

- Q16. Necrosis has been classified traditionally as coagulative,, liquefactive, and gangrenous
 (A) Hydropic (B) Oncogenic (C) Nuclear (D) Caseous
- Q17. Macroscopically, may appear as crumbled, granular, or laminated yellow-white exudate in center of a granuloma or a chronic abscess.
 (A) Metaplasia (B) Fibrosis (C) Caseation (D) Regeneration
- Q18. Necrosis is typically the final stage of necrosis in parenchyma of the brain or spinal cord
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 (A) Hemorrhage (B) Dry gangrene (C) Malacia (D) Gas gangrene
- Q20. Dry gangrene is the result of decreased vascular perfusion and/or loss of blood supply.
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 (A) Ischemic (B) Idiopathic (C) Hyperemic (D) Hemorrhagic
- Q22. is a type of cell death induced by a tightly regulated suicide program that degrades cells' own nuclear DNA and nuclear and cytoplasmic proteins.
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 (A) True (B) False
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 (A) H&E (B) Sudan III (C) Congo red (D) Alizarin red
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- Q36. Septic abscesses originate from incompletely degraded foreign bodies, whereas sterile abscesses arise from bacterial infection
 (A) True (B) False

Q29. **Gangrene** is invasion and putrefaction of necrotic tissue by

- a. Saprophytic bacteria b. pyogenic bacteria c. none of them **d. both of them**

Q30. secondary Gangrene occurs if the m.o. induce necrosis and putrefaction of the tissue

- a. True b. false

Q31. In Muroid degeneration the organ appear translucent jelly like and flabby.

- a. True b. false

Q32. In Hyalinosis the tissue transformed into into homogenous structureless translucent smooth material and stained more eosinophilic

- a. True b. false

Q33. is seen in the acini of the mammary gland, lung alveoli and prostate glands. It appears as round, homogenous, or concentrically laminated pink bodies with basophilic tint	a. corpora amylacea b. Hyaline casts c. Russel's bodies d. Mallory bodies
Q34. They are seen in plasma cells in chronic inflammation	a. corpora amylacea b. Hyaline casts c. Russel's bodies d. Mallory bodies
Q35. hyaline globules inside the cytoplasm of degenerated liver cells of alcoholic drinkers	a. corpora amylacea b. Hyaline casts c. Russel's bodies d. Mallory bodies

Q36. Hyaline degeneration is irreversible condition and the affected tissue may be calcified (dystrophic)

- a. True b. false

Q37. Ultrastructurally, the amyloid consists principally of fibrillar protein and small separate components of glycoprotein.

- a. True b. false

Q38. The amyloidosis in the kidney is irreversible and may leads to

- a. Uremia b. hypertension c. general edema **d. all of them.**

Q39. The gout is an indicator of disturbance inmetabolism

- a. Fat b. protein c. carbohydrates **d. mineral**

Q40.It is excessive accumulation of fat in fat-depots (S/C, omentum and mesentery, perirenal and pericardium)

- a. Lipidosis b. lipomatosis c. Lipoidal degeneration **d. fatty change**

Q41.It is the deposition of silver salts in the skin, conjunctiva and internal organs due to prolonged medication of silver drugs

- a. Argyrosis b. Plumbism c. siderosis **d. anthracosis**

Q42. Redness, Vesicle formation, Water discharge and Necrosis of the epidermis are lesion seen in.....

- a. Photosensitization b. Lipochromatosis **c. xanthomatosis** d. hemosedrosis

- Q43.....It is a condition in which destruction of melanocytes in small circumscribed areas results in patches of depigmentation and have hyperpigmented border and enlarged d. freckles
- a. Leukoderma b. Vitiligo c. Acanthosis nigricans
- Q44 Hyperparathyroidism and excess of Vitamin D can result in.....
- a. Metastatic calcification b. Dystrophic calcification c. Calcinosis circumscripta
- Q45 Compression of veins by tumor, abscesses, cysts or enlarged Lns can result in.....
- a. Local active hyperemia b. local passive hyperemia c. general active hyperemia d. none of them
- Q46. the causes of chronic general venous congestion are present in two organs.....
- a. Liver and lung b. lung and spleen c. liver and spleen d. none of them
- Q47. Pulmonary fibrosis as in case of pneumoconiosis can result in.....
- a. Local active hyperemia b. local passive hyperemia c. chronic general congestion
- Q48. heart failure cells can be seen in.....
- a. CVC of lung b. CVC of heart c. CVC of liver d. none of them
- Q49. cardiac fibrosis can be seen in.....
- a. CVC of lung b. CVC of heart c. CVC of liver d. none of them
- Q50..... hemorrhage in the tunica vaginalis of testis
- a. Hemothorax b. Hemoarthrosis c. Hematocele d. Hemoptysis
- Q51.....indicates hemorrhage from uterus
- a. Epistaxis b. Hemoptysis c. Hematemesis d. Metrorrhagia
- Q52. Inflammation is the reaction of vascularized living tissues to local injury.
- a. True b. False
- Q53. Increased flow of blood to injured tissue (vasodilation), is responsible for.....
- a. Pain b. Redness and heat c. Loss of function d. None of them
- Q54 per acute inflammation has a short duration, ranging from a few hours to a few days.
- a. True b. False
- | | |
|---|----------------|
| Q55. Fluid with minimal protein and is essentially an electrolyte solution like that of plasma. | a. Neutrophils |
| Q56. An opaque and often viscous fluid that contains more protein and more leukocytes. | b. Transudate |
| Q57. Are two types mucosal and connective tissue express high affinity receptors for immunoglobulin E on their surface. | c. Mast cells |
| | d. Exudate |
- Q58. The inflamed area is painful because pressure on nerve ending by exudate (edema) and Liberated chemical mediators from damaging cells
- a. True b. False
- Q59.is a yellow-brown lipoprotein that accumulates in secondary lysosomes, especially in long lived post mitotic cells, such as neurons and cardiac myocytes, and especially in aged animals.

Q63. chronic inflammation in which cells of the monocyte-macrophage system are predominant and take the form of macrophages, epithelioid macrophages (activated macrophages), and MGCs.

- (A) Hemorrhagic (B) Fibrinous (C) Granulomatous (D) suppurative

Q64. Occurs immediately after injury unless there is a clotting disorder	(A) First intention
Q65. Phase begins only after inflammation and proliferation phases successfully completed.	(B) Proud flesh
Q66. Healing occurs in nonseptic wounds	(C) Remodeling
Q67. Excessive granulation can lead to a type of hypertrophic scar called	(D) Hemostasis
Q68. Movement of intravascular fluid through inter-endothelial gaps into the interstitium	(E) Edema

Q69. Anaplastic cells are poorly differentiated cells with anisocytosis and pleomorphism.

- (A) True (B) False

Q70. Which one of the following is not a cause of general edema.

- (A) Sever parasitic infestation (B) Nephrotic syndrome (C) Hepatic failure (D) non of them

Q71. Pinpoint hemorrhage occurs mainly because of diapedesis with minor vascular damage	(A) Embolus
Q72. An aggregate of platelets, fibrin, and other blood elements formed on a vascular wall	(B) wedge
Q73. A piece of free-floating foreign material within the blood.	shaped
Q74. An arterial infarct will often	(C) A petechia
Q75. occurs when infarcted tissue is invaded by saprophytic bacteria	(D) gangrene
	(E) A thrombus

Q76. Which one of the following is not a cause of infarction

- (A) Thrombus (B) external pressure (C) both of them (D) non of them

Q77. outcomes of coagulative necrosis may be:

- (A) liquefaction (B) mineralization (C) sequestration (D) All of them (E) non of them

Q78. molecules generated in an area of inflammation that modules the inflammatory process in some way	(A) pitted
Q79. Large, multinucleated cells that arise from the fusion of macrophages	(B) swelled
Q80. If there is significant fibrosis, the surface of the chronic inflammation will be	(C) lymphocytes
	(D) giant cells
	(E) chemical mediators

Part II: Write short note on the followings:

(5 marks)

1- Morphologic Changes of Acute Cell Swelling.

2- Morphologic pictures of chronic venous congestion of lung and liver.

Good luck

Assistant Professor/ Mostafa Abdelgaber

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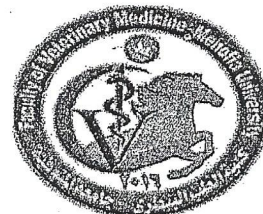
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- Q55. Vascular Endothelial Cells regulating:
 (A) Hemostasis/coagulation (B) Angiogenesis (C) Leukocyte homing (D) None of them (E) All of them
- Q56. Once activated and released or secreted, most inflammatory mediators:
 (A) Decay rapidly and destroyed enzymatically (B) Scavenged by protective mechanisms
 (C) Blocked by endogenous inhibitors (D) None of them (E) All of them
- Q57. A collection of pus circumscribed by a fibrous capsule that is visible grossly is called.....
 (A) Caseation (B) Abscess (C) Calcification (D) None of them (E) All of them

Q58. Rapidly enhances vascular permeability	(A) Resolution
Q59. The desired outcome in the acute inflammatory response	(B) Suppurative inflammation
Q60. Type of inflammation occurs in a mucous membrane	(C) Phlegmonous inflammation
Q61. Type inflammation in which high numbers of neutrophils	(D) Histamine
Q62. Neutrophils distributed in tissue layers such as subcutaneous C.T	(E) Catarrhal inflammation



Faculty of Veterinary Medicine
Department of Bacteriology, Immunology and Mycology
Exam of General Bacteriology 2020
Third year **Time: Two hours** **Total marks: 25**

I- Write (a) for true and (b) for false for following statements : (5 marks)

- 1- The capsule are polysaccharide in all bacteria except in Brucella are polypeptide.
a- True b- False
- 2- Microaerophilic bacteria are grow in high amount of oxygen and 5-10 % of CO₂
a- True b- False
- 3- In anaerobic bacteria oxygen is not toxic
a- True b- False
- 4- The bacteria can be isolated from very hot weather are called Psychrophilic
a- True b- False
- 5 - The first antibody appear in blood is IgG
a- True b- False
- 6- Plasmid is essential structure of bacteria
a- True b- False
- 7- Spore of bacteria occur in unfavorable condition
a- True b- False
- 8- Spore formation in bacteria is one of the methods of reproduction
a- True b- False
- 9- There is no change in the size of bacteria during lag phase
a- True b- False
- 10- Organ of respiration in bacteria is mitochondria
a- True b- False

II- Each questions below contains suggested answers choose the one best response to each question (5 Marks)

- 1- Zero growth rate is observed during one of the phase bacterial growth curve
a- Lag phase b- log phase c- Stationary phase d- Decline phase
- 2- One of the following methods is an example of negative stain to detect of capsule
a- Gram's stain b- Zeihl Neelson c- India ink stain d- Fontana's stain
- 3- Characterizes of exotoxins include all except
a- Heat labile b- Highly toxic c- Highly antigenic d- Lipopolysaccharide
- 4- Synthetic molecule that binds the receptors on B cells, but does not stimulate their production of antibodies unless it is conjugated with a bigger immunogenic molecule is

- a- Adjuvans b- Haptan c- Carrier d- Antibody
- 5- Which of the following antibodies cross through placenta
- a- IgG b- IgA c- IgM d- IgE
- 6- All the following are true concerning pili except
- a- They mediate bacterial adherence b- They may be involved in bacterial conjugation
- c- Their antigen is called H- antigen d- They are important virulence factors
- 7- Treatment of bacterial culture with gentamycin, an inhibitor of protein synthesis, would have maximal effect on
- a- Lag phase b- Log phase c- Stationary phase d- Decline phase
- 8- The characteristic shape of the bacteria is maintained because of
- a- Cell wall b- Capsule c- Pilli d- Mesosome
- 9- Which of mentioned are present on the place of infection by worm
- a- Basophil b- Eosinophil c- Monocyte d- Neutrophil
- 10- Non specific immune mechanism do not include
- a- Complement b- Chemokine c- Memory cell d- Interferon

III- Define the following (3 marks):

- 1- Psychrophilic bacteria 2- Haptan 3- Bacterial plasmid
- 4- Microaerophilic bacteria 5- Immunogene 6- Bacterial toxoid

IV- Give the reason for (3marks):

- 1- Oxygen is toxic to some bacteria and how bacteria detoxify toxic oxygen metabolites
- 2- The number of viable bacteria decreases during the decline phase
- 3- The intact skin is consider first line of defense

V- Compared on the following (3marks):

- 1- Cell wall of Gram positive and Gram negative
- 2- Innate and adaptive immunity

VI- Explain on the following (6marks):

- 1 Virulence factors of bacteria
- 2- Laboratory diagnosis of dermatophytes
- 3- Humeral immune response
- 4- Second line of defense

Good Luck

Ashraf Awaad

Prof. DR. Ashraf Awaad

Steph
a- True
b- True
c- Ascoli
d- True

- a- Mannitol salt agar b- EMB media c- Milk agar d- Baird parker media
- 33- McFadyean's reaction is employed for the presumptive diagnosis of
a- Anthrax b- Tetanus c- Typhoid d- All of these
- 34- BCG vaccine used for protection from
a- Listeria b- Leptospira c- Mycobacterium d- mycoplasma
- 35-Baird Parker medium is used for cultivation of
a Staphylococcus aureus b- proteus c- Haemophilus d- Campylobacter
- 36- Among the following which is positive for coagulase test?
a. Staphylococcus aureus b. Staphylococcus epidermidis
c. Staphylococcus saprophyticus d. All of the above
- 37- Bacteriological stain used to identify acid-fast organisms, what is the name of the stain?
a. Negative stain b. Gram stain c. Ziehl-Neelsen stain d. Malachite green staining
- 38- Inverted fir tree appearance is characteristic to
a. *Bacillus anthracis* b. *Mycoplasma bovis* c. *Pasteurella multocida* d. EHEC
- 39- Which of the following isn't use for serotyping of salmonellae
a. O antigen b. H antigen c. K antigen d. Vi antigen
- 40- The test used for detection of typhoid fever
a. Widal test b. ELISA c. Rosewall test d. Western blotting
- 41- Toxic shock syndrome (TSST) is caused by
a. Staph. albus b. Staph. aureus c. Strep. viridans d. None of these
- 42- Streptococcus uberis comprises which Lancefield
a- Group A b-- Group B c-- Group C d- - Group E
- 43- Rough colonies are the normal and virulent colonies in
a. *Bacillus anthracis* b. *Salmonella* c. *E.coli* d. None of these
- 44- Asculin hydrolysis test used for detection of
a- Streptococcus agalactiae b- Streptococcus dysgalactiae c- Streptococcus uberis d. None of these
- 45- The brucella which needed for primary isolation into 5- 10% of CO₂ is
a- *Brucella abortus* b- *Brucella ovis* c- *Brucella canis* d- *Brucella melitensis*
- 46- After 48 hours incubation poured blood plate Streptococcus produce colonies surround by
Incomplete zone of hemolysis with green discoloration which is
a- Beta hemolytic b- alpha hemolytic c- Gamma hemolytic
- 47- Hotis and Miller test is specific for detection of
a- Streptococcus dysgalactiae b- Streptococcus agalactiae c- Streptococcus uberis d- Streptococcus equi
- 48- Lancefield classification of Streptococci is based on
a- M and T antigens b- C substance antigen c- M, T and R antigens d- M antigen
- 49 Milk ring test is specific for detection of
a- *Brucella* b- *E.coli* c- *Salmonellae* d- *Shigella*
- 50- Shipping fever in cattle and sheep is caused by
a- *Pasteurella multocida* b- *Streptococcus equi* c- *Brucella canis* d- *Bacillus anthracis*



Departement of pathology
Faculty of veterinary medicine
Menoufia university



Course name (code)	General pathology (311)
Program	BVSc
Date	March 2021
Time allowed	2 hours
Total score	25 Marks

All questions should be answered:

Part I: Choose the correct answer

(20 marks)

Q1. Pathology is the study of the structural, biochemical, and functional changes in cells, tissues, and organs that underlie disease:

- (A) True (B) False (C) True if the word structural removed (D) True if the word functional removed

Q2.are reversible functional and structural responses to changes in physiologic states and some pathologic stimuli allowing the cell to survive and continue to function.

- (A) Apoptosis (B) Necrosis (C) Adaptations (D) Anthracosis

Q3.one of the four final common biochemical mechanisms leading to cell injury.

- (A) karyolysis (B) Damage to DNA (C) Lipidosis (D) Amyloidosis

Q4. The influx of water along with sodium ions to the cell when the Na⁺/K⁺ pumps fail called

- (A) Hydropic degeneration (B) Hypertrophy (C) Ischemia (D) Healing

Q5.is a local decrease in blood supply to tissue with decreased delivery of oxygen, glucose, and other nutrients to the cell, as well as decreased removal of metabolic wastes

- (A) Hyperemia (B) Edema (C) Congestion (D) Ischemia

Q6. Glycolysis leads to an accumulation of lactate with decreased intracellular pH, and produces heat

- (A) True (B) False (C) True if lactate replaced by glucose (D) True if decreased replaced by increased

Q7. liver affected with Hydropic degeneration increased in weight, pale and swollen with rounded edges.

- (A) True (B) False (C) True if pale replaced by bright red (D) True if increased replaced by decreased

Q8. Disruption of the intracellular.....balance is integral to the transition from potentially reversible acute cell swelling to irreversible injury and cell death.

- (A) Vitamin C (B) Sodium ion (C) MS222 (D) Calcium ion

Q9. EM examination of acute swollen epithelia showed loss of cilia & microvilli & develops cytoplasmic blebs

- (A) True (B) False (C) True if loss replaced by increasing (D) True if "blebs" replaced by inclusions

Q10. Normal endothelium is prothrombotic and antifibrinolytic.

- (A) True (B) False

Q11. Necrotic cell death elicits an inflammatory reaction because of the release of cell contents into the ECM.

- (A) True (B) False (C) True if elicits replaced by doesn't elicit (D) True if necrotic replaced by apoptotic

Q12. If cell fails to restore mitochondrial function, acute cell swelling becomes irreversible causing cell death.

- (A) True (B) False (C) True if irreversible replaced by reversible

Q13. is a gross lesion for the myocardial and skeletal muscle necrosis in white muscle disease.

- (A) Anthracosis (B) Calcification (C) Icterus (D) edema

Q14. Soon after cell death, necrotic tissue may have the same macroscopic features of acute cell swelling.

- (A) True (B) False

Q15. Dead cells tend to have intense cytoplasmic eosinophilia due to the denatured protein and loss of ribosomes

- (A) True (B) False

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(D) Histamine

Q62. Neutrophils distributed in tissue layers such as subcutaneous C.T

(E) Catarrhal inflammation

Q63. chronic inflammation in which cells of the monocyte-macrophage system are predominant and take the form of macrophages, epithelioid macrophages (activated macrophages), and MGCs.
 (A) Hemorrhagic (B) Fibrinous (C) Granulomatous (D) suppurative

Q64. Occurs immediately after injury unless there is a clotting disorder	(A) First intention
Q65. Phase begins only after inflammation and proliferation phases successfully completed.	(B) Proud flesh
Q66. Healing occurs in nonseptic wounds	(C) Remodeling
Q67. Excessive granulation can lead to a type of hypertrophic scar called	(D) Hemostasis
Q68. Movement of intravascular fluid through inter-endothelial gaps into the interstitium	(E) Edema

Q69. Anaplastic cells are poorly differentiated cells with anisocytosis and pleomorphism.
 (A) True (B) False

Q70. Which one of the following is not a cause of general edema.
 (A) Sever parasitic infestation (B) Nephrotic syndrome (C) Hepatic failure (D) non of them

Q71. Pinpoint hemorrhage occurs mainly because of diapedesis with minor vascular damage	(A) Embolus
Q72. An aggregate of platelets, fibrin, and other blood elements formed on a vascular wall	(B) wedge shaped
Q73. A piece of free-floating foreign material within the blood.	(C) A petechia
Q74. An arterial infarct will often	(D) gangrene
Q75. occurs when infarcted tissue is invaded by saprophytic bacteria	(E) A thrombus

Q76. Which one of the following is not a cause of infarction
 (A) Thrombus (B) external pressure (C) both of them (D) non of them

Q77. outcomes of coagulative necrosis may be:
 (A) liquefaction (B) mineralization (C) sequestration (D) All of them (E) non of them

Q78. molecules generated in an area of inflammation that modules the inflammatory process in some way	(A) pitted
Q79. Large, multinucleated cells that arise from the fusion of macrophages	(B) swelled
Q80. If there is significant fibrosis, the surface of the chronic inflammation will be	(C) lymphocytes
	(D) giant cells
	(E) chemical mediators

Part II: Write short note on the followings:

(5 marks)

- 1- Morphologic Changes of Acute Cell Swelling.
- 2- Morphologic pictures of chronic venous congestion of lung and liver.

Good luck

Assistant Professor/ Mostafa Abdelgaber



Menoufia University
Faculty of Veterinary Medicine
Nutrition and Clinical Nutrition. Second Year Exam, 2020/2021
Date: 14.3.2021 model A time allowed: 2 Hours



Please answer the all of following questions

I-First part the objective questions (50 questions/12.5 points) الاجابة في نموذج الاجابة الالكتروني

A-Choose the correct answer			
1- A dietary protein is not degraded in the rumen is referred to			
A. RUP	B. RDP	C. Microbial protein	D. Protected protein
2- Sweet clover disease is associated withdeficiency			
A. Vitamin E	B. Vitamin K	C. Vitamin A	D. Thiamin
3- Manganese plays an important role in the synthesis of.....			
A. Bone	B. Osteoclast	C. Chondroitin sulphate	D. Osteoblast
4- Acid detergent fiber (ADF) are.....			
A. Cellulose & hemicelluloses	B. Cellulose & lignin	C. Hemicellulose & lignin	D. All of them
5- Acetic and butyric acids in VFA in ruminants are used in.....			
A. sources of energy	B. synthesis of milk fat	C. converted to glucose	D. A&B
6- Trace element is expressed in			
A. Percent %	B. g\ kg	C. part per million	D. part per thousand
7- Crazy chick disease is due to deficiency of.....			
A. Vitamin E	A. Selenium	B. Thiamin	C. Vitamin E & Selenium
8- The is rich in polyunsaturated fatty acids			
A. soybean oil	B. coconut oil	C. peanut oil	D. Palm oil
9- essential for collagen formation.			
A. Vitamin E	D. Vitamin A	E. Vitamin C	F. Manganese
10- High level of calcium carbonate, iron, zinc and molybdenum reduce the absorption of			
A. Copper	B. Iron	C. Manganese	D. Cobalt
11- Methionine can be replaced partially by.....			
A. Glycine	B. tyrosine	C. cystine	D. Lysine
12- Chicks reared on a riboflavin-deficient diet develop..... paralysis			
A. nerve degeneration	B. curled toe	C. beri-beri	D. jerky
13- The lipids of grasses and clovers are.....			
A. Phospholipids	B. Glycolipids	C. Phosphoglycerides	D. Triacylglycerol
14-are 18- to 20-carbon unsaturated fatty acids having at least two double bonds			
A. EAAs	B. VFAs	C. Vitamin F	D. Lecithins
15-is a metabolic disorder mainly of dairy cows close to calving due to Ca deficiency			
A. Milk fever	B. ketosis	C. pregnancy toxemia	D. SARA
16- are produced when unsaturated plant oils are hydrogenated in ruminant			
A. VFA	B. steric acids	C. short chain fatty acids	D. trans-fatty acids
17- Phosphorus deficiency in cattle results in			



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A. Swollen hock syndrome	B. Pica	C. Osteomalacia	D. Rickets
18- Ruminant don't have enzyme			
A. cellulase	B. sucrase	C. lactase	D. protease
19- is the first limiting A.A in soybean			
A. L-lysine	B. DL- methionine	C. lysine	D. Methionine
20- Micelles are combination of bile salts, & fatty acids			
A. Diglyceride	B. Monoglyceride	C. Triglyceride	D. A, B & C
21- is phosphatidylcholines, Important in fat metabolism			
A. Glycolipids	B. Cephalins	C. Lecithins	D. phospholipids
22- is essential amino acids in poultry diets.			
A. Lysine	B. Cystine	C. Alanine	D. Histidine
23- can destroy vitamins during storage			
A. ultraviolet light	B. sodium chloride	C. PUFA	D. choline chloride
24- Vitamin Deficiency led to Embryo mortality reaches a peak between 18 to 20 days of incubation			
A. Cyanocobalamin	B. Thiamin	C. Riboflavin	D. Piroxidine
25- supplementation in poultry diets save about 100 LE/ ton feed.			
A. bacillus lechiniformis	B. Enzymes	C. probiotics	D. all of them

B- Identify the true (A) or false (B) sentences

- 26- Saturated fatty acids affect rumen fermentation less than do unsaturated fatty acids.
- 27- Oxidation of fat produces approximately 60 % of its weight water.
- 28- High fibrous diet like dry roughages decrease water requirement than less fibrous diet.
- 29- Animal can't live for at most three days if not provided with drinking water.
- 30- Animal body was analyzed by Slaughter and chemical analysis techniques.
- 31- Sodium is important part of an enzyme glutathione peroxidase.
- 32- Water requirement of lactating dairy cow is 40 L per day.
- 33- Most of the feed and forages are poor source of sodium.
- 34- All enzymes and hormones are protein in nature.
- 35- Microbes in the rumen can't consume ingested protein to build their own bodies
- 36- Deficiency in Zinc only causes Pica in cattle
- 37- The NDF consist of cellulose, hemicellulose, lignin, silica and cutins
- 38- Deficiency of Nicotinamide causes "black tongue " in poultry
- 39- Biotin is important in hair health.
- 40- Crude protein content important factor governing the bulk of ration
- 41- Antimicrobial agents can suppress intestinal synthesis of vitamin A.
- 42- VFA is short chain from fatty acid produced by microbes in rumen only



- 43- Metabolic faecal protein consists of undigested fat which Consider the lipids that not absorbed
- 44- Wool is rich in methionine and contains about 4%of sulphur
- 45- In positive DCAD, more cations in feed results in more production of blood buffers.

Connect the correct answer from column A to column B

Column A	Column B
46- Amylase	A- Acidification of the gut, helps in reduction of colonisation by Salmonella, Campylobacter and Clostridium.
47- Saccharomyces cerevisiae	B- A starch digesting enzyme that helps to digest more of the starch found in corn
48- Milk fever	C- Scavenge oxygen in the rumen, maintain anaerobic conditions and favoring the growth of cellulolytic bacteria
49- Allicin	D- Defined as a condition where rumen fluid pH is below 6,0
50- Fructooligosaccharides	E- Added for the stabilization of fats and to prevent the destruction of vitamin by oxidation
51- Bacillus subtilis	F- Releases energy from the fibrous portion of grains and grain byproducts.
52- Calcium formate	G- create acidic conditions and increase lactic acid formation, which are detrimental to the cellulolytic bacteria
53- Zinc bacitracin	H- Help Monogastrics digest about 60-70% of the organic phosphorus(P) found in feedstuffs of vegetable origin
54- Phytase	I- Physical adsorbents to feeds widely applied way of protecting animals against mycotoxins
55- Butylated hydroxy anisole	J- Biological adsorbents to feeds to protecting animals against mycotoxins
56- Xylanase	K- Has antibacterial, antioxidant, antiviral, antiparasitic and insecticidal functions.
57- HSCAS	L- Controlled by DCAD from -50 to -100 mEq/kg DM
58- B-glucan	M- Adhesion to the digestive tract wall to prevent colonization by pathogenic microorganisms
59- SARA	N- Effective in releasing protein anti-nutrients found in ingredients like soybean meal
60- Proteases	O- Subtherapeutic levels added to the food to enhance the rate of growth in poultry
	P- Non-digestible ingredients that beneficially affect the host by selectively stimulating the growth of bacteria