

31 Veterinary Animal Physiology ICAR SEPT 2022

Topic:- GEN KNOW COMMON PHD

1) Colour of the tag used on certified seed bags is[Question ID = 16958][Question Description = 101_221_GKD_SEP22_Q01]

1. Blue [Option ID = 37829]
2. Purple [Option ID = 37830]
3. White [Option ID = 37831]
4. Golden Yellow [Option ID = 37832]

2) Following are the statements regarding the Usar soil -

- A. It is reclaimed by adding lime.
- B. This soil has pH more than seven.
- C. Paddy crop can be grown in this soil.

Choose the *correct* answer from the options given below:

[Question ID = 16959][Question Description = 102_221_GKD_SEP22_Q02]

1. A and B only [Option ID = 37833]
2. B and C only [Option ID = 37834]
3. C only [Option ID = 37835]
4. A only [Option ID = 37836]

3) When total utility of a commodity increases, marginal utility will be

[Question ID = 16960][Question Description = 103_221_GKD_SEP22_Q03]

1. Negative but increasing
[Option ID = 37837]
2. Positive but decreasing
[Option ID = 37838]
3. Constant
[Option ID = 37839]
4. Either positive or negative
[Option ID = 37840]

4) Where is the headquarter of International Fund for Agriculture Development located?

[Question ID = 16961][Question Description = 104_221_GKD_SEP22_Q04]

1. Vienna, Austria
[Option ID = 37841]
2. Rome, Italy
[Option ID = 37842]
3. New York, USA
[Option ID = 37843]
4. Berlin, Germany
[Option ID = 37844]

5) Mid-Oceanic Ridges are one of the important divisions of the ocean floor. In this respect, point out the incorrect statement regarding the 'Mid-Oceanic Ridges'. [Question ID = 16962][Question Description = 105_221_GKD_SEP22_Q05]

1. It is the largest mountain chain on the surface of the earth [Option ID = 37845]
2. It is a series of interconnected chain within the ocean. [Option ID = 37846]
3. It is characterised by a central rift system [Option ID = 37847]
4. The rift system at the crest is the zone of very low volcanic activity. [Option ID = 37848]

6) Consider the following facts about the union territory of India and point out the one which is incorrect in relation to union territory. [Question ID = 16963][Question Description = 106_221_GKD_SEP22_Q06]

1. These are the areas under the direct control of central government. [Option ID = 37849]
2. Also known as the 'centrally administered territories. [Option ID = 37850]

3. These territories constitute a conspicuous departure from the unitary feature of India. [Option ID = 37851]
4. There is no uniformity in their administrative systems. [Option ID = 37852]

7) Variety of flora and fauna are found in the different types of forest in India. In this regard, species of trees like teak, *sal shisham*, *sandalwood*, etc. are found in which of the following type of forests in India?[Question ID = 16964][Question Description = 107_221_GKD_SEP22_Q07]

1. Tropical evergreen forests [Option ID = 37853]
2. Tropical thorn forests [Option ID = 37854]
3. Tropical deciduous forests [Option ID = 37855]
4. Montane forests [Option ID = 37856]

8) The Marginal Preference Theory of consumption behaviour was proposed by

[Question ID = 16965][Question Description = 108_221_GKD_SEP22_Q08]

1. Armstrong
[Option ID = 37857]
2. J.K.Hicks
[Option ID = 37858]
3. Neumann
[Option ID = 37859]
4. Edmund Cannon
[Option ID = 37860]

9) Point out the incorrect statements regarding the service sector in India.[Question ID = 16966][Question Description = 109_221_GKD_SEP22_Q09]

1. It is the highest contributor to GDP [Option ID = 37861]
2. It requires skilled labour [Option ID = 37862]
3. It is the fastest growing sector [Option ID = 37863]
4. It is restricted to very few sectors. [Option ID = 37864]

10) Consider the statements regarding the agriculture sector in India and point out the incorrect statement.[Question ID = 16967][Question Description = 110_221_GKD_SEP22_Q10]

1. Agriculture sector is the largest employer of workforce [Option ID = 37865]
2. It has contributed to the Gross Value Added (GVA) [Option ID = 37866]
3. Growth in allied sectors is the major drivers of overall growth in the sector. [Option ID = 37867]
4. Minimum Support Price (MSP) policy is used as to promote crop uniformity. [Option ID = 37868]

11) In case of related goods, the cross elasticity of demand is[Question ID = 16968][Question Description = 111_221_GKD_SEP22_Q11]

1. Low [Option ID = 37869]
2. High [Option ID = 37870]
3. Zero [Option ID = 37871]
4. Unity [Option ID = 37872]

12) With reference to organic farming in India, consider the following statements :

- A. The National Programme for Organic Production' (NPOP) is operated under the guidelines and directions of the Union Ministry of Rural Development.
- B. The Agricultural and Processed Food Products Export Development Authority' (APEDA) functions as the Secretariat for the implementation of NPOP.
- C. Sikkim has become India's first fully organic state.

Choose the *correct* answer from the options given below:

[Question ID = 16969][Question Description = 112_221_GKD_SEP22_Q12]

1. A and B only
[Option ID = 37873]
2. B and C only
[Option ID = 37874]
3. C only
[Option ID = 37875]
4. A, B and C

[Option ID = 37876]

13) With reference to the circumstances in Indian agriculture, the concept of "Conservation Agriculture" assumes significance. Which of the following falls under the Conservation Agriculture ?

- A. Avoiding the monoculture practices.
- B. Adopting minimum tillage.
- C. Avoiding the cultivation of plantation crops.
- D. Using crop residues to cover soil surface.
- E. Adopting spatial and temporal crop sequencing/ crop rotations.

Choose the *correct* answer from the options given below:

[Question ID = 16970][Question Description = 113_221_GKD_SEP22_Q13]

- 1. A, C and D only [Option ID = 37877]
- 2. B, C, D and E only [Option ID = 37878]
- 3. B, D and E only [Option ID = 37879]
- 4. A, B, C and E only [Option ID = 37880]

14) Consumers are likely to get a variety of goods in which kind of market competition[Question ID = 16971][Question Description = 114_221_GKD_SEP22_Q14]

- 1. Monopoly [Option ID = 37881]
- 2. Duopoly [Option ID = 37882]
- 3. Oligopoly [Option ID = 37883]
- 4. Monopolistic [Option ID = 37884]

15) What is the correct chronological order of the following laws enacted for the conservation and protection of environment ?

- A. Environment (Protection) Act.
- B. Water (Prevention & Control of Pollution) Act.
- C. Air (Prevention & Control of pollution) Act.
- D. National Green Tribunal Act.

Choose the *correct* answer from the options given below:

[Question ID = 16972][Question Description = 115_221_GKD_SEP22_Q15]

- 1. B, C, A, D [Option ID = 37885]
- 2. A, B, C, D [Option ID = 37886]
- 3. C, B, A, D [Option ID = 37887]
- 4. D, C, B, A [Option ID = 37888]

16) The scientific study of soil is[Question ID = 16973][Question Description = 116_221_GKD_SEP22_Q16]

- 1. Earth Study [Option ID = 37889]
- 2. Soil Science [Option ID = 37890]
- 3. Pedology [Option ID = 37891]
- 4. Soil Chemistry [Option ID = 37892]

17) *Triticum aestivum*, the common bread wheat is -

[Question ID = 16974][Question Description = 117_221_GKD_SEP22_Q17]

- 1. Tetraploid

[Option ID = 37893]

- 2. Hexaploid

[Option ID = 37894]

- 3. Haploid

[Option ID = 37895]

- 4. Diploid

[Option ID = 37896]

18) Sectoral inflation refers to[Question ID = 16975][Question Description = 118_221_GKD_SEP22_Q18]

- 1. Running inflation [Option ID = 37897]

2. Comprehensive inflation [Option ID = 37898]
3. Sporadic inflation [Option ID = 37899]
4. Creeping inflation [Option ID = 37900]

19) Keynes Liquidity trap refers to[Question ID = 16976][Question Description = 119_221_GKD_SEP22_Q19]

1. Speculative demand for money [Option ID = 37901]
2. Transactions motive of money is inelastic [Option ID = 37902]
3. Precautionary motive of money is inelastic [Option ID = 37903]
4. Transactions motive of money is constant [Option ID = 37904]

20) A business is solvent if[Question ID = 16977][Question Description = 120_221_GKD_SEP22_Q20]

1. Total receipts exceed total expenditures [Option ID = 37905]
2. Total debt exceeds total equity [Option ID = 37906]
3. Total sales exceed total cash expense [Option ID = 37907]
4. Total assets exceed total liabilities [Option ID = 37908]

Topic:- Veterinary and Animal Sciences 4_PHD

1) The immediate source of water loss from the body is

[Question ID = 4251][Question Description = 101_123_BVS_SEP22_Q01]

1. Intracellular fluid
[Option ID = 17001]
2. Intercellular fluid
[Option ID = 17002]
3. Extracellular fluid
[Option ID = 17003]
4. Cerebro-spinal fluid
[Option ID = 17004]

2) Which cardiac valves close with the first heart sound?

[Question ID = 4252][Question Description = 102_123_BVS_SEP22_Q02]

1. Atrioventricular valves
[Option ID = 17005]
2. Semilunar valves
[Option ID = 17006]
3. Both atrioventricular and Semilunar valves
[Option ID = 17007]
4. Neither, both valves open with the first heart sound
[Option ID = 17008]

3) The life span of WBC is approximately[Question ID = 4253][Question Description = 103_123_BVS_SEP22_Q03]

1. less than 10 days [Option ID = 17009]
2. between 20-30 days [Option ID = 17010]
3. between 2-3 months [Option ID = 17011]
4. more than three months [Option ID = 17012]

4) The darker purple color of venous blood is due to:[Question ID = 4254][Question Description = 104_123_BVS_SEP22_Q04]

1. Decreased concentration of Carbon dioxide [Option ID = 17013]
2. Increased concentration of Carbon dioxide [Option ID = 17014]
3. Decreased concentration of Oxygen [Option ID = 17015]
4. Increased concentration of Oxygen [Option ID = 17016]

5) Which of the following is not a true statement about pulmonary surfactant;

[Question ID = 4255][Question Description = 105_123_BVS_SEP22_Q05]

1. It can be deficient in premature newborns
[Option ID = 17017]
2. It is produced in type II alveolar cells
[Option ID = 17018]

3. It is in part composed of dipalmitoyl phosphatidylcholine

[Option ID = 17019]

4. It is produced by pulmonary endothelial cells

[Option ID = 17020]

6) Uric acid precipitates in the renal tubules in order to:[Question ID = 4256][Question Description = 106_123_BVS_SEP22_Q06]

1. Avoid ammonia toxicity [Option ID = 17021]

2. Avoid obligation of water excretion [Option ID = 17022]

3. Lubricate the renal tubules [Option ID = 17023]

4. Have a better mix with feces [Option ID = 17024]

7) Vomiting center is present in[Question ID = 4257][Question Description = 107_123_BVS_SEP22_Q07]

1. Hypothalamus [Option ID = 17025]

2. Medulla [Option ID = 17026]

3. Pons [Option ID = 17027]

4. Hippocampus [Option ID = 17028]

8) Which one of the avian digestive tract structures secretes HCl and pepsinogen?[Question ID = 4258][Question Description = 108_123_BVS_SEP22_Q08]

1. Crop [Option ID = 17029]

2. Proventriculus [Option ID = 17030]

3. Gizzard [Option ID = 17031]

4. Ceca [Option ID = 17032]

9) Rigor mortis is due to

[Question ID = 4259][Question Description = 109_123_BVS_SEP22_Q09]

1. Damage to actin and myosin

[Option ID = 17033]

2. Rapid sequestration of Calcium in endoplasmic reticulum

[Option ID = 17034]

3. Increased myosin ATPase

[Option ID = 17035]

4. ATP depletion

[Option ID = 17036]

10) The neurotransmitter at the sympathetic postganglionic-to-target organ synapse is[Question ID = 4260][Question Description = 110_123_BVS_SEP22_Q10]

1. Nor epinephrine [Option ID = 17037]

2. Epinephrine [Option ID = 17038]

3. Acetylcholine [Option ID = 17039]

4. Dopamine [Option ID = 17040]

11) Neuroglia that is part of the choroid plexus comprises:[Question ID = 4261][Question Description = 111_123_BVS_SEP22_Q11]

1. Astrocytes [Option ID = 17041]

2. Ependymal cells [Option ID = 17042]

3. Microglia [Option ID = 17043]

4. Oligodendrocytes [Option ID = 17044]

12) Which one of the following hormones promotes the tubular reabsorption of Na⁺ and the tubular secretion of K⁺? [Question ID = 4262][Question Description = 112_123_BVS_SEP22_Q12]

1. Antidiuretic hormone [Option ID = 17045]

2. Secretin [Option ID = 17046]

3. Aldosterone [Option ID = 17047]

4. Vasopressin [Option ID = 17048]

13) Which species is considered suitable for the production of human organ for transplantation?

[Question ID = 4263][Question Description = 113_123_BVS_SEP22_Q13]

1. Cattle [Option ID = 17049]

2. Buffalo [Option ID = 17050]

3. Pig [Option ID = 17051]
4. Mare [Option ID = 17052]

14) Noori is the clone of[Question ID = 4264][Question Description = 114_123_BVS_SEP22_Q14]

1. Sheep [Option ID = 17053]
2. Goat [Option ID = 17054]
3. Pig [Option ID = 17055]
4. Buffalo [Option ID = 17056]

15) Short term day-to-day fluctuation of the meteorological variables, is known as:

[Question ID = 4265][Question Description = 115_123_BVS_SEP22_Q15]

1. Climate [Option ID = 17057]
2. Weather [Option ID = 17058]
3. Microclimate [Option ID = 17059]
4. Macro Climate [Option ID = 17060]

16) The Henderson-Hasselbalch equation for determining the pH of a buffer is given as[Question ID = 4266][Question Description = 116_123_BVS_SEP22_Q16]

1. $\text{pH}=\text{pKa}+\log[\text{salt}]/[\text{acid}]$ [Option ID = 17061]
2. $\text{pH}=\text{pKa}+\log[\text{acid}]/[\text{salt}]$ [Option ID = 17062]
3. $\text{pH}=\text{pKa}-\log[\text{salt}]/[\text{acid}]$ [Option ID = 17063]
4. $\text{pH}=\text{pKa}-\log[\text{acid}]/[\text{salt}]$ [Option ID = 17064]

17) The skin fibroblasts contain[Question ID = 4267][Question Description = 117_123_BVS_SEP22_Q17]

1. Hyaluronic acid [Option ID = 17065]
2. Chondroitin sulfate [Option ID = 17066]
3. Dermatan sulfate [Option ID = 17067]
4. Heparan sulfate [Option ID = 17068]

18) The following is an inhibitor of cytochrome oxidase in electron transport chain

[Question ID = 4268][Question Description = 118_123_BVS_SEP22_Q18]

1. BAL [Option ID = 17069]
2. Rotenone [Option ID = 17070]
3. Sodium azide [Option ID = 17071]
4. CO_2 [Option ID = 17072]

19) Thyroxine is a[Question ID = 4269][Question Description = 119_123_BVS_SEP22_Q19]

1. Steroid hormone [Option ID = 17073]
2. Peptide hormone [Option ID = 17074]
3. Vitamin [Option ID = 17075]
4. Neurotransmitter [Option ID = 17076]

20) Prokaryotic mRNA is[Question ID = 4270][Question Description = 120_123_BVS_SEP22_Q20]

1. Monocistronic [Option ID = 17077]
2. Polycistronic [Option ID = 17078]
3. Contain a Poly A tail [Option ID = 17079]
4. Contain introns [Option ID = 17080]

21) Chemiosmotic hypothesis is associated with[Question ID = 4271][Question Description = 121_123_BVS_SEP22_Q21]

1. ATP synthesis [Option ID = 17081]
2. Protein synthesis [Option ID = 17082]
3. Protein transport [Option ID = 17083]
4. Signal transduction [Option ID = 17084]

22) Enzymes having slightly different molecular structures but performing identical activity are

[Question ID = 4272][Question Description = 122_123_BVS_SEP22_Q22]

1. Holoenzymes [Option ID = 17085]
2. Apoenzymes [Option ID = 17086]
3. Isoenzymes [Option ID = 17087]
4. Coenzymes [Option ID = 17088]

23) The following statement(s) about Ribulose is true.

[Question ID = 4273][Question Description = 123_123_BVS_SEP22_Q23]

1. It is a tetrose sugar [Option ID = 17089]
2. It has an aldehyde group [Option ID = 17090]
3. It is a hexose sugar [Option ID = 17091]
4. It is a keto pentose [Option ID = 17092]

24) Negative regulator of pyruvate kinase is[Question ID = 4274][Question Description = 124_123_BVS_SEP22_Q24]

1. Acetyl coA [Option ID = 17093]
2. Alanine [Option ID = 17094]
3. Citrate [Option ID = 17095]
4. Fructose 1,6 Biphosphate [Option ID = 17096]

25) For all the common amino acid except glycine the carbon atom is bonded to different groups.

- A. An amino group
- B. An R-group
- C. A carboxyl group
- D. Hydrogen atom

Choose the *correct* answer from the options given below:

[Question ID = 4275][Question Description = 125_123_BVS_SEP22_Q25]

1. A and B only
[Option ID = 17097]
2. B and C only
[Option ID = 17098]
3. A, B and D only
[Option ID = 17099]
4. A, B, C and D
[Option ID = 17100]

26) Which of the amino acid is simplest in structure

[Question ID = 4276][Question Description = 126_123_BVS_SEP22_Q26]

1. Methionine [Option ID = 17101]
2. Glycine [Option ID = 17102]
3. Alanine [Option ID = 17103]
4. Valine [Option ID = 17104]

27) System of specifying configuration around a chiral center of amino acid is

[Question ID = 4277][Question Description = 127_123_BVS_SEP22_Q27]

1. D, L system only [Option ID = 17105]
2. RS system only [Option ID = 17106]
3. D, L & RS system both [Option ID = 17107]
4. Chimeric system [Option ID = 17108]

28) Given below are two statements

Statement I: Pure water is slightly ionized

Statement II: Water has slight tendency to reversible ionization yielding a hydrogen ion and hydroxylion

In light of the above statements, choose the *correct* answer from the options given below

[Question ID = 4278][Question Description = 128_123_BVS_SEP22_Q28]

1. Statement I and Statement II are correct and Statement II is the correct justification of Statement I [Option ID = 17109]
2. Statement I and Statement II both are correct but Statement II is NOT the correct justification of Statement I [Option ID = 17110]
3. Statement I is correct but Statement II is false [Option ID = 17111]
4. Statement I and Statement II both are incorrect [Option ID = 17112]

29) Two catabolic process of glycogen are

[Question ID = 4279][Question Description = 129_123_BVS_SEP22_Q29]

1. Glycogenolysis and Glycogenesis
[Option ID = 17113]
2. Glycogenolysis and Gluconeogenesis

[Option ID = 17114]

3. Glycolysis and Glycogenolysis

[Option ID = 17115]

4. Glycolysis and Glycogenesis

[Option ID = 17116]

30) _____ is the immediate donor of glucose residue in the reaction catalyzed by glycogen synthase.

[Question ID = 4280][Question Description = 130_123_BVS_SEP22_Q30]

1. UMP-glucose

[Option ID = 17117]

2. UDP-glucose

[Option ID = 17118]

3. UTP-glucose

[Option ID = 17119]

4. Glucose-1-Phosphate

[Option ID = 17120]

31) Two sugars which differ only in the configuration around one carbon atom are called _____

[Question ID = 4281][Question Description = 131_123_BVS_SEP22_Q31]

1. Chimers [Option ID = 17121]

2. Chirals [Option ID = 17122]

3. Epimers [Option ID = 17123]

4. Isomers [Option ID = 17124]

32) two stereoisomers of glyceraldehyde can be represented by

A. Ball and stick models

B. Fisher projection formulas

C. Perspective formulas

Which of the following is *correct*

[Question ID = 4282][Question Description = 132_123_BVS_SEP22_Q32]

1. A only [Option ID = 17125]

2. B only [Option ID = 17126]

3. A and B only [Option ID = 17127]

4. A, B and C [Option ID = 17128]

33) Dextran are

[Question ID = 4283][Question Description = 133_123_BVS_SEP22_Q33]

1. Bacterial glucosen [Option ID = 17129]

2. Bacterial and yeast polysaccharides [Option ID = 17130]

3. Yeast starch [Option ID = 17131]

4. Bacterial and yeast branched chain amino acids [Option ID = 17132]

34) Inhibitors that bind covalently with or destroy a functional group on an enzyme that is essential for enzymatic activity is called

[Question ID = 4284][Question Description = 134_123_BVS_SEP22_Q34]

1. Suicidal inactivators [Option ID = 17133]

2. Mixed inhibitor [Option ID = 17134]

3. Uncompetitive inhibitor [Option ID = 17135]

4. Irreversible inhibitor [Option ID = 17136]

35) Pyruvate kinase is allosterically inhibited by _____

[Question ID = 4285][Question Description = 135_123_BVS_SEP22_Q35]

1. AMP [Option ID = 17137]

2. ATP [Option ID = 17138]

3. UTP [Option ID = 17139]

4. UDP [Option ID = 17140]

36) Handmade cloning is a method of?[Question ID = 4286][Question Description = 136_123_BVS_SEP22_Q36]

1. DNA cloning by manual methods [Option ID = 17141]
2. Somatic cell nuclear transfer [Option ID = 17142]
3. Replica plating of bacteria using a handmade wooden block [Option ID = 17143]
4. Blastomeric cloning [Option ID = 17144]

37) Sebelipase alfa, an FDA-approved protein for the treatment of lysosomal acid lipase deficiency, has been produced in transgenic[Question ID = 4287][Question Description = 137_123_BVS_SEP22_Q37]

1. Salmon [Option ID = 17145]
2. Rabbit [Option ID = 17146]
3. Chicken egg [Option ID = 17147]
4. Goat milk [Option ID = 17148]

38) Recombination of different types of cells to form more defined tissue or organ is known as ...[Question ID = 4288][Question Description = 138_123_BVS_SEP22_Q38]

1. Organotypic culture [Option ID = 17149]
2. Primary culture [Option ID = 17150]
3. Secondary culture [Option ID = 17151]
4. Cell line [Option ID = 17152]

39) Mung bean S1 nuclease could be used for...[Question ID = 4289][Question Description = 139_123_BVS_SEP22_Q39]

1. DNA synthesis [Option ID = 17153]
2. Nucleotide hydrolysis [Option ID = 17154]
3. Trimming single stranded regions in DNA [Option ID = 17155]
4. Removal of phosphate group from the ends of the DNA [Option ID = 17156]

40) Ligation reaction is generally performed at a temperature of[Question ID = 4290][Question Description = 140_123_BVS_SEP22_Q40]

1. 37°C [Option ID = 17157]
2. 40°C [Option ID = 17158]
3. 16°C [Option ID = 17159]
4. 25°C [Option ID = 17160]

41) Consider the following statements:

I. T4 DNA ligase can catalyze blunt end ligation more efficiently than E. coli DNA ligase

II. The ligation efficiency of T4 DNA ligase can be increased with PEG and Ficoll.

III. T4 ligase require ATP while E.coli DNA ligase require NAD⁺

[Question ID = 4291][Question Description = 141_123_BVS_SEP22_Q41]

1. Only I is true [Option ID = 17161]
2. Only II is true [Option ID = 17162]
3. Both I and III are true [Option ID = 17163]
4. All are true [Option ID = 17164]

42) Which second messenger signals the release of Ca⁺⁺ from the endoplasmic reticulum?[Question ID = 4292][Question Description = 142_123_BVS_SEP22_Q42]

1. Cyclic AMP [Option ID = 17165]
2. Cyclic GMP [Option ID = 17166]
3. 1,2 diacyl glycerol [Option ID = 17167]
4. Inositol triphosphate [Option ID = 17168]

43) The molecular mass of a protein is 22 kDa. The size of cDNA (excluding the UTR) that codes for this proteins is kb.[Question ID = 4293][Question Description = 143_123_BVS_SEP22_Q43]

1. 1.5 [Option ID = 17169]
2. 0.8 [Option ID = 17170]
3. 4.4 [Option ID = 17171]
4. 0.6 [Option ID = 17172]

44) The structure of an average eukaryotic gene includes...

[Question ID = 4294][Question Description = 144_123_BVS_SEP22_Q44]

1. UTR, CDS, Poly(A) [Option ID = 17173]
2. RBS, Exon, Intron [Option ID = 17174]
3. UAS, DAS, CDS [Option ID = 17175]
4. CDS, UAS, Poly(A) [Option ID = 17176]

45) Only percentage of total RNA is mRNA.[Question ID = 4295][Question Description = 145_123_BVS_SEP22_Q45]

1. 1-2% [Option ID = 17177]
2. 4-5% [Option ID = 17178]
3. 5-10% [Option ID = 17179]
4. 80-90% [Option ID = 17180]

46) How many chromosomes will be found per cell in trisomic cattle (*Bos taurus*)?[Question ID = 4296][Question Description = 146_123_BVS_SEP22_Q46]

1. 60 [Option ID = 17181]
2. 90 [Option ID = 17182]
3. 180 [Option ID = 17183]
4. 61 [Option ID = 17184]

47) The number of atoms held into a geometric plane by a peptide bond is:[Question ID = 4297][Question Description = 147_123_BVS_SEP22_Q47]

1. 2 [Option ID = 17185]
2. 3 [Option ID = 17186]
3. 4 [Option ID = 17187]
4. 6 [Option ID = 17188]

48) To isolate a gene coding for Insulin, the mRNA has to be isolated from...[Question ID = 4298][Question Description = 148_123_BVS_SEP22_Q48]

1. Intestine [Option ID = 17189]
2. Pancreas [Option ID = 17190]
3. Pituitary [Option ID = 17191]
4. Any tissue can be used [Option ID = 17192]

49) The C-value of laboratory mice is approximately[Question ID = 4299][Question Description = 149_123_BVS_SEP22_Q49]

1. 1.3 billion [Option ID = 17193]
2. 2.1 billion [Option ID = 17194]
3. 3.2 billion [Option ID = 17195]
4. 4.3 billion [Option ID = 17196]

50) The air-lift bioreactor is best suited for...[Question ID = 4300][Question Description = 150_123_BVS_SEP22_Q50]

1. Monolayers culture [Option ID = 17197]
2. Suspension culture [Option ID = 17198]
3. Culturing blood [Option ID = 17199]
4. Embryo culture [Option ID = 17200]

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1) Na^+/K^+ pumps are used for all of the following functions, except for the

[Question ID = 4301][Question Description = 101_124_VPA_SEP22_Q01]

1. electrical activity of nerve cells [Option ID = 17201]
2. cotransport of organic molecules [Option ID = 17202]
3. production of body heat [Option ID = 17203]
4. exchange of gases between the cytoplasm and extracellular fluid [Option ID = 17204]

2) Regarding ionic basis of action potential in cardiac muscle, which one of the following is incorrect?

[Question ID = 4302][Question Description = 102_124_VPA_SEP22_Q02]

1. Phase 0: Na influx [Option ID = 17205]
2. Phase 1: K influx [Option ID = 17206]
3. Phase 2: Ca influx [Option ID = 17207]
4. Phase 3: K efflux [Option ID = 17208]

3) Which of the WBC is used as a marker in case of stress and cortisol rise in animals?

[Question ID = 4303][Question Description = 103_124_VPA_SEP22_Q03]

1. Eosinopenia [Option ID = 17209]
2. Lymphopenia [Option ID = 17210]
3. Neutropenia [Option ID = 17211]
4. Basophilia [Option ID = 17212]

4) The normal pathway followed by a cardiac action potential is to begin in the SA node and then spread

[Question ID = 4304][Question Description = 104_124_VPA_SEP22_Q04]

1. Across the atria in the bundle of His. [Option ID = 17213]
2. Through the connective tissue layers that separate the atria and ventricle. [Option ID = 17214]
3. Across the atria and to the AV node. [Option ID = 17215]
4. From the left atrium to the right atrium. [Option ID = 17216]

5) The time required for the conduction of the cardiac action potential through the AV node would be approximately equal to the

[Question ID = 4305][Question Description = 105_124_VPA_SEP22_Q05]

1. RR interval [Option ID = 17217]
2. PR interval [Option ID = 17218]
3. ST interval [Option ID = 17219]
4. QT interval [Option ID = 17220]

6) _____ diverts blood from pulmonary artery to aorta .

[Question ID = 4306][Question Description = 106_124_VPA_SEP22_Q06]

1. Ductus arteriosus [Option ID = 17221]
2. Ductus Venosus [Option ID = 17222]
3. Foramen Ovale [Option ID = 17223]
4. None of the above [Option ID = 17224]

7) Which of the following statements most accurately describes avian air sacs?

[Question ID = 4307][Question Description = 107_124_VPA_SEP22_Q07]

1. The air sacs are highly vascular membranes that significantly contribute to gas exchange [Option ID = 17225]
2. The air sacs receive inspired air before it crosses the paleopulmonic and neopulmonic lung tissues [Option ID = 17226]
3. The volume of the air sacs is unaffected by body position [Option ID = 17227]
4. The air sacs do not have a significant gas-exchange function and only serve to provide a tidal flow of gas across the lung tissue [Option ID = 17228]

8) Breathing characterized by increased depth, frequency, or both, and is noticeable after physical exertion.[Question ID = 4308][Question Description = 108_124_VPA_SEP22_Q08]

1. Bradypnea [Option ID = 17229]
2. Polypnea [Option ID = 17230]
3. Tachypnea [Option ID = 17231]
4. Hyperpnea [Option ID = 17232]

9) Which of the following will cause Hemoglobin-Oxygen dissociation curve shift to left?

[Question ID = 4309][Question Description = 109_124_VPA_SEP22_Q09]

1. High BPG
[Option ID = 17233]
2. High Temperature
[Option ID = 17234]
3. High pCO₂
[Option ID = 17235]
4. High pH
[Option ID = 17236]

10) Which type of hypoxia defines the condition where the cells are unable to use the oxygen that is supplied?[Question ID = 4310][Question Description = 110_124_VPA_SEP22_Q10]

1. Anemic hypoxia [Option ID = 17237]
2. Ischemic hypoxia [Option ID = 17238]
3. Histotoxic hypoxia [Option ID = 17239]
4. Hypoxic hypoxia [Option ID = 17240]

11) Which of the following receptor have afferent nerve fibers in the glossopharyngeal nerve?[Question ID = 4311]

[Question Description = 111_124_VPA_SEP22_Q11]

1. Carotid bodies [Option ID = 17241]
2. Slowly adapting pulmonary stretch receptors [Option ID = 17242]
3. Aortic bodies [Option ID = 17243]
4. Intercostal stretch receptors [Option ID = 17244]

12) The ventilator response to a change in PaCO₂

[Question ID = 4312][Question Description = 112_124_VPA_SEP22_Q12]

1. is mediated through a change in pH of interstitial fluid bathing the central chemoreceptors. [Option ID = 17245]
2. is accentuated in metabolic acidosis, because there is less buffering of the interstitial fluid around the central chemoreceptors. [Option ID = 17246]
3. is modified during exercise, so PaCO₂ remains constant despite a large increase in carbon dioxide production. [Option ID = 17247]
4. all of the above

Please check- Option not given in Correction sheet [Option ID = 17248]

13) Tubular fluid is transported from Bowman's capsule to the renal pelvis by:[Question ID = 4313][Question Description = 113_124_VPA_SEP22_Q13]

1. Action of cilia [Option ID = 17249]
2. Peristalsis [Option ID = 17250]
3. Hydrostatic pressure gradient [Option ID = 17251]
4. Bucket brigade [Option ID = 17252]

14) Creatinine clearance evaluations provide an estimate of:[Question ID = 4314][Question Description = 114_124_VPA_SEP22_Q14]

1. Functional renal mass [Option ID = 17253]
2. Amount of protein metabolism [Option ID = 17254]
3. Muscle mass [Option ID = 17255]
4. Ability to concentrate urine [Option ID = 17256]

15) A layer of epithelial cells surrounding the outer surface of the capillary basement membrane[Question ID = 4315][Question Description = 115_124_VPA_SEP22_Q15]

1. Mesangial cells [Option ID = 17257]
2. Podocytes [Option ID = 17258]
3. Endothelial cells [Option ID = 17259]
4. JG cells [Option ID = 17260]

16) Among the GIT hormones, which one is called as the fireman of GIT?

[Question ID = 4316][Question Description = 116_124_VPA_SEP22_Q16]

1. Secretin [Option ID = 17261]
2. Enterogastrone [Option ID = 17262]
3. Cholecystokinin [Option ID = 17263]
4. Motilin [Option ID = 17264]

17) Brachydont teeth are present in;

[Question ID = 4317][Question Description = 117_124_VPA_SEP22_Q17]

1. Dogs
[Option ID = 17265]
2. Cats
[Option ID = 17266]
3. Humans
[Option ID = 17267]
4. all the above
[Option ID = 17268]

18) Regurgitation is initiated in

[Question ID = 4318][Question Description = 118_124_VPA_SEP22_Q18]

1. Rumen
[Option ID = 17269]
2. Reticulum
[Option ID = 17270]
3. Omasum
[Option ID = 17271]
4. Abomasum
[Option ID = 17272]

19) Which of the following reaction in the liver could be expected to occur during both the digestion phase and a

prolonged fast?[Question ID = 4319][Question Description = 119_124_VPA_SEP22_Q19]

1. Glycogen synthesis [Option ID = 17273]
2. Fatty acid synthesis [Option ID = 17274]
3. Ketone body synthesis [Option ID = 17275]
4. Triglyceride synthesis from fatty acids [Option ID = 17276]

20) Most of the calcium in the endoplasmic reticulum is sequestered by[Question ID = 4320][Question Description = 120_124_VPA_SEP22_Q20]

1. Calmodulin [Option ID = 17277]
2. Caldesmin [Option ID = 17278]
3. Calbindin [Option ID = 17279]
4. Calsequestrin [Option ID = 17280]

21) The minimum stimulus strength that produces a compound action potential in nerve or muscle, is known as

[Question ID = 4321][Question Description = 121_124_VPA_SEP22_Q21]

1. Rheobase [Option ID = 17281]
2. Chronaxei [Option ID = 17282]
3. Twice rheobase [Option ID = 17283]
4. Twice chronaxei [Option ID = 17284]

22) Which statement is correct for the muscle spindle?[Question ID = 4322][Question Description = 122_124_VPA_SEP22_Q22]

1. It is made of extrafusal muscles surrounded by connective tissue capsule [Option ID = 17285]
2. It is made of extrafusal muscles with no connective tissue capsule [Option ID = 17286]
3. It is made of intrafusal muscles surrounded by connective tissue capsule [Option ID = 17287]
4. It is made of smooth muscles surrounded by connective tissue capsule [Option ID = 17288]

23) The rotator system detecting acceleration and deceleration is located in the[Question ID = 4323][Question Description = 123_124_VPA_SEP22_Q23]

1. Utricle [Option ID = 17289]
2. Sacculae [Option ID = 17290]
3. Semi circular canal [Option ID = 17291]
4. Cochlea [Option ID = 17292]

24) Amongst below which nerve fiber has fastest conduction velocity[Question ID = 4324][Question Description = 124_124_VPA_SEP22_Q24]

1. A α [Option ID = 17293]
2. AB [Option ID = 17294]
3. A δ [Option ID = 17295]
4. Type B [Option ID = 17296]

25) The EEG is the measurement from the scalp of predominantly what neural activity?[Question ID = 4325][Question Description = 125_124_VPA_SEP22_Q25]

1. Post synaptic activity of the cerebral activity [Option ID = 17297]
2. Action potential in the cerebral cortex [Option ID = 17298]
3. Flow of cerebrospinal fluid in the lateral ventricle [Option ID = 17299]
4. Presynaptic inhibition of the cerebral activity [Option ID = 17300]

26) Which of the following is a characteristic of a graded potential?[Question ID = 4326][Question Description = 126_124_VPA_SEP22_Q26]

1. Adheres to the all-or-none principle of the stimulus applied at synaptic sites [Option ID = 17301]
2. Depolarizes or hyperpolarizes postsynaptic membrane [Option ID = 17302]
3. Opens voltage-gated Na⁺ channels [Option ID = 17303]
4. Propagates along axons [Option ID = 17304]

27) Postganglionic parasympathetic neurons have _____ receptors that bind to neurotransmitter _____.[Question ID = 4327][Question Description = 127_124_VPA_SEP22_Q27]

1. Nicotinic, norepinephrine [Option ID = 17305]
2. Adrenergic β 1, norepinephrine [Option ID = 17306]
3. Muscarinic, acetylcholine [Option ID = 17307]
4. Adrenergic α 1, acetylcholine [Option ID = 17308]

28) Rhythmic pattern of walking relies on the central pattern generator in the:[Question ID = 4328][Question Description = 128_124_VPA_SEP22_Q28]

1. Cerebral motor cortex [Option ID = 17309]
2. Basal nuclei [Option ID = 17310]
3. Cerebellum [Option ID = 17311]
4. Thoracolumbar spinal cord [Option ID = 17312]

29) Match List I with List II

List I	List II
A. Hippus	I. two pupils not of equal size
B. Horner's syndrome	II. tremor of the iris muscle
C. Cataract	III. opaque lens
D. Glaucoma	IV. pathologically high intraocular fluid

Choose the correct answer from the options given below:

[Question ID = 4329][Question Description = 129_124_VPA_SEP22_Q29]

1. A - I, B - II, C - III, D - IV [Option ID = 17313]
2. A - II, B - I, C - III, D - IV [Option ID = 17314]
3. A - III, B - II, C - I, D - IV [Option ID = 17315]
4. A - IV, B - III, C - II, D - I [Option ID = 17316]

30) Nystagmus, a clinical sign is due to the abnormality in the [Question ID = 4330][Question Description = 130_124_VPA_SEP22_Q30]

1. Vestibular system [Option ID = 17317]
2. Reticular activating system [Option ID = 17318]
3. Spinal cord [Option ID = 17319]
4. Cerebral cortex [Option ID = 17320]

31) Cortisol has which one of the following physiological effects?[Question ID = 4331][Question Description = 131_124_VPA_SEP22_Q31]

1. Stimulates tissue growth [Option ID = 17321]
2. Decreases lipolysis by adipose tissue [Option ID = 17322]
3. Increases gluconeogenesis in the liver and kidney [Option ID = 17323]
4. Stimulates mast cells to release histamine [Option ID = 17324]

32) Which one of the following best describes the action of FSH (follicle-stimulating hormone) in the female?[Question ID = 4332][Question Description = 132_124_VPA_SEP22_Q32]

1. Causes lysis or reduction in size of the corpus luteum [Option ID = 17325]
2. Causes granulosa cells to convert androgen to estrogens [Option ID = 17326]
3. Assists in the maturing of an ovarian follicle, its rupture, and subsequent development and maintenance of a corpus luteum [Option ID = 17327]
4. Stimulates the interstitial cells (Leydig cells) to secrete testosterone [Option ID = 17328]

33) Which one of the following best describes the action of progesterone?[Question ID = 4333][Question Description = 133_124_VPA_SEP22_Q33]

1. Increases libido [Option ID = 17329]
2. Increases blood supply and motility of the uterus [Option ID = 17330]
3. Increases endometrial development and glandular secretion of the endometrium, and decreases motility of the uterus [Option ID = 17331]
4. Assists follicular rupture and subsequent development of the corpus luteum [Option ID = 17332]

34) Ova get ready to receive the sperm at the stage of [Question ID = 4334][Question Description = 134_124_VPA_SEP22_Q34]

1. Metaphase stage of 1st meiotic division [Option ID = 17333]
2. Metaphase stage of 2nd meiotic division [Option ID = 17334]
3. Dictyate stage of 1st meiotic division [Option ID = 17335]
4. Dictyate stage of 2nd meiotic division [Option ID = 17336]

35) Back pressure test is used to detect estrus in which of the following species:[Question ID = 4335][Question Description = 135_124_VPA_SEP22_Q35]

1. Sheep [Option ID = 17337]
2. Dog [Option ID = 17338]
3. Mare [Option ID = 17339]
4. Pig [Option ID = 17340]

36) Restoration of the uterus to its normal non pregnant size and function after parturition, is known as.

[Question ID = 4336][Question Description = 136_124_VPA_SEP22_Q36]

1. Involution [Option ID = 17341]

2. Convolution [Option ID = 17342]
3. Invagination [Option ID = 17343]
4. Lochia [Option ID = 17344]

37) Synepitheliochorial placenta is present in all animals except[Question ID = 4337][Question Description = 137_124_VPA_SEP22_Q37]

1. Sheep [Option ID = 17345]
2. Goat [Option ID = 17346]
3. Cow [Option ID = 17347]
4. Mare [Option ID = 17348]

38) Which statement is true about mitochondria, except,

[Question ID = 4338][Question Description = 138_124_VPA_SEP22_Q38]

1. Located peripherally in the oocyte prior to LH surge.
[Option ID = 17349]
2. Distributed throughout the cytoplasm after ovulation.
[Option ID = 17350]
3. Contributed to embryo mainly by the oocyte.
[Option ID = 17351]
4. Contributed to embryo mainly by the sperm
[Option ID = 17352]

39) For the most domestic animals the duration of spermatogenesis is approximately[Question ID = 4339][Question Description = 139_124_VPA_SEP22_Q39]

1. 120 days [Option ID = 17353]
2. 10 days [Option ID = 17354]
3. 60 days [Option ID = 17355]
4. 6 months [Option ID = 17356]

40) Match List I with List II

List I	List II
A. Mesonephric duct	I. AMH
B. Paramesonephric duct	II. Testosterone
C. Leydig's cells	III. Wolffian
D. Sertoli cells	IV. Mullerian

Choose the correct answer from the options given below:

[Question ID = 4340][Question Description = 140_124_VPA_SEP22_Q40]

1. A - I, B - II, C - III, D - IV [Option ID = 17357]
2. A - II, B - III, C - I, D - IV [Option ID = 17358]
3. A - III, B - IV, C - II, D - I [Option ID = 17359]
4. A - IV, B - III, C - II, D - I [Option ID = 17360]

41) Furstenberg's Rosette is located[Question ID = 4341][Question Description = 141_124_VPA_SEP22_Q41]

1. Above the streak canal [Option ID = 17361]
2. Above the gland cistern [Option ID = 17362]
3. Above the teat cistern [Option ID = 17363]
4. Above the duct cistern [Option ID = 17364]

42) Incorporation of material taken from the environment, is known as

[Question ID = 4342][Question Description = 142_124_VPA_SEP22_Q42]

1. Hyperplasia [Option ID = 17365]
2. Hypertrophy [Option ID = 17366]
3. Accretion [Option ID = 17367]
4. Intussusception [Option ID = 17368]

43) Six's thermometer is[Question ID = 4343][Question Description = 143_124_VPA_SEP22_Q43]

1. Maximum-minimum thermometer [Option ID = 17369]
2. Dry bulb-wet bulb thermometer [Option ID = 17370]
3. Slings Psychrometer [Option ID = 17371]
4. Hair Hygrometer [Option ID = 17372]

44) Among the domestic animal species _____ has widest seasonal variations in the gestation period.

[Question ID = 4344][Question Description = 144_124_VPA_SEP22_Q44]

1. cattle [Option ID = 17373]
2. goat [Option ID = 17374]
3. pig [Option ID = 17375]
4. horse [Option ID = 17376]

45) Among the chicken egg parts, which one shows the least fluctuations?

[Question ID = 4345][Question Description = 145_124_VPA_SEP22_Q45]

1. Yolk content
[Option ID = 17377]
2. Albumen
[Option ID = 17378]
3. Egg shell
[Option ID = 17379]
4. Egg weight
[Option ID = 17380]

46) Which of the following rule relates the insulation cover and adipose tissue with respect to adaptation of the animals?

[Question ID = 4346][Question Description = 146_124_VPA_SEP22_Q46]

1. Golger's rule [Option ID = 17381]
2. Bergmann's rule [Option ID = 17382]
3. Allen's rule [Option ID = 17383]
4. Wilson's rule [Option ID = 17384]

47) Normal level of somatic cell count present in cow milk are

[Question ID = 4347][Question Description = 147_124_VPA_SEP22_Q47]

1. 3.5 to 4.0 lakhs /ml of milk [Option ID = 17385]
2. 1.0 to 2.0 lakhs /ml of milk [Option ID = 17386]
3. 8.0 to 9.0 lakhs /ml of milk [Option ID = 17387]
4. 20.0 to 25.0 lakhs /ml of milk [Option ID = 17388]

48) Which of the zona receptor acts as primary sperm receptor?[Question ID = 4348][Question Description = 148_124_VPA_SEP22_Q48]

1. ZP1 [Option ID = 17389]
2. ZP2 [Option ID = 17390]
3. ZP3 [Option ID = 17391]
4. ZP4 [Option ID = 17392]

49) Which one is NOT true about changes occurring after nerve damage?

[Question ID = 4349][Question Description = 149_124_VPA_SEP22_Q49]

1. Swelling of axis cylinder [Option ID = 17393]
2. Myelin sheath converted in fat droplets [Option ID = 17394]
3. Neutrophil invasion at the site [Option ID = 17395]
4. Neurilemmal sheath is unaffected [Option ID = 17396]

50) Which one of the following is also known as error correcting device of brain goal-directed movements?[Question ID = 4350][Question Description = 150_124_VPA_SEP22_Q50]

1. Thalamus [Option ID = 17397]
2. Hypothalamus [Option ID = 17398]
3. Epithalamus [Option ID = 17399]
4. Cerebellum [Option ID = 17400]