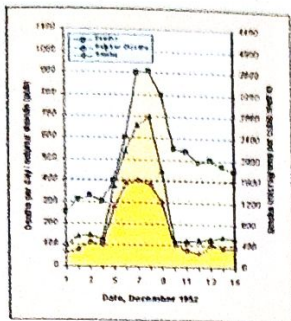
The Evolution of Air Pollution Research Methods - Modern Studies

The modern era of air pollution research involved using laboratory sampling equipment and epidemiologic methods to determine personal exposures and to monitor health effects. These efforts were used in the Harvard Six Cities Study, a prospective study pioneered in 1973, in which mortality data from a cohort of adults in six cities with different levels of air pollution were analyzed, controlling for behavioral risk factors such as smoking. This study led to more complex techniques for both measuring exposure and modeling the exposure-response relationship between PM and health endpoints
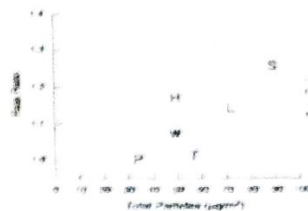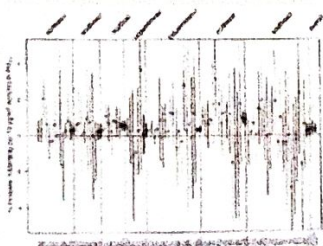

P~Portage, WI   H~Harriman, TN
T~Topeka, KS   L~St. Louis, MO
W~Watertown, MA
S~Steubenville, OH

Source: Dockery D. et al. An Association between Air Pollution and Mortality in Six U.S. Cities. NEJM 1993; 329 (24): 1753-1759

The Evolution of Air Pollution Research Methods - Multiple Sites

More recent studies have introduced sophisticated statistical approaches to the time-series relationship. The National Morbidity, Mortality, and Air Pollution Study (NMMAPS) has made substantial contributions towards understanding the association of PM with mortality by applying a consistent approach to data collected at 90 different sites across the nation.

The graph at the right shows the relative rates of mortality per 10 µg increase in PM_{10} levels for the 90 individual study sites.

Source: Samet JM, Zeger SL, Dominici FD et al. 2000. The National Morbidity, Mortality, and Air Pollution Study. Part II: Mortality and Mortality from Air Pollution in the United States. Cambridge, MA: Health Effects Institute.

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DEPATRMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2021-2022 (EVEN SEM)
CE8005 – AIR POLLUTION AND CONTROL ENGINEERING

STUDENTS PRESENTATION

EFFECTS OF NOISE POLLUTION

Sources of Noise Pollution

- Road Traffic noise
- Air Craft
- Noise from railroads
- Construction Noise
- Noise in Industry
- Noise in building
- Noise from Consumer products
- Loud Speakers / Public Address Systems
- Firecrackers

WHAT IS NOISE POLLUTION?

○ Sound that is unwanted or disrupts one's quality of life is called as noise. When there is lot of noise in the environment, it is termed as noise pollution.

○ Sound becomes undesirable when it disturbs the normal activities such as working, sleeping, and during conversations.

○ It is an underrated environmental problem because of the fact that we can't see, smell, or taste it.

○ World Health Organization stated that "Noise must be recognized as a major threat to human well-being"

Solutions for Noise Pollution

- Planting bushes and trees in and around sound generating sources is an effective solution for noise pollution.

- Regular servicing and tuning of automobiles can effectively reduce the noise pollution.

- Buildings can be designed with suitable noise absorbing material for the walls, windows, and ceilings.

- Workers should be provided with equipments such as ear plugs and earmuffs for hearing protection.

EFFECT ON ANIMAL

Noise pollution damages the nervous system of animal. Animal looses the control of its mind. They become dangerous

Noise can have a detrimental effect on animals by causing stress, increasing risk of mortality by changing the delicate balance in predator/prey detection and avoidance, and by interfering with their use of sounds in communication especially in relation to reproduction and in navigation.

Noise also makes species communicate louder, which is called Lombard vocal response. Scientists and researchers have conducted experiments that show whales' song length is longer when submarine-detectors are on.

Classification of Noise Pollution

There are 2 kinds of noise pollution.

A. Community Noise/ Environmental Noise (*non industrial noise pollution*).

- Air craft noise
- Roadway noise pollution
- Under water noise pollution

B. Occupational Noise(*industrial noise pollution*)

Solutions for Noise Pollution

- Similar to automobiles, lubrication of the machinery and servicing should be done to minimize noise generation.

- Soundproof doors and windows can be installed to block unwanted noise from outside.

- Regulations should be imposed to restrict the usage of play loudspeakers in crowded areas and public places.

- Factories and industries should be located far from the residential areas.
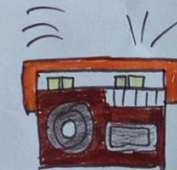
Health Effects

- According to the USEPA, there are direct links between noise and health. Also, noise pollution adversely affects the lives of millions of people.

- Noise pollution can damage physiological and psychological health.

- High blood pressure, stress related illness, sleep disruption, hearing loss, and productivity loss are the problems related to noise pollution.

- It can also cause memory loss, severe depression, and panic attacks.
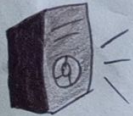
FATIGUE

Because of Noise Pollution, people cannot concentrate on their work. Thus they have to give their more time for completing the work and they feel tiring

ABORTION

There should be cool and calm atmosphere during the pregnancy. Unpleasant sounds make a lady of irrative nature. Sudden Noise causes abortion in females.

PUPIL DILATION

Noise Pollution causes dilation of the pupil of the eye

Solutions for Noise Pollution

- Community development or urban management should be done with long-term planning, along with an aim to reduce noise pollution.

- Social awareness programs should be taken up to educate the public about the causes and effects of noise pollution.

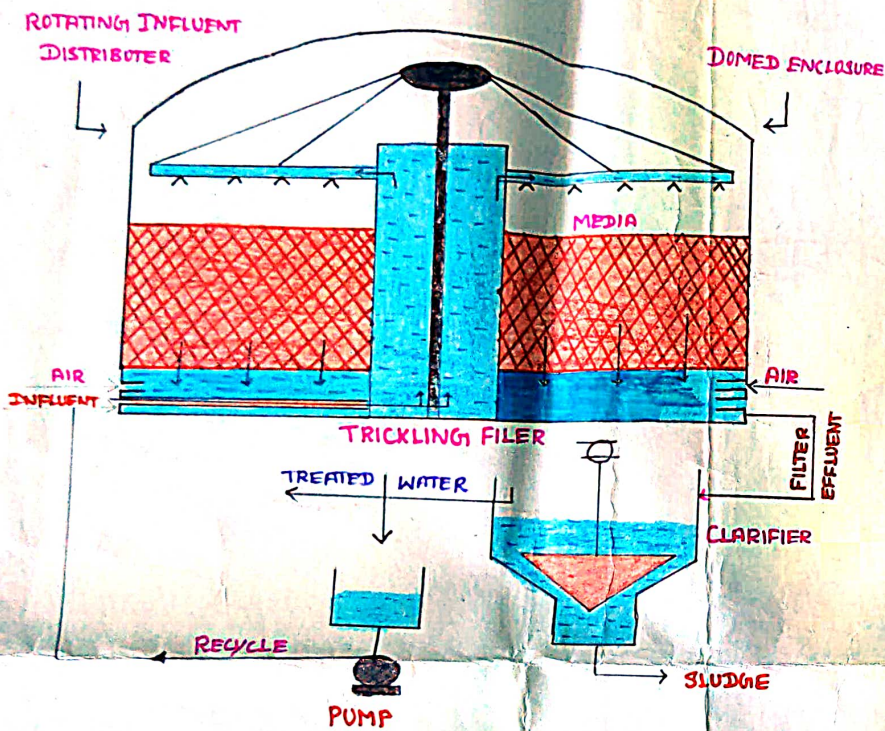CE8005 -

AIR POLLUTION & CONTROL ENGINEERING

III Yr CIVIL

Done By :-

M. Jayaseelan:
R. Karthikeyan:
N. Jayachandran
D. Stalin :-

Staff Incharge :-
Mr. K. Arun

WASTE WATER ENGINEERING — POSTER PRESENTATION

ROTATING INFLUENT DISTRIBUTER

DOMED ENCLOSURE

MEDIA

AIR

AIR

INFLUENT

TRICKLING FILER

FILTER EFFLUENT

TREATED WATER

CLARIFIER

RECYCLE

PUMP

SLUDGE

WATERING & TRICKLING FILTERS

TRICKLING FILTERS :-

⟶ Trickling Filters are used To Remove Organic Mater From Waste Water. The TF is an Aerobic Treatment System That Utilizes Microorganisms Attached to a medium to Remove Organic From Water Water.

⟶ It consists of a fixed bed, rocks, coke, gravel, slag, polyurethane foam, Sphagnum peat moss, ceramic or plastic media over which sewage or other wastewater flows downward flows and cause a Layer of microbial slime to grow, covering the bed of media.
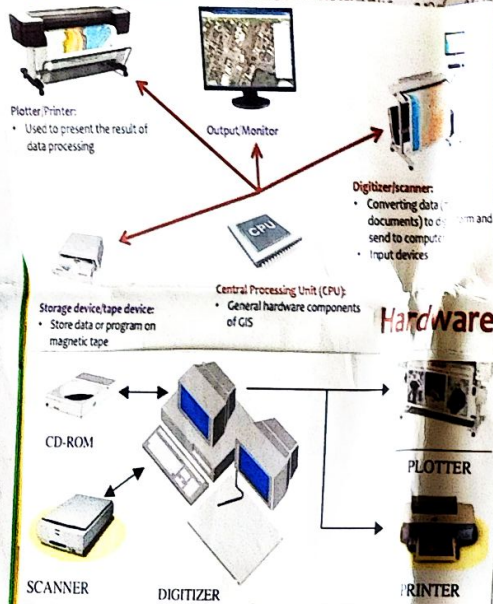
by.
P. Sathya
M. Monika
M. Rubika.

COMPONENTS OF GIS

HARDWARE

- It consists of equipments and port devices that are required to store, store, process and visualize geographic information.
- These include computer with hardisk, Digitizers, Scanners, printers and plotters etc.

Plotter/Printer:
- Used to present the result of data processing

Output/Monitor

Digitizer/scanner:
- Converting data from documents to form and send to computer
- Input devices

Central Processing Unit (CPU):
- General hardware components of GIS

Storage device/tape device:
- Store data or program on magnetic tape

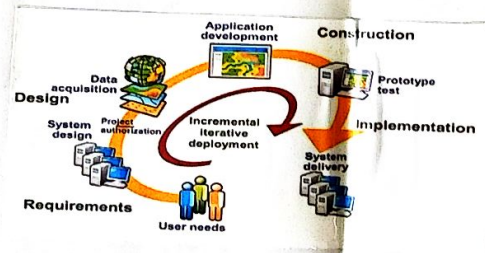CD-ROM

SCANNER   DIGITIZER

Hardware

PLOTTER

PRINTER

SOFTWARE

- Software is at the heart of GIS.
- The GIS software must have the basic capabilities of data input, storage, transformation, analysis and providing desired outputs.
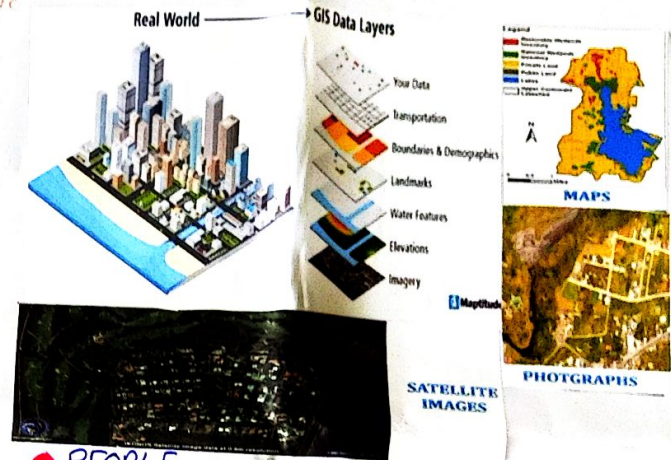

GDAL   QGIS
GeoServer   PostGIS   mapbox
Leaflet   OpenLayers

PROCEDURES

- These include the methods or ways by which data has to be input in the system, retrieved, processed, transformed and presented.

Application development   Construction
Data acquisition   Prototype test
Design
Project authorization   Incremental iterative deployment   Implementation
System design   System delivery
Requirements   User needs

DATA

- The data is captured or collected from various sources and and is processed for analysis and presentation.

Real World → GIS Data Layers
Your Data
Transportation
Boundaries & Demographics
Landmarks
Water Features
Elevations
Imagery

MAPS

SATELLITE IMAGES   PHOTGRAPHS

PEOPLE

- This component of GIS includes all those individuals, who are making the GIS work, and also the individuals who are at the user end using GIS services, appilation and tools.

By Individuals   By Groups   By Society on the Web
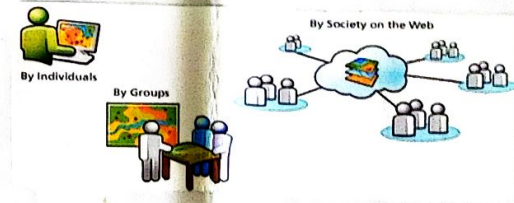
Work done by :-
R. Kuralavasan
J. Premkumar
F. Daniel Navis.
Staff Incharge :-
MR. KARUN, AP/CIVIL

04/10/2024

Staff Inch: Mr. K. Arun - A/P Civil

B. Agalya   III - Civil
R. Madhumitha   2019 - 0003

APPLICATION OF GIS

Abstract

- Wild fire - destroys human wealth
- Avoid Wild fire
- Using forest fire simulation

- Factors
  - Wind velocity
  - Direction
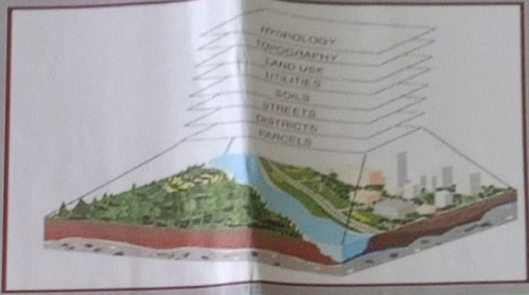
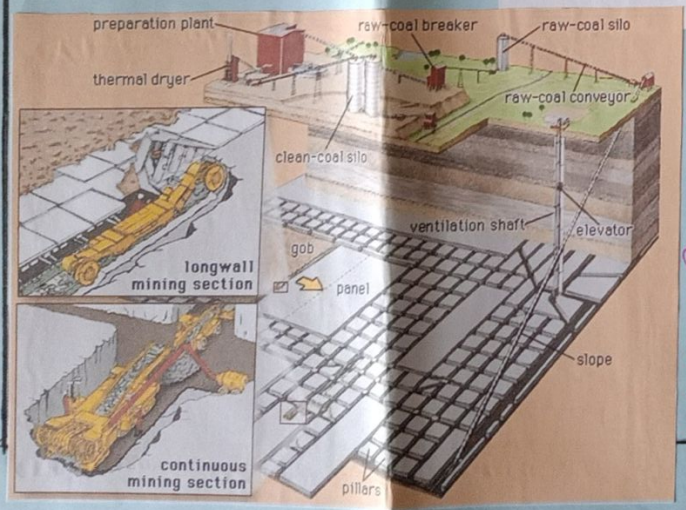FOREST FIRE MANAGEMENT

4. Environmental analysis

- The main aim of doing environment analysis is to accumulate information pertaining to the environment and to understand the environmental processes and linkages
- The main objective is to gather information pertaining to environmental phenomena and processes and also to gain understanding and insight

HYDROLOGY
TOPOGRAPHY
LAND USE
UTILITIES
SOILS
STREETS
DISTRICTS
PARCELS

GIS Application

- Forest Fire Management
- Oil spill and remedial measures
- Disaster Management
- Coal Mine Fire Management
- Air Pollution & Control
- Natural Resource Management
- Waste Water & Management

COAL MINE FIRE MANAGEMENT

preparation plant
raw-coal breaker
raw-coal silo
thermal dryer
raw-coal conveyor
clean-coal silo
ventilation shaft
elevator
longwall mining section
gob
panel
slope
continuous mining section
pillars

Coal Mining. Extraction of coal deposits from the Surface of Earth and from Underground.

Coal is the most abundant fossil fuel on Earth. Its predominant use has always been for producing heat energy. The mining of coal from Surface and underground deposits today is a highly productive, Mechanised Operat...

5. Disaster management

- Disasters are unpredictable extreme spatial events in the natural or man-made environment
- Disasters cannot be foreseen but can be dealt in such a way that the impact can be reduced to great extent by strategic planning and making use of the available analysis tools developed by the advancement in software technology
- Any disaster management activity will have broadly six phases in a cycle

DISASTER MANAGEMENT
1. PREDICTION
2. PREVENTION
3. PREPAREDNESS
4. MITIGATION
5. EMERGENCY MANAGEMENT AND RESCUE
6. DISASTER RECOVERY AND REHABILITATION

TYPES OF STRESSES

Stress is mainly classified into two forms that are,

normal stress & Tangential or shearing stress.

NORMAL STRESS :-

Stress is said to be normal stress when the direction of the deforming force is perpendicular to the cross-sectional area of the body. The length of the wire or the volume of the body changes stresses will be at normal. It is classified into two types;

* Longitudinal stress.
* Bulk stress or volumetric stress.

LONGITUDINAL STRESS :-

Consider a cylinder. when two cross-sectional areas of the cylinder are subjected to equal and opposite forces the stress experienced by the cylinder is called Longitudinal stress.

Longitudinal stress = Deforming force / Area of cross section = F/A

the longitudinal stress either stretches the object or compresses the object along its length. It can be classified into two types based on the direction of

deforming force.

* Tensile stress
* Compressive stress.

TENSILE STRESS :-

If the deforming force or applied force results in the increase in the objects length then the resulting stress is termed as tensile stress.

COMPRESSIVE STRESS :-

If the deforming force or applied force results in the decrease in the objects length then the resulting stress is termed as compressive stress.

BULK STRESS OR VOLUME STRESS :-

When the deforming force or applied force acts from all dimensions resulting in the change of volume of the object then such stress in called volumetric stress or Bulk stress.

In short, when the volume of body changes due to the deforming force is termed as volume stress.

SHEARING STRESS OR TANGENTIAL STRESS:-

When the direction of the deforming force or external force is parallel to the cross sectional area, the stress experienced by the object is called shearing stress or tangential stress.

this results in the change in the shape of the body.

In short, stress can be visualized as —

```
            STRESS
            /      \
   NORMAL STRESS    SHEARING STRESS /
                    TANGENTIAL STRESS.
      /    \
LONGITUDINAL   VOLUME STRESS /
STRESS         BULK STRESS.
   /    \
TENSILE STRESS    COMPRESSIVE
                  STRESS.
```
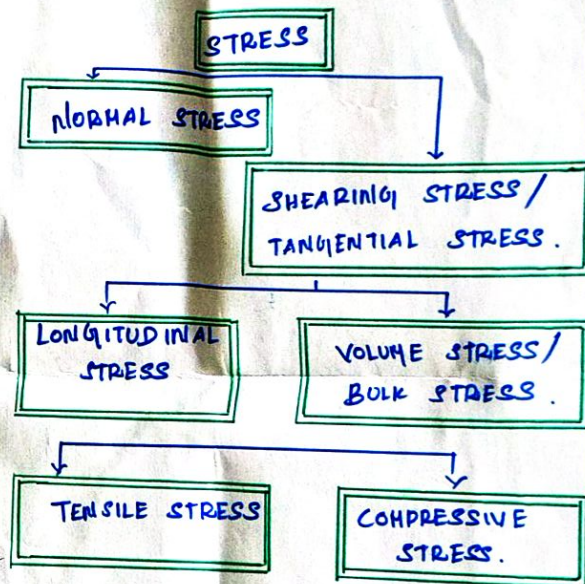
PRESENTED BY.

J. JCIRUTHIKA SRI

J. NIKESHA.

P. JKATHIRESHKLARI.

DEPARTMENT OF CIVIL ENGINEERING
CE8402 – STRENGTH OF MATERIALS II
PCE ACTIVITY – TECHNICAL QUIZ

NAME: MADHAVAN.S   ROLL.NO: 20   CLASS: CIVIL   DATE: 02/05/22.

1. The assumption made in Euler's column theory is that
   (A) The failure of column occurs due to buckling alone
   (B) The length of column is very large as compared to its cross-sectional dimensions
   (C) The column material obeys Hooke's law
   (D) All of the above

2. The point of contraflexure is a point where
   (A) Shear force changes sign
   (B) Bending moment changes sign
   (C) Shear force is maximum
   (D) Bending moment is maximum

3. The value of shear stress which is induced in the shaft due to the applied couple varies
   (A) From maximum at the center to zero at the circumference
   (B) From zero at the center to maximum at the circumference
   (C) From maximum at the center to minimum at the circumference
   (D) From minimum at the center to maximum at the circumference

4. A column is said to be a short column, when
   (A) Its length is very small
   (B) Its cross-sectional area is small
   (C) The ratio of its length to the least radius of gyration is less than 80
   (D) The ratio of its length to the least radius of gyration is more than 80

5. A cantilever beam is one which is
   (A) Fixed at both ends
   (B) Fixed at one end and free at the other end
   (C) Supported at its ends
   (D) Supported on more than two supports

6. The bending equation is
   (A) $M/I = \sigma/y = E/R$
   (B) $T/J = \tau/R = C\theta/l$
   (C) $M/R = T/J = C\theta/l$
   (D) $T/l = \tau/J = R/C\theta$

7. A continuous beam is one which is
   (A) Fixed at both ends
   (B) Fixed at one end and free at the other end
   (C) Supported on more than two supports
   (D) Extending beyond the supports

8. The maximum strain energy that can be stored in a body is known as
   (A) Impact energy
   (B) Resilience
   (C) Proof resilience
   (D) Modulus of resilience

9. Which of the following is the correct torsion equation?
   (A) $M/I = \sigma/y = E/R$
   (B) $T/J = \tau/R = C\theta/l$
   (C) $M/R = T/J = C\theta/l$
   (D) $T/l = \tau/J = R/C\theta$

10. A thin spherical shell of diameter (d) and thickness (t) is subjected to an internal pressure (p). The stress in the shell material is
    (A) pd/t
    (B) pd/2t
    (C) pd/4t
    (D) pd/8t

11. According to Euler's column theory, the crippling load of a column is given by $p = \pi^2 EI/Cl^2$. In the Euler's formula, the value of C for a column with one end fixed and the other end free, is
    (A) ½
    (B) 1
    (C) 2
    (D) 4

12. The maximum shear stress in a thin cylindrical shell subjected to internal pressure 'p' is
    (A) pd/t
    (B) pd/2t
    (C) pd/4t
    (D) pd/8t

13. A fixed beam is one which is fixed at _____.
    (A) One of its ends
    (B) Both of its ends
    (C) The middle
    (D) None of these

14. According to Euler's column theory, the crippling load for a column length (l) hinged at both ends, is
    (A) $\pi^2 EI/l^2$
    (B) $\pi^2 EI/4l^2$
    (C) $4\pi^2 EI/l^2$
    (D) $2\pi^2 EI/l^2$

15. The maximum deflection of a cantilever beam of length 'l' with a uniformly distributed load of 'w' per unit length is (where W = wl)
    (A) $Wl^3/3EI$
    (B) $Wl^3/8EI$
    (C) $Wl^3/16EI$
    (D) $Wl^3/48EI$

ANSWERS

1.	(A)	(B)	(C)	■
2.	(A)	■	(C)	(D)
3.	(A)	■	(C)	(D)
4.	(A)	(B)	■	(D)
5.	(A)	■	(C)	(D)
6.	■	(B)	(C)	(D)
7.	(A)	(B)	■	(D)
8.	(A)	(B)	■	(D)
9.	(A)	■	(C)	(D)
10.	(A)	(B)	■	(D)
11.	(A)	(B)	(C)	■
12.	(A)	(B)	(C)	■
13.	(A)	■	(C)	(D)
14.	■	(B)	(C)	(D)
15.	(A)	■	(C)	(D)

DEPARTMENT OF CIVIL ENGINEERING
CE8402 – STRENGTH OF MATERIALS II
PCE ACTIVITY – 2 (CROSSWORD)

NAME: **B. MOHAMED FAISAL** ROLL.NO: **20CE09** CLASS: **IInd CIVIL** DATE: **5/5/22**

The crossword grid is filled as follows:

- 1 (→): RESILIENCE
- 14 (→): LOAD
- 2 (↓): DETERMINATE
- (←): STRESS / SEERTS
- 13 (↓): STRAIN / S-G-N-I-L-K-C-U-B (BUCKLING →)
- 9 (→): BEAMCOLUMN
- 10 (↓): B...N (BEAMCOLUMN area)
- 4 (←): PROP
- 7 (↓): C
- 15 (↓): STRAIN
- 6 (↓): BMD
- (→): FIXEDBEAM / FIXED BEAM
- (←): TWO
- (→): DAOLLACITIRC (CRITICALLOAD ←)
- 11 (↓): C
- 3 (→): TNOSUPPORTS (TWOSUPPORTS ←)
- 8 (↓): S
- 12 (→): SHEARCENTRES / SHEAR CENTRES

QUESTIONS

1. The strain energy stored in a member is called _____ (→)
2. Conditions of equilibrium are sufficient to analyse the structure. (↓)
3. A beam whose both ends are fixed is known as a_____. (→)
4. In a cantilever beam, a vertical support is located at a suitable point, this vertical support is called as_____. (←)
5. A Continuous beam is one, which is supported on more than _____. (→)
6. The short form of graphical representation of bending moment values at salient points in beam is called _____ (↓)
7. A _____ is a long vertical slender bar or vertical member, subjected to an axial compressive load and fixed rigidly at both ends. (↑)
8. A _____ is a slender bar or a member in any position other than vertical, subjected to a compressive load and fixed rigidly or hinged or pin jointed at one or both the ends. (↑)

9. _____ is a member that are subjected to both axial compression and bending while bending is as important as axial compression. (→)
10. _____ failure is caused due to lateral deflection of the column. (←)
11. The load at which the column just buckles is called _____ (←)
12. _____ _____ is defined as the point in the cross-section through which the lateral (or transverse) loads must pass to produce bending without twisting. (→)
13. The force of resistance per unit area, offered by a body against deformation is known as _____. (←)
14. The external force acting on the beam is called _____ (→)
15. The ratio of change of dimension of the body to the original dimension is called _____. (→)

PCE ACTIVITY – QUIZ

SUBJECT: STRUCTURAL DESIGN AND DRAWING   DATE: 14/10/2021

REG.NO: 8211181103008
NAME: S.Jayashree

S. Jayashree
STUDENT SIGNATURE   STAFF INCHARCE SIGNATURE

QUESTIONS

1. Originally, Rankine's theory of lateral earthpressure can be applied to only _____
   a) Cohesion less soil
   b) Cohesive soil
   c) Fine grained soil
   d) Coarse grained soil

2. The factor that is responsible forinclination of resultant pressure to the retaining wall is _____
   a) Frictional force
   b) Surcharge
   c) Earth pressure
   d) Weight of the wall

3. The prestressed concrete slab systems areideally suited for _____
   a) Roofs
   b) Slabs
   c) Beam
   d) Column

4. The moment coefficients derived from theultimate load method are generally lower in

   _____
   a) Span
   b) Eccentricity
   c) Strength
   d) Magnitude

5. The factor that is responsible forinclination of resultant pressure to the retaining wall is _____
   a) Frictional force
   b) Surcharge
   c) Earth pressure
   d) Weight of the wall

6. A culvert can be used to span over acanyon, or depression, or even over a freeway or roadway.
   a) True
   b) False

7. Structural members subjected to bendingand large axial compressive loads are known as
   a) strut
   b) purlin
   c) beam-column
   d) lintel

8. The maximum area of tensionreinforcement in beams shall not exceed?
   a) 1.5%
   b) 4%
   c) 7%
   d) 0.5%

9. A plate girder is used when
   a) span is large and loads are heavy
   b) span is small and loads are heavy
   c) span is small and loads are light
   d) span is large and loads are light

10. Which of the following is correct regardinggantry girders?
    a) It is laterally supported except at thecolumns
    b) It is subjected to impact load
    c) It should not be analysed forunsymmetrical bending
    d) It is not subjected to longitudinal load

Blank Quiz

PCE ACTIVITY 2

Email *

stalinp052002@gmail.com / STALIN (R·no·17)

Name the atmospheric layer closest to the ground *

2 points

○ Mesosphere

◉ the troposphere

○ Thermosphere

○ Other:

The most abundant gas on the earth's atmosphere is *

2 points

○ A.Oxygen

○ B.Carbon

◉ C.Nitrogen

○ Other:

What atmospheric layer has most of the clouds? *

2 points

○ A.Mesosphere

○ B.Thermosphere

◉ C.Troposphere

○ Other:

The study of weather is called? *

2 points

○ A.meteorology

◉ B.climatology

○ C.aeronomy

○ Other:

Who coined the word 'ecology'? *

2 points

◉ Ernst Haeckelb.

○ Charles Darwinc.

○ Gregory Mendel

○ Other:

25/11/21

What are saprophytes? *

2 points

○ Living beings that feed on the sap from tree bark

◉ Living beings that feed on dead or decayed organic matter

○ Living beings that feed on other living beings.

○ Other:

Who are ethologists? *

2 points

○ a. Scientists who study about ethos

◉ b. Scientists who study about the behaviour of wild animals

○ c. Scientists who study about the behaviour of animals in a particular eco system.

○ Other:

What are terricolous animals? *

2 points

○ a. Animals that live in a particular territory

○ b. Animals that live on high mountains

◉ c. Animals that live in the soil

○ Other:

Who is known as the father of evolution?

2 points

○ a. Gregory Mendel

◉ b. Charles Darwin

○ c. Albert Einstein

○ Other:

Which of the following is an amphibian? *

2 points

◉ a. Salamanders

○ b. Lizards

○ c. Fish

○ Other:

This form was created inside of Kings College of Engineering.

Google Forms

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2022-2023 (ODD SEMESTER)
CS8792 – CRYPTOGRAPHY AND NETWORK SECURITY
PCE SKILL ACTIVITY PLAN

Activity-1: Online Quiz

➢ Asymmetric key ciphers

➢ Authentication

Activity-2: Cross word

➢ passwords

Activity-3: Presentation (APH)

➢ Elliptic curve cryptography
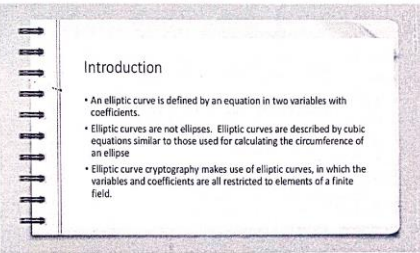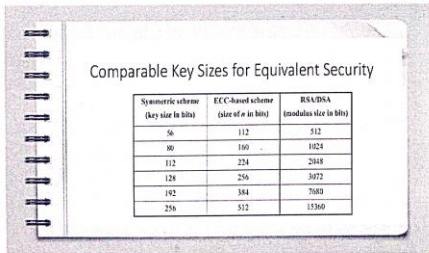
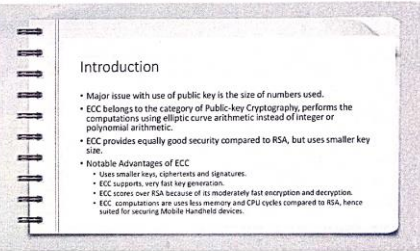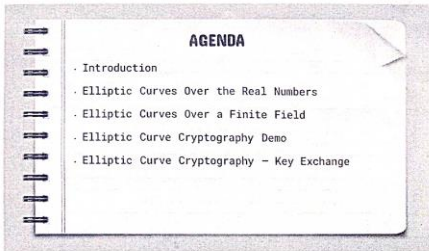➢ Elgamal cryptosystem

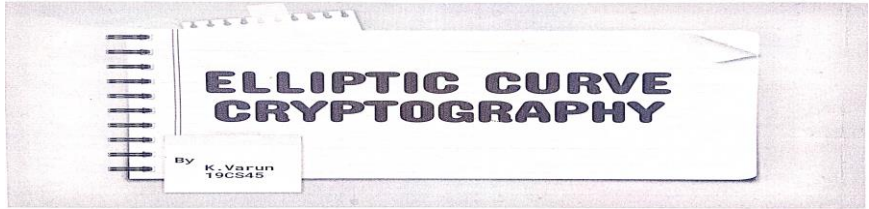**Activity-4: Case Study**

➢ SHA

Activity-5: Mind Map

➢ E-mail Security

PCE SKILL ACTIVITY EXECUTION SUMMARY

ACTIVITY	MODE	OUTCOME	MARKS ALLOTTED	NO OF STUDENTS APPEARED
Quiz No of Questions:10	Online	Ability to growth in knowledge and skills	10	50
Cross word N o of Questions:29	Offline	Help to build problem-solving skills and enhance memory and learning abilities.	10	50
Presentation No of Questions:1	Offline	Ability to convince an ideas	10	50
Case study No of Questions: 1	Offline	Ability to provide conclusion in study	10	50
Mind Map No of Questions:1	Offline	Ability to showed improved critical thinking skills.	10	50

Brain Teaser

Crossword »
Test your Knowledge on Cryptography

Name: K. Govindharajan
Roll NO :- 19CS21
Subject :- Cryptography and
Network security

SCREEN SHOTS – ACTIVITY 3

SCREEN SHOTS – ACTIVITY 5 – sample mind map
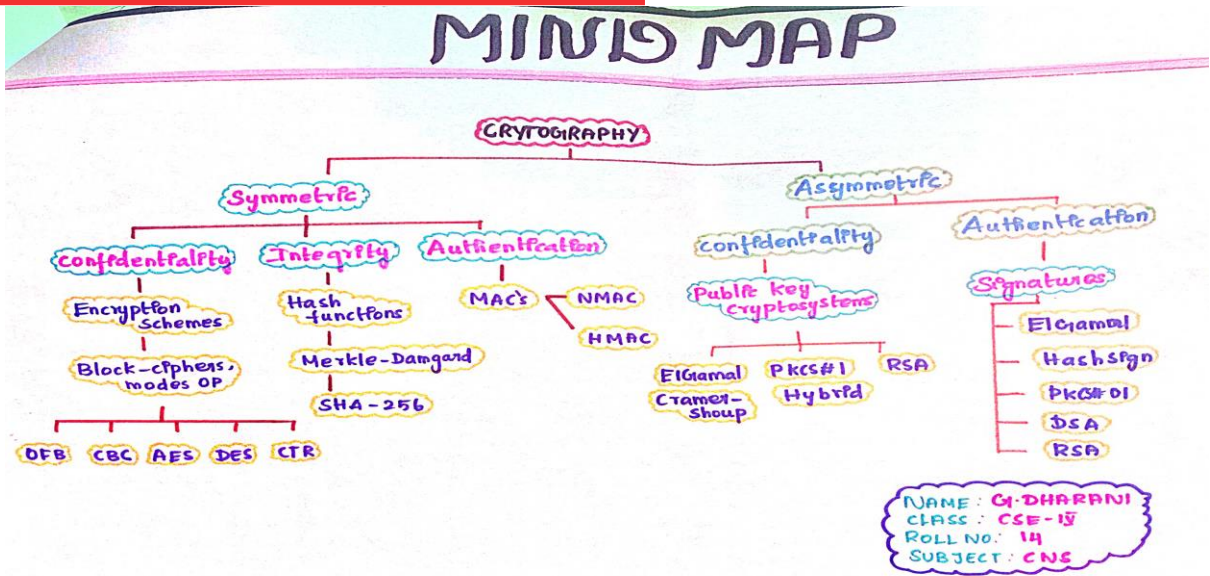
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2022-2023 (ODD SEMESTER)
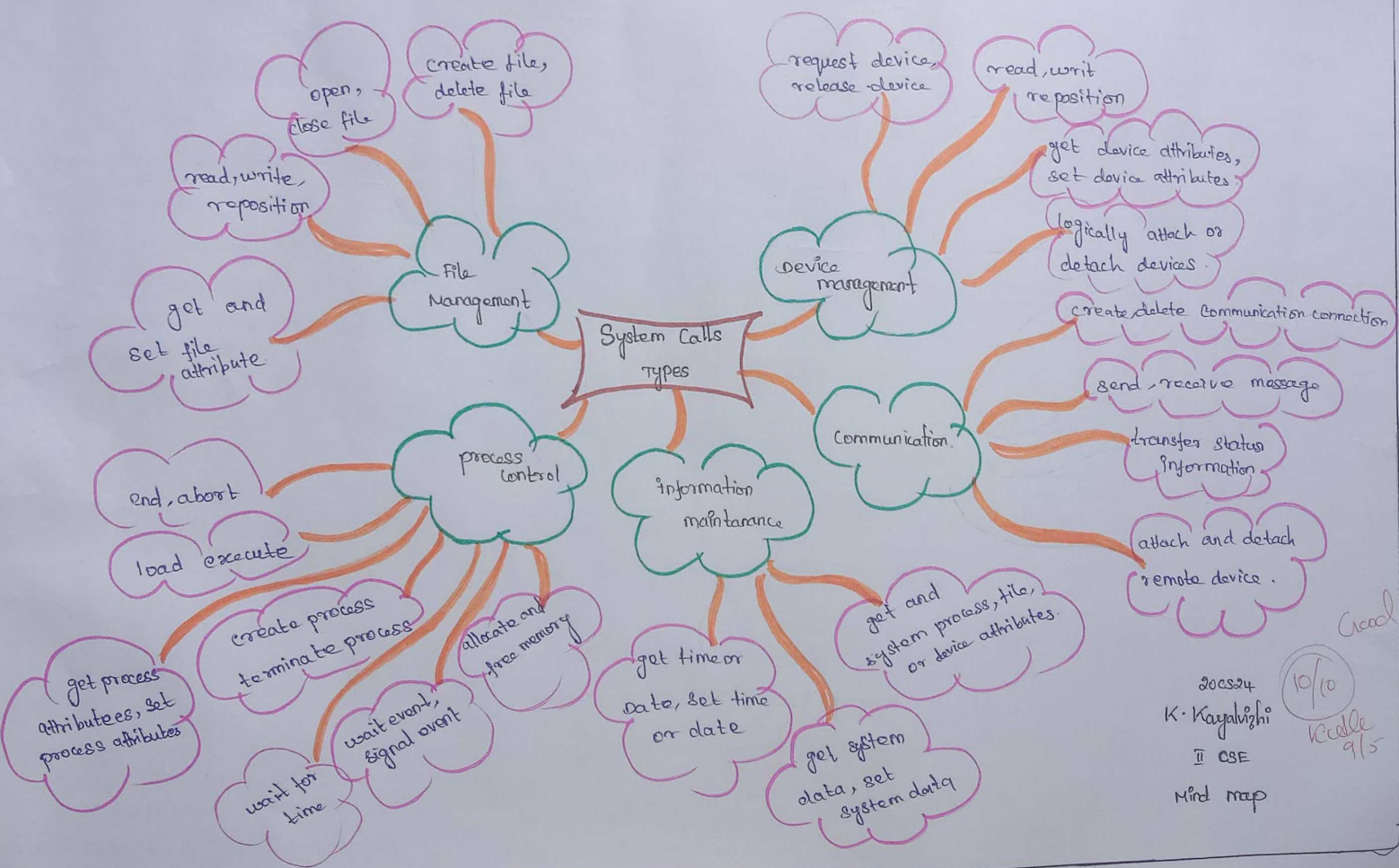**PCE - CONSOLIDATED MARK STATEMENT**

CLASS: IV CSE

S.NO	REG.NUMBER	ACTIVITY	PPT	CROSS WORD	QUIZ	MIND MAP	CASE STUDY	
		STUDENT NAME	10	10	10	10	10	TOTAL
1.	821119104001	Aarthi. R	7	10	10	10	10	47
2.	821119104002	Aiyappan. S	5	10	10	10	10	45
3.	821119104003	Ajay Prasanna. G S	3	10	10	10	10	43
4.	821119104005	Akash .K	5	10	10	10	10	45
5.	821119104006	Akshayalakshmi. G	7	10	10	10	10	47
6.	821119104007	Aravind. A	9	10	10	10	10	49
7.	821119104008	Avudaiappan .A B	7	10	10	10	10	47
8.	821119104009	Bakiya Lakshmi .A	7	10	10	10	10	47
9.	821119104010	Balakrishnan. M	9	10	10	10	10	49
10.	821119104011	Bavya. S	5	10	10	10	10	45
11.	821119104012	Bhavatharani .T	6	10	10	10	10	46
12.	821119104013	Deepika. P	8	10	10	10	10	48
13.	821119104014	Devipriya. S	7	10	10	10	10	47
14.	821119104015	Dharani. G	7	10	10	10	10	47
15.	821119104016	Divakaran. J	8	10	10	10	10	48
16.	821119104017	Elayadharshini .T	4	10	10	10	10	44
17.	821119104018	Fasila Afreen .J	7	10	10	10	10	47
18.	821119104019	Gokul .M	6	10	10	10	10	46
19.	821119104020	Gomathi .A	5	10	10	10	10	45
20.	821119104021	Gopinath. P	6	10	10	10	10	46
21.	821119104022	Govindharajan. K	6	10	10	10	10	46

22.	821119104023	Kamali. K	7	10	10	10	10	47
23.	821119104024	Kanishkar .K	8	10	10	10	10	48
24.	821119104025	Karkuzhali. N	9	10	10	10	10	49
25.	821119104026	Karthika. R	7	10	10	10	10	47
26.	821119104027	Mohamed Yasir. A	9	10	10	10	10	49
27.	821119104028	Muralidharan. N	3	10	10	10	10	43
28.	821119104029	Nandhini. J	9	10	10	10	10	49
29.	821119104031	Pavitha .P	4	10	10	10	10	44
30.	821119104032	Priyadharshini .E	6	10	10	10	10	46
31.	821119104033	Ramakrishnan .E	8	10	10	10	10	48
32.	821119104034	Rethinapriya. T	8	10	10	10	10	48
33.	821119104035	Sachin .R	9	10	10	10	10	49
34.	821119104037	Sathish .T	10	10	10	10	10	50
35.	821119104038	Selvabharathi. S	6	10	10	10	10	46
36.	821119104039	Shakthivel .M	7	10	10	10	10	47
37.	821119104040	Siva .G	10	10	10	10	10	50
38.	821119104041	Sivaranjani . S	10	10	10	10	10	50
39.	821119104043	Suguna. S	6	10	10	10	10	46
40.	821119104044	Suresh Karthik .J	9	10	10	10	10	49
41.	821119104045	Suruthi. S	9	10	10	10	10	49
42.	821119104046	Surya. A	6	10	10	10	10	46
43.	821119104047	Swetha. S	7	10	10	10	10	47
44.	821119104048	Tharanika. K	7	10	10	10	10	47
45.	821119104049	Varun. K	7	10	10	10	10	47
46.	821119104050	Vengatramanan. S	8	10	10	10	10	48
47.	821119104051	Vignesh. K	7	10	10	10	10	47
48.	821119104052	Vikiramadhithan .M	7	10	10	10	10	47
49.	821119104053	Viswa .A	7	10	10	10	10	47
50.		Sruthi. S	7	10	10	10	10	47

SYSTEM CALLS

System Calls Types

File Management
- open, close file
- create file, delete file
- read, write, reposition
- get and set file attribute

Device management
- request device, release device
- read, writ reposition
- get device attributes, set device attributes
- logically attach or detach devices
- create, delete communication connection
- send, receive message
- transfer status information
- attach and detach remote device

Communication

Process control
- end, abort
- load execute
- create process, terminate process
- allocate and free memory
- get process attributees, set process attributes
- wait event, signal event
- wait for time

Information maintanance
- get time or date, set time or date
- get and system process, file, or device attributes.
- get system data, set system data

Good

20CS24

K. Kayalvizhi

II CSE

Mind map

10/10

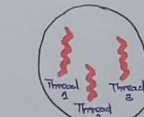# THREADS
in operating system

Threads in operating system

A thread is the smallest unit of processing that can be performed in OS. In most modern operating systems, a thread exists within a process that is, a single process may contain multiple threads.
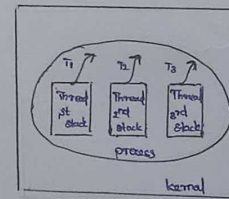

User Threads
Kernal Threads

Types of Threads.

* User Threads
* kernal Threads.

User Threads.

→ Threads are implemented at the user level by a thread library
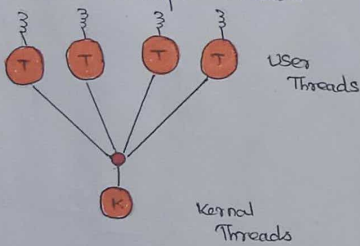
✓ Library provides support for thread creation, scheduling and management

✓ User threads are fast to creat and manage.

User space
Kernal space
Thread Library

Kernal Threads

→ Supported and managed directly by the OS.

✓ Thread creation, scheduling and management takes place in kernal space

✓ slower to create and manage

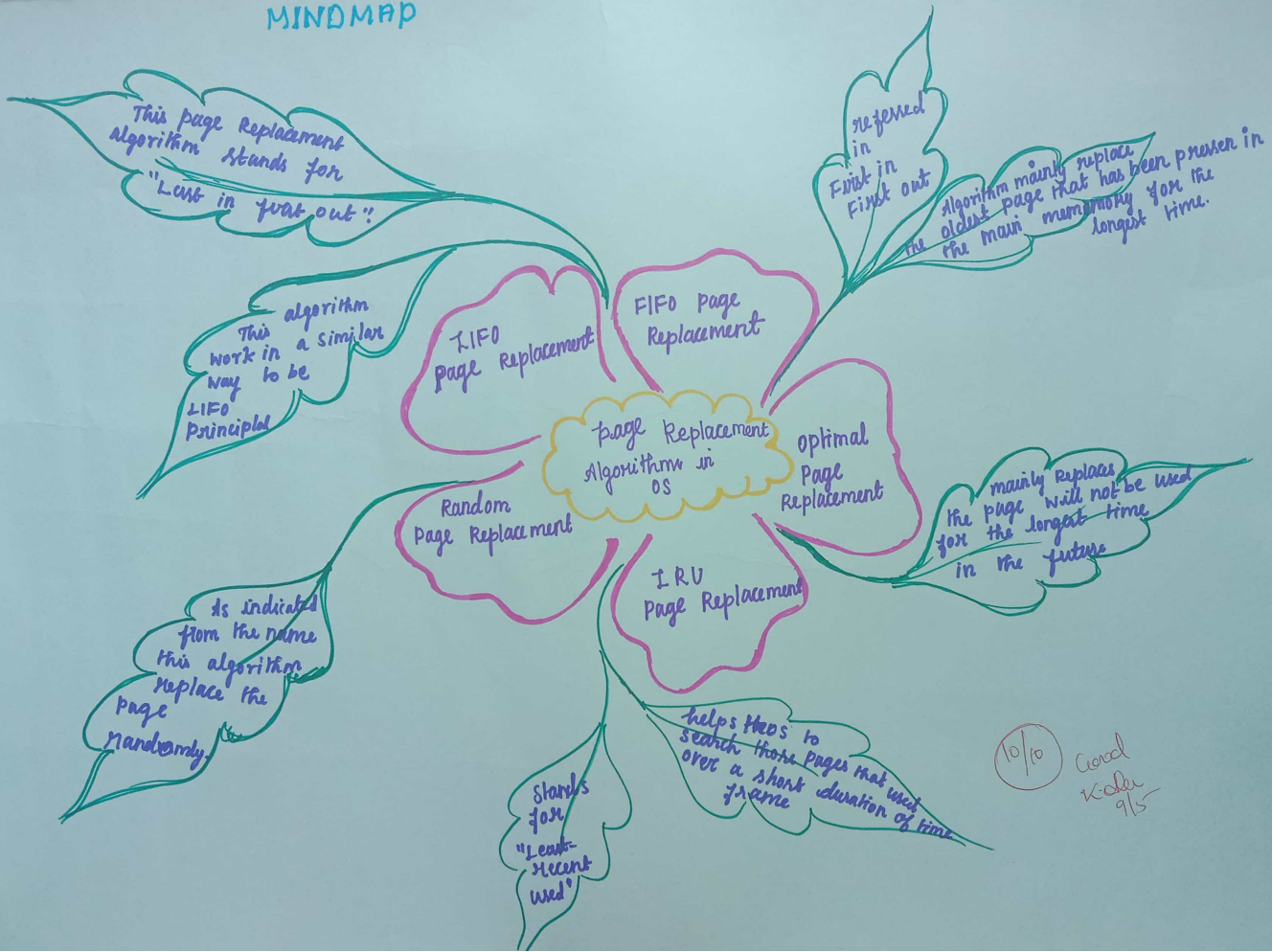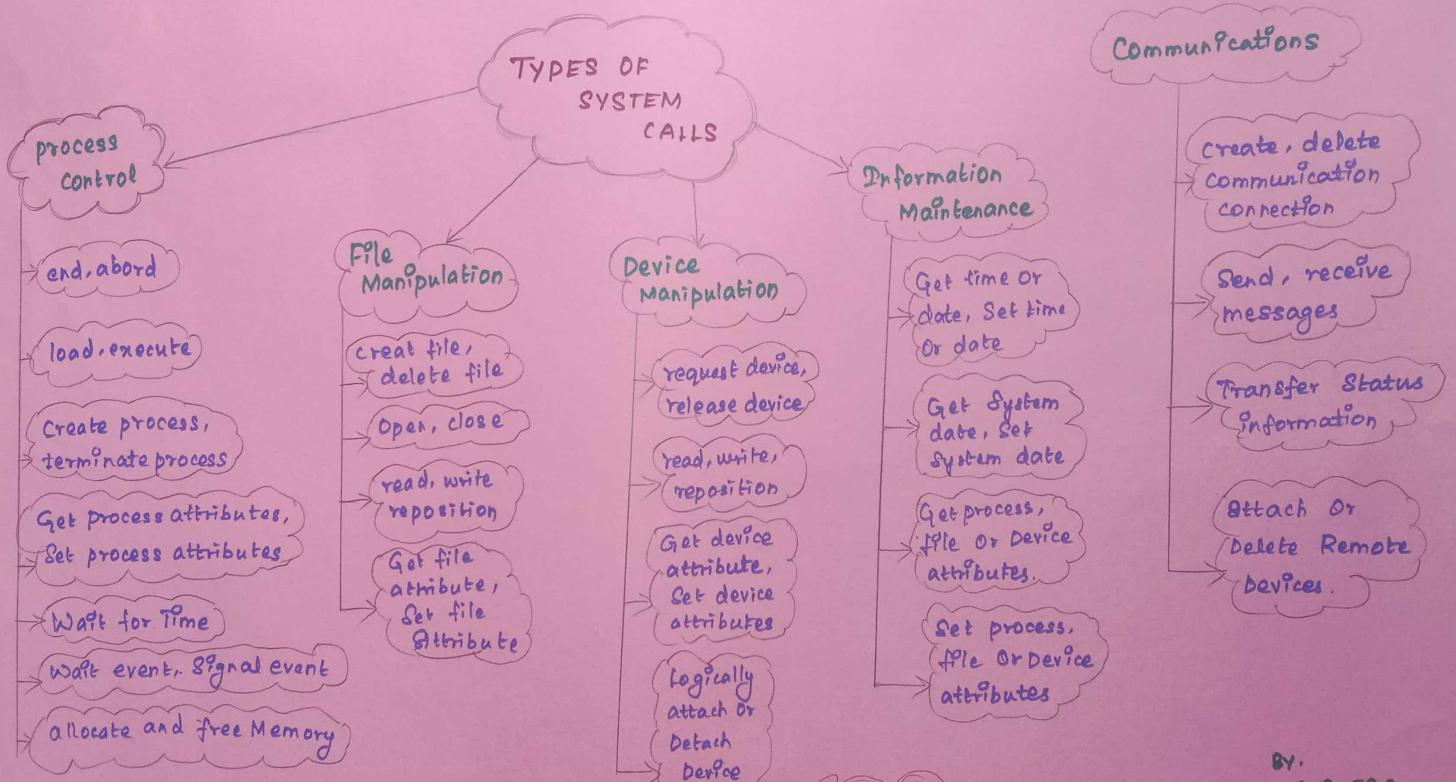Relationship between user threads and kernal Threads.

user space
kernal space

Threads process

Thread 1   Thread 3
Thread 2
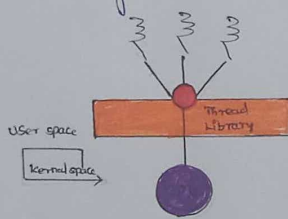
A Thread has following
• Thread ID
• program counter
• Register
• stock

Time

T1   T2   T3
Thread 1st stack   Thread 2nd stack   Thread 3rd stack
process
kernal

20CS24
K. Kayalvizhi
II CSE
Picter promt Activity

MINDMAP

Page Replacement Algorithm in OS

FIFO Page Replacement
referred in First in First out

Algorithm mainly replace the oldest page that has been presen in the main memmoty for the longest time.

LIFO Page Replacement
This page Replacement algorithm stands for "Last in first out".

This algorithm work in a similar way to be LIFO Principle

Random Page Replacement
As indicated from the name this algorithm replace the page Randomly.

Optimal Page Replacement
mainly Replaces the page will not be used for the longest time in the future

LRU Page Replacement
Stands for "Least Recent Used"

helps theOS to search those pages that used over a short duration of time frame

10/10 Good Kala 9/5

M. Vasinya
II nd - CSE

MINDMAP - SYSTEM CALLS

TYPES OF SYSTEM CALLS

Process Control
- end, abord
- load, execute
- Create process, terminate process
- Get process attributes, Set process attributes
- Wait for Time
- Wait event, Signal event
- Allocate and free Memory

File Manipulation
- creat file, delete file
- Open, close
- read, write reposition
- Get file attribute, Set file Attribute

Device Manipulation
- request device, release device
- read, write, reposition
- Get device attribute, Set device attributes
- Logically Attach Or Detach Device

Information Maintenance
- Get time Or date, Set time Or date
- Get System date, Set System date
- Get process, file Or Device attributes.
- Set process, file Or Device attributes

Communications
- Create, delete Communication connection
- Send, receive messages
- Transfer Status information
- Attach Or Delete Remote devices.

BY.
S. SNEGA
20CS48
CSE

DEADLOCK

Definition :-

Deadlock is a situation where a set of processes are blocked because each process is holding a resource and waiting for another resources acquired by some other process.
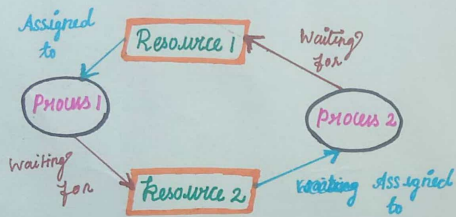
Deadlock can arise if the following four conditions hold simultaneously.

(Necessary conditions)

* Mutual exclusion :-
  * Two or more resource are non-shareable (only one process can use at a time).

* Hold and wait :-
  * A process is holding at least one resource and waiting for resources.

* No preemption :-
  * A resource cannot be taken from a process unless the process releases the resource.

* circular wait :-
  * A set of processes are waiting for each other in circular form.
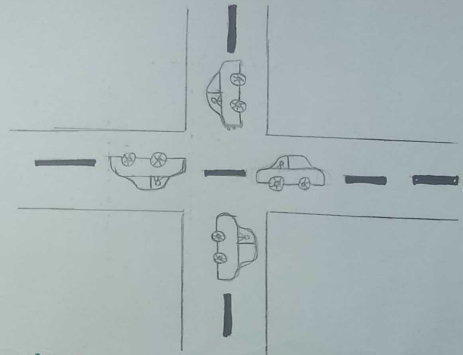
Methods for handling Deadlocks:

=> Deadlock prevention:
  • Deadlock prevention provides a set of methods to ensure that at least one of the necessary conditions cannot hold. These methods prevent deadlock by constraining how requests for resources can be made.

=> Deadlock avoidance:
  • Deadlock avoidance requires that the operating system be given addition information in advance concerning which resources a process will request and use during its lifetime.

10/10 k-dg/5

Ad hoc Testing

Ad hoc testing
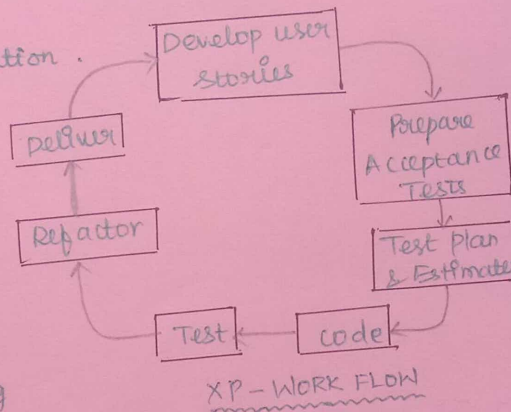 - Explore the undiscovered areas.

Helps in
 - Deciding the scope and duration of the various other testing.

When to Execute Adhoc testing?
 - limited time
 - After the formal test execution.

Types:
 - Buddy testing
 - Exploratory testing
 - Pair testing
 - Iterative testing
 - Agile and Extreme testing
 - Defect seeding

Various ways to make Ad hoc Testing more effective

 - Preparation
 - Creating a Rough Idea
 - Divide and Rule

 - Targeting Critical Functionalities
 - Using tools
 - Documenting the findings.

Drawbacks
 - Difficult to ensure that ensure that learnings gleaned.
 - Large number of defects found
 - Lack of comfort on coverage
 - Difficult to track the exact steps
 - Lack of data for metric analysis

XP - WORK FLOW

Develop user stories → Prepare Acceptance Tests → Test Plan & Estimates → code → Test → Refactor → Deliver → (back to Develop user stories)

TEAM No. : 5
TEAM NAME : DREAM EPIC
TOPIC NAME : AD HOC TESTING
TEAM MEMBERS:
 BAVYA.S   KARKUZHALI.M
 SURYA.A   SUGUNA.S
 PAVITHA.P RETHINAPRIYA.T
CUMULATIVE BRAIN STRONG

Group: 01 Shield

A. Vishla
R. Sachin
T. Sathish
N. Muralidharan
G. Siva

COMPATABILITY TESTING

* Compatibility Testing is a type of Non-functional Testing.

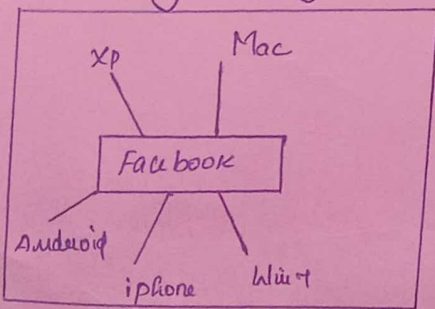* It used or accused by multiple user on the different Platforms.

* **Types of Compatibility Tests :**

* Hardware
* Operating System
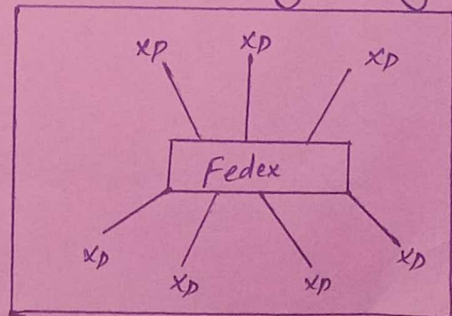* Software
* Network

* Browser.
* Devices
* Mobile
* Versions.

* **Compatibility testing bug / issue :**

* Alignment issue
* overlap issue

* Scattered issue
* Look and feel issue.

Compatibility Testing

Non-Compatibility Testing

K. Tharanika , S. Swetha , R. karthika, G. Akshayalakshmi

19CS43

CSE-iii

Software testing

IT8076

College ERP system.
Miniproject testing

Testing tool : testRigor
tool.

college ERP system Results

URL:

https://app.testrigor.com

Last Started Run

More info

https://app.testrigor.com
May 23, 2022 9:18 PM   Finished

Additional run settings

Rerun

Last Finished Run

More info

https://app.testrigor.com
May 23, 2022 9:18 PM   Finished

Last Successful Run

More info

https://app.testrigor.com
May 23, 2022 9:18 PM   Finished

This Test Suite is public (the results, test cases and more can be seen by everyone with the public link).

29°C Rain

esults Run #rsFty3iwwW78bTAiH Total time:6 minutes

verall results

■ 100% Passed (13)

Chrome on Ubuntu

■ 100% Passed (13)

13 Passed •———— Total Cases
13

13 Passed •———— Total Cases
13

Activate Windows
Go to Settings to activate Windows

29°C Rain ∧

MINI PROJECT REPORT FOR

ONLINE SHOPPING BOUQUET

TEST CASES

by . . . .

M. Gokul (18)

N. Muralidaran (37)

M. Vikiramadhithan (45)

A. Viswa (49)

MINI- PROJECT REPORT ON ONLINE SHOPPING

BOUQUET :

Test Case title : Admin Login :

Test Engineer : Group.

Test Case ID : 0052

Related
UC/FR/NFR } Wed

Date : 23-5-22

Purpose : To give the Admin Control the
access the website own.

Pre-req : The admin only password.

Password : The admin password matches the
passcode.

Status : OK

Test Case tittle : User login :

Test Engineer : Group

Test Case ID : 0053

Related UC/FR/NFR WED

Date : 25/5/22

Purpose : To give the uses of Authority
the user login page.

Pre-Request : User should have expression of

Sumit : The user password invalid and
button click.

Steps: Open the window browser (or) Software.

Validation of valid password
click the login button.

Test Case tittle: New user Register (or) Guest:

Test Engineer: Group

Test Case ID: 0054

Related UC/FR/NFR: FR1

Date : 25/5/22

Purpose : To give Authority of check the details.

Test data : 1) Display the bouquet Order and view.

choose the bouquet Menu.

2) Select the bouquet order purchase.

3) Display the payment.

Status : pass.

Test Case title : View Orders:

Test Case ID : 0054

Purpose : The particular user order the view bou
and another side views.
The bouquet order the customer.

Summit : The user (or) customer purchase the ord
view & tracking.

Test Case title : View sales:

Test Case ID : 0055

Purpose : The particular user the order purchase
view on sales (or) demands the display,

Test data : 1) The customer bouquet view on sales (or
Sales

2) The customer bouquet view on sales and demands.

3) The customer ID (or) Name generate the user name.

4) The customer view on Sales product (or) bouquet on hot take on delivery.

Test Case title : View Feedbacks:

Test Case ID: 0056

Purchase feedbacks :1) The customer the product delivery and bouquet good quality (or) Not, and details etc...

2) The customer side feedbacks generate the form.

Status :   pass.

1) Admin Login :

Admin

Password : [. . . . .]

[OK] [CANCEL]

2) User Login :

username : [. . . . . . @gmail.com]

Password : [. . . . .]

[LOGIN] [CANCEL]

3) New User Register (or) Guest :

Name : [Sam]

Gender : O Male   O Female

Age : [ ]

MailID : [. . . . . . . @gmail.com]

Ph.NO : [+91 . . . .]

zip Code : [620001]

Address :

[   ]
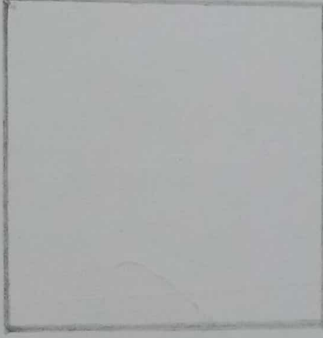
UserName : [Sam   ]

password : [- - - - - - --]

[SUMIT] [CANCEL]

4) View orders :

[   ] Name :
[   ] Flower :
[   ] Price : 300
[   ] Shape/wrapping :
[   ] Orders : [500 Views]

5) View Sales :

[   ] Name :
[   ] Flower :
[   ] Price : 700
[   ] Order : (500 Views)
[   ] Sales : (Not for Sale)

6) Feedbacks :

How often do you website?

what is most usual feature?

what would do you Alsee improved most?

Comment :
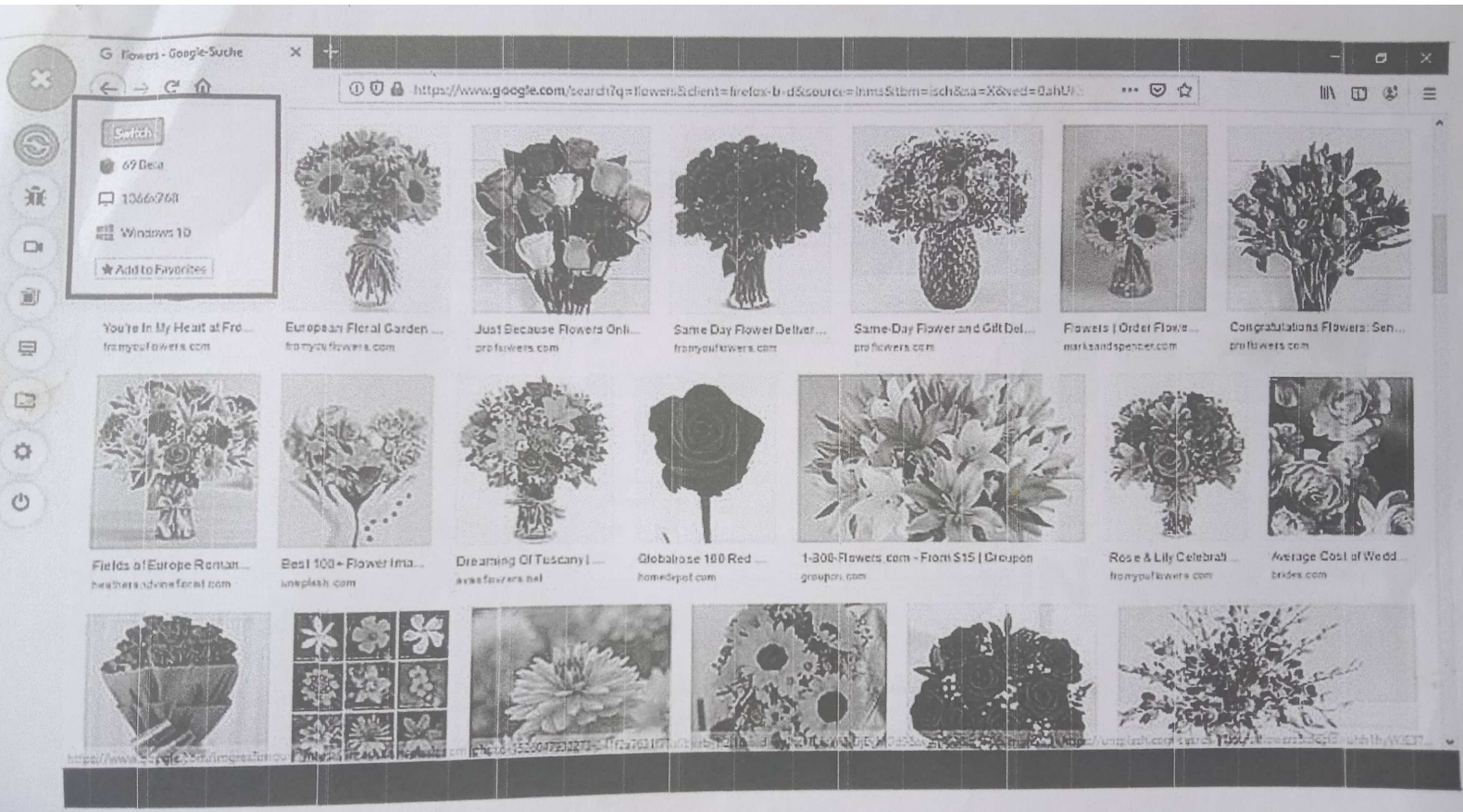
Submit feedback

New Tab

Search or enter address

Search

Untitled (untitled suite) - Selenium IDE 2.9.1 *

File Edit Actions Options Help

Base URL file:///E:/Uploads/Web%20Pages/login.html

Fast   Slow

Test Case	Table	Source	
test1	**Command**	**Target**	**Value**
test2	open	file:///E:/Uploads/Web...	
test3	store	Sample Value	i
Untitled *	echo	${i}	

Command echo

Target ${i}   Select   Find

Value

Runs: 1
Failures: 0

| Log | Reference | UI-Element | Rollup |

echo(message)

Arguments:
* message - the message to print
Prints the specified message into the third table cell in your Selenese tables. Useful for debugging.

Get smart
on privacy

Privacy

Take your Web with y

More ways to customize

THEMES   ADD-ONS   AWESOME BAR

Firefox Sync

Customize Firefox

ASSIGNMENT - 2

PCE. ACTIVITY

NAME : G. DHARANI

CLASS : CSE - III

ROLL NO : 14

SUB CODE : IT8076

SUBJECT : SOFTWARE TESTING

TITLE : TEST CASES AND
TEST PLANS

Library Management System

Login Form

Sl.No	Test case	Excepted Results	Test Result
1.	Enter Valid name and Password & Click on login button.	Software should main window.	Successful
2.	Enter Invalid	Software should not display main window.	Successful.

Book entry form.

Sl.No	Test Case	Excepted Result	Test Result.
1.	On the click of ADD button	At first user have to fill all fields with proper data if any error like entering text data instead of number or entering number instead of text.	Successful

2.	On the click of delete button.	This deletes the details of book by using Accession no.	Successful
3.	On the click of UPDATE button.	Modified records are updated in database by clicking the UPDATE button.	Successful
4.	On the click of search button.	Displays the details of book for entered Accession no otherwise gives proper Error message.	Successful
5.	On the click of CLEAR button	clear all fields	Successful
6.	On the click of EXIT button	Exit the current book details form	Successful
7.	On the click of NEXT button.	Display the next form	Successful

| | − | ⊡ | X |

Library Management System

| Admin Login |
| Librarian Login |

| Admin Section | − | ⊡ | X |

| Admin Librarian |

| View Librarian |

| Delete Librarian |

| Logout |

User Account form :

Sl.No	Test case	Excepted Result	Test results
1.	On the click of ADD button.	At first user have to fill all fields with proper data, if any Error like entering text data instead of number or entering number intead of text.	Successful
2.	on the click DELETE button	This delete the details of student by using register no.	Successful
3.	On the click of UPDATE button.	Modified records are updated in database by clicking UPDATE button.	Successful.
4.	on the click of EXIT button	Exit the current book details form.	Successful

Book Issue Form :

Sl. No	Test case	Excepted result	Test result
1.	On the click of ADD button.	At first user have to fill all fields with proper data it the accession number of book is already issued.	Successfully
2.	On the click of DELETE button	This deletes the details of book by using register no	Successful
3.	On the click of EXIT button	Exit the current book details form.	Successfull

Book return book form :

Sl. No	Test case	Excepted results	Test result
1.	On the click of ADP button.	At first user have to fill all fields with proper data, if any Error like entering text data instead	Successful

		of number of entering number instead of text.	
2.	on the click of DELETE button.	which deletes the details of book by Reg no.	Successful
3.	On the click of UPDATE button.	Modified records are updated in database by clicking UPDATE button.	Successful
4.	On the click of EXIT button.	Exit the current book details form.	Successful

Test Plan :

* A test plan refers to a detailed document that catalogs the test stragey, Objectives, schedule, estimations, deadlines, and the resources required for completing that particular object.

* The test plan is a basic guidance for future testing in the library management system.

Requirement analysis for Library Management system :

* The System requirements in library management focus.

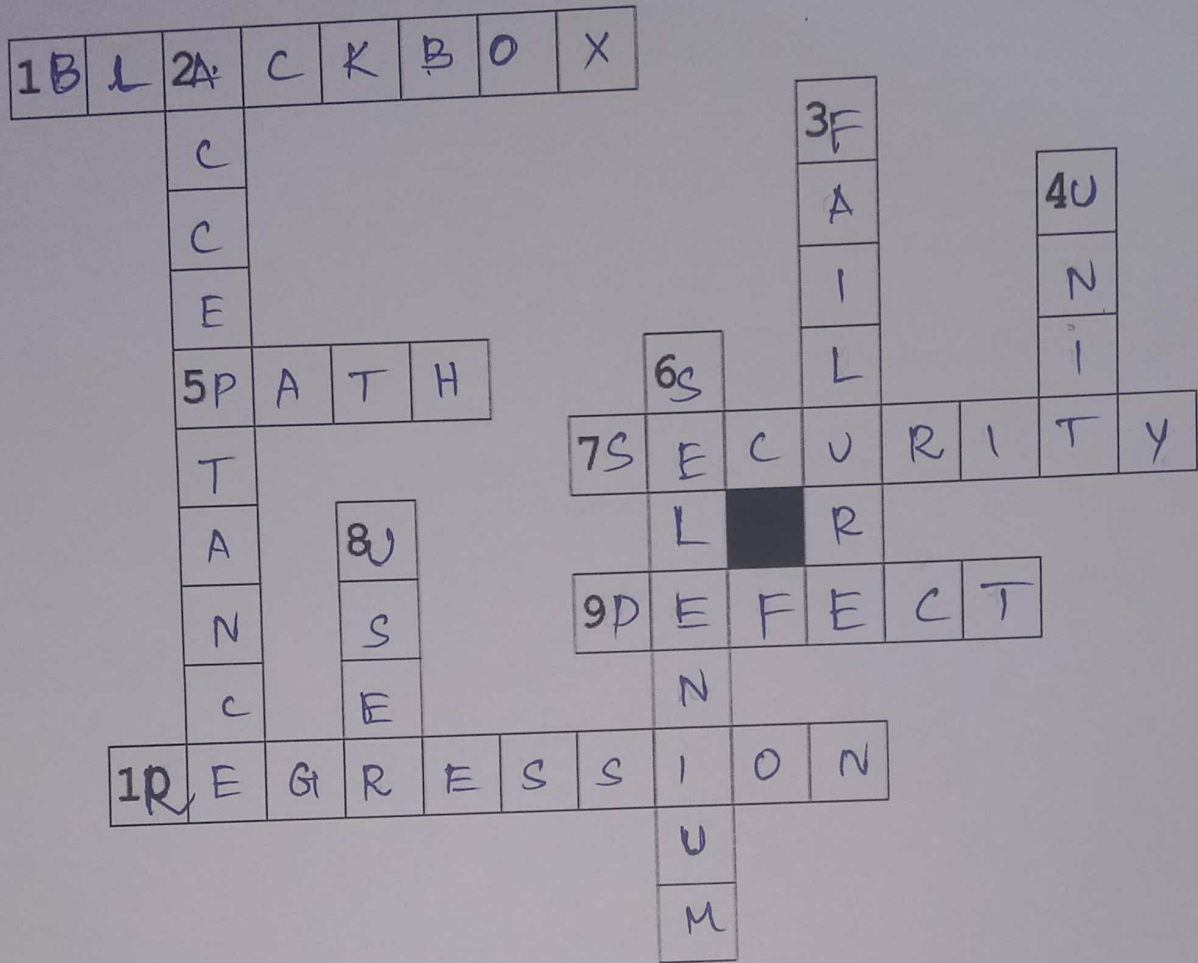* On the possibility of search for books by title, author or subject by the member.

Login — ⬚ X

Username   Admin

Password   . . . . .

Librarian Section — ⬚ X

Add Books

View Books

Issue Book

View Issued
        book

Return Book

Logout

07/05/2022

Karkuzhali. N
Rethinapriya. T
Deepika. P

Software Testing - PCE Activity

The crossword grid contains the following answers:

- 1 Across: BLACKBOX
- 2 Down: ACCEPTANCE
- 5 Across: PATH
- 3 Down: FAILURE
- 4 Down: UNIT
- 6 Down: SELENIUM
- 7 Across: SECURITY
- 8 Down: USER
- 9 Across: DEFECT
- 10 Across: REGRESSION

Across

1. No assumptions about how the system under test works
5. A sequence of events
7. Verifying that your application is secure
9. Form of software Bug
10. Software product runs correctly after the changes during maintenance
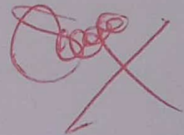
Down

2. Final stage of a testing cycle
3. When a test doesn't complete, or when it doesn't produce the expected result.
4. Test individual functions
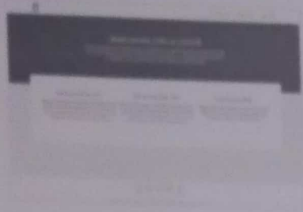6. Automated testing of UIs
8. Beta Testing

Clue Words

- path
- acceptance
- user
- regression
- unit

- blackbox
- selenium
- failure
- security
- defect

PCE ACTIVITY

APPLICATION OF CONCEPT

(CGPA AND GPA CALCULATOR WEBSITE)

TOOL NAME: GTMETRIX

BY,

J. FASILA AFREEN

CSE-III

ROLL NO: 17

Performance Report for:
https://bit.ly/3sPTgsX

Report generated: Sun, May 22, 2022 9:17 PM -0700
Test Server Location: Vancouver, Canada
Using: Chrome (Desktop) 98.0.4758.102, Lighthouse 9.3.1

A	Performance	Structure		L. Contentful Paint	T. Blocking Time	C. Layout Shift
	95%	96%		1.1s	0ms	0

Top Issues

IMPACT	AUDIT	
Low	Use a Content Delivery Network (CDN)	4 resources found
Low	Eliminate render-blocking resources	Potential savings of 80ms
Low	Use a <meta name="viewport"> tag with width or initial-scale	No <meta name="viewport"> tag found
Low	Serve static assets with an efficient cache policy	Potential savings of 21.6KB
Low	Avoid chaining critical requests	10 chains found

Page Details

1.9s
Fully Loaded Time

Total Page Size - 243KB
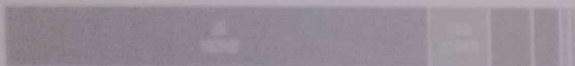
Total Page Requests - 21

■ HTML ■ JS ■ CSS ■ IMG ■ Video ■ Font ■ Other

How does this affect me?

Today's web user expects a fast and seamless website experience. Delivering that fast experience can result in increased visits, conversions and overall happiness.

As if you didn't need more incentive, Google has announced that they are using page speed in their ranking algorithm.

About GTmetrix

CARBON60
THE MANAGED CLOUD COMPANY

GTmetrix is developed by the good folks at Carbon60, a Canadian hosting company with over 20 years experience in web technology.

https://carbon60.com

The waterfall chart displays the loading behaviour of your site in your selected browser. It can be used to discover simple issues such as 404's or more complex issues such as external resources blocking page rendering.
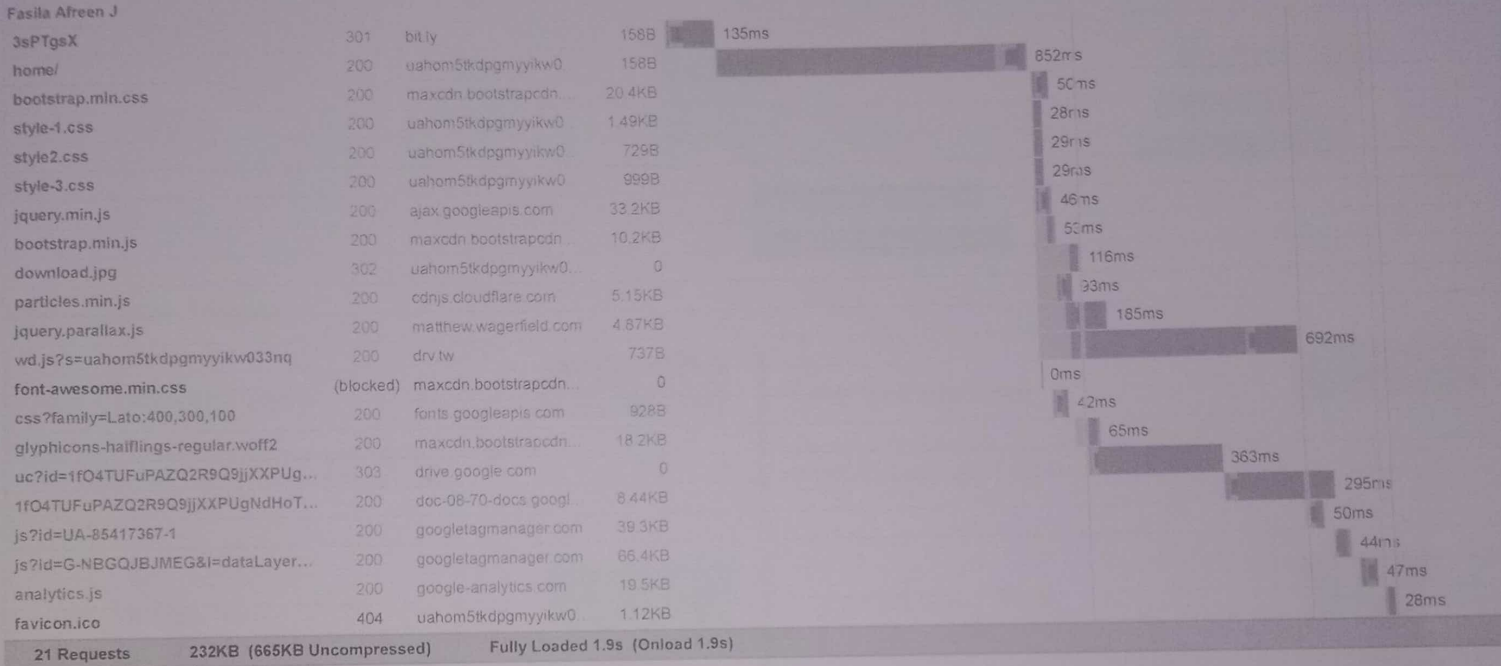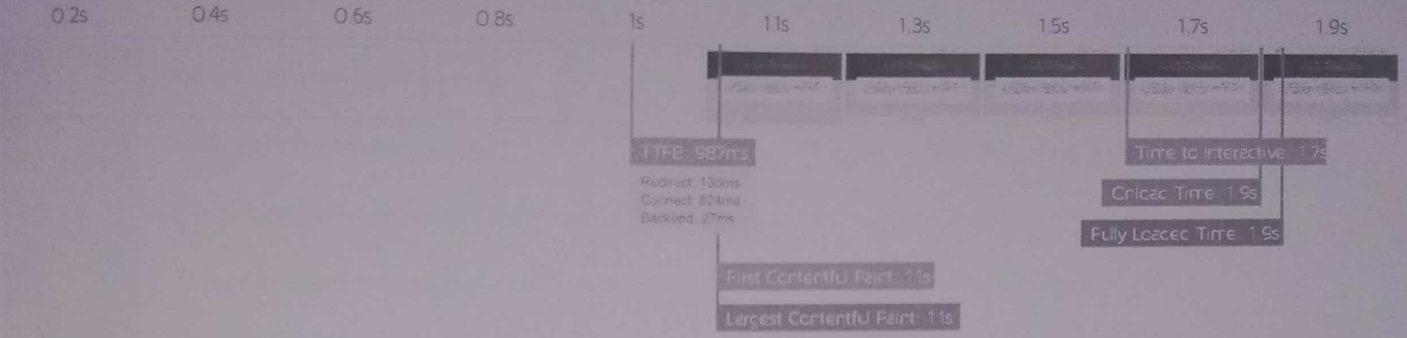
Fasila Afreen J

Request	Status	Host	Size	Time
3sPTgsX	301	bit.ly	158B	135ms
home/	200	uahom5tkdpgmyyikw0	158B	852ms
bootstrap.min.css	200	maxcdn.bootstrapcdn...	20.4KB	50ms
style-1.css	200	uahom5tkdpgmyyikw0	1.49KB	28ms
style2.css	200	uahom5tkdpgmyyikw0	729B	29ms
style-3.css	200	uahom5tkdpgmyyikw0	999B	29ms
jquery.min.js	200	ajax.googleapis.com	33.2KB	46ms
bootstrap.min.js	200	maxcdn.bootstrapcdn	10.2KB	53ms
download.jpg	302	uahom5tkdpgmyyikw0...	0	116ms
particles.min.js	200	cdnjs.cloudflare.com	5.15KB	33ms
jquery.parallax.js	200	matthew.wagerfield.com	4.87KB	185ms
wd.js?s=uahom5tkdpgmyyikw033nq	200	drv.tw	737B	692ms
font-awesome.min.css	(blocked)	maxcdn.bootstrapcdn...	0	0ms
css?family=Lato:400,300,100	200	fonts.googleapis.com	928B	42ms
glyphicons-halflings-regular.woff2	200	maxcdn.bootstrapcdn...	18.2KB	65ms
uc?id=1fO4TUFuPAZQ2R9Q9jjXXPUg...	303	drive.google.com	0	363ms
1fO4TUFuPAZQ2R9Q9jjXXPUgNdHoT...	200	doc-08-70-docs.googl.	8.44KB	295ms
js?id=UA-85417367-1	200	googletagmanager.com	39.3KB	50ms
js?id=G-NBGQJBJMEG&i=dataLayer...	200	googletagmanager.com	66.4KB	44ms
analytics.js	200	google-analytics.com	19.5KB	47ms
favicon.ico	404	uahom5tkdpgmyyikw0	1.12KB	28ms

21 Requests   232KB (665KB Uncompressed)   Fully Loaded 1.9s (Onload 1.9s)

GTmetrix

0.2s	0.4s	0.6s	0.8s	1s	1.1s	1.3s	1.5s	1.7s	1.9s

TTFB: 987ms
Redirect: 136ms
Connect: 824ms
Backend: 27ms

Time to Interactive: 1.7s
Critical Time: 1.9s
Fully Loaded Time: 1.9s

First Contentful Paint: 1.1s
Largest Contentful Paint: 1.1s

Performance Metrics

First Contentful Paint
CK -bU- consider improvement

How quickly content like text or images are painted onto your page. A good user experience is 0.9s or less.

1.1s

Time to Interactive
Gooc - Nothing to cc here

How long it takes for your page to become fully interactive. A good user experience is 2.5s or less.

1.7s

Speed Index
Gooc - Nothing to cc here

How quickly the contents of your page are visibly populated. A good user experience is 1.3s or less.

1.3s

Total Blocking Time
Gooc - Nothing to cc here

How much time is blocked by scripts during your page loading process. A good user experience is 150ms or less.

0ms

Largest Contentful Paint
Gooc - Nothing to cc here

How long it takes for the largest element of content (e.g. a hero image) to be painted on your page. A good user experience is 1.2s or less.

1.1s

Cumulative Layout Shift
Gooc - Nothing to cc here

How much your page's layout shifts as it loads. A good user experience is a score of 0.1 or less.

0

Browser Timings

Redirect	136ms	Connect	824ms	Backend	27ms
TTFB	987ms	First Paint	1.1s	DOM Int.	1.7s
DOM Loaded	1.7s	Onload	1.9s	Fully Loaded	1.9s

Structure Audits

IMPACT	AUDIT	
Low	Use a Content Delivery Network (CDN)	4 resources found
Low	Eliminate render-blocking resources	Potential savings of 80ms
Low	Use a <meta name="viewport"> tag with width or initial-scale	No <meta name="viewport"> tag found.
Low	Serve static assets with an efficient cache policy	Potential savings of 21.6KB
Low	Avoid chaining critical requests	10 chains found
Low	Avoid enormous network payloads	Total size was 243KB
Low	Avoid multiple page redirects	Potential savings of 135ms
Low	Ensure text remains visible during webfont load	1 font found
Low	Reduce JavaScript execution time	193ms spent executing JavaScript
Low	Reduce unused CSS	Potential savings of 19.5KB
Low	Reduce initial server response time	Root document took 26ms
Low	Avoid large layout shifts	1 element found
Low	Reduce unused JavaScript	Potential savings of 55.0KB
N/A	Avoid an excessive DOM size	74 elements
N/A	Largest Contentful Paint element	1 element found
N/A	Minimize main-thread work	Main-thread busy for 631ms
N/A	Reduce the impact of third-party code	Total size was 216KB
N/A	User Timing marks and measures	