



JEPAS(PG)-2020
M. Sc in Applied Nutrition (MAN)-2020

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 the answers only in the space provided. Do not make any stray mark on the OMR.
5. Write 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 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, docu-pen, log table, wristwatch, any communication device like mobile phones etc. inside the examination hall. Any candidate found with such items will be **reported against** & 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.



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- 1) How many calories is recommended for a sedentary breastfeeding mothers?
- 2100
 - 2500
 - 2900
 - 1900
- 2) Under aerobic conditions, 1mol glucose forms:
- 2mol ATP.
 - 16mol ATP.
 - 38mol ATP.
 - 42mol ATP.
- 3) The protein-digesting enzymes, trypsin, chymotrypsin and carboxypeptidase, are produced by the:
- Pancreas.
 - Duodenum.
 - Stomach.
 - Ileum.
- 4) How many double Bonds occur in Arachidonic acid?
- 1
 - 2
 - 3
 - 4
- 5) Kidney is differentiated into :
- Cortex and stroma
 - Cortex and medulla
 - Epithelium and medulla
 - All the above
- 6) Which of following is key to ability of DNA to store genetic information and to pass it on from generation to generation?
- Double stranded structure of DNA.
 - Deoxyribose sugar.
 - Phosphate unit.
 - Nitrogen base.
- 7) What should be the amount of calories which is prescribed for preterm baby during first week of life:
- 55kcal/kg/day.
 - 60kcal/kg/day.
 - 66kcal/kg/day.
 - 120kcal/kg/day.
- 8) Thromboxanes are:
- Nuerotransmitter.
 - Antioxidant..
 - Probiotics.
 - Eicosanoids.
- 9) Which is the enzyme specially involved in ossification of bone ?
- Alkaline phosphatase.
 - Acid phosphatise.
 - Hexokinase.
 - ATP ase.
- 10) Orotic aciduria can be treated by a diet rich in:
- Adenine.
 - Guanine.
 - Uridine.
 - Any one of them.

11) Juvenile onset obesity is also known as:

- a) Hypertropic obesity.
- b) Hyper plastic obesity.
- c) Heterogenic obesity.
- d) Heteroplastic obesity.

12) Which one of the following contain highest amount of antioxidant in a group of spices ?

- a) Cinnamon
- b) Nutmeg
- c) Clove
- d) Cardamom

13) In cereals phosphorus are present in the form of:

- a) Lysine.
- b) Methionine.
- c) Phytin.
- d) Phosphophytin.

14) The maintenance of mucus forming cells depends of adequate amounts of:

- a) Vitamin K.
- b) Vitamin C.
- c) Vitamin A.
- d) Vitamin D.

15) Protein can be found mostly which food group?

- a) Fruits.
- b) Cereals.
- c) Pulses.
- d) Vegetables.

16) Cooking meat by browning in a little fat & then simmering it in a covered pan with with a little liquid is known as:

- a) Boiling.
- b) Stewing.
- c) Simmering.
- d) Braising.

17) This nutrient is needed for a healthy immune system and strong connective tissue:

- a) Fibre.
- b) Vitamin K.
- c) Vitamin C.
- d) Fluoride.

18) Beta-oxidation of fatty acid takes place at:

- a) Peroxisome.
- b) Mitochondria.
- c) Mitochondria & peroxisome.
- d) Endoplasmic Reticulum.

19) The absorbed fat in the form of chylomicrons appear first in the:

- a) Portal vein.
- b) Lymphatic.
- c) Subclavian vein.
- d) Capillaries.

20) Vaccine required during pregnancy:

- a) MMR.
- b) BCG.
- c) Titenus.
- d) OPV.

21) Oxygen content of 1gm haemoglobin is about:

- a) 3.34mg.
- b) 3.30mg.
- c) 3.45mg.
- d) 3.25mg.

22) Which of following is used to make rectified spirit by fermentation process?

- a) Cellulose.
- b) Starch.
- c) Glucose.
- d) Fructose.

23) Two fatty acids that are components of fats are:

- a) Stearic acid and Oleic acid.
- b) Butyric acid and Caproic acid.
- c) Palmitic acid and Oleic acid.
- d) None of these.

24) A drug which prevents uric acid synthesis by inhibiting the enzyme xanthine oxidase is:

- a) Aspirin.
- b) Allopurinol.
- c) Colchicine.
- d) Probenecid.

25) 'Hiccough (hiccup)' is due to activity of:

- a) Intercostal muscles
- b) Food in air tract
- c) Diaphragm / jerky incomplete inspiration
- d) Inadequate oxygen in environment

26) Which vitamin is usually retained during cooking?

- a) Vitamin A.
- b) Vitamin C.
- c) Vitamin K.
- d) None of these.

27) Which of the following has no enzymes?

- a) Bile.
- b) Pancreatic juice.
- c) Gastric juice.
- d) None of the above.

28) Which of the following amino acid is sweet in taste?

- a) Glycine.
- b) Alanine.
- c) Glutamic acid.
- d) None of these.

29) The amount of fluid is given in tube feeding for an adult at the rate of:

- a) 25ml/KgBw.
- b) 35ml ml/KgBw.
- c) 30 ml/KgBw.
- d) 40 ml/KgBw.

30) Linoleic acid is a ___ fatty acid.

- a) n-3
- b) n-6
- c) n-9
- d) None of the above.

31) Trypsinogen is activated to trypsin by removal of a hexapeptide by:

- a) Pepsin.
- b) Chymotrypsin Physiology.
- c) Chymotrypsinogen.
- d) Pancreozymen.

32) Physiological changes associated with scurvy (hemorrhages, joint pain fractures) are caused by:

- a) Faulty collagen synthesis.
- b) Inadequate production of the
- c) Failure to synthesize neurotransmitters.
- d) Failure to absorb sufficient amounts of dietary iron.

33) Oleoresin is a concentrated, resinous extract obtained from :

- a) Leafy vegetable
- b) Fruits
- c) Sweetening agent
- d) Spices

34) What is the natural form of sugar found in fruit?

- a) Fructose.
- b) Drupes.
- c) Grapes.
- d) Fruits.

35) To help prevent nausea, you should:

- a) Skip breakfast.
- b) Take more amount of spicy foods.
- c) Eat little and often.
- d) Eat fatty foods.

36) Which of the following is a function of the skeletal system?

- a) Secretion and absorption.
- b) Contraction.
- c) Storage of minerals.
- d) Communication.

37) Low density lipoproteins(LDL) are the principal vehicle for _____ in the blood.

- a) Cholesterol.
- b) Phospholipids.
- c) Triglycerides.
- d) Free fatty acids.

38) Rich sources of Vitamin B are:

- a) Liver.
- b) Fresh liver oils.
- c) Green leafy vegetables.
- d) Egg yolk.

39) Which food contains the most fat?

- a) Graham crackers.
- b) Brownies.
- c) Pudding.
- d) Cake.

40) Which one of the following is a true fruit in the biological sense?

- a) Celery.
- b) Onion.
- c) Tomato.
- d) Rhubarb.

41) Your body needs vitamins and minerals because _____.

- a) They give the body energy.
- b) They help carry out metabolic reactions.
- c) They insulate the body's organs.
- d) They withdraw heat from the body.

42) The presence of blood in urine known as:

- a) Haematuria.
- b) Glycosuria.
- c) Oliguria.
- d) Anuria.

43) Which of the following does not contain fat?

- a) Meat.
- b) Cheese.
- c) Butter.
- d) Sugar.

44) Due to weight gain during pregnancy how much extra calorie is given to a expectant woman:

- a) 200kcal.
- b) 350kcal.
- c) 500kcal.
- d) 250kcal.

45) Linolenic acid or omega 3 FA is present in:

- a) Coconut oil.
- b) Groundnut oil.
- c) Mustard oil.
- d) Butter.

46) An example of a flower type vegetable is:

- a) Citrous fruit.
- b) Lemon.
- c) Broccoli.
- d) Spinach.

47) Bone is mainly composed of:

- a) Iron and phosphorus.
- b) Sulphur and calcium.
- c) Calcium and phosphorus.
- d) Calcium and magnesium.

48) Cow's milk contains fat:

- a) 4.1% .
- b) 3.1% .
- c) 5.3% .
- d) 6.1% .

49) RDA for calcium during pregnancy:

- a) 1500mg/day.
- b) 1200mg/day.
- c) 1400mg/day.
- d) 1300mg/day.

50) Function of vitamin K is :

- a) Respiration
- b) Carbohydrate metabolism
- c) Regulation of calcium and phosphate metabolism
- d) Blood clotting

51) The maintenance of mucus forming cells depends of adequate amounts of:

- a) Vitamin K.
- b) Vitamin C.
- c) Vitamin A.
- d) Vitamin D.

52) Which of the following groups would be most at risk for potassium deficiency?

- a) Lactating mothers.
- b) Pregnant women.
- c) Anorexics.
- d) Infants & young children.

53) This vitamin is needed to prevent a birth defect called Spina Bifida:

- a) Vitamin D.
- b) Vitamin A.
- c) Folate.
- d) Vitamin E.

54) The synthesis of urea occur in:

- a) Kidney.
- b) Liver.
- c) Muscle.
- d) Brain.

55) The hormone that lowers cAMP concentration in liver cell is:

- a) Glucagon.
- b) Insulin.
- c) Epinephirn.
- d) Thromboxine.

56) Pernicious Anaemia causes due to the deficiency of vitamin:

- a) B₁
- b) B₁₂
- c) C
- d) D

57) The sugar present in pulses in the form of :

- a) Amylose
- b) Maltose
- c) Raffinose
- d) Galactose

58) The amount of carbohydrate is given before OGTT test is:

- a) 70gm
- b) 72gms
- c) 65 gm
- d) 75gm

59) Which one of the is active form of antibiotic present in garlic ?

- a) Gingerol
- b) Allicin
- c) Geraniol
- d) Eugenol

60) Simmering is cooking food in a pan when the temperature is about:

- a) 80 to 99 degree centigrade.
- b) 100 degree centigrade.
- c) 60 degree centigrade.
- d) Eighty five degree centigrade.

61) Margarine is obtained from:

- a) Soy bean oil.
- b) Cotton seed oil .
- c) Lard.
- d) Tallow.

62) Which of the following amino acid is lack in groundnut protein ?

- a) Methionine
- b) Tryptophan
- c) Lysin
- d) Arginine

63) Salkowski test is performed to detect:

- a) Glycerol.
- b) Cholesterol.
- c) Fatty acids.
- d) Vitamin D.

64) An inborn error, maple syrup urine disease is due to deficiency of the enzyme:

- a) Isovaleryl-CoAhydrogenase.
- b) Phenylalanine hydroxylase.
- c) Adenosyltransferase.
- d) a-Ketoacid decarboxylase.

65) To prevent fluorosis and dental caries fluorine level in water should be?

- a) <1ppm.
- b) >1ppm.
- c) >1ppm &<2ppm.
- d) >2ppm.

66) Which of the following is a non-protein amino acid?

- a) Ornithine.
- b) Homocysteine.
- c) Histamine.
- d) All of them.

67) Vitamin B is necessary for:

- a) Eyes and skin.
- b) Energy production in cells.
- c) Healing wounds and preventing colds.
- d) Bones and teeth.

68) Which of the following vaccine is given to new born baby?

- a) OPV.
- b) DPT.
- c) BCG.
- d) HepB.

69) Unpleasant odours and taste in a fat (rancidity) can be delayed or prevented by the addition of:

- a) Lead.
- b) Copper.
- c) Tocopherol.
- d) Ergosterol.

70) According to RDA, folic acid requirement of a pregnant woman is:

- a) 100 mcg.
- b) 200 mcg.
- c) 500 mcg.
- d) 5 mcg.

71) Active form of vitamin D3:

- a) 25 hydroxycholecalciferol.
- b) 7-dehydrocholesterol.
- c) 1,25 dihydroxycholecalciferol.
- d) Cholecalciferol.

72) The nitrogenous base present in lecithin:

- a) Choline.
- b) Ethanol amine.
- c) Inositol.
- d) Serine.

73) A premature new born baby should be supplemented with vitamin k immediately after birth, at a dose of:

- a) 1mg.
- b) 2mg.
- c) 5mg.
- d) 4mg.

74) Which of the following has highest glycemic index?

- a) Ice cream.
- b) Cucumber.
- c) Bread.
- d) Dextrose.

75) The antioxidant component present in black tea :

- a) Theaflavin
- b) Isoflavin
- c) Xanthin
- d) Galic acid

76) Intake of diuretics increases the requirement of:

- a) Sodium.
- b) Vitamin-D.
- c) Glucose.
- d) Potassium.

77) Which substance is not normally present in urine ?

- a) Creatinine.
- b) Glucose.
- c) Uric acid.
- d) Urobilinogen.

78) Let down reflex is an example of:

- a) Milk production from mammary gland.
- b) Skeletal muscles contraction
- c) Eye movement.
- d) Cardiac cycle.

79) Uric acid is formed by the breakdown of:

- a) Purines.
- b) Pyrimidines.
- c) Urea.
- d) All of the above.

80) The best way that under nutrition can be measured by:

- a) Waist circumference.
- b) Waist Hip ratio.
- c) MUAC.
- d) All of these.

81) Infants born to mothers who are vegan may be at increased risk of deficiency of which nutrient?

- a) Vitamin C.
- b) Folate.
- c) Vitamin B12.
- d) Calcium.

82) Active transport across biomembrane involves

- a) Production of ATP
- b) Requirement of energy
- c) Production of toxin
- d) Release of energy

83) Which of the following fish contains the most fat?

- a) Bhekti.
- b) Hilsa.
- c) Mrigal.
- d) Bholi.

84) Neonatal tyrosinemia improves on administration of:

- a) Thiamin.
- b) Riboflavin.
- c) Pyridoxine.
- d) Ascorbic acid.

85) All of the following increase blood sugar level EXCEPT:

- a) Cortisol.
- b) Growth hormone.
- c) Somatostatin.
- d) Lutenising hormone.

86) Jaggery can not be easily crystallised as sugar due to presence of :

- a) Invert sugar
- b) Sorbitol
- c) Iron
- d) Ceramellan

87) Aquamin for TPN is a source of:

- a) Water soluble vitamins.
- b) Carbohydrates.
- c) Aminoacids.
- d) Electrolytes.

88) The amount of visible fat should be consumed by a pregnant woman in daily basis is about:

- a) 30gm.
- b) 40gm.
- c) 25gm.
- d) 50gm.

89) Which is the most common precipitant of alcoholic ketoacidosis?

- a) Pancreatitis.
- b) GI bleed.
- c) Alcohol withdrawal without precipitating illness.
- d) Infection.

90) Amylases in saliva begin the breakdown of carbohydrates into_____.

- a) Fatty acids.
- b) Polypeptides.
- c) Amino acids.
- d) Simple sugars.

91) A diet high in saturated fat can be linked to which of the following:

- a) Kidney failure.
- b) Bulimia.
- c) Anorexia.
- d) Cardio-vascular disease.

92) Lactic acid fermentation does not produce :

- a) ATP
- b) CO₂ and NADH
- c) CO₂
- d) NADH

93) Ornithine cycle is related to :

- a) Respiration
- b) Excretion
- c) Digestion
- d) Nutrition

94) Functional unit involved in absorption of digested food is :

- a) Brunner's glands
- b) Peyer's patch
- c) Villus
- d) Crypt of Lieberkühn

95) In Krebs's Cycle Succinyl CoA is converted to Succinic acid with the help of:

- a) Succinate thiokinase.
- b) Succinate dehydrogenase.
- c) Succinate carboxylase.
- d) Succinate synthase.

96) Osteomalacia is deficiency disease of :

- a) Infants due to protein-energy malnutrition
- b) Adults due to protein-energy malnutrition
- c) Adults due to vitamin D deficiency
- d) Infants due to vitamin K deficiency

97) Which one of the following is affected by Trichinella spiralis, a parasitic organisms ?

- a) Sea fish
- b) Cereal
- c) Corn
- d) Pork & pork products

98) Which one of the following fish is a type of fin, round & white fish ?

- a) Cod
- b) Mackerel
- c) Scallops
- d) Shrimp

99) Chest circumference is measured in the position of:

- a) Mesosternale.
- b) Sternum.
- c) Above the glabella.
- d) Dactylon.

100) Satiety centre in hypothalamus is regulated by:

- a) Gastric dilatation.
- b) Blood glucose level.
- c) Blood insulin level.
- d) All of the above.