



PUNJAB PUBLIC SERVICE COMMISSION

LECTURER ZOOLOGY (31B AND 60B) PUNJAB HIGHER EDUCATION DEPARTMENT INSTRUCTIONS

Roll No.

Signature

Time Allowed: 90 Minutes

Maximum Marks: 100

- Read the INSTRUCTIONS on ANSWER SHEET and QUESTION PAPER carefully before you start answering.
- Write your allotted Roll No. in the top right corner of QUESTION PAPER and in the specified place of ANSWER SHEET.
- Write PAPER CODE on your ANSWER SHEET AND FILL IN THE RELEVANT BUBBLE CODE Carefully. If you FAIL to do so, Your ANSWER SHEET will be CANCELLED.
- Read QUESTION PAPER carefully and mark your answers on the ANSWER SHEET only.
- Each question has four options. Fill only one box which you think is correct answer. Each question carries 1 mark and 0.25 mark will be deducted for each incorrect answer.
- Instructions for filling box appropriately have been given on the ANSWER SHEET. Read them carefully before you attempt the question paper.
- Sign in the Box provided on the ANSWER SHEET.
- Return both QUESTION PAPER and ANSWER SHEET, to the STAFF, at the end of test.
- Use of Calculator is not allowed.

IF A CANDIDATE HAS ANY OBSERVATION ON THE PAPER, THE SAME MAY BE BROUGHT TO THE NOTICE OF PPSC DURING THE CONDUCT OF TEST/EXAMINATION. NO REPRESENTATION ON THE PAPER WILL BE ENTERTAINED THEREAFTER.

- (Q 1): _____ is amino acid which is lost in cystic fibrosis.
(A) Methionine (B) Alanine
(C) Phenylalanine (D) Glycine
- (Q 2): Living _____ are scaleless.
(A) Hagfishes (B) Sharks
(C) Bony fishes (D) Ostracoderms
- (Q 3): In the membranous skeleton _____ sheath surrounds the central nervous system.
(A) Perineural (B) Perineurium
(C) Peritoneum (D) Perichondrium
- (Q 4): Calmodulin, a cytosolic protein has _____ binding sites for calcium.
(A) One (B) Two
(C) Three (D) Four
- (Q 5): A binary number 1100011 has the decimal value equal to:
(A) 4 (B) 16
(C) 99 (D) 128
- (Q 6): Some minerals are needed in relatively large amounts and are called:
(A) Macrominerals (B) Non-Essential minerals
(C) Trace minerals (D) Microminerals
- (Q 7): Change the narration: The father said, "If you do not work, Usman, you will fail".
(A) The father told Usman that if he did not work, he would fail. (B) The father warned Usman that if he did not work, he would fail.
(C) The father warned Usman that that if he did not work, he will fail. (D) The father warned Usman that in case he did not work hard, he would fail.
- (Q 8): _____ step of the action potential is energy dependent.
(A) Depolarization (B) Repolarization
(C) Action potential stage (D) Refractory period
- (Q 9): Vertebrate photoreceptors _____ in response to stimulus.
(A) Depolarization (B) Repolarization
(C) Hyperpolarization (D) Transduction
- (Q 10): Largest part of the human brain is:
(A) Cerebellum (B) Cerebrum
(C) Medulla Oblongata (D) Pituitary Gland
- (Q 11): Insects belongs to class _____.
(A) Hexapoda (B) Diplopoda
(C) Chilopoda (D) Arachnida
- (Q 12): Glycolysis converts _____.
(A) Glucose into pyruvate (B) Glucose into phosphoenolpyruvate
(C) Fructose into pyruvate (D) Fructose into phosphoenolpyruvate
- (Q 13): The universal blood donors for the ABO system are type _____.
(A) A (B) B
(C) O (D) AB
- (Q 14): _____ occurs in eukaryotes but not in prokaryotes.
(A) Attenuation (B) Splicing
(C) Mitochondrial RNA (D) Ribosome
- (Q 15): _____ helps in maintaining the shape of the eye.
(A) Neuroglia (B) Aqueous humor
(C) Vitreous humor (D) Perikaryon
- (Q 16): Which of the following Organizations did Pakistan join in 1969?
(A) SAARC (B) NAM
(C) OIC (D) D-8
- (Q 17): _____ in asthenosphere is the major factor behind the movement of tectonic plates.
(A) Thickness of crust (B) Heat conduction
(C) Heat convection (D) Temperature of inner core differentiation
- (Q 18): _____ is the largest single cause of loss of biodiversity.
(A) Habitat destruction (B) Hunting
(C) Pollution (D) Disease
- (Q 19): MacConkey agar is widely used for the selection of _____.
(A) Gram -ve strains (B) Bacilli
(C) Salmonella and shigella (D) Staphylococcus

- (Q 20): The _____ fishes have well developed stomach and the intestine is shorter than that of herbivores of comparable size.
 (A) Grazing (B) Strainer
 (C) Predatory (D) Sucking
- (Q 21): Arms are absent in class _____.
 (A) Ophiuroidea (B) Asteroidea
 (C) Echinoidea (D) Crinoidea
- (Q 22): Out of the following, which acts as pacemaker of the heart?
 (A) A-V node (B) Purkinje fiber
 (C) S-A node (D) Conus arteriosus
- (Q 23): Studies that involve a single dose or exposures of very short duration are:
 (A) Acute (B) Sub-chronic
 (C) Chronic (D) Observation period
- (Q 24): What is the main substance reabsorbed in the region of the descending limb of the loop of Henle?
 (A) Sodium (B) Potassium
 (C) Ammonia (D) Water
- (Q 25): The uterine tubes terminate in a hollow muscular organ in front of rectum and behind the urinary bladder is called:
 (A) Uterus (B) Vagina
 (C) Cervix (D) Endometrium
- (Q 26): The Myelin sheath is derived from the _____.
 (A) Microglia (B) Neuroglial cells
 (C) Schwann cells (D) Nerve cells
- (Q 27): Many of the animals when from different ancestors colonize similar habitats, acquire similar adaptations and resemble one another superficially is called as _____.
 (A) Parallel evolution (B) Tempo evolution
 (C) Divergent evolution (D) Convergent evolution
- (Q 28): Maggots are usually larvae of _____.
 (A) Coleoptera (B) Lepidoptera
 (C) Isoptera (D) Diptera
- (Q 29): Amphibians without tail belong to order _____.
 (A) Gymnophiona (B) Caudata
 (C) Squamata (D) Anura
- (Q 30): Which of the following companies were the first to introduce mobile phone?
 (A) Nokia (B) Ericsson
 (C) Motorola (D) Samsung
- (Q 31): Silverfishes occasionally damage _____.
 (A) Wood (B) Book binding
 (C) Rice (D) Wheat
- (Q 32): Continental drift theory proposed that all continents were a single supercontinent in past called as:
 (A) Pangaea (B) Laurasia
 (C) Gondwanaland (D) Madagascar
- (Q 33): Human possess _____ kidney.
 (A) Pronephros (B) Mesonephros
 (C) Metanephros (D) Both A & B
- (Q 34): Plant species having a wide range of genetical distribution evolve into a local population known as _____.
 (A) Biome (B) Ecosystem
 (C) Population (D) Ecotype
- (Q 35): _____ is the highest point of Salt range in Pothohar region.
 (A) Sakesar hill (B) Tilla Jogian
 (C) Takhat i Suleman (D) None of these
- (Q 36): Which Prophet was a symbol of Patience (Sabar)?
 (A) Hazrat Da'ood (A.S.) (B) Hazrat Moosaa (A.S.)
 (C) Hazrat Ayyoob (A.S.) (D) Hazrat Sulymaan (A.S.)
- (Q 37): What should come in place of question mark (?) that satisfies the following: $7/49 = 3/?$
 (A) 24 (B) 36
 (C) 18 (D) 21
- (Q 38): Large scale study of proteins is _____.
 (A) Metabolomics (B) Proteomics
 (C) DNA methylation studies (D) Bioinformatics
- (Q 39): Promoters may activate oncogenes by inhibiting the action of:
 (A) Malignant genes (B) Initiators
 (C) Suppressor genes (D) Virus
- (Q 40): Which nitrogenous waste product is the most toxic and is produced only in insects that live in water?
 (A) Urea (B) Ammonia
 (C) Uric acid (D) They are all equally toxic
- (Q 41): Electric eel can deliver an electric shock in excess of _____.
 (A) 50 volts (B) 5000 volts
 (C) 220 volts (D) 500 volts
- (Q 42): RNA polymerase I transcribes _____ in nucleolus.
 (A) rRNA (B) tRNA
 (C) mRNA (D) siRNA
- (Q 43): Who is the current Chief Minister of Khyber Pakhtunkhwa?
 (A) Dost Muhammad Khan (B) Mahmood Khan
 (C) Ameer Haider Khan Hoti (D) None of these
- (Q 44): Name the first biggest liar who announced the false prophethood?
 (A) Abu Jehl (B) Muslima Kazzab
 (C) Ibn-e-Muljim (D) Aswad-al-Ansi
- (Q 45): Speed of Line printer is measured in:
 (A) Character per minute (B) Paragraph per minute
 (C) Line per minute (D) Paper per minute
- (Q 46): The _____ coefficient is the probability that two alleles in an individual are identical by descent from a common ancestor.
 (A) Population (B) Probability
 (C) Inbreeding (D) Lod score

- (Q 47): Humans are classified in order:
 (A) Primata
 (C) Proboscidea
 (B) Chiroptera
 (D) Edentata
- (Q 48): I spend 20 hours to clean my garden. How long will it take if 4 people (with the same efficiency) come to join me?
 (A) 3 hours
 (C) 5 hours
 (B) 6 hours
 (D) 4 hours
- (Q 49): _____ number of molecules of CO₂ are produced by an acetyl group of acetyl-Co-A in a citric acid cycle.
 (A) 3
 (C) 1
 (B) 5
 (D) 2
- (Q 50): Before independence East Timor was a part of:
 (A) Australia
 (C) Malaysia
 (B) Philippines
 (D) Indonesia
- (Q 51): _____ of the codon is the redundancy of the genetic code, exhibited as the multiplicity of three base pairs codon combinations that specify an amino acid.
 (A) Degeneracy
 (C) Specificity
 (B) Universality
 (D) Non-overlapping
- (Q 52): The motion caused by earthquakes travels outward from the focus in the form of _____.
 (A) Electromagnetic waves
 (C) Gravity waves
 (B) Seismic waves
 (D) Magnetic waves
- (Q 53): Linking of Ca²⁺ with calmodulin activates _____ in the contraction cycle of smooth muscles.
 (A) MLC kinase
 (C) MHC kinase
 (B) MLC phosphorylase
 (D) MHC phosphorylase
- (Q 54): Immunological destruction of body tissue or product due to antibodies reacting with it as antigen is called _____.
 (A) Anaphylaxis
 (C) Prophylaxis
 (B) Autoimmune diseases
 (D) Immunodeficiency disease
- (Q 55): _____ animals produce urea.
 (A) Cartilaginous fish
 (C) Bony fish
 (B) Insects
 (D) Birds
- (Q 56): Corticotropin-releasing hormone stimulates synthesis or secretion of _____ hormone from Pituitary gland.
 (A) TSH
 (C) GH
 (B) ACTH
 (D) FSH
- (Q 57): The major sister phyla of arthropod is _____.
 (A) Annelida
 (C) Echinodermata
 (B) Mollusca
 (D) Aschelminthes
- (Q 58): In marsupials, gestation period varies between _____.
 (A) 8-20 days
 (C) 8-40 days
 (B) 8-30 days
 (D) 8-48 days
- (Q 59): Growth hormone secreted by pituitary gland regulates the function of _____.
 (A) Most of somatic tissues
 (C) Gonads
 (B) Thyroid gland
 (D) Interrenal gland
- (Q 60): Isotopes of atoms differ in:
 (A) Number of Neutrons
 (C) Number of Electrons
 (B) Number of Protons
 (D) Atomic weight
- (Q 61): Fleas are feeders of _____.
 (A) Crustaceans
 (C) Hair
 (B) Blood
 (D) Skin
- (Q 62): Galapagos finches are a good example of _____.
 (A) Extinction
 (C) Island gigantism
 (B) Heterochromia
 (D) Adaptive radiation
- (Q 63): Which one of the following is example of social insect?
 (A) Grasshopper
 (C) Louse
 (B) Honeybee
 (D) Cockroach
- (Q 64): _____ are agents that cause uncontrolled growth of cells.
 (A) Teratogens
 (C) Mutagens
 (B) Carcinogens
 (D) Heavy metals
- (Q 65): An amniotic egg is present in _____.
 (A) Frog
 (C) Sea turtle
 (B) Fish
 (D) Cockroach
- (Q 66): The thyroid gland secretes _____ hormones beside T₃ and T₄.
 (A) Somatostatin
 (C) Calcitonin
 (B) Parathormone
 (D) Thyroglobin
- (Q 67): The inner surface of ectoderm has a positive affinity for _____.
 (A) Endodermal cells
 (C) Archenteron
 (B) Mesodermal cells
 (D) Stomodium
- (Q 68): Madreporite is present in _____.
 (A) Ascaris
 (C) Hydra
 (B) Sea star
 (D) House fly
- (Q 69): What kind of areas are known as Arid areas?
 (A) Areas with high humidity
 (C) Delta Areas
 (B) Areas deficient in rainfall
 (D) Heavily forested areas
- (Q 70): Most mammals have _____ sets of teeth during their life.
 (A) 3
 (C) 5
 (B) 4
 (D) 2
- (Q 71): Biologically active hormonal form of vitamin D is:
 (A) Calcitriol
 (C) Retinol
 (B) Calmodulin
 (D) Calciferol
- (Q 72): Cortisol in fresh water increases _____ cells in fish gills.
 (A) Sodium
 (C) Chloride
 (B) Potassium
 (D) Magnesium
- (Q 73): Researchers are seeking to improve the genetic traits of the fish used in aquaculture by using different _____ techniques.
 (A) Bio-remediation
 (C) Transgenic
 (B) Vaccination
 (D) Immunization

- (Q 74): Which of the following is a mollusc?
 (A) Flat fish
 (C) Silver fish
 (B) Cuttle fish
 (D) Star fish
- (Q 75): In female fishes, expression of FSH is associated predominantly with:
 (A) Vitellogenesis
 (C) Spermiation
 (B) Recruitment of new oocyte generation
 (D) Both A & B
- (Q 76): An enzyme called _____ is found in body fluids has antimicrobial activity.
 (A) Lysozyme
 (C) DNA polymerase
 (B) Exonuclease
 (D) Nuclease
- (Q 77): To preserve nature and wild life there are several areas declared generally as _____.
 (A) Protected areas
 (C) National parks
 (B) Zoo
 (D) Game reserve
- (Q 78): Which of the following is an example of head-and-tail bacteriophage?
 (A) M13
 (C) Pbr322
 (B) Lambda phage
 (D) M16
- (Q 79): Rats and mice have estrous cycles that repeat every _____.
 (A) 4-6 hrs
 (C) 4-6 weeks
 (B) 4-6 days
 (D) 46 months
- (Q 80): In arthropods heart is present on:
 (A) Lateral side
 (C) Dorsal side
 (B) Ventral side
 (D) Dorsolateral side
- (Q 81): The synthesis of an RNA molecule from DNA is called _____.
 (A) Translation
 (C) Transcription
 (B) Central dogma
 (D) Replication
- (Q 82): Transcription starts at start codon _____ that codes for methionine.
 (A) UGA
 (C) AUG
 (B) UAG
 (D) UAA
- (Q 83): The Watson-Crick model suggested that DNA replication is _____.
 (A) Conservative
 (C) Semi conservative
 (B) Duplicated
 (D) None of these
- (Q 84): The continuing and intimate associations between two different species are called:
 (A) Carnivore
 (C) Autotrophs
 (B) Herbivore
 (D) Symbiosis
- (Q 85): Cytokine follows _____ type of cell to cell signaling.
 (A) Paracrine
 (C) Intracrine
 (B) Autocrine
 (D) Neurocrine
- (Q 86): Sickle cell disease in humans is due to a _____.
 (A) De-novo mutation
 (C) Missense mutation
 (B) Silent mutation
 (D) Frame shift mutation
- (Q 87): _____ is first step in many DNA based technologies.
 (A) Isolation
 (C) Annealing
 (B) Denaturation
 (D) Elongation
- (Q 88): The sensitivity of the avian ear is _____.
 (A) 100-15000 Hz
 (C) 500-20000Hz
 (B) 1000-15000 Hz
 (D) 100-10000Hz
- (Q 89): TRH follows _____ type of cell to cell signaling.
 (A) Paracrine
 (C) Intracrine
 (B) Autocrine
 (D) Neurocrine
- (Q 90): The historic character and built heritage of Bo-Kaap is located in:
 (A) Zimbabwe
 (C) South Africa
 (B) Egypt
 (D) Congo
- (Q 91): Stem cells can divide through _____.
 (A) Meiosis and can renew
 (C) Mitosis
 (B) Mitosis and can renew
 (D) Multiplication
- (Q 92): "Hayat-e-Javed" is a biography of:
 (A) Sir Syed Ahmad Khan
 (C) Mehmood Ghaznavi
 (B) Javed Iqbal
 (D) Liaquat Ali Khan
- (Q 93): Any adulterated elements leak into the ground, filtration, and are carried into groundwater reservoir is known as _____.
 (A) Land Contamination
 (C) Water Pollution
 (B) Noise Pollution
 (D) Air pollution
- (Q 94): Which of these animals is a carnivore?
 (A) Mammals
 (C) Goat
 (B) Camel
 (D) Lion
- (Q 95): Transgenic stem cells are grown in _____.
 (A) Vitro
 (C) Ovary
 (B) Vivo
 (D) Blastocyst
- (Q 96): DNA is synthesized by enzyme known as _____.
 (A) RNA polymerase
 (C) DNA topoisomerase
 (B) DNA ligase
 (D) DNA polymerase
- (Q 97): In insects, _____ layer of the exoskeleton is alive and secretes the upper, non-living layers of the exoskeleton.
 (A) The epicuticle
 (C) The endocuticle
 (B) The exocuticle
 (D) The epidermis
- (Q 98): Convert to indirect form: He asked, "Do I have to do it?"
 (A) He asked if he had to do that
 (C) He asked if he has to do it
 (B) He asked that he had to do it
 (D) He asked if he had to do it
- (Q 99):
 (A) عبدالحمید شرر
 (C) رتن ناتھ سرشار
 (B) سیر کوپسار ناؤل کس کی تصنیف ہے؟
 (D) مرزا بادی رسوا راشد الخیری
- (Q 100):
 (A) ثریا
 (C) دلآرام
 (B) انارکلی کا مرکزی کردار انارکلی ہے۔ انارکلی کا اصل نام کیا ہے؟
 (D) مروارید نادہ بیگم