

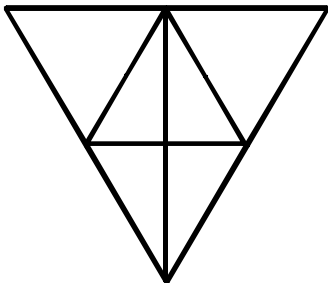
GUJARAT TECHNOLOGICAL UNIVERSITY
LABORATORY TECHNICIAN-SAST - (RLTAS)

EXAM DATE : 27/02/2024

PROVISIONAL ANSWER KEY

- 001 Which pair of singular and plural gender is incorrect?**
(A) Calf - Calves
(B) Man - Men
(C) Loaf - Loafs
(D) Ox - Oxen
- 002 I shall have been writing letters for some time before you return is a _____.**
(A) future perfect continuous tense.
(B) present perfect continuous tense.
(C) future present tense.
(D) simple future tense.
- 003 Find out the incorrect spelling.**
(A) Slavery
(B) Pleader
(C) Orator
(D) Begger
- 004 Change of verbs in to nouns:**
Find out the correct pair
(A) Act - Acting
(B) Believe - Belief
(C) Excite - Excited
(D) Enjoy – Entertain
- 005 Select the correct sentence.**
(A) The cows as well as the bullocks is very useful.
(B) He is a man who respect his parents.
(C) It is I who are responsible for this loss.
(D) Many a man have died for his country.
- 006 If today is Sunday, then three days from now will be _____.**
(A) Tuesday
(B) Friday
(C) Wednesday
(D) Monday
- 007 If Pratap could be given a code number 1618120116, what code number can be given to NAVIN.**
(A) 73957614
(B) 14289618
(C) 19274651
(D) 14122914
- 008 Six persons A, B, C, D, E and F are standing in a row. C and D are standing close to each other alongside E. B is standing beside A only. A is fourth from F. Who are standing on the extremes?**
(A) C and B
(B) B and F
(C) A and F
(D) B and D

- 009 What will come in the place of the question mark (?) in the following series?
 10000 – 6400 – 3600 – ?
 (A) 2600
 (B) 1600
 (C) 1800
 (D) 1200
- 010 Rohan got Rs 120/- as a half year interest on the investment of the Rs. 3000/-. What will be rate of interest?
 (A) 6%
 (B) 7%
 (C) 9%
 (D) 8%
- 011 A man said, “This girl is the wife of the grandson of my mother.” Who is the man to the girl?
 (A) Father-in-Law
 (B) Grand Father
 (C) Father
 (D) Brother
- 012 Find out the opposite of the word : Denial
 (A) Refusal
 (B) Available
 (C) Acceptance
 (D) Desirable
- 013 21 mango trees, 42 apple trees and 56 orange trees have to be planted in rows such that row contains the same number of trees of one variety only. Minimum number of rows in which the trees may be planted is _____?
 (A) 20
 (B) 18
 (C) 19
 (D) 17
- 014 Three of the following four words are alike in a certain way and one is different. Select the odd one.
 (A) Optical reader
 (B) Bifocals
 (C) Spectacles
 (D) Goggles
- 015 How many triangles are there in the figure given below?



- (A) 13
 (B) 12
 (C) 14
 (D) 15

- 016 What does CPU Stand for?
(A) Central Processing Unit.
(B) Computer Processing Unit.
(C) Central Peripheral Unit.
(D) Central Program Unit.
- 017 Which programming language is known for its simplicity and readability?
(A) Java
(B) C++
(C) Python
(D) Assembly
- 018 What is quantum computing?
(A) Traditional computing based on quantum mechanics
(B) Computing using quantum bits (qubits)
(C) Computing without binary code
(D) Advanced Artificial Intelligence
- 019 What is the function of an SSD (Solid State Drive) in a computer?
(A) Long-term storage.
(B) Temporary storage for running programs.
(C) Virtual machine emulation.
(D) High speed data access.
- 020 What is the function of RAM in a computer?
(A) Long-term storage
(B) Data Input / Output
(C) Temporary storage for running programs
(D) File organization
- 021 What is the purpose of firewall in computer security?
(A) Speed up internet connection.
(B) Manage file permissions.
(C) Prevent unauthorised access.
(D) Scan for virus.
- 022 What is the purpose of a QR code?
(A) Query Resolution
(B) Quantitative Reporting
(C) Quality Recognition
(D) Quick Response
- 023 What is the significance of the term “Big Data”?
(A) Large physical store storage
(B) Massive computational power
(C) Huge volumes of diverse data
(D) Extensive network coverage
- 024 What is the main purpose of a version control system like Git?
(A) Code optimization
(B) Code execution
(C) Code collaboration
(D) Code compilation
- 025 What is the purpose of Cloud Computing?
(A) Centralised data storage
(B) Local file sharing
(C) Offline processing
(D) Physical server management

- 026 An astronaut in outer space will observe sky as
 (A) White
 (B) Black
 (C) Blue
 (D) Red
- 027 Which is considered as the biggest port of India?
 (A) Kolkata
 (B) Cochin
 (C) Chennai
 (D) Mumbai
- 028 The statement showing fort and place mentioned below. Which is not correct statement?
 (A) Kangra fort - Himachal Pradesh
 (B) Amer fort - Rajasthan
 (C) Raigad fort - Maharashtra
 (D) Golconda fort - Karnataka.
- 029 Forest parks and reserve and the states mentioned below which statement is not correct?
 (A) Jim Corbett national park - Uttarakhand
 (B) Nanmangalam reserved forest - Tamil Nadu
 (C) Kakrail reserve forest - Rajasthan
 (D) Amarambalam reserved forest - Kerala
- 030 Match the Dance and state of origin
- | Dance | State |
|-----------------|-------------------|
| 1. Bharatnatyam | a. Tamil Nadu |
| 2. Kathak | b. Uttar Pradesh |
| 3. Kuchi Pudi | c. Andhra Pradesh |
| 4. Katha Kali | d. Kerala |
- (A) 1 – B, 2 – C, 3 – D, 4 – A
 (B) 1 – A, 2 – B, 3 – C, 4 – D
 (C) 1 – C, 2 – D, 3 – A, 4 – B
 (D) 1 – D, 2 – A, 3 – B, 4 – C
- 031 Wars of and parties are mentioned below. Which Pair is not correct?
 (A) First battle of Tarain – Prithviraj and Mohamad Ghor
 (B) First battle of Panipat – Barar and Rana Sang
 (C) Battle of Chausa – Sher Shah and Humayun
 (D) Battle of Samugarh – Dara Shikoh and Mughals
- 032 The Gujarat Public University Act 2023, came into force on
 (A) 8th October 2023
 (B) 9th October 2023
 (C) 10th October 2023
 (D) 11th October 2023
- 033 Objectives of Public Universities are mentioned under which sections?
 (A) Sec. 2
 (B) Sec. 3
 (C) Sec. 4
 (D) Sec. 5
- 034 Officers of Private University are mentioned under which section of the Act?
 (A) Sec. 7
 (B) Sec. 8
 (C) Sec. 6
 (D) Sec. 5

- 035 Section and contents are mentioned below. Which pair is not correct?
 (A) Sec. 9 - The Chancellor
 (B) Sec. 10 - Appointment of Vice-Chancellor
 (C) Sec. 11 - Appointment of Registrar
 (D) Sec. 13 - Officers etc. to be public servant
- 036 (1) The university grants commission (UGC) came in to existence on 28th Dec. 1955
 (2) UGC became a statutory organisation by Act in 1958
 (A) only 1 is correct
 (B) only 2 is correct
 (C) both 1 and 2 are correct
 (D) both 1 and 2 are not correct
- 037 (1) UGC advises Central and State Government for development of Higher Education
 (2) UGC is located in 4 Locations
 (A) only 1 is correct
 (B) only 2 is correct
 (C) both 1 and 2 are correct
 (D) both 1 and 2 are no correct
- 038 (1) All India council for Technical Education (AICTE) was set up in November 1945
 (2) All India council for Technical Education Act passed in 1987
 (A) both the statement 1 and 2 are correct
 (B) only 1 is correct
 (C) only 2 is correct
 (D) both 1 and 2 are not correct
- 039 (1) Smart India Hackathon is for better product innovation and development of mindset for problem solving.
 (2) SWAYAM is a platform for hosting all courses, to be accessed by anyone, anywhere at any time
 (A) only 1 is correct
 (B) only 2 is correct
 (C) both 1 and 2 are correct
 (D) both 1 and 2 are not correct
- 040 (1) The Pharmacy Act was enacted on 4/3/1948
 (2) PCI was constituted on 9/9/49 under section 13 of the Act
 (A) both 1 and 2 are correct
 (B) both 1 and 2 are not correct
 (C) only 1 is correct
 (D) only 2 is correct
- 041 ગુજરાતી ભાષામાં નામના કેટલા પ્રકાર છે ?
 (A) 8
 (B) 7
 (C) 6
 (D) 5
- 042 નીચેના પૈકી કઈ સંધિ સ્વર સંધિ નથી ?
 (A) સ્થળ + અંતર = સ્થળાંતર
 (B) જળ + આશય = જળાશય
 (C) રવિ + ઈન્દ્ર = રવીન્દ્ર
 (D) સમ્ + ઈક્ષા = સમીક્ષા

- 043 નીચેના પૈકી સમાનાર્થી શબ્દોની કઈ જોડી યોગ્ય નથી ?
 (A) અખિલ - આખુ, બધું
 (B) અતિથિ - પરોણો
 (C) અનિલ - ગર્વ, અહંકાર
 (D) અરજ - અનુનય, વિનંતી
- 044 ઉચ્ચારણ કે વર્ણનુ સામ્ય હોય પરંતુ અર્થ અલગ હોય, તેવી કઈ જોડી યોગ્ય નથી ?
 (A) અપેક્ષા - આશા # ઉપેક્ષા - અવગણના
 (B) અનુસાર - પ્રમાણે # અનુસ્વાર - એક લિપિચિહ્ન
 (C) અંસ - ભાગ # અંશ - ખભો
 (D) ઈમાન - પ્રામાણિકતા # ઈનામ - બક્ષિસ
- 045 શબ્દ સમૂહ માટેના એક શબ્દની કઈ જોડી યોગ્ય નથી ?
 (A) સાઠ વર્ષ પૂરા થતા ઉજવાતો ઉત્સવ - હીરક મહોત્સવ
 (B) સો વર્ષ પૂરા થતા ઉજવાતો ઉત્સવ - શતાબ્દી ઉત્સવ
 (C) પહેલા થઈ ગયેલું - અનુગામી
 (D) બે મોટા સમુદ્રને જોડનાર ખાડી - સમુદ્રધુની
- 046 Which organisations scientists confirm 2023 as the hottest year ever recorded?
 (A) European Union
 (B) United Nations
 (C) WHO
 (D) NASA
- 047 Which country recently passed a bill prohibiting the consumption and sale of dog meat?
 (A) China
 (B) Tiwan
 (C) Thailand
 (D) South Korea
- 048 What is the name of indigenous assault rifle, launched by DRDO for the armed forces?
 (A) Rakshak
 (B) Ugram
 (C) Nirbhay
 (D) Shakti
- 049 Which international organisation introduced medicine code for Ayurveda, Siddha and Unani system as Part of the ICD-11 module-2
 (A) UNESCO
 (B) WHO
 (C) UNICEF
 (D) CDC
- 050 In which city of India, Prasadam the country's first hygienic food street was inaugurated by Union Health Minister?
 (A) Indore
 (B) Surat
 (C) Ujjain
 (D) Gwalior
- 051 Which of the following is the mechanism of mechanical digestion in the large intestine?
 (A) Peristalsis
 (B) Haustral churning
 (C) Mass peristalsis
 (D) All of these

- 052 Which are the largest, motile cells in the blood, which in tissues become phagocytic cells?
(A) Lymphocytes
(B) Eosinophils
(C) Monocytes
(D) Neutrophils
- 053 Which are the major mucus secreting cells in small intestine?
(A) Absorptive cells
(B) Goblet cells
(C) Chief cells
(D) Paneth cells
- 054 This muscular valve prevents gastric juices from flowing back out of the stomach into the oesophagus
(A) Cardiac sphincter
(B) Pyloric sphincter
(C) Cecum
(D) Houston's valve
- 055 Which of these values of WBC total count/ml indicates infection?
(A) 18000
(B) 8000
(C) 6000
(D) 4500
- 056 Which of the following is not a function of liver?
(A) Storage of glycogen
(B) Detoxification
(C) Secretion of bile
(D) Secretion of insulin
- 057 The neurons that carry inputs to central nervous system are _____
(A) Sensory neurons
(B) Sympathetic neurons
(C) Motor neurons
(D) Input neurons
- 058 The term Bradycardia refers to
(A) Improper heart beating
(B) Slow heart rates
(C) Elevated heart rate
(D) Cardiac arrest
- 059 Which of these is not a disachharide?
(A) Maltose
(B) Amylose
(C) Lactose
(D) Cellobiose
- 060 Which of these amino acids is has a smallest side chain?
(A) Glycine
(B) Valine
(C) Lysine
(D) Tyrosine
- 061 Cholecalciferol is commonly known as Vitamin _____
(A) B12
(B) C
(C) A
(D) D3

- 062 Which of these diseases is caused by deficiency of Vitamin C?
(A) Scurvy
(B) Night blindness
(C) Beri-Beri
(D) Rickets
- 063 Which of these methods is used to determine Molecular wt of a protein?
(A) Thin layer chromatography
(B) Affinity chromatography
(C) HPLC
(D) SDS-PAGE
- 064 A nucleotide in a nucleic acid is made up of three components. A pentose sugar, a phosphate and _____
(A) Heme
(B) Nitrogenous base
(C) Thiamine
(D) Adipic acid
- 065 Enzyme Lactate Dehydrogenase, LDH 1 is clinically important in diagnosis of
(A) Liver damage
(B) Myocardial infarctions
(C) Pancreatitis
(D) Prostatic carcinoma
- 066 Which of these RNAs serve as adapter for protein synthesis?
(A) mRNA
(B) rRNA
(C) tRNA
(D) All are adapters
- 067 Heparin is a
(A) Blood stainer
(B) Blood coagulant
(C) Blood anticoagulant
(D) Staining reagent
- 068 The Rh blood group system was discovered by
(A) Paul Ehrlich
(B) William Harvey
(C) Linus Pauling
(D) Karl Landstienner
- 069 A normal Adult Hemoglobin contains
(A) Two alpha and two beta chains
(B) Two alpha and two delta chains
(C) Two alpha and two gamma chains
(D) All four alpha chains
- 070 Which of these blood cells is non-nucleated?
(A) Neutrophils
(B) Monocytes
(C) Basophils
(D) Thrombocytes
- 071 Giemsa stain, used for staining blood smears contains
(A) Methylene blue and eosin
(B) Safranin and methylene blue
(C) Crystal violet and safranin
(D) Crystal violet and eosin

- 072 Which of these is not a type of morphology of RBCs?
(A) Dohle bodies
(B) Stomatocytes
(C) Ovalocytes
(D) Burr cells
- 073 Which of these values of platelet count is considered “critical count”?
(A) <100000
(B) <75000
(C) <50000
(D) <40000
- 074 Which of these terms is used for generation of RBCs?
(A) Erythroblastosis
(B) Erythropoiesis
(C) Erythrocytosis
(D) Erythrocythemia
- 075 The germ theory of disease was established by
(A) Antony van Leeuwenhoek
(B) Louis Pasteur
(C) Alexander Fleming
(D) Robert Koch
- 076 Numerical aperture in microscopy is
(A) Ability of lens to gather light
(B) The X which denotes magnification
(C) The diaphragm adjustment
(D) Filter to adjust wavelength
- 077 The uncoloured live cells can be clearly observed under a
(A) Bright field microscope
(B) Electron microscope
(C) Phase contrast microscope
(D) Fluorescence microscope
- 078 Acid-fast Staining is a type of
(A) Simple staining
(B) Differential staining
(C) Negative staining
(D) Special staining
- 079 The largest known bacterium is
(A) Bacillus megaterium
(B) Bacillus stearothermophilus
(C) Thiobacillus thiooxidans
(D) Thiomargarita namibiensis
- 080 On an average a flagellated bacterium can generate swimming speed of about
(A) 20 $\mu\text{m/hr}$
(B) 20 cm/hr
(C) 20 m/hr
(D) 200 m/hr
- 081 GasPack jars are used for
(A) Culture preservation
(B) Oxygen supply for cultivation
(C) Sterilization
(D) Anaerobic cultivation

- 082 Which of these methods is not a method of sterilization?
(A) **Lyophilization**
(B) Radiation
(C) Filtration
(D) Moist heat
- 083 In spectrophotometry, 100% transmittance is equal to 0 OD. What is the OD at 0% transmittance?
(A) 100
(B) 10
(C) 0
(D) **∞**
- 084 Proteins absorb strongly at
(A) **280 nm**
(B) 340 nm
(C) 540 nm
(D) 660 nm
- 085 S, the Svedberg Unit is associated with
(A) UV spectrophotometry
(B) **Centrifugation**
(C) Agarose Gel Electrophoresis
(D) Gel permeation chromatography
- 086 The popularly known PCR machine is a
(A) Centrifuge
(B) Sonicator
(C) **Thermal cycler**
(D) Thermistor
- 087 The SDS-PAGE separates proteins based on
(A) **Size**
(B) Charge
(C) Charge to mass ratio
(D) Solubility
- 088 A pH electrode is a
(A) Amperometric sensor
(B) **Potentiometric sensor**
(C) Thermistor
(D) Conductometric sensor
- 089 A laminar air flow uses
(A) **HEPA filters**
(B) Bag filters
(C) Activated carbon filters
(D) Membrane filters
- 090 "When a ray of monochromatic light passes through an absorbing medium its intensity decreases exponentially as the length of absorbing medium increases". This is
(A) Beer's law
(B) **Lambert's law**
(C) Snell's law
(D) Huygens principle
- 091 Moist heat sterilization is done in
(A) Hot air oven
(B) Boiling water bath
(C) **Autoclave**
(D) Thermal cycler

- 092 Sonication is used for
(A) Protein separation
(B) Medium sterilization
(C) Air sterilization
(D) Cell disruption
- 093 CO₂ incubators are used in cell culture
(A) to remove oxygen from medium
(B) to maintain aseptic condition
(C) to maintain physiological pH of culture medium
(D) to maintain humidity
- 094 Disruption of cells for DNA isolation is ideally done using
(A) Lysozyme and detergents
(B) Sonication
(C) Grinding with abrasives
(D) Any of the above is ideal
- 095 The quantitative estimation of RNA can be done by
(A) Diphenylamine method
(B) Orcinol method
(C) Anthrone methods
(D) Folin method
- 096 EcoR1 is a type of
(A) DNA polymerase
(B) RNA polymerase
(C) Ligase
(D) Restriction endonuclease
- 097 Which of these is a vector used in cloning?
(A) M13 phage
(B) A phage
(C) Cosmid
(D) All are used as vectors
- 098 Which of these is blotting method to detect specific DNA sequences
(A) Southern blotting
(B) Northern blotting
(C) Western blotting
(D) Eastern blotting
- 099 pBR322 is a
(A) Plasmid
(B) Cosmid
(C) Restriction enzyme
(D) Phage
- 100 Gel permeation chromatography separates proteins based on their
(A) Charge
(B) Solubility
(C) Size
(D) Affinity