Chapter 15

Homeostasis

TOPIC WISE MULTIPLE CHOICE QUESTIONS

CONCEPT IN HOMEOSTASIS

ENTRY TEST BASED MCQs

(1) The mechanism of regulation and its environment, of solute and the gain and loss of water is called: (UHS 2017-Retake)

(a) Thermoregulation **(b)** Excretion
(c) Osmoregulation **(d)** Relaxation

(2) Keeping correct balance of ions and water in our body is called as: (UHS 2018)

(a) Excretion **(b) Osmoregulation**
(c) Thermoregulation **(d)** Selective reabsorption

OSMOREGULATION

(Hypotonic solution, hypertonic solution, isotonic solution)

. MCQs

(3) If solution around the cell is hypertonic, the cell is:

(a) Hypertonic **(b)** Isotonic
(c) Hypotonic **(d)** Both a & c

(4) Which of the following is osmoregulation?

(a) Movement of water **(b)** Elimination of wastes
(c) Maintenance of temperature **(d)** None of these

(5) Ability of an organism to regulate its fluid contents is:

(a) Osmoregulation **(b)** Excretion
(c) Thermoregulation **(d)** Homeostasis

(6) If an RBC is placed in hypotonic solution then will:

(a) Shrink **(b) Burst**
(c) Remain same **(d)** Remove water in the surrounding

(7) Ability to tolerate dehydration condition is called:

(a) Hydrobiosis **(b) Anhydrobiosis**
(c) Osmoconformer **(d)** None of these

PAST PAPER MCQ's

(8) A diluted solution compared to cell concentration is termed as: (SWL 2018)

(a) Hypertonic **(b) Hypotonic**
(c) Isotonic **(d)** Paratonic

(9) Extracellular environment may be diluted solution compared to the cell concentration. Designated as: (BWP 2018)

(a) Isotonic **(b)** Hypertonic
(c) Hypotonic **(d)** Cotonic

(10) Removal of salts with water from sweat glands as: (FSD 2021)

(a) Oil **(b)** Nitrogenous waste
(c) Sebum **(d)** Water

OSMOREGULATION IN PLANTS

. MCQs

(11) The plants which can tolerate physical and physiological shortage of water are called:
(a) Mesophyte **(b) Xerophyte**
(c) Hydrophyte **(d)** Halophyte

(12) Which of the following plant is a hydrophyte?
(a) Mango **(b)** Pinus
(c) Hydrilla **(d)** Cactus

(13) Cactus is an example of:
(a) Hydrophytes **(b)** Mesophytes
(c) Bryophytes **(d) Xerophytes**

PAST PAPER MCQ's

(14) Sunken stomata are found in which of the following group of plants? (GRW 2018)
(a) Hydrophytes **(b) Xerophytes**
(c) Mesophytes **(d)** Bryophytes

(15) The leaves with very small surface area, are found in: (RWP-2019)
(a) Hydrophytes **(b)** Mesophytes
(c) Xerophytes **(d)** Sciophytes

(16) A plants adapted to remove the flooding of its cells in fresh water is: (GRW 2021)
(a) Xerophyte **(b)** Mesophyte
(c) Hydrophyte **(d)** Geophyte

(17) Which one is not a Mesophyte? (GUJ 2021)
(a) Cactus **(b)** Mango
(c) Rose **(d)** Brassica

(18) The plants which have the adaptations for reduced rate of transpiration. (MTN-2021)
(a) Hydrophytes **(b)** Mesophytes
(c) Xerophyte **(d)** Bryophytes

(19) The plants that have adaptation of small and thick leaves to reduce water loss are called: (RWP 2017, RWP-2021,)
(a) Hydrophytes **(b)** Mesophyte
(c) Xerophytes **(d)** Hygrophytes

ENTRY TEST BASED MCQs

(20) Xerophytes have small thick leaves to: (UHS 2019)
(a) Help them float on water
(b) Help them survive in salty environment
(c) Limit water loss by reducing the surface area
(d) Limit water loss by increasing the surface area

OSMOREGULATION IN ANIMALS

. MCQs

(21) Animals which live in isotonic environment do not require actively to adjust their internal environment are:
(a) Osmoregulator **(b) Osmoconformer**
(c) Bony fishes **(d)** Excretophore

(22) Ability to tolerate dehydration condition is called:
(a) Hydrobiosis **(b) Anhydrobiosis**
(c) Osmoconformer **(d)** None of these

PAST PAPER MCQs

(23) The fishes which drink large amount of sea's water and excrete concentrated urine are: (MTN 2017)

(a) Cartilaginous fishes **(b) Bony fishes**
(c) Lung fishes **(d)** Lawless fishes

(24) Among the vertebrates hagfishes are isotonic with the surrounding: (MTN 2017)

(a) Fresh water **(b) Sea's water**
(c) Pond's water **(d)** River's water

(25) Hag fishes are: (MTN 2019)

(a) Osmoregulators **(b)** Isotonic
(c) Hypertonic **(d)** Hypotonic

(26) Trimethylamine oxide is produced in fishes which are: (MTN 2019)

(a) Cartilaginous **(b)** Bony
(c) Fresh water **(d)** Marine water

(27) Contractile vacuoles are found in: (LHR-2021)

(a) Plants **(b) Fresh water protozoa**
(c) Land animals **(d)** Land plants

EXCRETION

(Excretion in Plants, Excretion in Animals, Nature of Excretory Products)

. MCQs

(28) Removal of metabolic nitrogenous wastes is called:

(a) Defecation **(b) Excretion**
(c) Egestion **(d)** All of the above

(29) The precursor of urea cycle is:

(a) Ornithine **(b)** Citrulline
(c) Arginine **(d)** None of these

(30) Hypoxanthine, xanthine, ammonia, urea, uric acid and allantoin are produced by metabolism of:

(a) Purine **(b)** Pyrimidine
(c) Protein **(d) Both a & b**

(31) Animals excreting urea as metabolic nitrogenous waste are:

(a) Ammonotelic **(b)** Uricotelic
(c) Ureotelic **(d)** None of these

(32) Amount of water required to remove 1g nitrogen of urea is:

(a) 1 ml **(b)** 10 ml
(c) 500 ml **(d) 50 ml**

(33) Which of the following compound is devoid of nitrogen?

(a) Allantoin **(b)** Urea
(c) Creatine **(d) Dextrin**

(34) Amount of water required to remove 1g of uric acid is _____ times less than that of urea.

(a) 10 **(b)** 50
(c) 1 **(d)** 500

(35) Which of the following is strictly ureotelic?

(a) Reptiles **(b)** Birds
(c) Mammals **(d)** None of these

(36) Arginine is broken down into ornithine and urea by enzyme arginase in:
(a) Acidic pH **(b) Basic pH**
(c) Neutral pH **(d)** All of the above

(37) Which of the following is detoxified form of ammonia in urea cycle?
(a) Urea **(b)** Uric acid
(c) Ornithine **(d)** Arginine

(38) Which of the following pair is irrelevant?
(a) Amino acid – urea **(b)** Creatinine - muscle creatine
(c) Bilirubin – haemoglobin **(d) Allantoin – protein**

(39) Nitrogenous wastes are produced as a result of:
(a) Digestion **(b)** Respiration
(c) Deamination **(d)** All of the above

(40) In which of the following uric acid is not excreted as metabolic waste?
(a) Birds **(b)** Insects
(c) Land snail **(d) Frog**

(41) Urea is not secreted as metabolic waste in:
(a) Mammals **(b)** Most amphibians
(c) Sharks **(d) Hydra**

(42) Creatine is produced from breakdown of:
(a) Purines **(b)** Pyrimidines
(c) Proteins **(d)** Both 'a' & 'b'

PAST PAPER MCQs

(43) The excretory product that require minimum water for its elimination: (SGD 2017)
(a) Urea **(b) Uric acid**
(c) Ammonia **(d)** Creatinine

(44) Of all the excretory products, the principal one is: (MTN 2017)
(a) Ammonia **(b)** Urea
(c) Uric Acid **(d)** Bilirubin

(45) Animals excreting urea are called: (LHR 2018)
(a) Ureotelic **(b)** Ammonotelic
(c) Uricotelic **(d)** Excretotelic

(46) The excretory product which require minimum water for its removal: (FSD 2018)
(a) Urea **(b) Uric acid**
(c) Creatinine **(d)** Ammonia

(47) One gram of ammonia requires how much amount of water for its excretions: (SWL 2018)
(a) 50 ml **(b)** 100 ml
(c) 250 ml **(d) 500 ml**

(48) The excretory product that requires maximum water for its removal is: (SWL 2018)
(a) Urea **(b)** Uric acid
(c) Ammonia **(d)** Creatinine

(49) Uric acid is produced from the metabolism of: (DGK 2018)
(a) Nucleic acid **(b)** Fatty acids
(c) Carbohydrates **(d)** Lipids

(50) Among vertebrates uric acid is the chief nitrogenous waste in birds and: (LHR 2019)
(a) Fishes **(b)** Amphibians
(c) Reptiles **(d)** Mammals

(51) The excretory product which require minimum water for its removal: (FSD 2019)
(a) Uric acid **(b)** Urea
(c) Ammonia **(d)** Creatinine

(52) The compound which take part in urea cycle is: (BWP 2019)
(a) Adenine **(b)** Guanine
(c) Citrulline **(d)** Thymine

(53) How much water is needed to excrete 1g of Ammonia Nitrogen: (BWP 2019)
(a) 400ml **(b) 500ml**
(c) 600ml **(d)** 700ml

(54) In 1 gm of ammonia nitrogen requires how much water for excretion: (LHR 2021)
(a) 50 ml **(b)** 100 ml
(c) 200 ml **(d) 500 ml**

(55) The excretory product that requires minimum water for its eliminations as compared to others is: (MTN 2021)
(a) Uric acid **(b)** Urea
(c) Ammonia **(d)** Creatinine

(56) Which one of the following is the most toxic nitrogenous waste in animals? (DGK 2021)
(a) Urea **(b) Ammonia**
(c) Uric acid **(d)** Trimethylamine

(57) The excretory product that require minimum water for its elimination is: (RWP 2021)
(a) Urea **(b) Uric acid**
(c) Ammonia **(d)** Creatinine

ENTRY TEST BASED MCQs

(58) The main nitrogenous excretory product of humans is: (UHS 2019)
(a) Uric acid **(b) Urea**
(c) Ammonia **(d)** Ammonium

EXCRETION IN REPRESENTATIVE ANIMALS

. MCQs

(59) Which is not true about protonephridium?
(a) It is found in planaria **(b)** It is network of closed tubules
(c) It has an internal opening **(d)** Its branches are capped by flame cells.

(60) In insects, salts and water reabsorption take place in:
(a) Malpighian tubules **(b)** Mesenteron
(c) Ileum **(d) Rectum**

(61) The group of animals whose excretory system is structurally associated with nutritive tract:
(a) Vertebrates **(b)** Earthworm
(c) Planaria **(d) Insects**

PAST PAPER MCQs

(62) Flame cells are part of excretory system of: (BWP 2016)
(a) Hydra **(b)** Cockroach
(c) Planaria **(d)** Earthworm

(63) The most toxic nitrogenous waste in animals is: (DGK 2017)
(a) Uric acid **(b) Ammonia**
(c) Urea **(d)** Creatine

(64) Flame cells are part of excretory system of: (FSD 2017, DGK 2017)
(a) Cockroach **(b)** Earthworm
(c) Hydra **(d) Planaira**

(65) A network of closed tubules without internal opening is called: (LHR 2018)
(a) Metanephridium **(b) Protonephridium**
(c) Nephridium **(d)** Subneanephridium

(66) Flame cells are part of excretory system of. (SGD 2018)
(a) Hydra **(b) Planaria**
(c) Earthworm **(d)** Cockroach

(67) Excretory Structure present in Cockroach is: (BWP 2018, DGK 2018)
(a) Contractile Vacoule **(b) Malpighian Tubules**
(c) Nephredia **(d)** Flame Cells

(68) Meta nephridia are the excretory structure present in: (FSD 2018, 2019)
(a) Hydra **(b)** Planaria
(c) Cockroach **(d) Earthworms**

(69) The malpighian could remove nitrogenous wastes from the: (LHR 2019)
(a) Lymph **(b) Haemolymph**
(c) Coelomic fluid **(d)** Hind gut.

EXCRETION IN VERTEBRATES

Liver

PAST PAPERS MCQs

(70) Urea is produced in: (GRW 2017)
(a) Lungs **(b) Liver**
(c) Kidney **(d)** Pancreas

(71) Liver also has numerous crucial functions of: (MTN 2017)
(a) Osmoregulation **(b) Homeostasis**
(c) Excretion **(d)** Thermoregulation

(72) Arginase splits the arginine to form urea and: (GRW 2017)
(a) Ornithine **(b)** Citrulline
(c) Creatinine **(d)** Ammonia

(73) Liver acts as a store house for: (DGK 2018)
(a) Bile **(b)** Albumin
(c) R.B.Cs **(d) Iron**

(74) A group of Nucleic acid is converted into urea by: (FSD 2021)
(a) Liver **(b)** Spleen
(c) Kidney **(d)** Pancreas

(75) The central station of metabolism and metabolic clearing house of the body is: (MTN 2021)
(a) Liver **(b)** Stomach
(c) Hypothalamus **(d)** Pancreas

URINARY SYSTEM

MCQs

(76) Urine is collected in the central cavity of kidney called:
(a) Hilus **(b) Pelvis**
(c) Ureter **(d)** Urethra

(77) Glomerular filtrate contains:
(a) Glucose **(b)** Amino acids
(c) Urea **(d) All of the above**

(78) The tubular epithelium of nephron:
(a) Secretes substances into lumen **(b)** Produces selective secretion
(c) Secretes H^+ to balance pH **(d) All of the above**

(79) ADH acts on _____ to promote reabsorption of water in vertebrate nephron.
(a) Proximal convoluted tubule **(b)** Descending limb
(c) Collecting tubule **(d)** Bowman's capsule

(80) With each cardiac beat, kidneys receive blood supply of:
(a) 50% **(b)** 70%
(c) 20% **(d)** 14%

(81) pH value of glomerular filtrate passing through the tubule is maintained by:
(a) Hydrogen ions **(b)** Sodium ions
(c) Potassium ions **(d)** Calcium ions

(82) If heart is pumping 50ml of blood per beat the amount received by kidneys is:
(a) 20ml **(b) 10ml**
(c) 5ml **(d)** 25ml

(83) The tubular epithelium of nephron:
(a) Secretes substances into lumen **(b)** Produces selective secretion
(c) Secretes H^+ to balance pH **(d) All of the above**

(84) With each cardiac beat, kidneys receive blood supply of:
(a) 50% **(b)** 70%
(c) 20% **(d)** 14%

(85) High levels of ADH produce:
(a) Dilute urine **(b) Concentrated urine**
(c) Excessive urine **(d)** All of the above

PAST PAPER MCQs

(86) A pair of kidneys, consists of millions of functional unit called: (DGK 2017)
(a) Nephrons **(b)** Neurons
(c) Dendrons **(d)** Flatrons

(87) Which one of the following structures of kidney is involved in the production of concentrated urine? (LHR 2017)
(a) Glomerulus **(b) Juxtamedullary nephron**
(c) Cortical nephron **(d)** Vasa recta

(88) In juxtamedullary nephrons additional capillaries extend down to form a: (LHR 2017)
(a) Vasa efferentia **(b)** Vasa deferentia
(c) Vasa recta **(d)** Vasa recta

(89) All the collecting tubules of human kidney finally discharge into the: (FSD 2017)
(a) Bowman's capsule **(b)** Glomerulus
(c) Pelvis **(d)** Urethra

(90) The reabsorption of water in collecting tubules is under the control of: (RWP 2017)
(a) Aldosterone **(b) ADH**
(c) Tubular secretion **(d)** Pressure filtration

(91) Glomerular filtrate are reabsorbed in: (MTN 2018)
(a) Proximal tubule **(b)** Bowman's capsule
(c) Loop of Henle **(d)** Distal tubule

(92) In each nephron inner end form a cup shaped swelling called: (DGK 2018)
(a) Glomerulus **(b)** Henle's loop
(c) Bowman's capsule **(d)** Pelvis

(93) The blood vessel supplying the blood to Bowman's capsule is: (LHR 2018)
(a) Afferent arterioles **(b)** Efferent arterioles
(c) Renal artery **(d)** Renal vein

(94) Each cardiac beat supplies _ __ ___ of blood to human kidney: (GUJ 2019)
(a) 10% **(b)** 15%
(c) 20% **(d)** 25%

(95) ADH affects which part of nephron: (MTN 2019)
(a) Walls of collecting duct **(b)** Glomerulus
(c) Walls of loop of Henle **(d)** Proximal convulated tubule

(96) The active uptake of Sodium in the loop of Henle is provided by the action of Hormone: (BWP 2019)
(a) Cortisone **(b)** Testosterone
(c) Aldosterone **(d)** Progesterone

(97) The hormone which actively transport water from filtrate in collecting tubules back to kidney is: (LHR 2021)
(a) Aldosterone **(b) ADH**
(c) Testosterone **(d)** Oxytocine

(98) The blood passing through glomerulus is filtered into: (LHR 2021)
(a) Bowman's capsule **(b)** Ureter
(c) Bladder **(d)** Urethra

(99) Kidneys receive what amount of blood supplied with each cardiac beat: (FSD-2021)
(a) 10% **(b) 20%**
(c) 30% **(d)** 50%

(100) Urine leaves the body through: (MTN 2021)
(a) Pelvis **(b)** Ureter
(c) Urinary bladder **(d) Urethra**

(101) The uptake of sodium in the thick loop of Henle is promoted by the action of (LHR2021)
(a) ADH **(b) Aldosterone**
(c) Oxytocin **(d)** Testosterone

(102) The active absorption of Sodium in the ascending limb of Henle is promoted by: (BWP 2021)
(a) ADH **(b)** ATCH
(c) Vesopressoin **(d) Aldosterone**

ENTERY TEST BASED MCQs

(103) Select the part of nephron which is NOT permeable to water and stops its outflow: (UHS 2017)
(a) Glomerulus **(b) Ascending loop**
(c) Proximal Tubule **(d)** Descending loop

(104) When water content in body becomes high, what will happen? (UHS 2017)
(a) ADH release will be inhibited **(b)** Aldosterone will be released
(c) ADH will be released in large amount **(d)** Anterior pituitary will produce ADH

(105) The major factor in producing hypertonic urine is: (UHS 2017)
(a) Glomerulus
(b) Influence of aldosterone
(c) ADH influencing on collecting duct
(d) Gradual increase in osmolarity from cortex to inner medulla

(106) What is the least selective process during urine formation? (UHS 2017)
(a) Reabsorption **(b)** Secretion
(c) Pressure filtration **(d)** Differential permeability

(107) Vessel which carry blood to the glomerulus is called: (UHS 2017)
(a) Efferent arteriole **(b)** Vasa recta
(c) Renal vein **(d) Afferent arteriole**

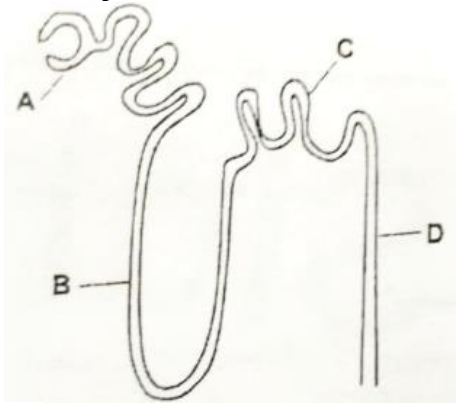
(108) The hormone which controls the uptake of the sodium ions in kidney and its maintenance in blood pressure: (UHS 2018)
(a) Gonadotrophic hormone **(b)** Thyroxine hormone
(c) Somatotropin hormone **(d) Aldosterone hormone**

(109) The capillaries of glomerulus rejoin to form a/an _____. (UHS 2018)
(a) Collecting duct **(b)** Afferent arteriole
(c) Peritubular capillaries **(d) Efferent arteriole**

(110) When filtration is completed the waste products through distal tube of nephrons empties to: (UHS 2018)
(a) Proximal tubules **(b)** Peritubular capillaries
(c) Efferent arterioles **(d) Collecting tubules**

(111) Blood solute potential is controlled by following hormone: (UHS 2018)
(a) Vasopressin **(b)** Epinephrine
(c) Thyroxine **(d)** Estrogen

(112) Given below is the diagram of nephron without vascular supply. (UHS 2019)



What is the name of Part C?
(a) Collecting tubule **(b) Distal tubule**
(c) Proximal tubule **(d)** Loop of Henle

(113) The route of urine excretion from kidney to outside of body is: (UHS 2019)
(a) Kidney → ureter → urinary bladder → urethra
(b) Urinary bladder → kidney → ureter → urethra
(c) Kidney → ureter → urethra → urinary bladder
(d) Kidney → urethra → urinary bladder → ureter

KIDNEY PROBLEMS AND CURES

MCQs

(114) Hyperoxaluria is high blood _____ level.
(a) Calcium **(b)** Phosphorus
(c) Oxalate **(d)** Acetate

(115) End stage of renal failure is:
(a) Hemodialysis **(b)** Polyuria
(c) Diabetes insipidus **(d) Uremia**

(116) Which one of the following is not relevant?
(a) Active uptake of Na^+- Aldosterone **(b)** Reduced quantity of urine - vasopressin
(c) Kidney stone - $CaCO_3$ **(d)** Lithotripsy - x-rays

(117) Non-surgical procedure of removing kidney stone is termed as:
(a) Hemodialysis **(b)** Peritoneal dialysis
(c) Lithotripsy **(d)** Uremia

(118) The incidence of calcium oxalate type stones are.
(a) 30% **(b)** 15%
(c) 70% **(d)** 10%

PAST PAPER MCQs

(119) The incidence of Calcium phosphate stones in humans are: (RWP 2017)
(a) 5% **(b)** 10%
(c) 15% **(d)** 20%

(120) Hemodialysis means: (LHR 2017)
(a) Removing the blood **(b) Clearing the blood**
(c) Diluting the blood **(d)** Storing the blood

(121) High Level of Circulating Calcium in the blood is called: (BWP 2017)
(a) Hypercalcemia **(b)** Hypoglycemia
(c) Osteomalcia **(d)** Hyperoxaluria

(122) Abdomen has a peritoneal cavity, lined by a thin epithelium called: (DGK 2017)
(a) Pericardium **(b) Peritoneum**
(c) Scrotal sac **(d)** Pleura

(123) The human abdominal cavity lined by a thin epithelium is called: (MTN 2018, SWL 2018)
(a) Ectoderm **(b)** Endoderm
(c) Peritoneum **(d)** Epidermis

(124) Increased plasma level of urea is an indication of: (GUJ 2021)
(a) Renal failure **(b)** Urinary tract infection
(c) Kidney stones **(d)** Sexually transmitted disease

(125) Non-Surgical removal of Kidney Stone is called: (BWP-2021)
(a) Dialysis **(b)** Uremia
(c) Lithotripsy **(d)** Kidney transplant

THERMOREGULATION

. MCQs

(126) Which of the following structure is not involved in the control of heat in cold temperature?
(a) Raising of fur **(b)** Production of sub-dermal fats
(c) Vasoconstriction **(d) Sweat gland**

(127) Heat shock proteins embrace:
(a) Enzymes **(b)** Hormones
(c) Both of these **(d)** None of these

(128) Plants respond to rapid chilling by:
(a) Producing heat shock proteins **(b)** Changing conc. of Cytosol
(c) By preventing ice crystal formation **(d)** Plant cannot tolerate rapid chilling

PAST PAPER MCQs

(129) The nature of shivering thermogenesis adaptation is: (GUJ 2021)
(a) Structural **(b) Physiological**
(c) Psychological **(d)** Behavioral

ENTERY TEST BASED MCQs

(130) All of the following are endotherms except: (UHS 2017 Retake)
(a) Birds **(b) Amphibians**
(c) Some fishes **(d)** Flying insects

TEMPERATURE CLASSIFICATION OF ANIMALS

. MCQs

(131) Flying insects are:
(a) Endotherm **(b)** Ectotherm
(c) Heterotherm **(d)** Poikilotherm

(132) Animals which are capable of varying degree of body heat production but do not regulate their body temperature:
(a) Endotherm **(b)** Ectotherm
(c) Heterotherm **(d)** Poikilotherm

PAST PAPER MCQs

(133) Lizards bask in sun to gain: (SGD 2017)
(a) Heat **(b)** Cold
(c) Air **(d)** Moisture

(134) _____ is not Endotherm. (MTN 2018)
(a) Bird **(b) Amphibian**
(c) Flying insect **(d)** Some fishes

(135) Bats and humming birds are example of: (LHR 2018, LHR 2019, MTN 2019)
(a) Ectotherms **(b)** Endotherms
(c) Heterotherms **(d)** Poikilotherms

THERMOREGULATION IN MAMMALS (HUMAN)

. MCQs

(136) In non-shivering thermogenesis:
(a) Thyroxin hormone is involve **(b)** Metabolic rate is increased
(c) Glucose breakdown is increased **(d) All of the above**

(137) Shivering thermogenesis involve:
(a) Thalamus **(b)** Thyroid
(c) Muscles **(d)** None of these

THERMOSTAT FUNCITON AND FEEDBACK CONTROLS IN HUMANS

. MCQs

(138) Pyrogens are produced by:
(a) Bacteria **(b)** Blood cell
(c) Viruses **(d) All of the above**

(139) Pyrogens displace set point of which of following above normal point of 37ºC?
(a) Hypothalamus **(b)** Cerebellum
(c) Thalamus **(d)** Pons

PAST PAPER MCQs

(140) The body temperature regulation in human is based on complex homeostatic thermostat present in the: (LHR 2017)
(a) Cerebrum **(b)** Medulla oblongata
(c) Hypothalamus **(d)** Thalamus

(141) In Bacterial and Viral infection, pathogens and leukocytes Cells produce a chemical called: (BWP 2017)
(a) Pyrexia **(b)** Toxins
(c) Afflatoxins **(d) Pyrogen**

(142) The fever causing chemical substances in human are: (GRW 2018)

(a) Pathogens **(b)** Poisons
(c) Pyrogens **(d)** Pyrexia

(143) High degree of renal failure is also called: (SGD 2018)

(a) Uremia **(b)** Leukemia
(c) Anemia **(d)** Lithotripsy

(144) In human beings, the homeostatic thermostat is present in a part of the brain called as: (MTN2018)

(a) Cerebrum **(b)** Thalamus
(c) Hypothalamus **(d)** cerebellum

ENTRY TEST BASED MCQs

(145) Substances responsible for increasing the set point of the hypothalamus are called: (UHS 2019)

(a) Pepsin **(b)** Prions
(c) Pyrogens **(d)** Androgens

ANSWER KEY

(Topic-Wise Multiple Choice Questions)

1	c	26		51	a	76	b	101	b	126	d
2	b	27	b	52	c	77	d	102	d	127	a
3	c	28	b	53	b	78	c	103	b	128	c
4	a	29	a	54	d	79	c	104	a	129	b
5	a	30	d	55	d	80	c	105	d	130	b
6	a	31	c	56	b	81	a	106	c	131	a
7	b	32	d	57	b	82	b	107	d	132	c
8	b	33	d	58	b	83	d	108	d	133	a
9	c	34		59	c	84	c	109	d	134	b
10	c	35	c	60	d	85	b	110	d	135	c
11	b	36	b	61	d	86	a	111	a	136	d
12	c	37	a	62	c	87	b	112	b	137	c
13	d	38	d	63	b	88	c	113	a	138	d
14	b	39	c	64	d	89	c	114	c	139	a
15	b	40	d	65	b	90	b	115	d	140	c
16		41	a	66	b	91	a	116	c	141	d
17		42	a	67	b	92	c	117	c	142	c
18	c	43	b	68	d	93	a	118	c	143	a
19	c	44	a	69	b	94	c	119	c	144	c
20	c	45	a	70	b	95	c	120	a	145	c
21	b	46	b	71	b	96	c	121	a		
22	b	47	d	72	b	97	b	122	b		
23	b	48	c	73	d	98	b	123	c		
24	b	49	a	74	a	99	b	124	a		
25		50	c	75	a	100	d	125	c		

CONCEPT IN HOMEOSTASIS

. Short Questions

Q: 1 Define homeostasis.

Ans. The protection of internal environment from the harms of fluctuations in external environment is termed as homeostasis. It keeps the internal fluctuations in a narrow range.

Q: 2 Differentiate between osmoregulation and thermoregulation.

Ans.

Osmoregulation	Thermoregulation
To maintain the water and salt balance in the body is called osmoregulation.	The maintaince of internal body temperature within a tolerable range is called thermoregulation.

PAST PAPER Short Questions

Q: 3 Differentiate between osmoregulation and thermoregulation. **(LHR-2017)**

Q: 4 Differentiate between osmoregulation and thermoregulation.
(DGK 2017, LHR 2017, RWP 2018,)

Q: 5 Define Homeostasis. Give components of homeostatic Control System. **(BWP 2021)**

OSMOREGULATION

(Hypotonic solution, hypertonic solution, isotonic solution)

. Short Questions

Q: 1 Differentiate between hypertonic and isotonic solutions.

Ans.

Hypertonic Solution	Isotonic Solution
The more concentrated solution as compared to cell environment is known as hypertonic solution	If outer solution resembles to the internal environment of cell than it is called isotonic solution
By placing the cell in hypertonic solution, cell shrinks	There is no change in cell

Q: 6 Distinguish between hypotonic and hypertonic environment.

Ans.

Hypotonic environment	Hypertonic environment
A dilute solution as compared to the cell concentration is called hypotonic environment.	A more concentrated external environment as compared to cell environment is called hypertonic environment.
Cell become turgid in hypotonic environment	Cell shrinks in hypertonic environment

PAST PAPER Short Questions

Q: 7 Compare hypertonic environment and hypotonic environment. **(GRW 2017, 2018)**

Q: 8 Compare Hypotonic environment with hypertonic environment. **(GRW-2019)**

Q: 9 Define the given terms: **(SWL-2019)**
(i) Hypertonic environment (ii) hypotonic environment.

Q: 10 Differentiate between hypotonic and hypertonic environments. **(GRW-2021)**

Q: 11 Compare hypotonic and hypertonic solution.

OSMOREGULATION IN PLANTS

. Short Questions

Q: 1 How plants have adapted in xerophytic conditions?

Ans. Plants adopted xerophytic condition by following way

- Many xerophytes possess small, thick leaves. It reduces the surface, thus it reduces the loss of water by transpiration
- They have thick, waxy and leathery cuticle.
- Stomata are on lower surface of leaves.
- In rainy season, stem stores water for use in dry conditions.

PAST PAPER Short Questions

Q: 12 Give the characteristics of xerophytic plants. **(LHR 2017)**
Q: 13 Enumerate four adaptations of **xerophytes** in terrestrial habitat. **(LHR-2017)**
Q: 14 Discuss the process of osmoregulation in mesophytes. **(GRW 2018)**
Q: 15 What are xerophytes? Give two adaptations of xerophytes. **(LHR 2018)**
Q: 16 Write two adaptations of hydrophytes. **(MTN-2019)**
Q: 17 Write at least two important characters of Hydrophytes. **(MTN-2019)**
Q: 18 Write two adaptations of xerophytes. **(DGK-2019)**
Q: 19 Differentiate between hydrophytes and mesophyte. **(LHR-2021)**

OSMOREGULATION IN ANIMALS

Short Questions

Q: 1 How do bony fishes maintain osmoregulation?

Ans.

- Bony fishes take in large amount of sea water.
- Excrete concentrated urine with maximum salt excretion & minimum water loss.
- Gills and rectal glands actively remove salts from the body.

Q: 2 List the adaptations of terrestrial animals for osmoregulation.

Ans.

- Development of waxy exoskeleton of insects and multi-layered dead, keratinized skin cells to decrease water loss.
- Drinking and eating moist foods compensate water loss.
- Use metabolic water obtained from carbohydrates of seeds of desert plants.
- Produce concentrated urine.
- Can tolerate dehydration (Anhydrobiosis).

- **Differentiate between osmoconformers and osmoregulators.**

Ans.

Osmoconformers	Osmoregulators
These animals do not require actively to adjust their internal environment and are isotonic to external environment are called osmoconformers.	Animals whose body fluid concentration differ with outside environment and actively regulate to discharge excess of water in hypotonic and excrete salts in hypertonic environment.
These animals live in isotonic environment.	These animals live in hypotonic or hypertonic environment.
Marine invertebrates, hag fishes	Bony fishes, terrestrial animals, cartilaginous fish.

Q: 20 Define anhydrobiosis with an example.

Ans. **Definition:** Terrestrial animals can tolerate dehydration and it differs in various animals. This characteristic is known as anhydrobiosis.
Example: Desert animals.

Q: 21 List the adaptations of terrestrial animals for osmoregulation.

Ans.

- Development of waxy exoskeleton of insects and multi-layered dead, keratinized skin cells to decrease water loss.
- Drinking and eating moist foods compensate water loss.
- Use metabolic water obtained from carbohydrates of seeds of desert plants.
- Produce concentrated urine.
- Can tolerate dehydration (Anhydrobiosis).

PAST PAPER Short Questions

Q: 22 Differentiate between osmoconformers and osmoregulators. **(DGK 2015, BWP 2017, FSD 2017)**

Q: 23 How osmoregulation takes place in marine environment? **(MTN 2017)**

Q: 24 Define excretophores and anhydrobiosis. **(SGD 2017)**

Q: 25 Define anhydrobiosis. **(LHR 2018, 2019)**

Q: 26 Differentiate between Osmoconformer and Osmoregulators. **(MTN-2019, LHR 2019)**

Q: 27 How fresh water fishes maintain osmoregulation conditions? **(DGK 2018)**

Q: 28 What are osmoconformers and osmoregulators animals? **(LHR-2021)**

Q: 29 Define Anhydrobiosis with an example. **(FSD-2021)**

Q: 30 Define excretophore and anhydrobiosis. **(FSD-2021)**

Q: 31 What are excretophores? Give an example. **(SGD-2021)**

Q: 32 Compare osmoregulation in marine fishes and fresh water fishes. **(FSD-2021)**

Q: 33 How arthropods and mammals overcome the problem of evaporative water loss? **(MTN-2021)**

EXCRETION

(Excretion in Plants, Excretion in Animals, Nature of Excretory Products)

. Short Questions

Q: 34 Define excretion. How does it differ from defecation?

Ans. **Excretion:** Removal of waste materials especially nitrogenous waste outside the body is called excretion

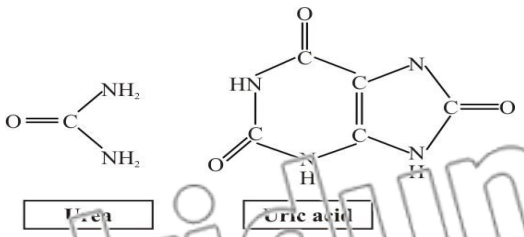
Difference from Defecation: Excretion is removal of nitrogenous waste while defecation is removal of undigested food.

Q: 35 Why leaves are named as excretophore?

Ans. The falling of yellow leaves in autumn is the seasonal time for the plants to get rid of the accumulated wastes and because of this reason leaves are said to be excretophore.

Q: 36 Give structural formulae of urea and uric acid.

Ans.



Q: 37 What is ebony?

Ans. Ebony is tree in which black wood is produced due to deposition of waste material in old xylem which is no longer used for water transport.

Q: 38 Name nitrogenous wastes produced by metabolism of purines and pyrimidines.

Ans. Metabolism of purine and pyrimidine bases produce significant amount of nitrogenous wastes hypoxanthine, xanthine, uric acid, allantoin, urea and ammonia.

Q: 39 What are ammonotelic, ureotelic, uricotelic animals?

Ans. Animals excreting ammonia, urea and uric acid are called as ammonotelic, ureotelic and uricotelic respectively. Ureotely and uricotely are evolutionary adaptations to nitrogenous waste in their habitats.

PAST PAPER Short Questions

Q: 40 Write structural formula of urea and uric acid. **(DGK 2017)**

Q: 41 Give an account of excretion in plants. **(GRW 2017)**

Q: 42 Differentiate between ureotelic and uricotelic animals. **(MTN 2014, SWL 2017)**

Q: 43 What are excretophores and why? **(FSD 2018)**

Q: 44 What is the function of excretophore? **(DGK 2018)**

Q: 45 Why the leaves are said to be excretophore? **(SGD 2018, LHR-2019, BWP 2018)**

Q: 46 What are excretophores? **(FSD-2019)**

Q: 47 What are excretophores? Give an example. **(SGD-2019)**

Q: 48 Why leaves are called excretophores? **(DGK-2019)**

Q: 49 Differentiate between ureotelic and uricotelic. **(SGD-2019)**

Q: 50 Write the formula of uric acid. **(MTN-2021)**

Q: 51 Which nitrogenous wastes are produced by the metabolism of purine and pyrimidine? **(GRW-2021)**

EXCRETION IN REPRESENTATIVE ANIMALS

. Short Questions

Q: 52 What are flame cells

Ans. These are the structural units of excretory system in planaria. Each flame cell has a tuft of cilia, whose beating propels interstitial fluid into the tubular system. The beating of cilia look like flickering flame therefore these cells are called flame cells.

Q: 53 Illustrate the function of malpighian tubules.

Ans. Malpighian tubules are associated with digestive tract through which nitrogenous wastes are excreted. These collect excretory product from hemolymph and it pass out to rectum.

PAST PAPER Short Questions

Q: 54 What is metanephridium? In which organism is it found? **(RWP 2017)**

Q: 55 What are flame cells? Write their function. **(SGD 2017)**

Q: 56 Draw and label the structure of a single flame cell. **(SWL 2017)**

Q: 57 Give difference between protonephridium and metanephridum. **(FSD 2018)**

Q: 58 Differentiate between protonephridia and metanephridia. **(GRW 2017, LHR 2019, DGK 2019, FSD 2019)**

Q: 59 What are "Malpighian Tubules"? In which organism they are found? **(GRW 2019)**

Q: 60 What is flame cell, give its function? **(SGD 2019)**

EXCRETION IN VERTEBRATES

Liver

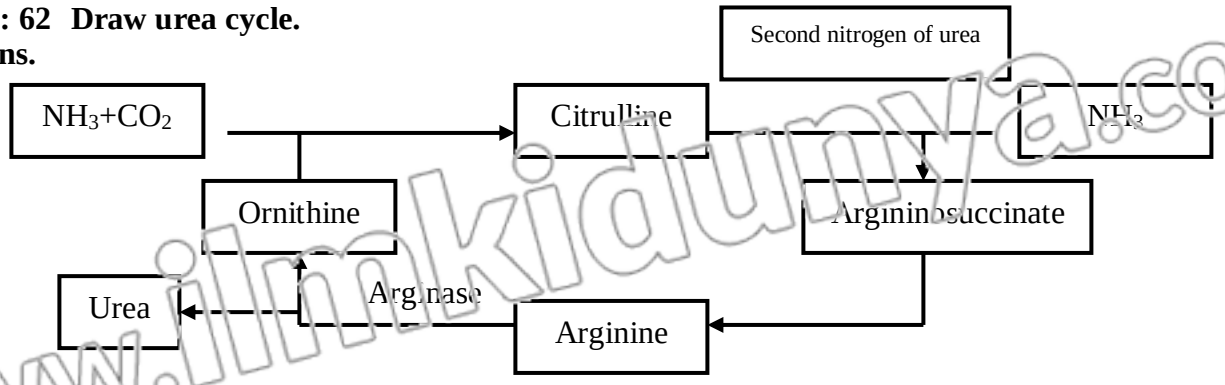
. Short Questions

Q: 61 Water, salts and sebum is excreted by skin but still it is not considered as excretory organ. Why?

Ans. The removal of water and salts from the sweat glands is for the purpose of thermoregulation, and the removal of sebum on the skin is for protection against microorganism not for excretion, so it is not actually considered as excretory organ.

Q: 62 Draw urea cycle.

Ans.



Q: 63 List the substances synthesized by liver.

Ans. Liver synthesizes nitrogenous wastes like NH_3, urea, uric acid, plasma protein (prothrombin, fibrinogen and albumin), bile & lipids, cholesterol and lipoproteins.

PAST PAPERS Short Questions

Q: 64 Sketch urea cycle. **(LHR 2018)**

Q: 65 What is the function of bile? **(SWL 2017)**

Q: 66 Write two important functions of liver. **(MTN 2017)**

Q: 67 Draw and label the urea cycle. **(RWP 2017, LHR 2018)**

Q: 68 Skin does not some within the definition of excretory organ. Comments. **(LHR 2019)**

Q: 69 Sketch urea cycle. **(SWL 2019)**

Q: 70 Make sketch of urea cycle. **(DGK 2019)**

Q: 71 Briefly describe urea cycle. (**MTN 2018, RWP 2021)**

URINARY SYSTEM

. Short Questions

Q: 72 Layout a differentiation between aldosterone & ADH.

Ans.

Aldosterone	ADH
This hormone is released by adrenal cortex.	This hormone is released from posterior pituitary.
Promote active uptake of sodium (Na^+) in ascending limb or thick loop of Henle.	Facilitates reabsorption of water in collecting tubules.

Q: 73 How do ascending & descending loop of Henle differ in their physiology yet contribute in sustaining high concentration of kidney interstitium?

Ans. **Descending loop** of Henle causes gradual osmotic outflow of water from filtrate back to kidney while **ascending loop** of Henle prevents water outflow but allows active transport of Na^+ ions into kidney interstitium.

Q: 74 Write the position and function of sphincter muscles in excretory system.

Ans. **Position:**

Sphincter muscles are present near the junction of the urethra and the urinary bladder.

Function:

The function is to control the urine in bladder

In this manner both contribute in its high concentration.

Q: 1 Why does filtration take place only at glomerular part of nephron and nowhere else?

Ans. Filtration at glomerular level occurs due to two reasons:

- Walls of glomerulus are porous, so substances can easily pass through it.
- High blood pressure develops at glomerulus that is known as filtration pressure.

Q.2 Differentiate between ureter and urethra.

Ans.

Ureter	Urethra
Urine leaves the kidney through a duct which known as ureter.	Urine leaves the urinary bladder during urination through urethra.
Ureter emerges from each kidney and carry urine to urinary bladder.	Sphincter muscles are present between urethra and bladder to control the urine.

Q: 75 Differentiate between afferent and efferent arterioles in relation to nephron.

Ans. Afferent Arterioles: Arterioles which carry blood towards glomerulus are called afferent arterioles.

Efferent Arterioles: Arterioles which carry blood away from glomerulus are called efferent arterioles.

Q: 76 What is a vasa recta?

Ans. In juxtamedullary nephrons additional capillaries extend down to form U-shaped loop of vessels, vasa recta. This part functions for selective reabsorption, counter current multiplier, tubular secretion and site for action of aldosterone.

Q: 77 Write functions of proximal convoluted tubule.

Ans. All the useful constituents of the glomerular filtrate are reabsorbed in proximal tubules and when filtrate leaves proximal tubules, it mostly contains nitrogenous wastes.

Q: 78 What is counter current multiplier?

Ans. It is mechanism involved in reabsorption of water and concentration of urine. Counter current multiplier causes gradual osmotic outflow of water from the filtrate back to kidney as it passes downward in the descending loop of Henle. Ascending loop of Henle does not allow outflow of water from its filtrate, instead actively transports Na^+ ions into kidney interstitium to sustain its high concentration.

PAST PAPER Short Questions

Q: 79 Define counter current multiplier mechanism. **(LHR-2018)**

Q: 80 Define counter current multiplier. **(LHR-2019)**

Q: 81 Differentiate between re-absorption and secretion in nephron. **(DGK 2018)**

Q: 82 What is counter current multiplier? **(LHR 2017, DGK 2018)**

Q: 83 What is glomerulus? **(BWP 2018)**

Q: 84 What are Juxtamedullary Nephrons? Give their function. **(BWP-2019)**

Q: 85 Enlist the three steps in urine formation in human. **(GRW-2019)**

Q: 86 Differentiate between ureter and urethra. **(GRW-2021)**

Q: 87 Write two differences between cortical nephron and juxtamedullary nephron. **(SWL-2021)**

Q: 88 Define Nephron. Give its types. **(MTN-2021)**

Q: 89 What is glomerular filtrate? **(FSD-2021)**

KIDNEY PROBLEMS AND CURES

. Short Questions

Q: 90 Define dialysis.

Ans. It is an artificial way of cleaning of blood (from urea). It is done in condition of chronic renal failure where functions of kidney is lost.

Q: 91 What is Lithotripsy?

Ans. It is the technique used to break up stones that form in the kidney, ureter or gall bladder by high concentration of X-rays or ultrasound rays which are directed from a machine outside the body.

Q: 92 Write different types of kidney stones with their % incidence.

Ans. Calcium oxalate stone: 70%
Calcium phosphate stone: 15%
Uric acid stone: 10%

Q: 93 Layout a comparison between hemodialysis & peritoneal dialysis.

Ans. Similarities:-

Both the methods are used in case of renal impairment or renal failure.

Differences:-

Hemodialysis	Peritoneal Dialysis
Blood is cleaned outside the body in a machine called dialyzer.	Blood is cleaned inside the body in peritoneal cavity.
Dialyzer has two spaces separated by a thin membrane. From one space blood flows from which wastes & excess water moves via membrane into dialysis fluid on other side.	Peritoneal cavity is filled with dialysis fluid. Fluid is introduced into body by a catheter, excess water & wastes moves through peritoneum into dialysis fluid as in kidney.

Q: 2 Mention two metabolic altered states that generally (70%) cause kidney stone formation.

Ans.

- High blood oxalate level due to increased intake of oxalate leading to **hyperoxaluria.**
- Higher blood oxalate level due to increased production of oxalate.

Q: 3 What is renal failure?

Ans. When kidney is unable to filter urea (due to increased plasma level) and nitrogenous wastes, this condition is called renal failure. This occurs particularly due to destruction of glomerular part of nephron.

Q: 94 What is uremia?

Ans. It is an acute renal failure. Accumulation of nitrogenous wastes (urea) in blood because kidneys are unable to eliminate them.

PAST PAPER Short Questions

Q: 95 Define uremia. What is its permanent treatment? **(DGK 2017)**
Q: 96 What is lithotripsy? Name its common type. **(RWP 2017)**
Q: 97 What is hyperoxaluria? How is it caused? **(MTN 2017)**
Q: 98 State renal failure. **(LHR 2017)**
Q: 99 What is hypercalcemia? Write its effects. **(GRW 2017)**
Q: 100 Write the phenomenon of lithotripsy. **(FSD 2017)**
Q: 101 What is renal failure? **(BWP 2017)**
Q: 102 What is peritoneal dialysis? **(DGK 2017)**
Q: 103 State renal failure. **(LHR 2017)**
Q: 104 What is hypercalcemia? Write its effects. **(GRW 2017)**
Q: 105 Differentiate between haemodialysis and peritoneal dialysis. **(LHR 2018)**
Q: 106 Define uremia. What is its permanent treatment? **(MTN 2018)**
Q: 107 Write a concise note on hemodialysis. **(MTN 2018)**
Q: 108 Briefly describe hemodialysis. **(DGK 2019)**
Q: 109 Define uremia. What is its permanent treatment? **(LHR 2021)**
Q: 110 What is lithotripsy? **(LHR 2018, SWL 2018, MTN 2018, GRW2021)**
Q: 111 Define dialysis. Give its type. **(GRW 2021)**
Q: 112 Distinguish Hypercalcemia from Hyperoxaluria. **(MTN 2021)**
Q: 113 What is Lithotripsy? Give the mechanism. **(BWP 2021)**
Q: 114 What is peritoneal dialysis? Explain. **(RWP 2021)**
Q: 115 Write a note on kidney transplantation **(RWP 2021)**

THERMOREGULATION

. Short Questions

Q: 116 List the structural adaptations of heat exchange.

Ans.

- Development of subdermal fatty layer for insulation.
- Development of pelage.
- Presence of sweat glands.
- Lungs modification for panting.

Q: 117 What are heat snock proteins? Give their role. Or how the most plants have adapted to survive in heat stress?

Ans. The cells of plants during high temperature synthesize large quantities of special proteins called heat-shock proteins. These proteins embrace enzymes and other proteins thus help to prevent denaturation.

Q: 118 How do plants overcome low temperature?

Ans. Plants respond to cold stress by increasing proportion of unsaturated fatty acids, which help membrane to maintain structure at low temperature by preventing crystal formation. Plants have adapted to bring changes in solute composition of the cells, which causes cytosol to super cool without ice formation.

Q: 119 List the physiological adaptations of heat exchange.

Ans.

- Regulation of blood flow to skin increases in warmth to dissipate heat and decreases in cold to economize heat loss.
- Activation of certain muscles causing plumage fluffing.
- Activation of sweat glands for evaporative cooling.

Q: 120 Write behavioural adaptations in animals for temperature regulation.

Ans.

- Movement of the animal to an environment where heat exchange is minimal.
- Controlling the surface area available for heat exchange by adjustment of posture.

PAST PAPER Short Questions

Q: 121 What are physiological adaptations of heat exchange in animals? **(SGD 2017)**

Q: 122 What are heat-shock proteins? **(MTN 2015,2018)**

Q: 123 Define panting with one example. **(MTN 2015-17, SWL 2018)**

Q: 124 Describe physiological adaptations of animals for thermoregulation. **(SWL 2019)**

Q: 125 What are heat shock proteins? **(MTN 2019)**

Q: 126 Account one each main adaptation in plants to high low temperature. **(DGK 2019)**

Q: 127 How plants respond to cold stress? **(SGD 2019)**

Q: 128 What are behavioural adoptations to regulate heat exchange between animals and environment? **(SGD 2019)**

Q: 129 Define panting with one example. **(GRW 2021)**

Q: 130 Define the term Heat Shock Proteins. **(MTN 2021)**

Q: 131 Define panting with an example. **(FSD 2021)**

TEMPERATURE CLASSIFICATION OF ANIMALS

. Short Questions

Q: 132 Differentiate between ectotherm and endotherm.

Ans.

Ectotherm	Endotherm
The animals which produce metabolic heat at low level, exchange it with the environment and absorb heat from the surroundings are called ectotherm.	The animals which generate their own body heat as the by product through heat production during metabolism are called endotherm.
Example: Amphibians and Reptiles.	**Example:** Mammals, Birds and flying insect.

Q: 133 What are heterotherms?

Ans. Heterotherms are those animals who are capable of varying degrees of endothermic heat production but generally do not regulate their body temperature within a narrow range e.g. bats, humming bird etc.

PAST PAPER Short Questions

Q: 134 Differentiate between ectotherms and endotherms. **(SGD 2018, LHR 2019, SWL 2021)**

Q: 135 What are Poikilotherms? Give one example as well. **(BWP 2021)**

THERMOREGULATION IN MAMMALS (HUMAN)

. Short Questions

Q: 136 Why do you observe the raising of your body hair in extreme cold condition?

Ans. In cold conditions, by raising hairs or furs, thicker layer of still air is trapped and it acts as good insulator between animal skin and the surroundings, ultimately results in retention of body heat.

Q: 137 What is shivering thermogenesis?

Ans. The rate of heat production is increased by increased muscle contraction by movements or shivering so called as shivering thermogenesis.

Q: 138 What is blubber?

Ans. It is thick layer of insulating fat just under the skin in marine mammals like whales and seals. It provides protection against low temperature of external aquatic environment.

PAST PAPER Short Questions

Q: 139 How shivering thermogenesis and non-shivering thermogenesis may be differentiated? **(FSD 2017)**

Q: 140 How marine mammals regulate their body temperature? **(DGK 2017)**

Q: 141 Describe thermoregulation in mammals. **(LHR 2017)**

Q: 142 What is blubber and in which animals is it found? **(BWP 2018)**

Q: 143 Differentiate between shivering thermogenesis and non-shivering thermogenesis. **(GRW 2018, LHR 2015, GRW 2013, DGK 2017, 2018)**

Q: 144 How vasodilation differs from vasoconstriction? **(LHR 2021)**

THERMOSTAT FUNCTION AND FEEDBACK CONTROLS IN HUMANS

. Short Questions

Q: 145 What is thermostat of the body in humans?

Ans. Thermostat in hypothalamus maintains our body temperature within a narrow range. It responds by cooling and heating mechanisms to temperature change.

Q: 146 What are pyrogens?

Ans. Pyrogens are the chemicals produced from pathogens and WBCs. These displace the set point of hypothalamus and cause pyrexia.

Q: 147 What is importance of pyrexia?

Ans. Pyrexia stimulates the protective mechanisms against pathogens.
In it pyrogens are produced which displace the set of hypothalamus above the 37°C

Q: 148 What is negative feedback mechanism?

Ans. Such a mechanism in which a controlling system is itself controlled by its products. The functions of target organs are inhibited in this process.

PAST PAPER SHORT QUESTIONS

Q: 149 What do you mean by pyrexia and pyrogens? **(MTN 2017)**
Q: 150 What are pyrogens? Give their function. **(LHR 2017)**
Q: 151 What are pyrogens? Give their functions. **(BWP 2018)**
Q: 152 Why temperature of the body increases during fever? **(MTN 2018, 2019)**
Q: 153 What is Pyrogen? Give its role. **(MTN 2019)**
Q: 154 Differentiate between pyrexia and pyrogens. **(RWP 2019)**
Q: 155 What is pyrexia? **(FSD 2018, RWP 2018, BWP 2019, FSD 2021)**
Q: 156 Differentiate between pyrexia and pyrogens. **(SGD 2021)**
Q: 157 Define Panting and Pyrogens. **(SWL 2021, LHR 2021)**