

JEPAS(PG)-2021

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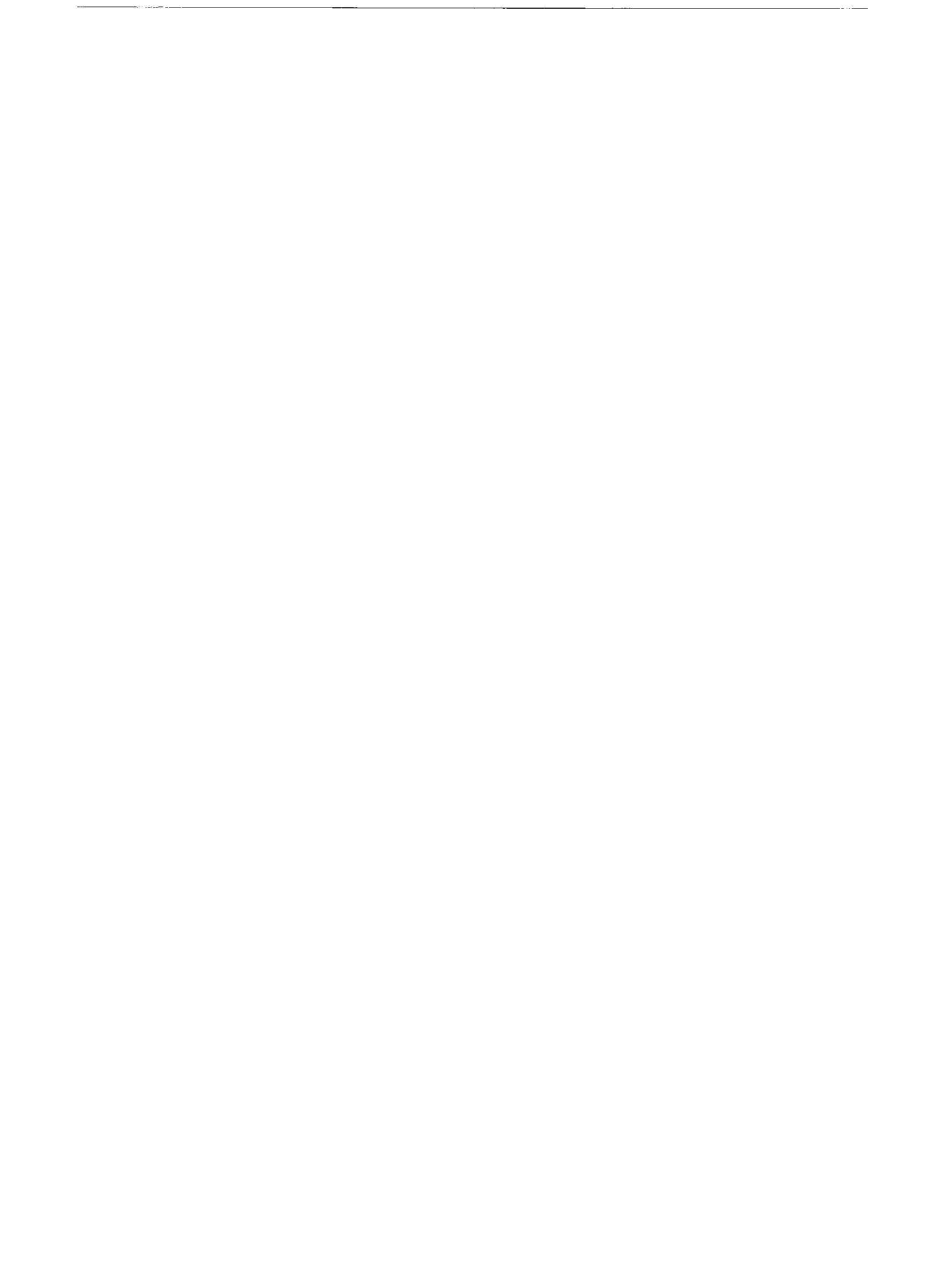
Subject: M. Sc in Applied Nutrition (MAN)

Duration: 90 minutes

Full Marks: 100

#### Instructions

1. All questions are of objective type having four answer options for each. Only one option is correct. Correct answer will carry full marks 1. In case of incorrect answer or any combination of more than one answer,  $\frac{1}{4}$  mark will be deducted.
2. Questions must be answered on OMR sheet by darkening the appropriate bubble marked A, B, C, or D.
3. Use only **Black/Blue ball point pen** to mark the answer by complete filling up of the respective bubbles.
4. Mark answers only in the space provided. Do not make any stray mark on the OMR.
5. Write question booklet number and your roll number carefully in the specified locations of the **OMR**. Also fill appropriate bubbles.
6. Write your name (in block letter), name of the examination centre and put your full signature in appropriate boxes in the OMR.
7. The OMR is liable to become invalid if there is any mistake in filling the correct bubbles for question booklet number/roll number or if there is any discrepancy in the name/signature of the candidate, name of the examination centre. The OMR may also become invalid due to folding or putting stray marks on it or any damage to it. The consequence of such invalidation due to incorrect marking or careless handling by the candidate will be sole responsibility of candidate.
8. Candidates are not allowed to carry any written or printed material, calculator, log-table, wristwatch, any communication device like mobile phones etc. inside the examination hall. Any candidate found with such items will be **reported against** and his/her candidature will be summarily cancelled.
9. Rough work must be done on the question paper itself. Additional blank pages are given in the question paper for rough work.
10. Hand over the OMR to the invigilator before leaving the Examination Hall.



1. Iodides are stored in the thyroid follicles mainly in the form of
  - a) Thyroglobulin.
  - b) Thyroxine.
  - c) Monoiodotyrosine.
  - d) Diiodotyrosine.
  
2. Water diuresis is commonly seen in patients suffering from
  - a) Diabetes mellitus.
  - b) Diabetes insipidus.
  - c) Cushing syndrome.
  - d) Addison's disease.
  
3. Digestibility of protein is affected by
  - a) Trypsin inhibitor.
  - b) Limiting amino acid.
  - c) Heat treatment.
  - d) None of the above.
  
4. The difference between fats and oils is
  - a) Fats have a higher percentage of fatty acid as MUFA.
  - b) Fats have a higher percentage of PUFA.
  - c) Fats are solid at room temperature.
  - d) Fats are usually obtained from plant sources.
  
5. Spinach has a very high iron content, but less bioavailability. Iron in the spinach is in the form of
  - a) Elemental iron.
  - b) Myoglobin.
  - c) Non heme iron.
  - d) Heme iron.
  
6. Pulses are low in fat content and contain zero
  - a) Iron.
  - b) Cholesterol.
  - c) B vitamins.
  - d) Protein.
  
7. Which of the following enzymes is preset in malted beverage?
  - a) Lipase.
  - b) Protease.
  - c) Amylase.
  - d) Phenolase.

8. In most fruit juices the major portion of total soluble solid is
- Salt.
  - Sugar.
  - Vitamins.
  - Minerals.
9. Which of the following has the highest protein content?
- Oat.
  - Ragi.
  - Wheat.
  - Bajra.
10. What is the chemical process that occurs when oxygen comes in contact with the flesh of cut fruits?
- Enzymatic browning.
  - Mincing.
  - Packing.
  - Deep frying.
11. The egg shell mainly contains
- Magnesium carbonate.
  - Phosphorus pentoxide.
  - Calcium carbonate.
  - Calcium sulphate.
12. Deep yellow yolk does not necessarily indicate
- High vitamin A content.
  - High protein content.
  - High fat content.
  - All of the above.
13. Milk is a
- High fiber high residue food.
  - High fiber low residue food.
  - Low fiber high residue food.
  - Low fiber low residue food.
14. A ketogenic diet is
- Poor in carbohydrate, rich in fat.
  - Poor in fat, rich in carbohydrate.
  - Poor in protein, poor in fat.
  - Rich in carbohydrate, rich in fat.

15. Lactose intolerant persons may tolerate
- Ice-cream.
  - Cottage cheese.
  - Evaporated milk.
  - Condensed milk.
16. What circumstance may trigger or be linked to celiac disease?
- Surgery.
  - Pregnancy.
  - Viral infection.
  - All of the above.
17. A person with celiac disease can still eat
- Rice.
  - Potato.
  - Dried beans.
  - All of the above.
18. The risk factors for type1 diabetes include all of the following except
- Diet.
  - Genetic factors.
  - Autoimmunity.
  - Environmental factors.
19. How does food move through the digestive tract?
- By gravity.
  - By wavelike muscle contractions.
  - By cilia.
  - By chemical absorption.
20. Hormones responsible for fight-or-flight response are
- Thyroxine and melatonin.
  - Insulin and glucagon.
  - Epinephrine and norepinephrine.
  - Estrogen and progesterone.
21. An organ or structure that is not a component of the urinary system is the
- Urethra.
  - Urinary bladder.
  - Kidneys.
  - Adrenal gland.

22. Blood helps in the transport of the following components except
- Hormone.
  - Oxygen.
  - Heat.
  - Lymph.
23. Which of the following food items provides dietary fiber?
- Pulses.
  - Whole grain.
  - Fruits and vegetables.
  - All of the above.
24. Which of the following is not a legume?
- Peas.
  - Corn.
  - Lentil.
  - Black gram.
25. The aromatic volatile compounds of spices are called
- Spice oil.
  - Spice fat.
  - Spice gel.
  - Spice paste.
26. The sugar contributes to beverage
- Sweetness.
  - Calories.
  - Mouth feel.
  - All of the above.
27. Butter must contain at least what percentage of fat?
- 70 %.
  - 80 %.
  - 90 %.
  - 95 %.
28. What is the moisture content of cow's milk?
- 30 %.
  - 50%.
  - 83 %.
  - 90 %.

29. Blanching is commonly done in vegetable industries to inactivate
- Pathogen.
  - Moulds.
  - Microorganisms.
  - Enzymes.
30. Maltose is a disaccharide of
- Glucose and galactose.
  - Glucose and glucose.
  - Glucose and lactose.
  - Fructose and lactose.
31. If you have a normal cholesterol level, what portion of your total daily calories can come from saturated fat?
- 5 % or less.
  - 10 % or less.
  - 15 % or less.
  - 25 % or less.
32. Trans fatty acids can raise cholesterol levels. Which of these is a source of trans fat?
- Beef.
  - Butter.
  - Cookies.
  - All of the above.
33. Unsaturated fats are made saturated by
- Polymerization.
  - Hydrogenation.
  - Dehydrogenation.
  - Hybridization.
34. Rich sources of polyunsaturated fatty acids in the diet is
- Milk.
  - Butter.
  - Vegetable oils.
  - Eggs.
35. An excessive amount of uric acid in the body can lead to gout and
- Headache.
  - Kidney stone.
  - Stomach pain.
  - Gall stone.

36. Type 2 diabetes can cause long term damage in the
- Kidneys.
  - Eyes.
  - Nerves.
  - All of the above.
37. Type 2 diabetes can cause long term damage in the
- Hormone.
  - Neuro transmitter.
  - Acid.
  - Blood.
38. Which of the following glands regulates circadian rhythm directly?
- Pituitary.
  - Thyroid.
  - Pineal gland.
  - Pancreas.
39. Growth hormone inhibiting hormone affect the function of
- Anterior pituitary.
  - Posterior pituitary.
  - Adrenal cortex.
  - Adrenal medulla.
40. Which one among the following elements/ions is essential in small quantities for development of healthy teeth but causes mottling of the teeth if consumed in higher quantities?
- Iron.
  - Chloride.
  - Fluoride.
  - Potassium.
41. Which one among the following minerals is essential for the transmission of nerve impulses in the nerve fibres of human body?
- Calcium.
  - Cobalt.
  - Iodine.
  - Sodium.
42. Which of the following is a rich source of Omega-3 oils?
- Dairy products.
  - Cod-liver oil.
  - Vegetables.
  - Wheat products.



43. Which of the following enzyme catalyzes the first step of glycolysis?
- Hexokinase.
  - Pyruvate kinase.
  - Glucokinase.
  - Phosphofructokinase-1.
44. Whenever the cell's ATP supply is depleted, which of the following enzyme's activity is increased?
- Hexokinase.
  - Pyruvate kinase.
  - Glucokinase.
  - Phosphofructokinase-1.
45. In acid medium anthocyanins turns \_\_\_\_\_ in colour.
- Pinkish.
  - Blueish.
  - Blackish.
  - Reddish.
46. Cooking leads to oxidation of
- Folic acid.
  - Oxalic acid.
  - Ascorbic acid.
  - Malic acid.
47. Main storage form of thiamin is
- TTP.
  - TMP.
  - TDP.
  - Free thiamine.
48. Which one is not a natural component of urine
- Water.
  - Minerals.
  - Proteins.
  - All.
49. Epithelial cells of the intestine involved in food absorption have on their surface
- Pinocytic vesicles.
  - Zymogen granules.
  - Phagocytic vesicles.
  - Microvilli.

50. Which of the following is not involved in the stimulation of release of pancreatic juice?
- a) Gastrin.
  - b) Secretin.
  - c) Trypsinogen.
  - d) Cholecystokinin.
51. Heartbeat is regulated by \_\_\_\_\_ nerve:
- a) Oculomotor.
  - b) Vagus.
  - c) Olfactory.
  - d) Trigeminal.
52. Cryptorchidism is a condition in which \_\_\_\_\_.
- a) Male hormones are not reactive.
  - b) Ovaries are removed.
  - c) Sperms are not formed.
  - d) Testes fail to descend in scrotal sacs.
53. Which of the following organ is devoid of gland?
- a) Vulva.
  - b) Oviduct.
  - c) Uterus.
  - d) Vagina.
54. Which hormone triggers the kidneys to return calcium ions filtered out of the blood back to the bloodstream?
- a) Cholecystokinin.
  - b) Parathyroid hormone.
  - c) Epinephrine.
  - d) Melatonin.
55. Which hormones enter quickly into the cell?
- a) Mineralocorticoids.
  - b) Glucocorticoids.
  - c) Both.
  - d) None.
56. Long periods of parenteral nutrition is not recommended because
- a) It increases the toxicity of blood.
  - b) It puts pressure on the kidney.
  - c) It puts pressure on the heart.
  - d) It causes the GI track to degenerate.

57. When food is given in the stomach or intestines directly: then it is \_\_\_\_\_ nutrition.
- Intravenous.
  - Saline.
  - Enteral.
  - Parenteral.
58. On ripening; most of the starch is converted into
- Fructose.
  - Glucose.
  - Both.
  - Maltose.
59. Enzymatic browning occurs only when fruits are
- Boiled.
  - Steamed.
  - Cut into pieces.
  - Refrigerated.
60. According to ICMR-RDA 2020 daily requirement for Iron among lactating mothers
- Increases by 6mg.
  - Increases by 10 mg.
  - Decreases by 6 mg.
  - Decreases by 10 mg.
61. According to ICMR-RDA 2020 daily requirement for Iron among NPNI woman are
- 25 mg.
  - 27 mg.
  - 29 mg.
  - 31 mg.
62. Which vitamin is produced by photobiogenesis
- A.
  - D.
  - E.
  - K.
63. In NNAPP Iron Folic acid tablet is given to pregnant women for 100 days in a year where amount of elemental iron is
- 50 mg.
  - 100 mg.
  - 150 mg.
  - 500 mg.

64. Melena is related to
- Jaundice.
  - Obesity.
  - CKD.
  - Peptic Ulcer.
65. Gilbert syndrome is related to
- Liver.
  - Stomach.
  - Brain.
  - Kidney.
66. Low prothrombin activity is characterized by poor absorption of vitamin
- A.
  - C.
  - K.
  - E.
67. Tyrosine is a \_\_\_\_\_ amino acid:
- Glucogenic.
  - Ketogenic.
  - Both.
  - None amino acid.
68. Carotenoids found in -
- Spinach.
  - Potato.
  - Yam.
  - Grapes.
69. Which metal is found in cyanocobalamine -
- Fe.
  - Ca.
  - P.
  - Co.
70. In a protein molecule nitrogen percentage is -
- 16.
  - 17.
  - 18.
  - 19.

71. Wilson's disease occurs due to the deficiency of
- Vit - A.
  - Vit - C.
  - Calcium.
  - Copper.
72. In which disease protein food is restricted -
- Malaria.
  - Hepatitis.
  - Nephritis.
  - TB.
73. A person who has had a renal transplant should regulate the intake of \_\_\_\_\_.
- Carbohydrates.
  - Proteins.
  - Fats.
  - Vitamins.
74. For a person suffering from problems like slow neural transmission, eg dementia, they should be given \_\_\_\_\_
- Increased sodium.
  - Increased potassium.
  - Increased calcium.
  - Increased magnesium.
75. Respiratory quotient (R.Q.) falls in all the following conditions except-
- Acidosis.
  - Febrile conditions.
  - Diabetes mellitus.
  - Starvation.
76. The percentage of total calories obtained from carbohydrates should be between-
- 15- 20%.
  - 20-35%.
  - 50-60%.
  - 5-10%.
77. Which of the following nutrients is rich in short and medium chain fatty acids?
- Milk.
  - Peanut oil.
  - Sunflower oil.
  - Almond oil.

78. Among the given nutrients milk is a poor source of
- Calcium.
  - Protein.
  - Carbohydrate.
  - Vitamin C.
79. Which one of the following is essential for preventing dental caries?
- Flourine.
  - Iodine.
  - Iron.
  - Zinc.
80. Which of the following is not an artificial sweetener?
- Saccharin.
  - Aspartame.
  - Sucrose.
  - Neotame.
81. Which of the following is considered a complete protein food?
- Almond.
  - Horse gram.
  - Soya bean.
  - Cashew nut.
82. What is the smoke point temperature for fats?
- Above 350 degrees F.
  - Above 442 degrees F.
  - Above 500 degrees F.
  - Above 525 degrees F.
83. Per cubic feet of space, which oven is most efficient?
- Convection.
  - Deck.
  - Microwave.
  - Rotary.
84. A patient with gastric resection may need which supplement?
- Vitamin B12.
  - Copper.
  - Vitamin B6.
  - Zinc.

85. Which of the following contributes most significantly to the osmotic load of an enteral formula?
- Amino acids.
  - Calcium caseinate.
  - Laetalbumin.
  - Soy protein isolate.
86. The end products of bacterial fermentation of malabsorbed carbohydrate are:
- Carbon dioxide, hydrogen and pyruvate.
  - Lactic acid, alpha ketoglutaric acid and carbondioxide.
  - Lactic acid, hydrogen and methane.
  - Short chain fatty acids, hydrogen and carbon dioxide.
87. Which one of the following groups of chemicals is not a food nutrient?
- Protein.
  - Enzyme.
  - Carbohydrate.
  - Vitamin.
88. Foods from the meat, poultry, fish, dry beans, eggs group are an important source of
- Iron.
  - Beta carotene.
  - Fiber.
  - Calcium.
89. Which of the following fruits is most suitable for marmalade preparations?
- Guava.
  - Lichi.
  - Orange.
  - Apple.
90. Of the following food items, which one is not used for making jam?
- Pine apple.
  - Apple.
  - Peas.
  - Grapes.
91. Which of the following contains highest amount of beta carotene?
- Ripe mango.
  - Ripe papaya.
  - Watermelon.
  - Beetroot.

92. What is the most common site of gout attack?
- a) Big toe.
  - b) Foot.
  - c) Knee.
  - d) Ankle.
93. Which spice is derived from the dried flower buds of a tree?
- a) Fennel.
  - b) Aniseed.
  - c) Cumin.
  - d) Clove.
94. Crohn's disease
- a) Always affect the colon.
  - b) May lead to intestinal obstruction.
  - c) Is best treated surgically.
  - d) Requires a gluten free diet.
95. Fiber supplements
- a) May be helpful in diverticular disease.
  - b) Are always easily fermented by colon.
  - c) Are usually derived from soluble fiber.
  - d) Should be avoided in constipation.
96. Diabetes happens because of which of these?
- a) The liver does not make enough blood sugar.
  - b) Muscles use too much sugar.
  - c) The body cannot use blood sugar the way it should.
  - d) The body makes more insulin than it needs.
97. High concentration of glucose 6-phosphate is inhibitory to
- a) Hexokinase.
  - b) Pyruvate kinase.
  - c) Glucokinase.
  - d) Phosphofruktokinase-1.
98. "Glisson capsule" is seen in
- a) Kidneys.
  - b) Liver.
  - c) Pancreas.
  - d) Stomach.



99. Acrosome is made up of \_\_\_\_\_ .

- a) Ribosome.
- b) Mitochondria.
- c) Centrioles ituitary.
- d) Golgi bodies.

100. Daily requirement of Calcium of pregnant woman according to ICMR-RDA 2020 is

- a) 800mg/day.
- b) 1000 mg/day.
- c) 1200 mg/day.
- d) 1400 mg/day.

