End – Semester Examination (Spring Semester) – 2022-23
[B.Tech – 2nd Year, 4th Semester]

Paper Name: Probability & Statistics
Paper Code: MATUGBS05

Full Marks: 80
Time: 3 hrs

GROUP A
[Answer any *five* questions] [5 x 2 = 10]

1. i) Write the name of different measures of central tendency.
   ii) Given the dataset **20, 22, x, 28** and knowing that the mean is 24, find the missing value x.
   iii) Explain the difference between Population and Sample.
   iv) How covariance is computed for two variables?
   v) What is the probability that you will get at least one head when you flip a fair coin thrice?
   vi) What do you mean by independent events?
   vii) State the multiplication rule of probability for dependent events.

GROUP – B
[Answer any *four* questions] [4 x 5 = 20]

2. Three groups of observations contain 12, 8 and 5 observations. Their geometric means are 7.65, 10.51 and 7.57, respectively. Find the geometric mean of the 25 observations in the single group formed by combining the above three groups.
3. Compute the mean deviation about the median and mean from the following data: 350, 160, 220, 250, 310, and 330.
4. Define the terms: inter-quartile range and quartile deviation.
5. a) A person goes from P to Q on bicycle at 21 mile per hour (mph) and returns at 25 mph. Find his average speed through harmonic mean. [2]
   b) Find the Pearson's coefficient of correlation between X and Y, when Cov(X,Y) = – 12.49 , Var(X) = 2.11 and Var(Y) = 81. [3]
6. a) A box contains 5 white and 10 black balls. Eight of them are placed in another box. What is the probability that the latter box contains 2 white and 6 black balls? [2.5]
   b) Four cards are drawn at random from a pack of 52 playing cards. What is the probability of getting all the four cards of the same suit? [2.5]
7. Given P(A) = 1/4 and P(B) = 1/3 and P(A ∩ B) = 1/2, find the value of P(A|B) and P(B|A). [5]

GROUP – C
[Answer any *five* questions] [5 x 10 = 50]

8. Calculate the arithmetic mean and median of the following grouped frequency distribution. [5x2]

x	5	10	15	20	25	30	35	40	45	50
f	2	10	8	5	6	9	2	4	3	1

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9. Consider a grouped frequency distribution of marks obtained out of 100 in a particular subject. Find the mean and median marks. [4 + 6]

Marks	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80	80 – 90	90 – 100
No of students	2	9	8	5	6	10	2	4	3	1

10. Find the range, inter-quartile range, mean, variance and standard deviation for the following test scores recorded in a class: 88, 77, 95, 79, 59, 70, 86, 94, 68, 67, 91, 81, 77, 56, 60, 70., [1+3+1+4+1]

11. Find the standard deviation, Karl Pearson's coefficient of skewness and fourth central moment using the result obtained in Q9. What is the nature of the frequency curve? [5+2+2+1]

12. A red and blue die are rolled.

a) Find the conditional probability of obtaining sum 7, given that the blue die resulted in a number less than 4.

b) Find the conditional probability of obtaining a sum greater than 8, given that the red die resulted in a 4.

c) A bag contains 6 red, 8 white and 9 blue balls. If three balls are drawn one by one without replacement, find the probability of getting all blue balls. [3+3+4]

13. a) A basket contains 30 oranges and 20 apples out of which 5 apples and 3 oranges are defective. If a person takes out 3 at random, what is the probability that either both are apples or both are good?

b) Two dices are thrown together. What is the probability that the sum of the numbers on two faces is neither divisible by 2 nor by 3? [5+5]

14. a) A card is drawn from a full deck of 52 cards. What is the probability that the card drawn will be either a queen or a black card?

b) What is the probability that we roll a pair of six-sided fair dice and either get at least one 3, or an even sum when we add the outcomes of dice together?

c) State the Bayes' Theorem. If you draw a card from a deck of playing cards, and then without replacing it, draw a second card, what is the probability that you'll get two Kings in a row? [2+3+2+3]

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Regular and Supplementary End Semester Examination (Spring Semester) 2023

(B. Tech 2nd Year 4th Semester)

SubjectName: Object Oriented Programming Systems **FullMarks:**80
SubjectCode: CSEUGPC05 **Time:**3 Hours

Group A
Answer all *5* questions **5x2=10**

1. Answer the following in maximum two sentences
   a. Define Applet in Java.
   b. What is the difference between Abstract Class and Interfaces.
   c. What do you mean by an exception?
   d. What is "**this**" in Java?
   e. How can you access the data member of an object?

Group- B
Answer *any 6* questions **5x6=30**

2. Explain the difference between method overloading and method overriding with an example.
3. Explain dynamic method dispatch with an example.
4. Describe the use of static data members in Java.
5. Draw and explain the different types of inheritances in an Object-Oriented Programming System.
6. Differentiate different types of Java variable in terms of its scope.
7. Write a Java Program with output to explain what will happen if we call the run () method directly without calling the start () method in a thread.
8. Explain how can an exception be handled in Java.

Group- C
Answer *any 4* questions **4x10=40**

9. What do you mean by packages in Java? Explain in details with a table how can visibility control be achieved in Java. **2+8**
10. With a help of a neat diagram explain the life cycle of a thread. **10**
11. Point out any three advantages of Object-Oriented Programming over Traditional Programming. Discuss some of the features of Object-Oriented Programming. **3+7**
12. Create two threads such that the first thread will print all odd numbers in a range and the second one will print all prime numbers in a range.
13. Write a short note on **5+5**
    a. StringBufferClass
    b. Wrapper Class

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Spring (Even) Semester Examination, 2023

Subject Name: Environmental Science Subject Code: UCCUGMC02

Full Marks: 80 Time: 3:00 Hours

Group – A (Attempt all questions) 40 x 1 = 40

Choose the correct answer.

1. The upper layer of the lithosphere is known as
   a. Stratosphere b. Crust c. Core d. Mantle

2. The planet Jupiter is a
   a. Gaseous planet b. Terrestrial planet c. Both gaseous and terrestrial d. None of these

3. One non-polluting energy resource is
   a. Coal b. Solar energy c. Fuel wood d. Petrolium

4. CFC is-
   a) Chlorofluoro Carbon b) Centre Fuel Control
   C) Carcinogenic Fluride Compound d) None of these

5. The most famous mass extinction happened in Cretaceous period when
   a. Dinosaur extinct b. Dodo bird extinct c. Passenger pigeon extinct d. none of this

6. The Bhopal gas disaster happened in India year
   a. 1864 b. 1964 c. 1984 d. 2012

7. Example of one keystone species is
   a. Cow b. rose plant c. Palm tree d. Banyan tree

8. The full form of MoEFCC is
   a. Ministry of environmental conference
   b. Member of environmental and forest conference
   c. Ministry of Environment, Forest and Climate change
   d. Ministry of Man and Climate change

9. One air pollutant reducing equipment is
   a. BOD bottle b. Electrostatic precipitator c. pH paper d. none of this

10. Lichen species is the indicator of
    a. acid rain b. dust particle c. radioactive substances d. global warming

11. The book "Origin of species" written by
    a. Rachel Carson b. Charles Darwin c. Ernst Haeckel d. Rabindranath Tagore

12. Silicosis is a
    a. waterborne disease b. airborne disease c. vector borne disease d. None of this

13. "The London Smog" incident happened in the year
    a.1947 b.1952 c. 2000 d. 2022

14. Thebiomass pyramid is
    a. always upright b. always inverted c. Upright or inverted d. none of this

15. Photochemical smog is the example of
    a. primary air pollutant b. secondary air pollutant
    c. biodegradable air pollutant d. none of these

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16. One example of indoor air pollutant is
a. cigarette smoke
b. Dust particles from construction site
c. Sulphur Dioxide from thermal power plants
d. Smokes from automobiles

17. The percentage of Nitrogen in the atmosphere is
a. 21%
b. 52%
c. 34%
d. 78%

18. The Silent Valley movements started to protect the
a. forest and biodiversity
b. Kunti river
c. Kerala region
d. Atmosphere of the Silent Valley

19. Minamata disease occurred due to presence of — in water
a. Sulphur dioxide
b. Bacteria
c. Mercury
d. potassium cyanide

20. The World Environment Day is celebrated on
a. First April
b. 5th May
c. 15th July
d. 5th June

21. The Wildlife Protection Act come to force in the year
a. 1942
b. 1972
c. 2014
d. 2022

22. The age of our Earth is
a. 4 billion years
b. 5 billion years
c. 6 billion years
d. 7 billion years

23. The number of National Park present in India (as on January, 2023) are-
a.106
b. 206
c. 500
d. 1000

24. "Meeting the needs of present without compromising the ability of future generation to meet their own need" is the definition of sustainable development which was given by:
a. Mahatma Gandhi
b. G.H. Brundtland
c. Wangari Maathai
d. SunderlalBahuguna

25. The maximum number of individuals that can be supported by a given environment is called
a. Carrying capacity
b. Population size
c. Biotic potential
d. Environmental resistance

26. Social, economic and ecological equity is the necessary condition for achieving
a.Ecological development
b. Economic development
c. Sustainable development
d. Social development

27. The presence of high coliform counts in water indicate
a. Contamination by human wastes
b. phosphorous contamination
c. Decreased biological oxygen demand
d. Hydrocarbon contamination

28. The ecological pyramid that is always upright
a. Pyramid of number
b. Pyramid of biomass
c. Both 'a' and 'b'
d. Pyramid of energy

29. A high BOD value in aquatic environment is indicative of
a. A pollution free system
b. A highly polluted system due to excess of nutrients
c. A highly polluted system due to abundant heterotrophs
d. A highly pure water with abundant of autotrophs

30. World wetland day is celebrated on
a. 2nd February
b. 21st March
c. 5th June
d. 16th September

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31. Which one is true?

a. Symbiosis is when neither population affects each other
b. Symbiosis is when the interaction is useful to both the population
c. Commensalism is when none of the interacting populations affect each other
d. Commensalism is when the interaction is useful to both the populations

32. Which of the following sources of energy do not produce carbon dioxide?

a. Wind energy
b. Geothermal energy
c. Hydroelectric energy
d. All of the above

33. Which one of the following is a correct grazing food chain?

a. Grass → Grasshopper → Frog → Snake → Hawk
b. Grass → Frog → Grasshopper → Snake → Hawk
c. Grass → Grasshopper → Frog → Hawk → Snake
d. Grass → Grasshopper → Snake → Frog → Hawk

34. Which one is sedimentary cycle?

a. Hydrogen cycle
b. Phosphorous cycle
c. Oxygen cycle
d. Nitrogen cycle

35. The Earth receive major energy from

a. Sun
b. Moon
c. Mars
d. Jupiter

36. Non- living components of ecosystem are

a. Biotic
b. Abiotic
c. Free living
d. None

37. Man belongs to

a. Herbovours
b. Carniovours
c. Omnivours
d. none of these

38. Which of the below is producer

a. Cat
b. Fish
c. Tiger
d. Paddy

39. Which of the following is a part of pond ecosystem?

a. Fish
b. Lizard
c. Goat
d. Tiger

40. Mangrove type forest are found in-

a. Nyle Delta
b. Godabari delta
c. Mississippi delta
d. Sundarban delta

Group- B Attempt any FOUR questions from the following

1. Which layer is called 'tropopause'? Discuss about the layers of crust to inner core of our earth. 2+8= 10

2. What is biodiversity? Write the uses and values of biodiversity. What do you understand by the term 'hotspot'? 2+5+3= 10

3. Write short notes on the following; 5x2=10
   a. Conservation of biodiversity.
   b. Acid rain.
   c. Photochemical smog.
   d. Origin of oxygen in the primitive atmosphere.

4. Give a deliberate discussion on the 'Chipko Movement'. 10

5. What do you mean by pollution? On the basis of persistence, discuss about the types of air pollutants present in the atmosphere.Write the health impacts of air pollution. 2+4+4= 10

6. How many types of pyramid are present in the ecosystem? Discuss different types of ecological pyramids present in the ecosystem. 2 + 8= 10

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CSE
55

Biology for Engineers

2023

Marks-80 Time-3Hrs

A. Answer the following question with select the correct options. 1×20=20

1. This is the largest phylum of Animal on the earth.
A. Mollusca B. Amphibia C. Arthropoda D. Aves

2. Where is DNA present in the eukaryotic cells?
A. Inside the nucleus B. With other cellular contents C. Inside the ribosomes D. Not present

3. Which of the following nitrogenous base is not present in DNA?
A. Thymine B. Adenine C. Guanine D. Uracil

4. Whichofthefollowingisthefunctionoflysosomes?
A. Autophagy B.Autolysis C.Digestion D.All of the above

5. Who is known as the "Father of Genetics"?
A. Morgan B. Mendel C. Watson D. Bateson

6. Glycolysis is the conversion of
A. Fructose into phosphoenolpyruvate B. Fructose into pyruvate
C. Glucose into phosphoenolpyruvate D. Glucose into pyruvate

7. Which substrate is used in the last step of glycolysis?
A. Glyceraldehyde 3-phosphate B. Pyruvate
C. Phosphoenolpyruvate D. 1, 3-bisphosphoglycerate

8. Which of the following immunity is present from our birth?
A. Innate Immunity B. Active immunity C. Passive immunity D. Acquired immunity

9. Which of the following cells is involved in humoral immunity?
A. T-cells B. B-cells C. Mast cells D. Both T and B cells

10. Anticodon is present in
A. DNA B. tRNA C. tRNA D. mRNA

11. Name the RNA molecules which is used to carry genetic information copied from DNA?
A. tRNA B. mRNA C.RRNA D. snRNA

12. The percentage of human genome which encodes proteins is approximately
A. Less than 2% B. 5% C. 25% D. 99%

13. The jawless vertebrate is
A. Crocodile B. zoris C. *Hyla* D. *Petromyzon*

14. Phylum of *Taenia Solium* is
A. Aschelminthes B. Annelids C. platyhelminths D.Mollusca

15. On the Origin of Species was written by _____
A. Charles Darwin B. Ludmila Kuprianova C. Mikhail A. Fedonkin D. None of the above

16. Which of these is a characteristic of prokaryotic cells?

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A. Absence of cell organelles B. Absence of nucleus
C. Presence of 70S ribosomes D. All of these

17. From which structure is a mesosome derived from?
A. Plasmid B. Cell wall C. Ribosome D. Cell membrane

18. Thescalelessvertebrateis
A. Snake B. Rohu C. Shark D. rat

19. Which of thefollowingisafightlessbird?
A. Pigeon B.vulture C.Parrot D. ostrich

20.Booklungsarerespiratory organsin
A. Insects B. Aarachnids C.Molluscans D. Echinoderms

B. Answer any 10 questions from the following. **2×10=20**

1. What is Coelom? Where is it found?
2. What is genetic code?
3. In which cell organelle thylakoid is found? Mention its one function.
4. Mention two differences betweenDNA and RNA.
5. Write down the two characteristic features of Phylum Arthropoda.
6. Mention the chemical reaction of photosynthesis?
7. What is Central Dogma in molecular biology?
8. Mention two differences betweenB-cell and T-cell .
9. What is mRNA? Mention its one function.
10. What is Green gland? Where it is found?
11. What do you mean by antibody?
12. What is chromosome?

C. Answer any 6 questions from the following. **5×6=30**

1. Write down the characteristics features of Phylum Mollusca. Mention two animal names under this phylum.
2. Write down a short note on Antibody structure.
3. Describe the Oparin and Haldane theory on the chemical basis of the origin of life.
4. What is nucleotide? Write down the structure of double helix DNA.
5. What is notochord? Write down the characteristics features of class Amphibia.
6. Write down the structure of mitochondria and mention its function.
7. What is immunity? Mention the different types of WBC. Mention its function in immunity.
8. What is metazoan? Write down thecharacteristics featuresof PhylumPoifera.

D. Answer any one question from the following **10×1=10**

1. What is Photosynthesis? Write down the process ofPhotosynthesis. Mention its importance. **(2+6+2)**

2. What is TCA cycle. Describe the Kreb cycle.Mention its importance. **(2+6+2)**

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B.Tech Examination-2023
Electronics and Communication Engineering
(Even Semester Regular and Supplementary)
Course Name: Principle Of Communication System, Course Code: ECEUGOE02

Full Marks: 80 **Time: 3.00 Hrs**

- **Answer Q.1 and seven questions from rest of the questions.**
- **Answer all parts of a question in same place.**
- **Symbols have their usual meaning.**

1. **Choosing the correct alternative from the given options answer any ten questions.** 10x1=10

(a) The function of the input transducer in a communication system is
(i) to transmit the message signal (ii) to modulate the message signal (iii) to convert message sound signal into electrical signal (iv) none of the above

(b) Single sideband system needs
(i) more bandwidth (ii) high power (iii) complex receiver circuit as compared to the other type of system (iv) none of these.

(c) A 1000 KHz carrier is simultaneously amplitude modulated with 300 Hz and 2 KHz audio sine wave. The frequency which will not present in the output is
(i) 998 KHz (ii) 999.7 KHz (iii) 1000.3 KHz (iv) 700KHz

(d) In commercial FM broadcasting the maximum frequency deviation is normally
(i) 5 KHz (ii) 15 KHz (iii)75 KHz (iv) 200 KHz

(e) The process of transmitting two or more information signals simultaneously over the same channel is called
(i) multiplexing (ii) telemetry (iii) detection (iv) modulation

(f) Pre-emphasis in FM systems involves
(i) compression of modulating signal (ii) expansion of modulating signal (iii) amplification of lower frequency components of the modulating signal (iv) amplification of higher frequency components of the modulating signal

(g) If a signal band-limited to f_m Hz is sampled at a rate less than $2f_m$, the reconstructed signal will be
(i) higher in magnitude (ii) smaller in magnitude (iii) have higher frequency suppressed (iv) distorted.

(h) The non-uniform quantization leads to
(i) improve signal to noise ratio for low level input signal (ii) reduce the probability of error (iii) reduce quantizing noise (iv) to increase signal strength.

(i) Which is not a digital modulation system?
(i) PAM (ii) PCM (iii) DM (iv) ADM

(j) In PCM, if the transmission path is very long
(i) repeater station is used (ii) pulse width may be increased (iii) pulse amplitude is increased (iv) pulse spacing is reduced

(k) The modulation method that represents bits as different phase shifts of a carrier is known as
(i) ASK (ii) FSK (iii) PSK (iv) MSK

(l) The communication medium causes the signal to be
(i) amplified (ii) modulated (iii) attenuated (iv) none of the these

2. (a) Draw the block diagram of a communication system and briefly explain the function of each block. 5
(b) Mention different types of modulation. 2
(c) Why do we need modulation in communication? 3

3. (a) What is meant by the term amplitude modulation? 2
(b) Define modulation index for AM wave. 2
(c) Derive an expression for single-tone amplitude modulated wave. 4
(d) Write the condition for over modulated AM wave and draw the waveform of over modulated AM wave. 2

4. (a) Prove that the balanced modulator produces an output signal consisting of two side band only with the carrier removed. 5
(b) How is a SSB-SC signal demodulated? 3
(c) Calculate the percentage of power savings for DSB-SC signal for the percentage modulation of (i) 100% (ii) 50% 2

5. (a) What is Carson's rule? 2

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(b) Explain the generation of narrowband FM signals with suitable block diagram.

(c) A single tone frequency modulated wave is denoted by following expression $s(t) = 2\cos[2\pi \times 10^6 t + 10\sin(2\pi \times 10^3 t)]$. Determine carrier frequency, modulating frequency, modulation index and maximum frequency deviation.

6. (a) Explain the varactor diode method for generation of FM signal. 5

(b) Explain Pre-Emphasis in FM signal generation. 3

(c) Compare between AM and FM 2

7. (a) State sampling theorem. 2

(b) What is aliasing? How is it prevented? 2

(c) Explain flat top sampling technique. 4

(d) Find the Nyquist rate and the Nyquist interval for the signal $x(t)=\cos(4000\pi t)\cos(1000\pi t)$ 2

8. (a) How is an analog signal converted to a digital signal in PCM system? 5

(b) Derive the expression for transmission bandwidth in a PCM system. 3

(c) A television signal having a bandwidth of 4.2 MHz is transmitted using binary PCM system. Given that number of quantization level is 512. Determine transmission bandwidth and output signal to quantization noise ratio. 2

9. (a) Explain Delta modulation in detail with suitable block diagram. 5

(b) What are slope overload distortion and granular noise in delta modulation and how it is removed in ADM? 3

(c) Given a sine wave of frequency f_m and amplitude A_m applied to a delta modulator having a step size Δ. Show that slope overload distortion will occur if $A_m > \frac{\Delta}{2\pi f_m T_s}$. Here T_s is the sampling frequency. 2

10. (a) The binary data 10101001 is transmitted over a baseband channel. Draw the waveform for the transmitted data using following format – (i) Polar RZ (ii) Split phase Manchester Coding. (iii) AMI 3

(b) What do you mean by coherent modulation technique and non-coherent modulation technique? 3

(c) How is FSK signal detected? 4

11. (a) What do you mean by entropy? 2

(b) Define lossless channel and deterministic channel with channel matrix and channel diagram. 4

(c) A discrete memory less source (DMS) X has five possible outcomes with probabilities $P_1 = \frac{1}{2}$, $P_2 = \frac{1}{4}$, $P_3 = \frac{1}{8}$, $P_4 = \frac{1}{16}$, $P_5 = \frac{1}{16}$. Find entropy and information rate if there are 16 outcomes per second. 4

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Aliah University

End Semester Examination (Spring Semester) 2023

(For 2nd Year 4th Semester B.Tech(CSE))

Paper Name: Computer Organization and Architecture **Full Marks: 80**

Paper Code: CSEUGPC06 **Time: 3 hours**

Group A(Answer all questions) 10 X1

1. Calculate the maximum capacity of a memory which uses an address bus of size 12 bit?
2. What is hit ratio?
3. What are the functions of PC and Accumulator?
4. Convert the hexadecimal number 68BE to octal.
5. What is locality of reference?
6. How many address bits are required for a 512X4 memory?
7. Which addressing mode is used in the instruction PUSH B?
8. What is CAM?
9. Use 8 bit two's complement integers, perform the following computations: -34+ (-12).
10. What is meant by stored program concept?

Group B (Answer any 5 questions) (5X6=

1. i) A two byte relative mode branch instruction is stored in memory location 1000.The branch is made to the location 87.What is the effective address? (3+3)
   ii) Differentiate between CISC and RISC architecture. (6)
2. Describe stack based CPU organization. (6)
3. Differentiate Hardwired and Microprogrammed Control.
4. i) What is Cache memory?
   ii) Why is it needed? (1+2+3)
   Explain Write-through and Write back mechanism.
5. What do you mean by machine cycle and t states? What is Von Neumann concept and its bottleneck? (3+3)
6. Explain the merits and demerits of the floating-point and fixed point representations storing real numbers. (3+3)

Group C(Answer any 4 questions) (4X10=40)

1. a) Draw the flowchart of Booth's Multiplication Algorithm and explain it.
   b) Multiply (-9) and -13 using Booth's Multiplication upto five digits . (5+5)
2. a) What is Instruction format?
   b) What is Instruction cycle?
   c) Draw and Explain the state transition diagram of an instruction cycle. (2+2+6)
3. Discuss the following addressing mode with examples: (2+2+2+2+2)
   i) Immediate ii) Register iii) Direct iv) Indirect v) Index
4. Evaluate the arithmetic statement X=(A+B)/(C+D) using zero,one , two and three address instructions. (2.5 X 4
5. a) Why is set-associative mapping technique more advantageous than direct or associative mapping technique?
   b) A computer has 512 KB cache memory and 2 MB main memory.If the block size is 64 bytes,then find out subfields for
   i) direct mapped cache
   ii) associative
   iii) 8-way set associative cache.
   c) Compare and Contrast SRAM and DRAM. (2+6+2)

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ALIAH UNIVERSITY

End Semester Examination (Spring Semester) 2023

(B.Tech CSE 2nd Year 4th Semester)

Subject Name: Object Oriented Programming Lab
Full Marks: 100
Time: 3 Hours
Subject Code: CSEUGPC07

Answer *any one* question

1. Write Java Program to print all the Prime numbers in a range given by the user. Take input through BufferedReader class object.
2. Write a Java Program to create a class called Complex. Within the class define the relevant data variables as well as methods to sum and multiply two complex numbers. Create Complex class objects in main methods and perform summation and multiplication.
3. Write a Java Program to take input of five city name through command line argument. Sort these cities in alphabetic order by using compareTo method.
4. Write a Java Program to take a string input by using BufferedReader class object. Reverse this string and print it.
5. Define an Abstract class Shape and its two Subclasses Square and Circle. Use method overriding to calculate the area of the square and circle.
6. Define a class Shape and within the class define overloaded methods calculateArea to calculate the area of Circle and Square. Use BufferedReader for input.
7. Define an interface Shape with abstract method calculatePerimeter. Implement the interface in two classes called Square and Circle. Create its objects to calculate perimeter.
8. Use multithreading to create two threads Fibonacci and Prime. Fibonacci thread will display the series for the n terms with 6000ms delay and Prime thread will display prime numbers of a given range with 3000ms delay.
9. Write a Java program to handle "divide by zero exception" with the following message- "Exception Occurred" if the quotient is -1. Otherwise print the result in finally block.
10. Define a class Students with marks as one of the data member. In the main method create an array of Student Object and calculate the average marks obtained by all the students. Take input using BufferedReader class object.

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