

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

Subject: Animal Nutrition

- Q. No.1** The species which cannot convert glucose to fat
- a Avian
 - b Caprine
 - c Swine
 - d Equine
- Q. No.2** Methane production in rumen from 100 gm digested carbohydrate is
- a 2.00 g
 - b 6.25 g
 - c 13.34 g
 - d 4.50 g
- Q. No.3** Although TVFA concentration in the rumen varies with feed and time of feeding, it is usually _____ concentration
- a 70-150 mmol/litre
 - b 15-180 mmol/litre
 - c 190-200 mmol/litre
 - d 220-230 mmol/litre
- Q. No.4** Feeding standard based on digestible nutrient content was given by
- a Grouven
 - b Wolff
 - c Kuhn
 - d Lehman
- Q. No.5** Metabolic faecal nitrogen excretion (gm per kg DM intake) in cattle
- a 0.5
 - b 1.0
 - c 2.5
 - d 5.0
- Q. No.6** The nutritive ratio is equal to
- a TDN-DCP
 - b (TDN-DCP)/DCP
 - c TDN-CP
 - d (TDN-CP)/CP
- Q. No.7** Metabolic water produced per gram of protein is
- a 0.4 g
 - b 0.6 g
 - c 0.8 g
 - d 1.0 g
- Q. No.8** The following one is not a feed additive
- a Oilcake
 - b Antibiotics
 - c Prebiotics
 - d Binders

- Q. No.9** An example of wet processing method of grain is
- a Popping
 - b Extruding
 - c Exploding
 - d Roasting
- Q. No.10** In ruminants, the ME is calculated from DE by multiplying
- a 0.65
 - b 0.75
 - c 0.82
 - d 0.99
- Q. No.11** Excess lipids/oils in the ration of ruminants affect the digestibility of
- a Crude Protein
 - b Crude Fibre
 - c NFE
 - d Trace minerals
- Q. No.12** Mixing time required mixing mash type of feeds in a horizontal mixer is
- a Less than 1 minute
 - b 3-5 minutes
 - c 10-15 minutes
 - d 20-30 minutes
- Q. No.13** Defaunation in ruminants is
- a Removal of bacteria
 - b Removal of protozoa
 - c Removal of fungi
 - d Removal of microbes
- Q. No.14** The inclusion level of fish meal in poultry ration is
- a 1-5%
 - b 5-10%
 - c 10-15%
 - d 15-20%
- Q. No.15** Flame photometry is used to estimate
- a Phenols
 - b Soluble sugars
 - c Minerals
 - d Green house gases
- Q. No.16** Allantoin is
- a Rumen metabolite
 - b Purine derivative
 - c Anti nutritional factor
 - d Synthetic amino acid

- Q. No.17 Lambert Beer law find its application in**
- a Colorimetry
 - b Centrifugation
 - c In vitro gas production technique
 - d Electrophoresis
- Q. No.18 Pore size of nylon bag used for *in sacco* technique is**
- a 1-2 μm
 - b 5-10 μm
 - c 40-60 μm
 - d 80-100 μm
- Q. No.19 Rumen protozoa was discovered by**
- a R. E. Hungate
 - b C. G. Orpin
 - c Nehring
 - d Gruby and Delafond.
- Q. No.20 The major compounds that have been used as chemical preservatives of high-moisture grain**
- a Organic acids
 - b Minerals
 - c Antibiotics
 - d Probiotics
- Q. No.21 Copper act as a antidote for treatment of**
- a Zinc toxicity
 - b Linamarin toxicity
 - c Mercury toxicity
 - d Molybdenum toxicity
- Q. No.22 The isomer of the CLA present in the milk fat is**
- a *Cis-9, Trans-11*
 - b *Cis- 11, Trans-13*
 - c *Cis-10, Trans-12*
 - d *Cis-12, Trans12*
- Q. No.23 Which of the following carries B₁₂ across the intestinal mucosa?**
- a Intrinsic factor
 - b Extrinsic factor
 - c Antihemophilic factor
 - d Animal protein factor
- Q. No.24 Brix a term commonly used to indicate the content of _____ in molasses**
- a Fat
 - b Urea
 - c Sugar
 - d Protein

- Q. No.25 One calorie is equal to:**
- a 0.293 joule
 - b 0.239 joule
 - c 4.184 joule
 - d 3.601 joule
- Q. No.26 *Streptococcus zymogen* is used mainly for the determination of available?**
- a Arginine
 - b Threonine
 - c Methionine
 - d Tryptophan
- Q. No.27 Ruminant animals fed high levels of easily fermentable carbohydrates, without adaptation, are likely to suffer from:**
- a Acidosis
 - b Alkalosis
 - c Hydronephrosis
 - d Ketosis
- Q. No.28 Methemoglobin is formed in blood of ruminants from toxicity of**
- a Phytate
 - b Cyanogen
 - c Nitrate
 - d Oxalate
- Q. No.29 Which element from the following is required for the formation of mucopolysaccharide which forms the organic matrix of bone?**
- a Calcium
 - b Manganese
 - c Copper
 - d Magnesium
- Q. No.30 DCP requirement(kg) for production of 1 kg milk with 4% fat is**
- a 0.025
 - b 0.035
 - c 0.045
 - d 0.055
- Q. No.31 The amino acids which do not participate in transamination reaction**
- a Lysine & methionine
 - b Lysine & histidine
 - c Lysine & tryptophane
 - d Lysine & threonine
- Q. No.32 In Van Soest method of analysis, we can determine the Hemicellulose as**
- a NDF - ADF
 - b ADF - Lignin
 - c NDF-lignin
 - d ADF-cellulose

- Q. No.33** Laboratory animal which require dietary source of vitamin C
- a Rat
 - b Mice
 - c Hamster
 - d Guineapig
- Q. No.34** Rate limiting enzyme in cholesterol biosynthesis?
- a α 1-4 glucosidase
 - b HMG CoA reductase
 - c Squalene synthetase
 - d 7 α hydroxylase
- Q. No.35** For fatty acid synthesis, Acetyl CoA comes from mitochondria to cytoplasm as?
- a Carnitine
 - b Malate
 - c Citrate
 - d Oxaloacetate
- Q. No.36** Organochlorine pesticides have high affinity to accumulate in
- a Liver
 - b Kidney
 - c Heart
 - d Fat
- Q. No.37** Swollen hock syndrome and frizzled feather in poultry due to deficiency of
- a Selenium
 - b Zinc
 - c Copper
 - d Iodine
- Q. No.38** A number of disorders of cattle & sheep described as “pining”, “salt sick”, “bush sickness”, & “wasting disease” is associated with deficiency of
- a Cobalt
 - b Selenium
 - c Sodium
 - d Iron
- Q. No.39** Which among the following is most susceptible to aflatoxicosis
- a Ducks
 - b Pig
 - c Cattle
 - d Sheep
- Q. No.40** In cat, Taurine deficiency leads to
- a Ascitis
 - b Retinal degeneration
 - c Goitre
 - d Reproductive problem

- Q. No.41 Which of the following is an exopeptidase**
- a Trypsin
 - b Chymotrypsin
 - c Carboxy peptidase A
 - d Pepsin
- Q. No.42 Example of a basic amino acid with epsilon amino group**
- a Methionine
 - b Glycine
 - c Lysine
 - d Tryptophan
- Q. No.43 Bitot's spot is seen in deficiency of which vitamin**
- a Vitamin A
 - b Vitamin D
 - c Vitamin E
 - d Vitamin K
- Q. No.44 Maximum level of urea in the concentrate mixture of cattle is**
- a 1.0%
 - b 3.0%
 - c 5.0%
 - d 7.0%
- Q. No.45 Aminopterin is an anti vitamin of**
- a Thiamin
 - b Biotin
 - c Pantothenic acid
 - d Folic acid
- Q. No.46 Esters of fatty acids with higher molecular weight alcohols other than glycerol**
- a Waxes
 - b Lipids
 - c Lecithin
 - d Cephalin
- Q. No.47 In ruminants, methyl malonic aciduria is seen in the deficiency of**
- a Vitamin B₁
 - b Vitamin B₆
 - c Vitamin B₁₂
 - d Folic acid
- Q. No.48 ___% NDF in total ration is critical for maintenance of normal milk fat**
- a 25.0-28.0%
 - b 40.0- 42.0 %
 - c 62.0 -66.0%
 - d 70.0- 73.0 %

- Q. No.49** Which one of the following is not a phenyl propane derivatives?
- a Isopropyl alcohol
 - b Sinapyl alcohol
 - c Coniferyl alcohol
 - d Coumaryl alcohol
- Q. No.50** The true ketogenic amino acid is
- a Phenyl alanine
 - b Leucine
 - c Arginine
 - d Serine
- Q. No.51** Which one of the following is a rumen protozoan:
- a *Dasytricha ruminantium*
 - b *Selenomonas ruminantium*
 - c *Magasphaera eldenii*
 - d *Methanobacterium ruminantium*
- Q. No.52** The vitamin which acts as a cofactor in transamination reaction
- a Thiamin
 - b Riboflavin
 - c Pyridoxine
 - d Biotin
- Q. No.53** One example of pentasaccharide is
- a Stachyose
 - b Raffinose
 - c Xylose
 - d Verbascose
- Q. No.54** Consumption of raw eggs may produce the deficiency of
- a Thiamin
 - b Biotin
 - c Menadione
 - d Folic acid
- Q. No.55** Rumen butyric acid conversion to ketone bodies takes place primarily in
- a Hepatic tissues
 - b Extra Hepatic tissues
 - c Ruminal wall
 - d Rumen fluid
- Q. No.56** Dry matter (%) of canned dog food is
- a 22-26
 - b 46-52
 - c 70-84
 - d 90-94

- Q. No.57** In poultry, nutritional roup is caused by the deficiency of
- a Vitamin A
 - b Vitamin D
 - c Vitamin E
 - d Vitamin K
- Q. No.58** Which of the following feed ingredient is used as energy source but not a protein source?
- a Linseed meal
 - b Salseed meal
 - c Mustard cake
 - d Sunflower cake
- Q. No.59** “Enzootic ataxia” in Australia & “Swayback” in U.K affecting young lambs results due to deficiency of the element
- a Sulpher
 - b Copper
 - c Manganese
 - d Iodine
- Q. No.60** Feed additive which get lodged in gizzard of poultry and helps in grinding
- a Limestone
 - b Grit
 - c Inulin
 - d Gizzarosine
- Q. No.61** Mannan oligosaccharide is used in poultry feed as
- a Probiotic
 - b Prebiotic
 - c Antibiotic
 - d Acidifier
- Q. No.62** Death in HCN poisoning is due to
- a Depression of respiratory centre in the brain
 - b Low oxygen tension in the lungs
 - c Inability of the tissues of exchange oxygen
 - d Clotting of blood
- Q. No.63** Fat is absorbed from intestinal lumen as
- a Chylomicron
 - b Very low density lipoprotein
 - c Micelle
 - d High density lipoprotein
- Q. No.64** Recommended protein level (%) for adult maintenance cat diet is
- a 10
 - b 15
 - c 20
 - d 25

- Q. No.65** 1 kg of urea with 46% nitrogen equivalent to protein is
- a 1.87 Kg
 - b 2.87 Kg
 - c 3.87 Kg
 - d 4.87 Kg
- Q. No.66** The oil has lowest iodine value is
- a Coconut oil
 - b Castor seed oil
 - c Cotton seed oil
 - d Soybean oil
- Q. No.67** The normal temperature of rumen liquor is
- a 30-34⁰C
 - b 44-48⁰C
 - c 26-30⁰C
 - d 38-42⁰C
- Q. No.68** The concentration (%) of dispensable amino acid in tissue protein is
- a 20
 - b 30
 - c 40
 - d 50
- Q. No.69** Penguin like squat in hens is due to deficiency of
- a Vitamin B₁
 - b Vitamin B₂
 - c Vitamin B₆
 - d Vitamin D₃
- Q. No.70** Which one of the following fatty acid may be termed as volatile fatty acid?
- a Stearic
 - b Palmitic
 - c Myristic
 - d Lauric
- Q. No.71** In very good silage pH ranges from
- a 3.5-4.2
 - b 4.2-4.8
 - c 4.8-5.2
 - d 5.2-5.8
- Q. No.72** The rate of absorption of sugars decreases in the following order
- a Glucose>galactose>fructose>pentose
 - b Galactose>glucose>fructose>pentose
 - c Fructose>glucose>galactose>pentose
 - d Pentose>glucose>galactose>fructose

- Q. No.73 Indian feeding standard is based on which of the following feeding standard**
- a Haecker standard
 - b ARC
 - c NRC
 - d Morrison standard
- Q. No.74 The anti nutritional factor present in water hyacinth is**
- a Phytic acid
 - b Oxalic acid
 - c Prussic acid
 - d Ricin
- Q. No.75 Trypsin inhibitor of soybean interferes with the utilization of**
- a Methionine
 - b Lysine
 - c Arginine
 - d Tryptophan
- Q. No.76 Fatty liver kidney syndrome in young broiler is due to deficiency of**
- a Vitamin A
 - b Riboflavin
 - c Biotin
 - d Manganese
- Q. No.77 Cerebrocortical necrosis in sheep is due to deficiency of**
- a Thiamin
 - b Riboflavin
 - c Niacin
 - d Pantothenic acid
- Q. No.78 The protein requirement ($\text{g/w}^{0.75}$) for calculating DCP requirement for maintenance of cattle is**
- a 2.48
 - b 2.84
 - c 3.61
 - d 4.41
- Q. No.79 In which of the following techniques the analytical materials are separated by using a mobile phase**
- a Colorimetry
 - b Chromatography
 - c Spectrophotometry
 - d Electrophoresis
- Q. No.80 In fattening when carbohydrate is converted to fat, RQ value will be**
- a 0.7
 - b 0.8
 - c 1.0
 - d More than 1.0

- Q. No.81 Molybdenum is a constituent of which of the following enzyme**
- a Carbonic anhydrase
 - b Glutathione peroxidase
 - c Xanthin oxidase
 - d Catalase
- Q. No.82 Thumps in pigs is associated with deficiency of**
- a Copper
 - b Iron
 - c Zinc
 - d Selenium
- Q. No.83 Impact grinding is working principle of which of the following mills**
- a Roller mill
 - b Percussion mill
 - c Jaw crusher
 - d Hammer mill
- Q. No.84 Element required for hydrogenation of fat is**
- a Iron
 - b Copper
 - c Cobalt
 - d Nickel
- Q. No.85 Piglets reared in intensive concrete sty have specifically high requirement for**
- a Iron
 - b Folic acid
 - c Calcium
 - d Vitamin D
- Q. No.86 A calf weighing 30 kg requires _____ kg of colostrum per day at first week of age**
- a 2.0
 - b 2.5
 - c 3.0
 - d 3.5
- Q. No.87 Which of the following mineral is required to prevent dental carries**
- a Calcium
 - b Phosphorus
 - c Magnesium
 - d Fluorine
- Q. No.88 Hypomagnesaemic tetany can be aggravated by dressings of pasture with**
- a Calcium
 - b Potassium
 - c Iron
 - d Zinc

- Q. No.89** The net gain of ATP(mole / per mole of propionic acid) by oxidation of propionic acid via glucose
- a 12
 - b 17
 - c 18
 - d 25
- Q. No.90** Feed ingredient contain highest level of calcium among the following is
- a Cotton seed hulls
 - b Soybean hulls
 - c Soybean seed
 - d Cotton seed
- Q. No.91** The insoluble oxalate present in the plant feedstuff is in the form of
- a Calcium oxalate
 - b Potassium oxalate
 - c Sodium oxalate
 - d Ammonium oxalate
- Q. No.92** Goose stepping in swine is due to deficiency of
- a Vitamin A
 - b Vitamin E
 - c Vitamin C
 - d Pantothenic acid
- Q. No.93** The minimum crude protein content in Compounded cattle feed (grade I) as per BIS
- a 22.0%
 - b 20.0%
 - c 18.0%
 - d 16.0%
- Q. No.94** Which of the following is an example of ionophoric antibiotic
- a Oxytetracycline
 - b Penicillin
 - c Bacitracin
 - d Monensin
- Q. No.95** If an animal consumes 5kg DM and excretes 6 kg feaces with 50% moisture, the digestibility co efficient of DM will be
- a 40.0%
 - b 50.0%
 - c 60.0%
 - d 70.0%
- Q. No.96** Which vitamin is dietary essential to maintain hoof quality in equine?
- a Thiamin
 - b Riboflavin
 - c Biotin
 - d Niacin

- Q. No.97** The ME (kcal/kg) content of layer ration as per BIS (2007) should be
- a 2500
 - b 2600
 - c 2800
 - d 3000
- Q. No.98** Pre ruminal calves require usual essential amino acid except
- a Lysine
 - b Arginine
 - c Histidine
 - d Threonine
- Q. No.99** Sulphur hexa fluoride (SF₆) is used for estimation of
- a CO₂ production
 - b Methane production
 - c VFA production
 - d Lactic acid production
- Q. No.100** *In vitro* gas production technique for feed quality evaluation was given by
- a Menke and coworkers
 - b Henneberg&Stohmann
 - c Tilley and Terry
 - d Van Soest and Co workers
- Q. No.101** Salt feeding in dogs is contraindicated in
- a Ascitis
 - b Diabetes
 - c Liver diseases
 - d Myocarditis
- Q. No.102** Coenzyme A contains
- a Thiamin
 - b Riboflavin
 - c Pantothenic acid
 - d Biotin
- Q. No.103** Gross Energy value(kcal/g) of methane is
- a 3.76
 - b 5.86
 - c 9.21
 - d 13.25
- Q. No.104** *Leucaenaleucocephala* contains anti nutritional factors as
- a Oxalate
 - b Gossypol
 - c Glucosinolates
 - d Mimosine

- Q. No.105** Which vitamin is synthesized from glucose
- a Vitamin E
 - b Vitamin B₁
 - c Vitamin B₆
 - d Vitamin C
- Q. No.106** The following chemical may act as potential toxin for cat is
- a Benzoic acid
 - b Sorbic acid
 - c Propylene glycol
 - d Glycerol
- Q. No.107** Haylage has a moisture content of
- a 35-40%
 - b 40- 45%
 - c 55-60%
 - d 60-65%
- Q. No.108** The optimum crude fibre (%) content in dog diet on dry matter basis is
- a 1-3
 - b 3-5
 - c 5-8
 - d 8-11
- Q. No.109** Depigmentation of colored hair and black wool is a common finding in
- a Iron deficiency
 - b Copper deficiency
 - c Magnesium deficiency
 - d Calcium deficiency
- Q. No.110** Young male pigs undergo symptoms of feminization if feed contain
- a Zearalenone
 - b Aflatoxin
 - c Fumonisin
 - d Ochratoxin
- Q. No.111** The available phosphorus (% by mass, minimum) in pre-starter broiler chick feed as per BIS (2007) is
- a 0.35
 - b 0.45
 - c 0.55
 - d 0.60
- Q. No.112** In ruminants, for efficient utilization of NPN compounds the protein content of the basal concentrate mixture should be
- a Below 13.0%
 - b 14.0-18.0%
 - c 19.0-20.0%
 - d 20.0 – 22.0%

- Q. No.113** “Alkali disease” or “blind staggers” is caused by the toxicity of
- a Copper
 - b Molybdenum
 - c Selenium
 - d Magnesium
- Q. No.114** The CP (%) of good quality solvent extracted mustard seed cake is
- a 35
 - b 42
 - c 45
 - d 27
- Q. No.115** Yield of Microbial protein by digestion of one kilogram of organic matter in the rumen ranges
- a 20-250 g
 - b 90-230 g
 - c 150-400 g
 - d 200-450 g
- Q. No.116** Average daily feed intake of a laying hen
- a 60.0g
 - b 110.0 g
 - c 230.0 g
 - d 300.0 g
- Q. No.117** The deleterious factor present in spent tea leaves are
- a Ricin
 - b Mowrine
 - c Saponin
 - d Tannin
- Q. No.118** Which of the following is referred as Lipotropic factor
- a Choline
 - b Biotin
 - c Thiamin
 - d Niacin
- Q. No.119** Physiological fuel value (kcal/g)of protein is
- a 4.00
 - b 5.65
 - c 6.25
 - d 9.00
- Q. No.120** Which of the following vitamin is a structural component of body tissue
- a Vitamin B₁
 - b Vitamin B₂
 - c Choline
 - d Biotin

Key: Animal Nutrition

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