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*Signature of Invigilator*

Question Booklet Series

**X**

**Subject Code : 23**

**PAPER-II**

**Question Booklet No.**

(Identical with OMR Answer Sheet Number)

## **HOME SCIENCE**

*Time : 2 Hours*

*Maximum Marks: 200*

### ***Instructions for the Candidates***

1. Write your Roll Number in the space provided on the top of this page as well as on the OMR Sheet provided.
2. At the commencement of the examination, the question booklet will be given to you. In the first 5 minutes, you are requested to open the booklet and verify it:
  - (i) To have access to the Question Booklet, tear off the paper seal on the edge of this cover page.
  - (ii) Faulty booklet, if detected, should be got replaced immediately by a correct booklet from the invigilator within the period of 5 minutes. Afterwards, neither the Question Booklet will be replaced nor any extra time will be given.
  - (iii) Verify whether the Question Booklet No. is identical with OMR Answer Sheet No.; if not, the full set is to be replaced.
  - (iv) After this verification is over, the Question Booklet Series and Question Booklet Number should be entered on the OMR Sheet.
3. This paper consists of One hundred (100) multiple-choice type questions. All the questions are compulsory. Each question carries *two* marks.
4. Each Question has four alternative responses marked: (A) (B) (C) (D) . You have to darken the circle as indicated below on the correct response against each question.

*Example:* (A) (B) (C) (D) , where (C) is the correct response.
5. Your responses to the questions are to be indicated correctly in the OMR Sheet. If you mark your response at any place other than in the circle in the OMR Sheet, it will not be evaluated.
6. Rough work is to be done at the end of this booklet.
7. If you write your Name, Roll Number, Phone Number or put any mark on any part of the OMR Sheet, except in the space allotted for the relevant entries, which may disclose your identity, or use abusive language or employ any other unfair means, such as change of response by scratching or using white fluid, you will render yourself liable to disqualification.
8. Do not tamper or fold the OMR Sheet in any way. If you do so, your OMR Sheet will not be evaluated.
9. You have to return the Original OMR Sheet to the invigilator at the end of the examination compulsorily and must not carry it with you outside the Examination Hall. You are, however, allowed to carry question booklet and duplicate copy of OMR Sheet after completion of examination.
10. **Use only Black Ball point pen.**
11. **Use of any calculator, mobile phone, electronic devices/gadgets etc. is strictly prohibited.**
12. **There is no negative marks for incorrect answer.**



## HOME SCIENCE

## PAPER II

1. Constant temperature is maintained in our body on account of
  - (A) Water
  - (B) Roughage
  - (C) Energy giving food
  - (D) Vitamin and protein
  
2. As per My Pyramid food guidance system, healthy fat in a person should be obtained from
  - (A) Sweets, oil, fruits and fats
  - (B) Cheese, yogurt and milk
  - (C) Pasta, oats, beef and chicken
  - (D) Vegetables, fish, oil and nuts
  
3. Which of the following bacteria grow in alkaline pH?
  - (A) *Lactobacillus officinalis*
  - (B) *Vibrio cholerae*
  - (C) *Salmonella typhi*
  - (D) *Staphylococcus aureus*
  
4. Choose the weaving type for upholstery applications.
  - (A) Twill
  - (B) Satin
  - (C) Pile
  - (D) Plain
  
5. \_\_\_\_\_ is persistent and genetic endowment of personality.
  - (A) Conscience
  - (B) Discipline
  - (C) Self Concept
  - (D) Temperament
  
6. Which of the following does not constitute 90% of dry weight of any food?
  - (A) Carbohydrates
  - (B) Fibres
  - (C) Proteins
  - (D) Fats
  
7. A set of statements that seeks to explain problems, actions or behaviour is referred as
  - (A) Anomie
  - (B) Verstehen
  - (C) Microsociology
  - (D) Conflict function
  
8. Which one of the following is a trisaccharide?
  - (A) Raffinose
  - (B) Verbascose
  - (C) Stachyose
  - (D) Maltose
  
9. The type of coding recommended for presenting a food sample for sensory evaluation is
  - (A) Three digit sequential numbers
  - (B) Three alphabets chosen randomly
  - (C) Three digit random numbers
  - (D) Three numbers or alphabets chosen randomly
  
10. The primary colours according to Munsell colour theory are
  - (A) Three
  - (B) Two
  - (C) Four
  - (D) Five

11. Which one of the following requires highest moisture content for growth?

- (A) Bacteria
- (B) Virus
- (C) Mold
- (D) Yeast

12. Your Mom is weaving a sweater for you. She is doing two types of knitting processes alternatively. In each type, loops are formed in different way. Choose the correct option.

- (A) Wrap forms loop in diagonal way
- (B) Weft forms loop in orthogonal way
- (C) Wrap forms loop in orthogonal way
- (D) Weft forms loop in a row

13. Which one of the following agent is *not* permitted for ripening of fruits?

- (A) Calcium Carbide
- (B) Ethylene gas
- (C) Smoke
- (D) Ethephon

14. Smallest unit of sound in language is

- (A) Phoneme
- (B) Syllable
- (C) Morpheme
- (D) Syntax

15. The foodservice system practised by ISKON for distribution of mid-day meal can be classified as

- (A) Assembly foodservice system
- (B) Ready-prepared foodservice system
- (C) Commissary foodservice system
- (D) Conventional foodservice system

16. The percentage of learning that takes place through sight is

- (A) 15%
- (B) 87%
- (C) 50%
- (D) 70%

17. Respiratory quotient does not fall in the following condition:

- (A) Diabetes mellitus
- (B) Acidosis
- (C) Starvation
- (D) Febrile condition

18. Correct order of the Management Process is

- (A) Planning, Organizing, Controlling, Evaluation
- (B) Organizing, Controlling, Planning, Evaluation
- (C) Planning, Controlling, Evaluation, Organizing
- (D) Organizing, Planning, Controlling, Evaluation

19. Stratified sampling is used when a population is

- (A) from a homogenous group
- (B) has similar characteristics
- (C) belongs to similar age-group and gender
- (D) from a heterogenous group

20. Which one of the following salts are generally used below 0.1% in food processing industries?

- (A) Sodium
- (B) Magnesium
- (C) Calcium
- (D) Ammonium

21. You put two fabrics in water. One of them sinks faster and becomes heavier. Other one takes time to sink because it leaks

- (A) Bleaching
- (B) Scouring
- (C) Stiffening
- (D) Parchmentisation

22. Identify the highest source of Calcium among following food sources:

- (A) Sesame seeds
- (B) Amaranth greens
- (C) Finger millet
- (D) Chickpea

23. If the neural tube fails to seal in the head end of the embryo, a defect known as \_\_\_\_\_ occurs.

- (A) Spinabifida
- (B) Microcephaly
- (C) Anencephaly
- (D) Macrocephaly

24. Identify the false statement among the following:

- (A) Amylase rich foods are used to increase energy density of infant foods.
- (B) Pregnant Women require extra nutrients during II and III trimesters of pregnancy.
- (C) Infants need much less energy per kg body weight in comparison to adults.
- (D) Women have lesser ferritin in liver than men.

25. The word 'M' in SMART concept of formulating training objectives is

- (A) Measurable
- (B) Manageable
- (C) Meaningful
- (D) Monitoring

26. The expression "Window of opportunity" refers to the following age duration to arrest growth retardation in Indian children:

- (A) Birth to five years
- (B) Pre-school years
- (C) Birth to two years
- (D) Adolescent age

27. Which is *not* a renewable resource of energy?

- (A) Geothermal
- (B) Wind
- (C) Water
- (D) Electricity

28. If one measure is in ordinal scale and the other variable is at least ordinal, then the following correlation is employed:

- (A) Product moment
- (B) Rank order
- (C) Multiple
- (D) Partial

29. Nutritional assessment methods and techniques as per NFHS-4 data, the percentage of stunted children under 5 years of age is

- (A) 47.5
- (B) 38.4
- (C) 45.0
- (D) 30.9

30. An ergogenic aid helps an individual to tolerate intense training by

- (A) building muscle and increasing stamina.
- (B) providing instant energy.
- (C) increasing body weight.
- (D) providing adequate rest to athlete.

31. Most of the vegetables are stored under refrigeration for prolonged shelf-life at

- (A) 15 °C
- (B) 0 °C
- (C) 5 °C
- (D) -20 °C

32. You are asked to print a fabric of 5 meter length and 1 meter width. You are given a design of 18" × 12" to print on whole fabric in a very short time. Which process you will follow?

- (A) Block printing
- (B) Batic printing
- (C) Roller printing
- (D) Heat transfer printing

33. Putrefaction includes gases

- (A) Carbon dioxide and Sulfur dioxide
- (B) Hydrogen sulfide and Carbon monoxide
- (C) Carbon dioxide and Hydrogen sulfide
- (D) Sulfur dioxide and Carbon monoxide

34. A Rosogolla of 100 grams contains 4 grams of protein, 2 grams of fat and 186 kcalories. Calculate the amount of carbohydrate (g) present in it.

- (A) 32 g
- (B) 38 g
- (C) 43 g
- (D) 35 g

35. The newborn's vision is estimated to be \_\_\_\_\_ on the well known snellen chart.

- (A) 70/200
- (B) 20/600
- (C) 200/100
- (D) 20/20

36. Iron rich food is required more for which kind of Olympic event performers?

- (A) Sprinter
- (B) Marathon runner
- (C) Long jump
- (D) Javelin thrower

37. Triangulation in PRA means

- (A) Source of information
- (B) Cross checking the data
- (C) Combination of tools
- (D) Mixture of techniques

38. Decision making is

- (A) Crucial to Management
- (B) Unique to Management
- (C) Results of Management
- (D) One of the steps in Management

39. What does ANOVA calculate?

- (A) F ratios
- (B) R ratios
- (C) Z scores
- (D) T scores

40. Gluten is prohibited for which disease?

- (A) Gastrointestinal disorder
- (B) Malabsorption syndrome
- (C) Celiac disease
- (D) Lipidoses disorder

41. The process of conversion of glucose to glycogen takes place in

- (A) Pancreas
- (B) Kidney
- (C) Adrenal glands
- (D) Liver

42. Food is digested and broken down slowly due to the presence of

- (A) Polyunsaturated fatty acid
- (B) Dietary fibers
- (C) Starch
- (D) Aromatic amino acids

43. Bubble nucleation and expansion of the vapour bubble is used to print on fabric in following technique:

- (A) Piezoelectric ink jet
- (B) Thermal ink jet
- (C) Continuous ink jet
- (D) Heat transfer printing

44. Which one of the following is *not* a property of Omega-3 fatty acids?

- (A) Anti-thrombotic
- (B) Anti-arrhythmic
- (C) Anti-inflammatory
- (D) Anti-diabetic

45. The organ which prevents entry of some harmful microbes into the foetus is \_\_\_\_\_.

- (A) Placenta
- (B) Umbilical cord
- (C) Amnion
- (D) Chorion

46. Combination of few methods such as increasing acidity, high temperature of processing and low temperature to reduce microorganism is called

- (A) Stumbling technology
- (B) Low pressure preservation approach
- (C) Hurdle technology
- (D) High pressure food preservation

47. Some people are genetically predisposed to alcohol intolerance, this is due to the polymorphism of \_\_\_\_\_ enzyme.

- (A) Aldehyde dehydrogenase
- (B) Alcohol catalase
- (C) Enzyme cytochrome P450
- (D) Alcohol dehydrogenase

48. Which one of the following is non-sporulating bacteria that poisons food?

- (A) *Clostridium perfringens*
- (B) *Bacillus cereus*
- (C) *Clostridium botulinum*
- (D) *Corynebacterium diphtheriae*

49. Distance education overcomes the difficulty of

- (A) Group learning
- (B) Tele conferencing
- (C) Geographical isolation
- (D) Individual learning

50. According to Consumer Protection Act 1986, how many consumer rights are there?

- (A) 5
- (B) 6
- (C) 9
- (D) 7

51. Vitamin B<sub>1</sub> deficiency is the cause for which of the following diseases?

- (A) Beri-beri
- (B) Rickets
- (C) Muscular dystrophy
- (D) Hemolytic anemia

52. The quality that is *not* considered during yarn testing is

- (A) Maturity
- (B) Hairiness
- (C) Yarn elongation
- (D) Twist measurement

53. Fruits, vegetables and whole grains are excellent sources of which of these following nutrients?

- (A) Carbohydrate and fat
- (B) Carbohydrate and fiber
- (C) Fat and protein
- (D) Protein and vitamin

54. Pre-test, Post-test, Natural Control Group design is a \_\_\_\_\_ design.

- (A) Non-experimental
- (B) Field Research
- (C) Quasi experimental
- (D) Experimental

55. Which of the following vitamin supplement is recommended for arthritis patients?

- (A) Niacin
- (B) Vitamin A
- (C) Vitamin E
- (D) Vitamin K

56. The five basic principles of community development include

- (A) Sustainability, Community based, Participatory, Asset based, Self-reliance
- (B) Sustainability, Community based, Participatory, Asset based, Self-reliance
- (C) Sustainability, Community based, Inventory, Asset based, Self-reliance
- (D) Sustainability, Community based, Participatory, Asset based, Economics

57. To create the awareness among consumers, which consumer organization is the oldest one in India?

- (A) Consumer Guidance Society of India
- (B) Consumer Education and Research Centre
- (C) Bureau of India Standards
- (D) Federation of Consumer Organization

58. Protein Efficiency Ratio (PER) is the ratio between

- (A) Gain in body weight and protein intake
- (B) Protein intake and gain in body weight
- (C) Biologically available protein and body weight
- (D) Protein intake and loss of body fat

59. Basal Metabolic Rate (BMR) is the measure of energy during

- (A) Fasting
- (B) Resting
- (C) Running
- (D) Post-eating

60. Which of the following is an example of a prebiotic?

- (A) Yogurt
- (B) Inulin
- (C) Creatinine
- (D) Fish oil



**61.** As per basic entitlement, a primary school child should receive the following under mid-day school meal program in India:

- (A) 450 kcal and 8-12g protein
- (B) 350 kcal and 6-8g protein
- (C) 700 kcal and 20g protein
- (D) 500 kcal and 10g protein

**62.** Denim is heavy grade cotton. Pumice stone which is used during its processing shows many disadvantages like back-staining, wear and tear of machine etc. Now enzymatic treatment is preferred for Bio-Stone washing. The enzyme that is used in this process is

- (A) Lactase
- (B) Pectinase
- (C) Laccase
- (D) Cellulase

**63.** Which of the following state was the first to make rainwater harvesting compulsory for every building to avoid groundwater depletion?

- (A) Madhya Pradesh
- (B) Kerala
- (C) Tamil Nadu
- (D) Uttarakhand

**64.** Delayed wound healing is associated with

- (A) Diabetes mellitus
- (B) Hypertension
- (C) Liver cirrhosis
- (D) Obesity

**65.** Mr. Sivan, a 70 years old scientist by profession is diagnosed with nerve cell death and tissue loss throughout the brain, affecting nearly all its functions. The cortex in the brain shrivels up and this damages, the areas involved in thinking, planning and remembering. The shrinkage in a nerve cell is especially severe in the hippocampus which caused an overall imbalance, memory loss and change in personality. Which of the following diseases is expected for Mr. Sivan?

- (A) Parkinson's disease
- (B) Alzheimer's disease
- (C) Phenylketonuria
- (D) Cognition loss

**66.** Major fatty acid present in coconut oil is

- (A) Palmitic
- (B) Lauric
- (C) Myristic
- (D) Caproic

**67.** Which one of the following causes maximum destruction of ascorbic acid?

- (A) Baking
- (B) Boiling
- (C) Microwaving
- (D) Pressure cooking

**68.** The extended form of MGNREGA which stands for the most recent employment programme of the government is

- (A) Mahatma Gandhi National Regional Employment Guarantee Act.
- (B) Mahatma Gandhi National Regulatory Establishment Governing Act.
- (C) Mahatma Gandhi National Rural Establishment Governing Act.
- (D) Mahatma Gandhi National Rural Employment Guarantee Act.

69. For preparing orange squash, which preservative is used?

- (A) Sodium Benzoate
- (B) Potassium Sorbate
- (C) Potassium Metabisulfite
- (D) Sodium Sulphate

70. Two groups of subjects, control and experimental are chosen to study the effect of feeding a nutritional supplement and relevant data collected. Identify appropriate test for data analysis to determine significant differences between the groups:

- (A) Analysis of variance
- (B) Students 't' test
- (C) Odd's ratio
- (D) Chi square test

71. The food safety and standards Act, 2006 differs from earlier food regulation on the following conceptual principle:

- (A) Implementation of food law are stringent to prevent fraud.
- (B) More regulations are framed to prevent food adulteration.
- (C) The major responsibility of supplying safe is on the Food Business Operator.
- (D) Consumer is given the responsibility to check on food safety.

72. Zero Waste Designing is

- (A) reducing waste by keeping garments for long time.
- (B) reducing waste by recycling.
- (C) reducing waste during design cutting.
- (D) redesigning the waste.

73. Molds grow best in the presence of

- (A) Warm temperature, moisture and mild acidic media.
- (B) Cold temperature, low moisture and neutral media.
- (C) Cold temperature, high moisture and high alkaline media.
- (D) Warm temperature, low moisture and neutral media.

74. Mrs. Akansha Rastogi Agarwal is 20 weeks pregnant. She is in \_\_\_\_\_ trimester of her pregnancy.

- (A) First
- (B) Second
- (C) Third
- (D) Fourth

75. Parboiled rice is nutritionally superior on account of

- (A) distribution of water soluble nutrients throughout the grain and subsequent retention on polishing.
- (B) enhancement of nutrients because of soaking, steaming and polishing.
- (C) destruction of anti-nutritional factors and higher availability of vitamins.
- (D) dissolution and lowering of starch and protein fractions.

76. According to the principles of Extension Education, the principle which is based on discussions and suggestions is

- (A) principle of learning by doing.
- (B) principle of leadership.
- (C) principle of whole family.
- (D) principle of applied science and democratic approach.

77. Basis for computing recommended dietary allowances for vitamins and minerals in Indians is

- (A) mean requirements and 20% allowance for cooking losses.
- (B) mean requirements and addition of twice standard deviation values.
- (C) mean requirements as determined by population studies.
- (D) mean requirements and 10% allowance for individuals variations.

78. What is the main objective of the Basel Convention?

- (A) To reduce movements of hazardous waste between nations to protect human health and environment
- (B) To analyze the waste produced by a nation and its characterization
- (C) Conservation of the waste to protect human health and environments
- (D) Characterization of the waste for proper disposal

79. What is the calorie content of a product with following composition: moisture-10%, fat-5%, protein-15%, ash-40%, CHO- 60% and dietary fiber-5%

- (A) 365 kcal
- (B) 355 kcal
- (C) 345 kcal
- (D) 375 kcal

80. Which vitamin is used most commonly to control browning in fruits by enzymes?

- (A) Vitamin K
- (B) Vitamin C
- (C) Vitamin B
- (D) Vitamin D

81. Which food source among the following has best quality protein?

- (A) Wheat
- (B) Rice
- (C) Soy
- (D) Red gram

82. Flat puppets which are operated against the rear of a tightly stretched white cloth screen with a light behind are called

- (A) Glove puppets
- (B) Rod puppets
- (C) String puppets
- (D) Shadow puppets

83. Invisible fat in food refers to

- (A) fats/oils used for frying foods.
- (B) fats/oils used for cooking foods.
- (C) bound fat which cannot be extracted by ordinary solvents.
- (D) fat content of food as reported in food composition tables.

84. Berk (2008) emphasised on four types of parenting. One of the types is indulgent parenting. What does indulgent parenting accounts for?

- (A) Parents want to have everything under control and do not show any signs of love, attachment or warmth.
- (B) The parents have caring, sensitive relation to the needs of the children with clear limits to their children.
- (C) The parents are emotionally withdrawn and distant from the children, indifferent towards children's behaviour not interested in children's success.
- (D) The parents towards children have warm and caring relation but with too much pamper so that the children of such parents often are impulsive, irritable without self control and spoiled.

85. Indicate the nature of diets being consumed on account of nutrition transition in Indian population:

- (A) High sugar, high fat, low fiber, low vitamins and low minerals
- (B) High sugar, high fiber, low vitamins, high minerals and high fat
- (C) High vitamins, high minerals, high fiber, low fat, low sugar
- (D) Low sugar, high fiber, high vitamins, low fat, high minerals

86. Vikaas is the government sponsored programme of day care scheme for \_\_\_\_\_ group.

- (A) people blacklisted from state
- (B) below poverty level people
- (C) cerebral palsied and autistic
- (D) aids affected people

87. For Infant's brain development the important lipids are

- (A) Linolenic and palmitic acid
- (B) Stearic and linoleic acid
- (C) Arachidonic and docosahexaenoic acid
- (D) Eicosapentaenoic and caprylic acid

88. The core values, beliefs and assumptions that are widely shared by members of an organization are known as

- (A) Organizational climate
- (B) Organizational culture
- (C) The pervading atmosphere
- (D) The mission statement

89. The time required to kill microorganisms at a given lethal temperature is called

- (A) Thermal inactivation time
- (B) Thermal death time
- (C) Critical time
- (D) Lag phase

90. You have conducted a diet survey on Indian population. Which of the following nutrient composition tables you would use for computation?

- (A) FAO Nutrient database
- (B) USDA Nutrient database
- (C) Indian Food Composition tables
- (D) European Nutrient database

91. Principal protein in rice is

- (A) Zein
- (B) Oryzenin
- (C) Casein
- (D) Lysine

92. "Eight head theory" in the human figure is defined for designing garments. "Fifth head" in this theory means

- (A) from the nape of the neck to the armscye (armpit).
- (B) from the mid-thigh to below knee.
- (C) from the hollow of the waist to the hip (crotch).
- (D) from the hip to the mid-thigh.

93. A teratogen is

- (A) Male sex hormone
- (B) Risk factor for congenital defects
- (C) Drug for mother to prevent miscarriage
- (D) Medical test to detect gender of foetus

94. Unit of radiation energy is

- (A) Radura
- (B) Gray (GY)
- (C) Percentage
- (D) MeV

95. The most popular technique for preservation of cultures including freezing with subsequent drying is referred as

- (A) Liquid under paraffin
- (B) Lyophilization
- (C) Drying
- (D) Freezing

96. The most important quality attribute responsible for color of the potato chips is

- (A) Starch
- (B) Proteins
- (C) Reducing sugars
- (D) Vitamin C

97. Government of India launched National Family Benefit scheme for assisting a section of people of India. Which section of Indian people can avail the benefit from the scheme?

- (A) The Ministry of Rural Development implemented this scheme under which monetary grant of Rs. 20,000/- is given as lump sum assistance to the bereaved household in the event of death of the breadwinner.
- (B) The Ministry of Rural Development implemented this scheme under which pension scheme for widows as well as pension scheme for the elderly below poverty line were operated.
- (C) Under this scheme of the Ministry of Rural Development ten KG of food grain is given to those eligible aged persons who have remained uncovered under the Indira Gandhi National Old Age Pension scheme.
- (D) The scheme of the Ministry of Rural Development aims at creating efficient and effective institutional platforms of the rural poor.

98. Monoglycerides and diglycerides are used in a variety of foods as

- (A) Emulsifiers
- (B) Flavor
- (C) Calories
- (D) Color

99. Identify the natural toxicant present in tapioca.

- (A) Gossypol
- (B) Cyanogens
- (C)  $\beta$ -oxalyl amino alanine
- (D) Solanin

100. Which of the following statement is true regarding Indian history?

- (A) India is a country with a long history of making its own furniture styles and forms, not influenced by outside cultures.
- (B) In India, there isn't much wood, so most furniture is made of material like stone, reeds or clay.
- (C) Indian furniture is a blend of European influences with Indian material and decorative elements.
- (D) Indian furniture was very plain and never had elaborate decoration because the European colonist preferred plain surfaces.

**ROUGH WORK**

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