

**Domain Knowledge Test for recruitment of Assistant Professor in DUVASU, Mathura**

**Subject: Veterinary Physiology**

- Q. No.1 All of the following enzymes are found in lysosomes except**
- a Acid phosphatase
  - b Lipoprotein lipase
  - c Cathepsin
  - d N acetylhexosaminidase
- Q. No.2 Which subcellular fraction of mammalian hepatocytes contains the enzymes necessary for elongation of long chain fatty acid?**
- a Plasma membrane
  - b Nucleus
  - c Endoplasmic Reticulum
  - d Ribosomes
- Q. No.3 Technical term for excessive sweating is**
- a Hyperhydration
  - b Hyperhydrosis
  - c Polydipsia
  - d Dehydration
- Q. No.4 The concentration of calcium in a cell is 0.3%. The concentration of calcium in the surrounding fluid is 0.1%. How could the cell obtain more calcium?**
- a Passive Transport
  - b Diffusion
  - c Active Transport
  - d Osmosis
- Q. No.5 Which of the following induces conformational change in protein?**
- a Uniport
  - b Symport
  - c Antiport
  - d Facilitated diffusion
- Q. No.6 Adrenergic activation of salivary glands leads to**
- a Viscous saliva with less mucin
  - b Viscous saliva rich in mucin
  - c Watery saliva with less mucin
  - d Watery saliva rich in mucin
- Q. No.7 Which among the following statement is not true**
- a Glucose, amino acids are transported in non-ionic form
  - b Sodium, potassium and calcium are transported in non-ionic form
  - c Hydrogen and chloride are transported in ionic form
  - d Urea is transported in non-ionic form

- Q. No.8 Liddle's syndrome occurs is due to**
- Sodium channel dysfunction
  - Potassium channel dysfunction
  - Calcium channel dysfunction
  - Chloride channel dysfunction
- Q. No.9 The repeated stimuli leading to superimposition of single twitches called**
- Isometric contraction
  - Isotonic contraction
  - Mechanical summation
  - Afterload contraction
- Q. No.10 RBCs of Camel are**
- Circular, convex and nucleated
  - Circular, convex and non-nucleated
  - Oval and non-nucleated
  - Oval and nucleated
- Q. No.11 Cell membrane of RBC's contain ..... protein that carries blood group antigen**
- Actin
  - Spectrin
  - Glycophorin
  - Glucophorin
- Q. No.12 ..... is the principle cation of erythrocytes in pig, chicken and turkey**
- Sodium
  - Potassium
  - Calcium
  - Magnesium
- Q. No.13 Haldane effect represents**
- Decrease in H ion concentration in RBCs to reduce CO<sub>2</sub> in tissues
  - Liberation of H ion for oxygenation of Hb in lungs
  - Liberation of H ion for de-oxygenation of Hb in tissues
  - Increase in H ion concentration in RBCs to take-up more CO<sub>2</sub> at lungs
- Q. No.14 In sickle cell anemia, RBC's containing polymerized haemoglobin S are called**
- Drapanocytes
  - Spherocytes
  - Poikilocytes
  - Elliptocytes
- Q. No.15 Transferrin is an example of**
- $\alpha$  1 globulin
  - $\alpha$  2 globulin
  - $\beta$  globulin
  - $\gamma$  globulin

- Q. No.16 Neutrophil extracellular trap (NET) is a unique method of antimicrobial action discovered by**
- Haldane and Pristley
  - Hamburger
  - Aschoff and Landau
  - Brinkman and Zyclinsky
- Q. No.17 Which among the following is not true regarding transverse tubules?**
- Thick walled tubules formed by sarcoplasmal invaginations
  - Extend at the level of Z lines
  - Function in the uptake and storage of calcium
  - Transmit action potential from outer surface of sarcolemma to interior of the fiber
- Q. No.18 Laplace's law is applied**
- To thick walled ventricles to calculate stress released during relaxation
  - To thick walled ventricles to calculate stress developed during contraction
  - To thin walled auricles to calculate stress developed during contraction
  - To thin walled auricles to calculate stress released during relaxation
- Q. No.19 Stimulation of slow inward calcium current (I<sub>ca</sub>) is antagonised by**
- Epinephrine
  - Norepinephrine
  - Acetylcholine
  - Isoproterenol
- Q. No.20 Inactivation of the myocardial contractile process (myocardial relaxation) is called**
- Trappe
  - Bowditch
  - Staircase
  - Lusitropy
- Q. No.21 Among these hormones, which hormones have no effect on coronary vasoactive effect?**
- Thyroxine and catecholamines
  - Insulin and glucagon
  - Oxytocin and vasopressin
  - Mineralocorticoids and ACTH
- Q. No.22 Recording of jugular venous pulse is called**
- Manogram
  - Phlebogram
  - Sphygmogram
  - Phonocardiogram

- Q. No.23** **Barker syndrome in pigs is caused due to deficiency of**
- a Dipalmitoyl lecithin
  - b Dipalmitoyl choline
  - c Phosphotidyl choline
  - d Phosphotidyl lecithin
- Q. No.24** **Cell organelles absent in RBC's other than nucleus**
- a Golgi apparatus and mitochondria
  - b Golgi apparatus and lysosomes
  - c Mitochondria and rough endoplasmic reticulum
  - d Mitochondria and smooth endoplasmic reticulum
- Q. No.25** **Name the physiological uncoupler which stops ATP synthesis.**
- a 2, 4-dinitrophenol
  - b Dicoumarol
  - c FCCP
  - d Thermogenin
- Q. No.26** **Fick's first law of diffusion represents**
- a Diffusion of a substance per unit time is proportional to concentration difference
  - b Diffusion of a substance per unit time is inversely proportional to the distance over which diffusion takes place
  - c Diffusion of a substance per unit time is proportional to the permeability coefficient
  - d Diffusion of a substance per unit time is inversely proportional to the diffusion coefficient
- Q. No.27** **A diabetic patient developed metabolic acidosis resulting in deep & rapid breathing which is called**
- a Kussmaul breathing
  - b Cheyne-Stokes respiratory pattern
  - c Apneutics breathing
  - d Periodic breathing
- Q. No.28** **Which one of the following statements is not true?**
- a Nitrogen is in virtual equilibrium throughout the respiratory system
  - b Water vapour pressure is not same throughout the respiratory system
  - c Gasses remains at 100 percent humidification
  - d Each gas diffuses in response to its own partial pressure difference



- Q. No.29** An important barrier that prevents the free passage of albumin across the glomerular capillary wall is formed by
- Filtration slits
  - Hydrophobic basement barrier
  - Anionic proteoglycan molecule
  - Fenestrated capillary endothelium
- Q. No.30** Which one of the following statements is not true for microcirculation of kidney?
- It is a high pressure capillary network in glomerulus with alterable resistance
  - It is a low pressure capillary network surrounding renal tubules
  - It is a high pressure capillary network surrounding renal tubules
  - It regulates RBF and GFR
- Q. No.31** An exogenous substance used to measure renal plasma flow (RPF) is
- Inulin
  - Para amino hippuric acid (PAH)
  - Mannitol
  - Creatinine
- Q. No.32** Which among the following is a potent vasoconstrictor and platelet aggregator?
- Thromboxane A<sub>2</sub>
  - Renin
  - Prostaglandin
  - Interleukin-2 and TNF- $\alpha$
- Q. No.33** Which among the following gastrointestinal hormones comprise the 'ileal brake'?
- Secretin and gastrin
  - Enteroglucagon and Peptide YY
  - CCK and Motilin
  - Motilin and somatostatin
- Q. No.34** Which type of small intestine mucosal cell has postulated role in the production of bacteriolytic enzymes
- Columnar absorptive cells
  - Goblet cells
  - Enterochromaffin cell
  - Peneth cell
- Q. No.35** The concentration of bile acids in the jejunum for the formation of micelle atleast should be
- 2 mM
  - 4 mM
  - 6 mM
  - 10 mM

- Q. No.36** Amount of gastric juice produced in birds is about
- a 0.5 ml/hr/kg body weight
  - b 3.5 ml/hr/kg body weight
  - c 6.5 ml/hr/kg body weight
  - d 8.8 ml/hr/kg body weight
- Q. No.37** Sarcoplasmal acetylcholine receptors are considered as
- a Calcium ion channels
  - b Sodium ion channels
  - c Voltage-gated channels
  - d Ligand-gated channels
- Q. No.38** The non-opioid neuromodulator, neurotensin is secreted from
- a Pons
  - b Hypothalamus
  - c Heart
  - d Medulla
- Q. No.39** The receptor type found in target tissues and innervated by the PSNS is
- a  $\alpha$  and  $\beta$  adrenergic
  - b Muscarinic
  - c Nicotinic
  - d Dopaminergic
- Q. No.40** Which of these is not a feature of postganglionic neurons in the sympathetic nervous system?
- a Originating distal to the effector organ
  - b Unmyelinated
  - c Short in length
  - d Noradrenergic
- Q. No.41** Acetylcholine is synthesized and packaged in the presynaptic terminal before being released to act on the postsynaptic receptors. Which of these statements about this process in parasympathetic postganglionic neurons is not true?
- a Acetylcholine is synthesized by the action of choline-o-acetyltransferase on choline and acetyl coenzyme A
  - b Release of neurotransmitter is triggered when voltage sensitive calcium channels open to allow the influx of calcium.
  - c The released acetylcholine acts on postsynaptic nicotinic receptors.
  - d Choline is recycled by being taken back up into the presynaptic terminal.

- Q. No.42 What is NANC neurotransmission?**
- a Neurotransmission in the autonomic nervous system involving noradrenaline and neuropeptide Y co-transmission
  - b Neurotransmission in the autonomic nervous system that involve acetylcholine or noradrenaline.
  - c Neurotransmission in the enteric nervous system that does not involve acetylcholine or noradrenaline
  - d Co-transmission in the autonomic nervous system of both neuropeptide Y and acetylcholine.
- Q. No.43 Which of the following is the combination of ganglion and gland?**
- a Adrenal medull
  - b Adrenal cortex
  - c Adreno-medullary cortex
  - d Pons and medulla
- Q. No.44 The sialic acid content of eCG/ PMSG is**
- a 2-4%
  - b 14-16 %
  - c 25-28 %
  - d 40-47 %
- Q. No.45 Which pair of hormones causes aggression in dogs**
- a Thyroxin and Parathormone
  - b Oxytocin and Vasopression
  - c Estrogen and Progesterone
  - d Progesterone and Testosterone
- Q. No.46 Piglet anaemia is**
- a Hypochromic macrocytic
  - b Hypochromic microcytic
  - c Hyperchromic normocytic
  - d Hypochromic normocytic
- Q. No.47 Phenomenon of suppression or prolongation of estrous cycle of mature female mice when housed in groups and isolated from males is called**
- a Bruce effect
  - b Whitten effect
  - c Lee-Boot effect
  - d Coolidge effect

- Q. No.48** Ratio of stearic and oleic acid is reduced by an active enzyme present in myoepithelial cells of ruminants called
- Desaturase
  - $\beta$ -galactosidase
  - Galactosyltransferase
  - Xanthine oxidase
- Q. No.49** Activin is structurally
- 1 $\alpha$  and 1 $\beta$  subunit of inhibin with glucose moiety
  - 2 $\alpha$  subunit of inhibin with glucose moiety
  - 2 $\beta$  subunit of inhibin with glucose moiety
  - 2 $\beta$  subunit of inhibin
- Q. No.50** A family of protein act as a carrier for pheromones and play a crucial role in its delivery and detection
- Lipocalins
  - Liposomes
  - Androstenone
  - 11-deoxy corticosterone
- Q. No.51** The main compounds involved in the development of boar taint are
- Skatole and androstenone
  - Androstenone and indole
  - Indole and skatole
  - Indole and steroids
- Q. No.52** Which among the following is not true with suckling reflex?
- Required for galactopoiesis
  - Maintain nucleic content of mammary gland
  - Activate virginal state of mammary gland
  - Activate oxytocin release
- Q. No.53** Mouse bone marrow cells were fractionated to derive stem cell antigen-1<sup>+</sup> (Sca-1<sup>+</sup>) cells. These cells were cultured with interleukin-3, or granulocyte-macrophage colony stimulating factor, or macrophage-colony stimulating factor, or granulocytes colony stimulating factor. Most numerous and varied colonies were obtained in the culture stimulated with
- Interleukin-3.
  - Granulocyte- macrophage colony stimulating factor.
  - Macrophage-colony stimulating factor.
  - Granulocytes colony stimulating factor.



- Q. No.54** What will be the sequence of utilization of ATP sources by muscle during slow to fast contraction?
- a Breakdown of Creatine Phosphate, Anaerobic Glycolysis, Aerobic Oxidation
  - b Breakdown of Creatine Phosphate, Aerobic Oxidation, Anaerobic Glycolysis
  - c Aerobic Oxidation, Breakdown of Creatine Phosphate, Anaerobic Glycolysis
  - d Aerobic Oxidation, Anaerobic Glycolysis, Breakdown of Creatine Phosphate
- Q. No.55** Transcaltachia is a
- a Process of endocytosis by which the  $\text{Ca}^+$  enters the enterocytes
  - b Process of exocytosis by which the  $\text{Ca}^+$  leaves the enterocytes
  - c Process of endocytosis by which the  $\text{Na}^+$  enters the enterocytes
  - d Process of exocytosis by which the  $\text{K}^+$  leaves the enterocytes
- Q. No.56** Which of the following statement regarding Calmodulin is incorrect?
- a It is a heat stable globular protein
  - b It has molecular weight of 16KDa
  - c It is a calcium dependent regulatory protein found in all eukaryotic cells
  - d One molecule of calmodulin can bind with 2  $\text{Ca}^{2+}$  ions to form an active complex
- Q. No. 57** The proportion of milk stored in cistern: alveolus in cattle is
- a 80:20
  - b 50:50
  - c 100:0
  - d 30:70
- Q. No.58** Site of rennin action
- a  $\alpha$ -lactalbumin
  - b  $\beta$ -lactalbumin
  - c  $\kappa$ -casein
  - d  $\beta$ -casein
- Q. No. 59** Fat globule membrane contains .....protein
- a Butyrophyllin
  - b Caesin
  - c  $\alpha$ -lactalbumin
  - d  $\beta$ -lactalbumin
- Q. No. 60** Which substance in seminal plasma primarily maintains osmotic pressure?
- a Fructose
  - b Inositol
  - c Citric acid
  - d Ergothionine

- Q. No.61** Which cell is essential for maintenance of spermatogenic cell glutathione?
- a Sertoli cells
  - b Leydig cells
  - c Myoid cells
  - d Spermatogonial cells
- Q. No.62** Type of pheromone that brings physiological changes having long term influence
- a Driving pheromone
  - b Chemical pheromone
  - c Priming pheromone
  - d Signaling pheromone
- Q. No.63** FSH stimulates sertoli cells of seminiferous tubule for formation of
- a Androgen binding protein
  - b Inhibin
  - c Testosterone binding protein
  - d  $5\alpha$  dihydrotestosterone
- Q. No.64** .....extender was evolved by Bhosrekar and Ganguli at NDRI Karnal
- a Citric acid whey extender
  - b Tris-buffered egg yolk extender
  - c Cocunut milk extender
  - d Egg yolk citrate extender
- Q. No.65** Hypothalamic site which is not the surge centre for LH release
- a Preoptic area
  - b Arcuate nucleus
  - c Anterior hypothalamus
  - d Suprachiasmatic nucleus
- Q. No.66** In which species there are higher concentrations of estrogens during 7-8 month of pregnancy, with a decrease towards end term
- a Sow
  - b Cattle
  - c Ewe
  - d Mare
- Q. No.67** First successful cryopreservation in sheep embryo was done by
- a Bilton and Moore
  - b Audery and smith
  - c Wilmut and Rowson
  - d Polge and Smith

- Q. No.68 Endometrial glands open in to the endometrial lumen except in**
- a Caruncular area
  - b Middle part of uterus
  - c Utero-cervical junction
  - d Utero-tubal junction area
- Q. No.69 Which type of glucose transporter (GLUT) is seen in skeletal muscle**
- a GLUT 1
  - b GLUT 2
  - c GLUT 3
  - d GLUT 4
- Q. No.70 Which among the following involves reward and punishment learning?**
- a Classical conditioning
  - b Operant conditioning
  - c Habituation
  - d Sensitization
- Q. No.71 Ruminant acidosis develops in which one of the following condition?**
- a Removing unionized acids & by exchange of ionized VFA for bicarbonate
  - b Removing ionized acids & by exchange of unionized VFA for bicarbonate
  - c Increased bicarbonate input from blood
  - d Decreased lactate formation in rumen
- Q. No.72 The type -I glomus cells present in the carotid bodies contain granules which release some substances during hypoxemia. Which one of the following is released in hypoxemia ?**
- a Serotonin
  - b GABA
  - c Dopamine
  - d IL-8
- Q. No.73 What would be the outcome if the theca interna cells were destroyed in a Graafian follicle?**
- a Immediate formation of corpus albicans .
  - b Increased progesterone synthesis in the granulose cells.
  - c Decreased estrogen synthesis in the granulose cells.
  - d Formation of corpus hemorrhagicum.
- Q. No.74 Normally the size of red blood cells (RBC) in venous blood is greater than that of arterial blood. This increased size of red blood cell in the venous blood is due to**
- a The increased permeability of red blood cell membrane.
  - b The decreased osmotic pressure in the plasma.
  - c The increased osmotic pressure in RBC.
  - d The dissociation of cytoskeleton proteins in RBC.

- Q. No.75** Spontaneous activation of the individual pacemaker cells spread in “concerted” manner in myometrium is associated with
- Tight junctions
  - Transcytosis
  - Gap junctions
  - Convection
- Q. No.76** A dog eats a large serving of cheese cake having high amount of sodium. It hardly drinks any fluid. In spite of this, the water and the electrolyte balance was maintained. Which one of the following explanation is correct?
- Aldosterone was decreased and alcohol dehydrogenase (ADH) was increased.
  - Aldosterone was increased and ADH was decreased.
  - There was no change in either of the hormone.
  - Sympathoadrenal system was stimulated.
- Q. No.77** The pituitary hormone that stimulates the male testes to produce sperm and stimulates the development of the follicle in the female on a monthly cycle is:
- growth hormone
  - Luteinizing hormone
  - Follicle-stimulating hormone
  - Prolactin
- Q. No.78** Which one of the following behavioural changes are expected in a rat when its nucleus accumbens is experimentally ablated?
- Aggressive behavior increases
  - Exploratory behavior decreases
  - Nest-building activity increases
  - Level of parental care drops
- Q. No.79** The fluid from which of the following accessory gland neutralize the acidity in a vagina of the female?
- Seminal vesicle
  - Prostate gland
  - Cowper’s gland
  - Urethra
- Q. No.80** Scientists uncovered that the microbes from rumen of cattle can convert certain types of plastics, including the polyethylene terephthalate (PET), based on the fact that it consume a natural polyester produced by plants, called
- Xanthene
  - Xylose
  - Cutin
  - Lecithin



- Q. No.81** Vasopressin differs from oxytocin, in that isoleucine is substituted for
- Valine
  - Phenylalanine
  - Tyrosine
  - Methionine
- Q. No.82** Within minutes following a normal delivery, flow through the foramen ovale decreases dramatically. What is the cause of this change?
- Increased formation of prostaglandin E2 in the endocardium
  - Increased rate of flow through the pulmonary artery
  - Increased left atrial pressure
  - Increased right atrial pressure
- Q. No.83** A dog administered a number of medications, one of which appears to be interfering with the emission phase of the sexual act. Which of the following medications could cause this problem?
- A medication that prolongs the duration of action of nitric oxide.
  - A medication that blocks the smooth muscle receptors for nitric oxide.
  - A testosterone-like androgen compound.
  - An inhibitor of beta-adrenergic nervous system receptors.
- Q. No.84** Intracerebroventricular injections of which of the following do not decrease the food intake in birds
- Serotonin
  - Cholecystokinin
  - Bombesin
  - 5 hydroxytryptamine
- Q. No.85** Following ejaculation, arterial blood flow into the corpora cavernosa decreases back to the normal resting level resulting in the flaccid state. What is the best explanation for this decrease in blood flow?
- Systemic arterial pressure decreases due to absence of sexual stimulation.
  - The level of sympathetic stimulation to the arterioles supplying the corpora cavernosa decreases.
  - Resistance of the arterioles supplying the corpora cavernosa increases.
  - Formation of nitric oxide in the endothelial cells of the arterioles supplying the corpora cavernosa is stimulated by the increase in parasympathetic nervous system activity.
- Q. No.86** The key enzyme which helps in the establishment of the circadian rhythm
- Glutathione peroxidase
  - N-acyl transferase
  - Glucose 6 phosphatase
  - Galactosyltransferase

- Q. No.87** A disorder that destroyed only the motor neurons of the spinal cord below the thoracic region. Which aspect of sexual function would not be possible?
- Arousal
  - Erection
  - Lubrication
  - Ejaculation
- Q. No.88** The sympathetic nerve enters the thyroid gland in association with blood vessels at the hilus on the
- Lateral aspect of each lobe
  - Medial
  - Basal
  - Dorsoventral aspect of each lobe
- Q. No.89** Excessively synthesized hormone in the cell is degraded by fusion of hormone containing granules with lysosome is termed as
- Lysophagy
  - Lysolyophagy
  - Crinophagy
  - Ectolysophagy
- Q. No.90** Pitressin tennate in oil is the famous repositol preparation of
- Vasopressin
  - Oxytocin
  - ACTH
  - Cortisol
- Q. No.91** Which one of the following statements is not true?
- Birds have higher body temperatures than mammals of the same weight because they have higher rates of metabolism and usually have lower rates of heat loss than mammals.
  - Mammals have a greater power to increase in weight-specific heat production than birds.
  - Small birds have higher body temperatures than large birds because they have higher rates of heat production, relative to their weight, than do large birds.
  - Mammals seem to have a balance between heat production and loss, so that body temperature is independent of weight.
- Q. No.92** Fetal crop of leydig cells secretes
- GH
  - Androstenedione
  - Aldosterone
  - Pregnanolone

- Q. No.93 Biochemical indication of Vitamin B12 deficiency can be obtained by measuring urinary excretion of**
- a Pyruvic acid
  - b Lactic acid
  - c Malic acid
  - d Methyl malonic acid
- Q. No.94 Pantothenic acid is a constituent of coenzyme involved in**
- a Dehydrogenation
  - b Acetylation
  - c Oxidation
  - d Decarboxylation
- Q. No.95 Positive bathmotropic effect on heart is produced by**
- a Increased myocardial activity
  - b Lowering heart rate
  - c Increased stimulus conduction
  - d Increased response of cardiac muscle to stimuli
- Q. No.96 Which among the following statements are true regarding filtration in avian kidneys?**
- a 25 % filtrate comes from mammalian type nephrons and 75 % from reptilian type nephrons
  - b 75 % filtrate comes from mammalian type nephrons and 25 % from reptilian type nephrons
  - c 50 % filtrate comes from mammalian type nephrons and 50 % from reptilian type nephrons
  - d 45 % filtrate comes from mammalian type nephrons and 55 % from reptilian type nephrons
- Q. No.97 Uric acid precipitates in the renal tubules in order to**
- a Avoid ammonia toxicity
  - b Lubricate the renal tubule
  - c Avoid obligation of water excretion
  - d Have better mix with the faeces
- Q. No.98 Which among the following statements are not true?**
- a Dorsal respiratory groups (DRG) control the basic rhythm of breathing by triggering inspiratory impulses.
  - b Ventral respiratory groups (VRG) primarily active in exercise and stress.
  - c Apneustic center stimulates the expiratory neurons of the DRG and VRG.
  - d Pneumotaxic center controls "switch-off," so controls inspiratory time.

- Q. No.99 Hypoxic vasoconstriction is due to**
- a Decreased PO<sub>2</sub> in alveolar gas
  - b Decreased PO<sub>2</sub> in arterial gas
  - c Decreased PCO<sub>2</sub> in alveolar gas
  - d Decreased PCO<sub>2</sub> in arterial gas
- Q. No.100 Which one of the following is not the function of Auerbach plexus?**
- a Control peristaltic movement of bowel
  - b Increases the tone of gut
  - c Increases the velocity and intensity of contraction
  - d Control local secretion and absorption
- Q. No.101 Which one of the following statements is not true for Frothy Bloat in cattle?**
- a Occurs in cattle eating legumes or lush grasses or protein rich grass or a diet high in concentrates.
  - b The froth interferes with the expulsion of gases resulting from normal fermentation in the rumen.
  - c The stable foam traps gas produced by normal fermentative processes.
  - d Ruminal concentrations of soluble proteins and minerals are believed to suppress the stability of foam in the rumen, potentially increasing the incidence and severity of bloat
- Q. No.102 Which among the following is true regarding gastric emptying?**
- a Regulated by gastric receptors responding to chemical composition of food
  - b Regulated by duodenal receptors responding to chemical composition of food
  - c Regulated by jejuna receptors responding to chemical composition of food
  - d Regulated by ilea receptors responding to chemical composition of food
- Q. No.103 The foveolar cells secrete mucus and also bicarbonate to allow the acid to penetrate mucosal lining of stomach at pH**
- a Above 4
  - b Below 3-4
  - c Below 2-3
  - d Below 1-3
- Q. No.104 Bacteriophage population in rumen liquor is about**
- a 10<sup>3</sup> – 10<sup>4</sup> cells/ g of rumen liquor
  - b 10<sup>5</sup> – 10<sup>6</sup> cells/ g of rumen liquor
  - c 10<sup>8</sup> – 10<sup>9</sup> cells/ g of rumen liquor
  - d 10<sup>9</sup> – 10<sup>11</sup> cells/ g of rumen liquor
- Q. No.105 The first site of fatigue is**
- a Betz cells in cerebral cortex
  - b Motor neurons of spinal cord
  - c Neuromuscular junction
  - d Muscle



- Q. No.106** Abnormal sensations of the body such as tingling, burning and numbness is called
- Paresthesia
  - Paralgesia
  - Pallanesthesia
  - Hallucination
- Q. No.107** What are the eicosanoids present that have contradictory effect in blood coagulation?
- PGI<sub>2</sub> and TXA<sub>2</sub>
  - PGF<sub>2</sub> $\alpha$  and PGI<sub>2</sub>
  - Leukotrienes and TXA<sub>2</sub>
  - Leukotrienes and Enkephalins
- Q. No.108** Cells that divide seminiferous tubules into basal and adluminal compartments
- Sertoli cells
  - Leydig cells
  - Myoid cells
  - Spermatogonial cells
- Q. No.109** The sperm head has haploid DNA complexed to basic proteins known as
- Nucleoamines
  - Histones
  - Protamines
  - Argimines
- Q. No.110** Sperm reservoirs in horse and pig are located in
- Endometrial cups
  - Utero-tubal junction
  - Oviduct
  - Uterus
- Q. No.111** For detection of cholestasis in dogs, which is the most appropriate enzyme to be detected in serum
- AST
  - ALT
  - GGT
  - Alkaline Phosphatase
- Q. No.112** Which isoenzyme levels are helpful in assessing cardiac damage
- LDH-1
  - LDH-2
  - LDH-3
  - LDH-4

- Q. No.113 Houssay's dog is**
- a Pinealectomized and hypophysectomized
  - b Depancreatized and hypophysectomized
  - c Depancreatized and Pinealectomized
  - d Depancreatized and adrenalectomized
- Q. No.114 Hexamethylphosphoramide is a potent**
- a Inhibits synthesis of adrenal steroids
  - b Antispermatic agent
  - c Inhibitory to MSH secretions
  - d Microtubule inhibitor
- Q. No.115 Which one of the followings is potent antidiuretic hormone for all mammals except pig and humans?**
- a Lysine vasopressin
  - b Arginine vasopressin
  - c Oxytocin
  - d Lysine vasotocin
- Q. No.116 Action of  $\text{Na}^+$ -  $\text{K}^+$  pump involves**
- a Influx of three potassium ions and efflux of two sodium ions
  - b Influx of two potassium ions and efflux of two sodium ions
  - c Influx of two potassium ions and efflux of three sodium ions
  - d Influx of three potassium ions and efflux of three sodium ions
- Q. No.117 Experiment used to demonstrate the importance of plasma proteins for survival and synthesis of plasma proteins by liver**
- a Gel filtration chromatography
  - b Plasmapheresis
  - c Electrophoresis
  - d Salting-out method
- Q. No.118 Receptors that have not been identified in birds**
- a Central chemoreceptors
  - b Peripheral mechanoreceptors
  - c Proprioceptors
  - d Thermoreceptors
- Q. No.119 What prevents actin and myosin from existing in a continuously bonded state?**
- a Troponin
  - b Tropomyosin
  - c Calcium ions
  - d ATP

**Q. No.120** Activation of  $\beta$  adrenergic receptors does not associated with

- a Relaxation of smooth muscle in the lung (bronchodilation)
- b Peripheral vasodilation with subsequent hypotension
- c Reflex tachycardia
- d Asthama



**Key: Veterinary Physiology**

Q. No.	Answer	Q. No.	Answer	Q. No.	Answer
1	b	41	c	81	b
2	c	42	c	82	c
3	b	43	a	83	d
4	c	44	b	84	d
5	d	45	b	85	c
6	b	46	b	86	b
7	b	47	c	87	d
8	a	48	a	88	b
9	c	49	d	89	c
10	d	50	a	90	a
11	c	51	a	91	b
12	b	52	c	92	b
13	b	53	a	93	d
14	a	54	a	94	b
15	c	55	a	95	d
16	d	56	d	96	a
17	c	57	d	97	c
18	b	58	c	98	c
19	c	59	a	99	a
20	d	60	b	100	d
21	d	61	a	101	d
22	b	62	c	102	b
23	a	63	a	103	a
24	a	64	a	104	c
25	d	65	b	105	c
26	d	66	d	106	a
27	a	67	a	107	a
28	b	68	a	108	a
29	c	69	d	109	c
30	c	70	b	110	b
31	b	71	b	111	c
32	a	72	c	112	a
33	b	73	c	113	b
34	d	74	c	114	b
35	a	75	c	115	b
36	d	76	a	116	c
37	d	77	c	117	b
38	b	78	b	118	c
39	b	79	c	119	b
40	c	80	c	120	d