

Question Booklet Sr. No.

1008

Roll No.

OMR Sheet No.

Ph.D.-2018
HOME SCIENCE ENTRANCE TEST, MARCH 2020

Time : 2 Hours

Maximum Marks : 200

Number of Pages in this Booklet : 20

Number of Questions in this Booklet : 100

INSTRUCTIONS FOR THE CANDIDATES

- (i) Check this booklet carefully for the sequence of pages and questions. If it is defective due to pages/questions missing or not in serial order or any other discrepancy it should be got replaced immediately from the invigilator within the period of 5 minutes. Afterwards neither the Question Booklet will be replaced nor any extra time will be given.
- (ii) After this verification write your Roll No. and OMR Sheet Number on this Question Booklet.
- (iii) **Use only Black or Blue ball point pen.**
- (iv) This paper consists of **100** multiple choice type questions. Each question has four alternative answers (a), (b), (c) and (d). **Only one of these alternative answer is correct.** You are required to darken completely the circle of correct answer in the OMR Sheet.
- (v) There is **no negative marking.**
- (vi) Do not write anything other than relevant entries or put any mark on any part of the OMR Sheet, which may disclose your identity, otherwise you will render yourself liable to disqualification.
- (vii) Use of electronic gadgets such as pager, cell phone, calculator and log table etc. is prohibited.
- (viii) Rough Work may be done in the end of this booklet.
- (ix) You have to **return the OMR Sheet** to the invigilator at the end of the examination compulsorily.

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SEAL

1. Food poisoning due to which of the following organism has the shortest incubation period?
 - (a) Salmonella
 - (b) Staphylococcus
 - (c) Clostridium botulism
 - (d) Clostridium perfringens.

2. Which of the following is NOT TRUE of free radicals?
 - (a) Beta-carotene helps in neutralizing free radicals
 - (b) Deficiency of free radicals leads to carcinoma
 - (c) Exercise helps in neutralizing free radicals
 - (d) Inflammation is an internally generated source of free radicals.

3. Median is measure of :
 - (a) Skewness
 - (b) Correlation
 - (c) Central tendency
 - (d) Dispersion.

4. Which of the following vitamin affects metabolism of calcium in our body?
 - (a) Vitamin A
 - (b) Vitamin B
 - (c) Vitamin C
 - (d) Vitamin D.

5. Milk pasteurization is tested by :
 - (a) OTA test
 - (b) Phosphatase test
 - (c) Nitric acid test
 - (d) Acid chromatin test.

6. Pigeon chest results from
 - (a) Fluorosis
 - (b) Rickets
 - (c) Lathyrism
 - (d) Epidemic dropsy.

7. Which of the following fruits have maximum calories by weight?
 - (a) Guava
 - (b) Banana
 - (c) Apple
 - (d) Orange.

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8. Which of the following is NOT a food borne disease?
- (a) Amebiasis (b) Cholera
(c) Typhoid (d) Chicken pox.
9. Which of the following is a poor source of iron?
- (a) Meat (b) Spinach
(c) Jaggery (d) Butter.
10. Which of the following sequences of foodstuffs is correctly arranged in decreasing proportion by which they have protein content per 100 gm?
- (a) Pulses, Soyabean, Buffalo milk, Eggs
(b) Soyabean, Pulses, Eggs, Buffalo milk
(c) Pulses, Soyabean, Buffalo milk, Eggs
(d) Eggs, Soyabean, Pulses, Buffalo milk.
11. Which of the following nutritional disorder is caused by sanguinarine?
- (a) Aflatoxicosis (b) Endemic ascites
(c) Epidemic dropsy (d) Neurolathyrisms.
12. Which of the following sequences is CORRECTLY arranged in decreasing vitamin C contents per 100 gm of food items?
- (a) Amaranth, guava, cabbage, amla, orange
(b) Guava, amla, orange, amaranth, cabbage
(c) Orange, amla, guava, cabbage, amaranth
(d) Amla, guava, cabbage, amaranth, orange.
13. Egg protein is also labelled as 'reference protein' because of its high :
- (a) Protein content (b) Net protein utilization
(c) Protein/fat ratio (d) Avidin content.

14. Daily caloric requirement of an average hard working male laborer is :
- (a) Less than 2300 (b) 2400–2500
(c) 2600–2700 (d) More than 2800.
15. Which of the following pair of words DOES NOT share the same relationship as in other pairs?
- (a) Proteins : Marasmus (b) Niacin : Pellagra
(c) Iron : Anemia (d) Sodium : Rickets.
16. Which of the following items DOES NOT belong in the group?
- (a) Carrot (b) Potato
(c) Tomato (d) Ginger.
17. Choose a word from the following to fill in the BLANK to get with the series : Groundnuts:
Sesame : Mustard :
- (a) Cereals (b) Legumes
(c) Leafy vegetables (d) Oilseeds.
18. Which of the following is TRUE of nutritive value of coconut oil?
- (a) High essential fatty acid (b) High saturated fatty acid
(c) High mono-unsaturated fatty acid (d) High poly-unsaturated fatty acid.
19. Which of the following has the highest calories per unit quantity (100 ml)?
- (a) Cow's milk (b) Buffalo's milk
(c) Goat's milk (d) Human milk.
20. Which of the following has the highest calories per unit quantity (100 gm)?
- (a) Egg (b) Groundnut
(c) Soyabean (d) Meat.

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21. Milk pasteurization involves :
- (a) Adding chlorine to milk (b) Cooling milk below zero degree
(c) Controlled heating of milk (d) Adding lactase to milk.
22. Epidemic dropsy is caused by consumption of contaminated?
- (a) Pulses (b) Mustard oil
(c) Groundnuts (d) Potatoes.
23. Which of the following is TRUE of Botulism food poisoning?
- (a) Heating up to 100°C destroys its toxin
(b) There is NO anti-toxin for it
(c) It DOES NOT occur in infants
(d) Home canning is immune to it.
24. Which of the following has the highest fat per unit quantity (100 gm)?
- (a) Egg (b) Groundnut
(c) Soyabean (d) Meat.
25. Parboiling is done for :
- (a) Milk pasteurization (b) Autoclaving of utensils
(c) Detoxifying *Khesari dhal* (d) Defluoridation of water.
26. Which of the following has the highest Linoleic acid per 100 gm?
- (a) Sesame oil (b) Mustard oil
(c) Safflower oil (d) Palm oil.
27. Prevalence of anemia in pregnant women in India is :
- (a) Less than 20% (b) 21%-30%
(c) 31-50% (d) More than 50%.

28. Which of the following has the highest lactose per unit quantity (100 ml)?
- (a) Cow's milk (b) Buffalo's milk
(c) Goat's milk (d) Human milk.
29. Endemic ascites occurs due to food contamination with :
- (a) Pyrrolizidine alkaloid (b) Sanguinarine alkaloid
(c) Ergot alkaloid (d) Beta oxalyl amino alanine (BOAA).
30. Which of the following is an essential amino acid?
- (a) Glutamic acid (b) Phenylalanine
(c) Glycine (d) Arginine.
31. Essential amino acid are so named because these are required :
- (a) For brain metabolism (b) From outside sources
(c) In large quantities (d) For puberty growth spurt.
32. Which of the following is true of nuts in our diet?
- (a) Fat content is 20% (b) Protein content is 40%
(c) Good source of Vitamin B (d) Poor source of iron.
33. Nitric acid is used to test the adulteration of :
- (a) Ghee (b) Mustard oil
(c) Milk (d) Cheese.
34. Nalgonda technique is used for :
- (a) Food fortification (b) Defluoridation
(c) Chlorination (d) Testing purity of mustard oil.

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35. Three to five hours after a party many of the guests develop vomiting and diarrhea. Which of the following is the probable diagnosis :
- (a) Cholera (b) Botulism
(c) Salmonella food poisoning (d) Staphylococcal food poisoning.
36. For which of the following food poisoning case fatality rate is the highest :
- (a) Staphylococcal (b) Botulism
(c) Salmonellosis (d) Clostridium perfringens.
37. Which of the following is TRUE of Clostridium perfringens food poisoning?
- (a) Poorly cooked meat can cause it (b) Its incubation period is 1-6 hrs
(c) Its case fatality rate is 40% (d) Its spores are destroyed at 50°C.
38. Which of the following is TRUE of Salmonella food poisoning?
- (a) It occurs without fever (b) It is a zoonosis
(c) Its incidence is declining (d) Its incubation period is 36-60 hrs.
39. Which of the following could be measured directly?
- (a) Pain (b) Hope
(c) Health (d) Weight.
40. Which of the following would be an example of a nominal data?
- (a) Age in years (b) BMI
(c) Weight in kg (d) Blood groups.
41. Which of the following is NOT criterion of safe and wholesome water?
- (a) Free from pathogens (b) Free from harmful chemicals
(c) Free from chlorine (d) Pleasant to taste.

42. Which of the following is TRUE of Zinc in human nutrition?
- (a) It acts as a free radical (b) It is contra-indicated during lactation.
(c) It is NOT found in animal foods (d) Its deficiency may affect immune system.
43. Which of the following is TRUE of Copper in human nutrition?
- (a) Its daily requirement is 400-500 microgram
(b) Hypercuperemia may be seen in Wilson's disease
(c) Hypocuperemia may be seen in Hodgkin's disease
(d) Its deficiency may lead to neutropenia.
44. Which of the following is NOT TRUE of dietary fibers?
- (a) All dietary fibers are starch polysaccharides
(b) These have a property of holding water and swelling
(c) Gum in fenugreek seeds can reduce blood glucose level
(d) Gum in fenugreek seeds can reduce blood cholesterol level.
45. Which of the following focus on finding a solution to an immediate practical problem?
- (a) Basic research (b) Applied research
(c) Explanatory research (d) Descriptive research.
46. In a normal distribution, percentage of observations beyond two standard deviation of mean is
- (a) 5% (b) 12.5%
(c) 18.5% (d) 31.6%.
47. In an *anganwadi* centre all the 12 children aged 2 years present on 10.12.2019 weighed 10 kg. each. Which of the following inference can be drawn here?
- (a) Mean weight 12 kg (b) Median weight 12 kg
(c) Standard deviation = 'zero' kg (d) Standard deviation 1.2 kg.

48. What is the recommended level of Fluorides in drinking water for India?
(a) 0.5-0.8 PPM (b) 1.0-2.5 PPM
(c) Above 2.5 PPM (d) Below 0.5 PPM.
49. Hardness of water for kitchen use should be in the range of :
(a) Less than 1 m eq/lit (b) 1-3 m eq/ lit
(c) 3-6 m eq/lit (d) More than 6 m eq/lit.
50. Who of the following is associated with 'White revolution' movement?
(a) George Kurien (b) Rajinder Singh
(c) Bindeshwar Pathak (d) Sundarlal Bahuguna.
51. Which of the following statements are TRUE about salmonellosis?
(a) It represents food borne illness affecting man and animals
(b) It is always fatal
(c) Its incidence has declined substantially in developed countries
(d) Use of pesticides in animal feeds prevents salmonellosis.
52. Which of the following principles or recommendations should be used in mid-day meal scheme?
(a) Rice water left after cooking should be mixed with *dhal*
(b) Cereal-pulse combination should be in 1 : 3 ratio
(c) Food grains should be stored in a moist atmosphere
(d) Sprouted pulses should NOT be used.
53. Recommended daily calorie intake of a sedentary non-pregnant, non-lactating Indian woman is
(a) Less than 2000 calories (b) 2000-2200 calories
(c) 2200-2400 calories (d) 2400-2800 calories.

54. Which of the following is the best source of Vitamin C?
- (a) Orange (b) Guava
(c) Cabbage (d) Amla.
55. Which of the following is TRUE of Groundnuts?
- (a) Fat content = Less than 30%
(b) Protein content = Less than 30%
(c) Calories provided = Less than that by sugar
(d) These are poor in vitamin B.
56. Which of the following is TRUE of obesity?
- (a) It is seen only in adults
(b) BMI is above 25 in obese people
(c) It DOES NOT run in families
(d) It DOES NOT have a role in causing gall bladder disease.
57. Which of the following is NOT TRUE of body mass index (BMI)?
- (a) Its values are age independent
(b) Its calculation is similar for both sexes
(c) It can distinguish between weight due to muscles or fat
(d) Its calculation requires both weight and height of a person.
58. For the following conditions relative risk is increased due to obesity. Select the condition for which it is GREATLY increased?
- (a) Gall bladder disease (b) Fetal defects
(c) Impaired fertility (d) Colon cancer.

59. Due to which of the following conditions risk of diabetes type II is **CONVINCINGLY** increased?
- (a) Voluntary weight loss in obese people
 - (b) Intake of non-starch polysaccharides
 - (c) Maternal / gestational diabetes
 - (d) Exclusive breast feeding for first 6 months.
60. Which of the following is a **MODIFIABLE** risk factor for hypertension?
- (a) Age
 - (b) Sex
 - (c) Dietary fibre
 - (d) Ethnicity.
61. Which of the following disease results from consumption of contaminated groundnuts?
- (a) Fluorosis
 - (b) Epidemic dropsy
 - (c) Lathyrism
 - (d) Aflatoxicosis.
62. Which of the following is a criteria of a sanitary eating establishment?
- (a) Corners of room walls should NOT be rounded
 - (b) Perishable and non-perishable food items to be kept together
 - (c) Waste to be disposed off on alternate days
 - (d) Doors should be of self-closing type.
63. Which of the following is **NOT** a part of strategies outlined in National Nutrition Policy of India?
- (a) Replacing low cost nutritious food with high energy foods
 - (b) Instituting land reforms in rural areas
 - (c) Equal remuneration for women
 - (d) Improving purchasing power of people.
64. The terms repeatability, precision, reproducibility, and consistency are used to indicate :
- (a) Validity
 - (b) Sensitivity
 - (c) Specificity
 - (d) Reliability.

65. Which of the following diseases has food borne transmission?
- (a) Cholera
(b) Endemic typhus
(c) Guinea worm diseases
(d) Kala Azar.
66. Which of the following is a part of a healthy diet of a person?
- (a) Salt intake should be 5-10 gms per day
(b) Dietary fat should be 30-45% of total dietary intake
(c) Proteins should be 10-15% of total dietary intake
(d) Junk food should be used in moderate amounts.
67. Which of the following is TRUE about Refined oils?
- (a) Refining of Vegetable oils is done with steam
(b) Refining of Vegetable oils removes unsaturated fatty acids
(c) Complete dependence on one vegetable oil is a healthy option
(d) For frying use vegetable oils with lower thermal stability.
68. Deficiency of which of the following causes DENTAL CARIES?
- (a) Fluoride
(b) Iodine
(c) Iron
(d) Protein.
69. For which of the following vitamins meat and fish are good source?
- (a) Thiamine
(b) Riboflavin
(c) Niacin
(d) Ascorbic acid.
70. Tryptophan is a precursor of :
- (a) Thiamine
(b) Riboflavin
(c) Niacin
(d) Cynacobalamin.

71. Daily requirement of folic acid for healthy male adults is :
- (a) Below 100 mcg (b) 200 mcg
(c) 500 mcg (d) 600 mcg or above.
72. A sample which involves a random start and then proceeds with every k th element from then onwards is :
- (a) Systematic random sampling (b) Stratified random sampling
(c) Simple random sampling (d) Snowball sampling.
73. Which of the following is TRUE about sampling?
- (a) Systematic random sampling is more scientific than simple random sampling
(b) In judgement sampling elements DO NOT have equal and independent chance of selection
(c) In simple random sampling one can draw only one sample from a population
(d) In stratified random sampling ONLY up to 3 strata CAN be formed in a population.
74. Which of the following is a nonparametric test of statistical significance?
- (a) ANOVA (b) t-test
(c) Pearson correlation coefficient (d) Chi-square test.
75. Which of the following disease is caused by food?
- (a) Scabies (b) Plague
(c) Typhoid fever (d) Syphilis.
76. Which of the following is NOT TRUE of probability sampling technique?
- (a) Each unit has an equal chance of selection
(b) Generates unbiased estimation of population
(c) Produce a sample that resembles population as closely as possible
(d) Avoids use of sampling frame.

77. What is the danger zone for the temperature range in which bacteria proliferate in food?
- (a) 0–5°C (b) 5–60°C
(c) 60–80°C (d) 80–100°C.
78. Leftover foods should be reheated before consumption to at least what temperature?
- (a) 74°C (b) 60°C
(c) 50°C (d) 44°C.
79. In which compartment should raw meat be stored in a refrigerator?
- (a) In the top (b) In the middle
(c) Bottom (d) In the upper shelf of door.
80. Which of the following is NOT a part of the domains with which nutrigenomics deals?
- (a) Study of the effects of nutrients on the expression of an individual's genetic makeup
(b) Diagnosis and nutritional prevention of DNA damage on an individual basis
(c) Study of the nutritional factors that protect the genome from damage
(d) Development of new hormones that supplement genome health.
81. The proper temperature of a home refrigerator should be?
- (a) 0–1°C (b) 2–8°C
(c) 9–12°C (d) 13–18°C.
82. Which of the following is TRUE of the conditions for keeping together raw and cooked food in a refrigerator?
- (a) It should never be done
(b) It may be done unconditionally
(c) It may be done if raw food is properly washed
(d) It may be done if both are being refrigerated at the same temperature.

83. Which of the following is NOT a measure of dispersion?
- (a) Mean
 - (b) Variance
 - (c) Standard deviation
 - (d) Range.
84. Which of the following habit of cooks ensures food safety?
- (a) Wearing charm bracelets
 - (b) Daily pesticide spray in kitchen
 - (c) Bathing daily
 - (d) Adding sodium bicarbonate to cooked food.
85. Which of the following is a close ended questions?
- (a) What are your views about diet fads?
 - (b) Why have you stopped eating non-veg foods?
 - (c) How will you grade a tea shop?
 - (d) How many workers are employed in your hostel mess?
86. Which of the following is TRUE about diagrammatic representation of data?
- (a) Histogram is used for discrete data
 - (b) Pie chart can be draw as rectangle
 - (c) Random scatter diagram imply lack of relationships
 - (d) Positive correlation is indicated by a horizontal line.
87. Among these which colour should be preferred for granite shelves to enhance Food Safety ambience in a kitchen?
- (a) Green
 - (b) Grey
 - (c) Black
 - (d) White.

88. Which of the following is NOT TRUE as per the nutrigenomics concept?
- (a) Nutrition DOES NOT affect the extent to which different genes are expressed
 - (b) Nutrition modulates whether individuals attain the potential established by their genetic background
 - (c) Fortifying flour with folic acid—a move intended to prevent neural tube defects among mothers who eat the flour—may lead to numerous unforeseen health problems
 - (d) Only a portion of the population will respond positively to specific nutritional interventions, while others will be unresponsive, and still other could even be adversely affected.
89. Which of the following is TRUE for dry storage of food items?
- (a) Can be done anywhere if the item is properly packed
 - (b) Should be away from the wall and above ground level
 - (c) Should be done in refrigerator only
 - (d) Should be done in a dark humid place.
90. In which of the following nonrandom sampling techniques does the researcher asks the subjects to identify other potential respondents?
- (a) Snowball
 - (b) Convenience
 - (c) Purposive
 - (d) Quota.
91. Which of the following term describes the more frequent eating out on weekends among Indian families?
- (a) Cyclic trends
 - (b) Transitional trends
 - (c) Seasonal trends
 - (d) Secular trends.
92. Which of the following is an example of primary data source?
- (a) Interview of a dietician for a survey
 - (b) Daily diary records of a police station for a month
 - (c) Sales data of a cafe for one year
 - (d) Personal diary of a chef since his childhood.

93. Which of the following conditions is applicable to Chi-Square test?
- Sample size should always be more than 200
 - It cannot be used for more than 2 categories
 - It should always be applied to percentages
 - Frequencies should be mutually exclusive.
94. What should be the logical work flow inside the kitchen where : 1 = Receiving area, 2 = Storage area, 3 = Preparation area, 4 = Service area?
- 1, 2, 3, 4
 - 2, 3, 1, 4
 - 4, 2, 3, 1
 - 1, 3, 2, 4.
95. Consider a published research finding – "Constipation patients who received high fiber diet complained less frequently to hard stool than those not receiving the same". Now identify, which of the following option indicates the INDEPENDENT VARIABLE :
- Constipation
 - Frequency of hard stool complaints
 - Use of laxatives
 - Intake of high fiber diet.
96. Which of the following is TRUE as per the nutrigenomics concepts?
- Genome instability, in the absence of overt exposure to genotoxins, is NOT linked with Nutritional deficiency
 - Nutritional deficiency or excess can cause DNA damage on its own and that the effects are of the same magnitude as that of many common environmental toxicants
 - Riboflavin, pantothenic acid, and biotin have NO link with an increase in DNA damage to the same extent observed with occupational exposure to genotoxic and carcinogenic chemicals
 - Nutrigenomics has NEVER focussed on single-nucleotide polymorphism (SNPs), since dietary factors differentially alter the effect of one or more SNPs.

97. What is the correct sequence for a three sink system of dishwashing?
- (a) Scrape, Wash, Rinse, Sanitize with ice cold water, Air dry
 - (b) Soak, Sanitize, Air dry, Rinse with hot water, Wash
 - (c) Scrape, Rinse, Wash, Sanitize with hot water, Air dry
 - (d) Soak, Sanitize with warm water, Air dry, Rinse, Wash.
98. Which of the following habit of cooks ensures food safety?
- (a) Bathing daily
 - (b) Wearing bracelets/*taweez*
 - (c) Washing hands before going to sleep
 - (d) Adding sodium bicarbonate (soda) to cooked food.
99. Which of the following is TRUE of Nutritional management of Phenylketonuria?
- (a) Diet has no role in it
 - (b) A low-phenylalanine diet is essential
 - (c) It needs diet supplementation with legumes and nuts
 - (d) A low-tryosine diet is essential.
100. Which of the following statements are TRUE about sampling?
- (a) Snow ball sampling is an example of random sampling
 - (b) Stratified random sampling is used when strata are similar to each other
 - (c) Each unit has equal chance of being chose in simple random sampling
 - (d) In repeated samples from a population, results from all samples are same.