ફિઝિયોલોજીના ટ્યુટર, સા. રા. સે. વર્ગ-૨(ખાસ ભરતી) (જા.ક.૪૩/૨૦૧૪૧૫)

ભાગ-૧ : સામાન્ય અભ્યાસ સમય-૫૦ મીનીટ પ્રશ્નો-૧૦૦ કુલ ગુણ-૧૦૦ માધ્યમ-ગુજરાતી

ક્રમ	વિગત
૧.	ગુજરાતની ભૌગોલિક, આર્થિક અને સામાજિક ભૂગોળ
૨.	ગુજરાતનો સાંસ્કૃતિક વારસો, સાહિત્ય, કળા, ધર્મ
૩.	ભારતની અર્થ વ્યવસ્થા અને રાજનીતિ
૪.	ભારતનું બંધારણ : (૧) આમુખ (૨)મૂળભૂત અધિકારો અને ફરજો (૩) રાજ્યનિતીના માર્ગદર્શક સિધ્ધાંતો (૪) સંસદની રચના (૫) રાષ્ટ્રપતિની સત્તાઓ (૬) ભારતનું ચુટણીપંચ (૭)રાજ્યપાલશ્રીની સત્તાઓ (૮) ન્યાયતંત્ર (૯) એટર્ની જનરલ (૧૦) કમ્પ્ટ્રોલર એન્ડ ઓડીટર જનરલ (C.A.G) (૧૧) અનુસૂચિત જાતિ, અનુસૂચિત જનજાતિ અને સમાજના પછાત વર્ગો માટેની જોગવાઇઓ (૧૨) પંચાયતી રાજ (૧૩) નાણા પંચ
૫.	સામાન્ય વિજ્ઞાન.
૬.	ગણિતશાસ્ત્ર (૧) સંખ્યાત્મક કસોટી (૨) સામાન્ય બૌદ્ધિક ક્ષમતા અને તાર્કિક કસોટી
૭.	ગુજરાતી વ્યાકરણ (૧) જોડણી (૨) સમાનાર્થી-વિરૂદ્ધાર્થી શબ્દો (૩) રૂઢિપ્રયોગો અને કહેવતો (૪) સમાસ (૫) અલંકાર (૬) છંદ (૭) સંધિ
૮.	અંગ્રેજી વ્યાકરણ (1) Articles, Pronouns, Adjectives, Prepositions, Conjunctions and Question tag. (2) Verb and Tense, Agreement between subject and verb, Gerund, Participles. (3) Model auxilliaries, Usage of can, may, could, should, etc. (4) Use of some, many, any, few, a little. Since and for. (5) Active and passive voice (6) Degrees of adjectives. (7) Common errors of usage.
૯.	આધુનિક ભારતનો ઇતિહાસ
૧૦.	જાહેરાતમાં દર્શાવેલ જગ્યા અંગેની સામાન્ય ફરજો અને વિભાગની પ્રવૃત્તિની રૂપરેખા અને યોજનાઓ તથા ગુજરાતના વહીવટી તંત્રનું માળખું
૧૧.	ખેલ જગત
૧૨.	તાજેતરના મહત્વના બનાવો

Part-2 Time-50 Minitues Total Question-100 Total Marks-200 Medium-English

A.General Physiology

* Cell and Organelles
* Body Fluid compartments
* Transport acress cell memberance
* Memberance potentails

B.Systemic Physioloty

1. Blood :

* Blood Cells (Red, white and Platelets) : Development & Functions
* Hemoglobin, Patho-physiology of Anaemia
* Physiological basis of Immune mechanisms
* Blood groups systems (ABO, Rh, MNP etc), Physiological basis of Blood Transfusion reactions, Rh incompaibility and Hemolytic Disease of Newborn.
* Haemostasis: Role of Platelets, Blood Coagulation;, Fibrinolysis, Anticoagulants

2. Cardio-Vascular System :

* Properties of cadriac muscle
* Origin and conduction of cardiac impulse
* Cardiac cycle and associated pressure, volume and other chages
* Physiological basis of Electro-cardiography, Heart sounds
* Heart rate, Cardiac output regulation
* Cardio-vascular reflexes
* Blood Pressure determinants and regulation
* **Regional Circulation** : Coronary, cerebral, Pulmonary, Rental, Cutaneous, capillary, Skeletal muscle etc.

3. Respiration :

* Mechanics : Muscles of breathing, Rib motion, Intra pulmonary & Intrapleural pressure, Lung Complaince & Surfratant, Work of breathing
* Lung Volumes, Capacities and Lung function tests
* Oxygen and Carbondioxide transport between lungs and tissues
* Regulation of Respiration
* High altitude physiology, Hypoxia, Asphyxia, Cyanosis, Decompression sickness, Periodic breath ing
* Exercise physiology

4. Digestion :

* Digestive juices : Composition, functions and regulation of Saliva, Gastric juice, Bile, Pancreatic juice and Secretions of small and large intestine
* Movements : Mastication, Deglutition, Mixig and Propulsive (Peristalsis) movements of gut
* Absorption of digested food material
* Gastro Intestinal Hormones

5. Endocrinology :

* Mechanism of hormone secretion, Actions, Control of secretion and Disorders of Anterior & Poste rior Pitutary, Thyroid, Parathyroid, Adrenal (cotex & medulla) and Pancreas
* Local Hormones

6. Reproduction :

* Puberty
* Male Reproductive System : Structure and functions of male reproductive organs, Spermatogenesis, Endocrine function of testis
* Female Reproductive System :
* Structure & functions of ovary, Ovulation, Hormones of ovary
* Pregnancy : Maternal changes and nutrition during pregnancy, Placental functions and hormones
* Lactation : Hormones acting on mammary gland, Milk secretion and ejection, Advantage of breast feeding.
* Family Planning : Physiological basis of different methods

7. Muscle Physiology :

* Types and Properties of muscles
* Mechanism of muscle contraction
* Energatics of muscle contraction

8. Nervous System :

* Neurons
* Nerve fibbers : Types and Properties, Origin and Conduction of nerve impulse
* Transmission across Sysnapse and Neuromuscular junction
* Pathways & characterstics of a) cutaneous, Deep and Visoeral sensations and b) Cortico-spinal & Cortico-bulbar pathways
* Muscle tone, Maintenance of Posture and Equilibrium
* Structure, connections, functions and disorders of cerebllum, Thalamus, Hyporthalamus, Limble system, Basal ganglia and Cerebral cortex
* E.E.G., Sleep and Arousal mechanisms
* Speech and its disorders
* Conditioned reflexes, Learning and Memory
* Autonomic nervous system: divisions (Sympathic & Parasympathtic), their origin functins, neurotransmitters and related drug actions.

9. Special Senses :

* Vision : Image formation, Refractive media and Refractive errors, Photoreceptors and Photochemistry, Colour Vision, Visual Pathways and their lesions
* Hearing : Structure and functions of external, middle and internal ear, Organ of Corti, Mechanism and pathways of hearing, Deafness
* Smell and teste : Receptors, mechanism and pathways

10. Excretion :

* Structure and functions of kidney Nephron
* Urine formation: Glomerular filtration and tubular function
* Role of kidney inregulation of water balance, sodium, potassium and chloride excretion; acid-base balance, etc.
* Renal function tests
* Micturition : Filling and emptying of urinary bladder, Micturition reflexes and disorders

11. Functions of Skin and regulation of Body Temperature