

Roll No.

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(Write Roll Number from left side exactly as in the Admit Card)

Signature of Invigilator

Question Booklet Series

X

Question Booklet No.

(Identical with OMR Answer Sheet Number)

Subject Code : 23

PAPER-II

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 (five) 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, 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.**

PAPER II

(HOME SCIENCE)

1. Among the following compounds identify the correct one which supplies double energy in comparison to protein and carbohydrate in human body:
 - (A) Minerals
 - (B) Vitamins
 - (C) Micronutrients
 - (D) Fats
2. Defence system of human body is boosted by:
 - (A) Carbohydrates in food
 - (B) Minerals in food
 - (C) Proteins in food
 - (D) Fats in food
3. Two fibers are twisted clockwise or anti-clockwise to form yarn. Two yarn sets can form a fabric by weaving. How can a single yarn form a fabric?
 - (A) By rolling
 - (B) By twisting
 - (C) By spreading
 - (D) By knitting
4. The major component of bacterial cell wall is called as:
 - (A) Xylan
 - (B) Chitin
 - (C) Cellulose
 - (D) Peptidoglycan
5. Identify the correct sequential steps in manufacture of cheese:
 - (A) Acidification, Coagulation, Curd separation, Salting, Shaping, Ripening
 - (B) Coagulation, Acidification, Curd separation, Shaping, Salting, Ripening
 - (C) Acidification, Curd separation, Coagulation, Ripening, Salting
 - (D) Coagulation, Curd separation, Salting, Acidification, Shaping, Ripening
6. The human brain development after birth occurs due to:
 - (A) increase in neuron size and glial cell number.
 - (B) increase in neuron number and glial cell number.
 - (C) increase in number and size of barrier cells.
 - (D) increase in size and number of adjacent cells.
7. When there are two independent samples of ranked data, which one of the following is to be preferred in non-parametric test?
 - (A) A one-way ANOVA
 - (B) The Spearman rho
 - (C) The Mann-Whitney U
 - (D) The Chi-square
8. Which of the following tests is used for measuring degree of unsaturation in fat?
 - (A) Saponification number
 - (B) Iodine number
 - (C) Peroxide value
 - (D) Polanski value
9. Conscious seeking of the simplest, easiest and quickest method of doing work is:
 - (A) Time plan
 - (B) Work simplification
 - (C) Write out all plans
 - (D) Work plans
10. What are the specifications for minimum juice content and TSS for fruit squash respectively?
 - (A) 25% and 45%
 - (B) 10% and 40%
 - (C) 25% and 65%
 - (D) 40% and 80%

[Please Turn Over]

11. Which one of the following pigments is most stable to thermal and pH variations?

- (A) Carotenoids
- (B) Chlorophylls
- (C) Betanins
- (D) Anthocyanins

12. The acceptable daily intake and tolerable daily intake denote safe consumption levels for:

- (A) antioxidants and preservatives
- (B) additives and contaminants
- (C) chemicals and drug residues
- (D) pesticide residues and sweeteners

13. Which type of non-woven fabric is employed in geotextiles and disposable medical/hygienic products?

- (A) Airlaid
- (B) Drylaid
- (C) Wetlaid
- (D) Spunlace

14. How much time it will take to get FSSAI license once all the relevant documents and fees payments are made?

- (A) Within 30 days
- (B) Within 60 days
- (C) Within 80 days
- (D) Within 10 days

15. In communication the language is:

- (A) the non-verbal code.
- (B) the iconic code.
- (C) the verbal code.
- (D) the symbiotic code.

16. Maximum concentration of minerals in human body is found in:

- (A) Arms and Legs
- (B) Skin
- (C) Bones and Teeth
- (D) Brain

17. According to the Roger's Model of Diffusion of Innovation, the population of third world countries is positioned in the category of:

- (A) Laggards
- (B) Early Adopters
- (C) Innovator
- (D) Late Majority

18. Undigested food contains large amount of water and it is absorbed in:

- (A) Food-pipe
- (B) Large intestine
- (C) Stomach
- (D) Small intestine

19. When someone fails to manage time effectively, it results in:

- (A) Increased stress
- (B) Greater productivity
- (C) Better decision making
- (D) Increased work quality

20. Which one of the following is suitable for reducing error/bias to minimum in sample selection?

- (A) Stratified sampling
- (B) Random sampling
- (C) Cluster sampling
- (D) Purposive sampling

21. Bleaching is NOT needed for:
- (A) Cottons
 - (B) Silk
 - (C) Wool
 - (D) Rayon
22. Which protein source among the following has highest biological value?
- (A) Egg
 - (B) Zein
 - (C) Soyabean
 - (D) Prolamines
23. Which part of the eye of the new born is poorly developed?
- (A) Peripheral retina
 - (B) Cornia
 - (C) Iris
 - (D) Central retina
24. During fermentation of food which of the following nutrients is increased?
- (A) Ergosterol
 - (B) Calcitriol
 - (C) Retinol
 - (D) Cyanocobalamine
25. Which one of the following conditions in childhood is associated with cognitive impairment in adulthood?
- (A) Maternal iron and iodine deficiency
 - (B) Upper respiratory tract infections
 - (C) Protein-energy malnutrition
 - (D) Infantile diarrhea
26. A prominent non-nutritional cause for childhood malnutrition in developing countries is:
- (A) Insanitary environment and repeated infections.
 - (B) Adequate healthcare services.
 - (C) Presence of PHCs in rural areas.
 - (D) Mid-day school lunch program.
27. Define Engel's law of consumption:
- (A) The percentage of income allocated for food purchases decreases as income rises.
 - (B) The percentage of income allocated for luxury goods purchases decreases as income rises.
 - (C) The percentage of income allocated for food purchases increases as income rises.
 - (D) The percentage of income allocated for food purchases either decreases or increases as income rises.
28. Green tea is also called:
- (A) Orthodox tea
 - (B) Fermented tea
 - (C) Unfermented tea
 - (D) Semi-fermented tea
29. Which one of the following salt in derivatized form helps the body in preventing goiter?
- (A) Magnesium iodide
 - (B) Sodium iodide
 - (C) Copper iodide
 - (D) Cadmium iodide
30. Which one of the following diet survey techniques would give minimum error for computing nutrient intakes of population?
- (A) 24 hour recall survey
 - (B) Food frequency
 - (C) Dietary pattern survey
 - (D) Weighment survey

31. A 35 year old lady is suffering from baldness, amnesia/forgetfulness and cold intolerance and is diagnosed with under active thyroid. What would be the impact of this disease on BMR?

- (A) Remains unaltered
- (B) Increases
- (C) Results in initial upsurge and subsequent lowering
- (D) Declines

32. Bandhni dupatta has tiny white dots scattered all over the fabric. Which kind of technique is used?

- (A) Resist dyeing
- (B) Block printing
- (C) Roller printing
- (D) Hand print

33. Which one of the following is responsible for spoilage in chilled shrimp?

- (A) Bacillus species
- (B) Achromobacter
- (C) Molds or yeasts
- (D) Pseudomonas

34. With progression of age of the human being, loosening of skin and wrinkle formation occur due to:

- (A) epidermis adheres tightly to the dermis.
- (B) the dermis thickens.
- (C) the weave of collagen fibers within it becomes tight.
- (D) the number of elastin fibers declines.

35. Receiving and interpreting a message is called:

- (A) Encoding
- (B) Drafting
- (C) Decoding
- (D) Communication

36. Normal level of calcium in human blood should be:

- (A) 8.5 – 10.3 mg/dl
- (B) 5.5 – 7.3 mg/dl
- (C) 1.0 – 5.5 mg/dl
- (D) 12.5 – 14.3 mg/dl

37. Porin is present in:

- (A) Bacterial cell wall
- (B) Flagella
- (C) Hypae
- (D) Pilli

38. Xerophthalmia disorder can be controlled by supplementation of which of the following nutrient?

- (A) Iron
- (B) Vitamin C
- (C) Vitamin A
- (D) Magnesium

39. Good human resource management requires good communication which happens only when:

- (A) more messages are given to more people.
- (B) right message is given in the right form and to the right people.
- (C) various media are used to give messages.
- (D) messages are detailed and with illustrations.

40. According to NITI Aayog report every second woman in the age group of 15-49 years age has:

- (A) Goiter
- (B) Anemia
- (C) Low BMI
- (D) Marasmus

41. Individuals consuming a diet low in this nutrient can have low plasma prothrombin level when treated with antibiotics:

- (A) Folic Acid
- (B) Vitamin K
- (C) Vitamin B₁₂
- (D) Thiamine

42. In the dyeing of wool, dye anion forms ionic interaction with amino groups of the proteins. Another type of interaction that is found between the azo, amino or alkylamino groups, and the amido group is

- (A) Van der Waals forces
- (B) Hydrogen bond
- (C) Covalent bond
- (D) London forces

43. Which of these is not an insoluble dietary fiber?

- (A) Cellulose
- (B) Pectin
- (C) Hemicellulose
- (D) Lignin

44. "Extension Education is formal and informal education". — Who said this?

- (A) L. D. Kalsey
- (B) D. Ensoninger
- (C) O. P. Dhama
- (D) M. C. Burret

45. Sociometry method is used to select a:

- (A) Project
- (B) Leader
- (C) Programmer
- (D) Supervisor

46. Person with celiac disease can eat which one of these foods?

- (A) Wheat flour
- (B) Barley
- (C) Rice
- (D) Rye

47. On the basis of high-priority, decision taken is known as:

- (A) Programmed Decision
- (B) Group Decision
- (C) Routine Decision
- (D) Emergency Decision

48. Trans-fats are responsible for a variety of diseases. Which of the followings contain trans-fats?

- (A) Extra virgin olive oil
- (B) Hydrogenated vegetable oil
- (C) Shell fish oil
- (D) Soybean oil

49. The reason of using emulsifier in ice-cream is:

- (A) to keep it firm during freezing procedure.
- (B) to eventually distribute the sugar molecules throughout.
- (C) to eventually distribute fat molecules throughout the colloid.
- (D) to preserve the food for sale.

50. Maillard reaction which gives brown food its distinct flavour occurs due to the reaction of:

- (A) fat and amino acids.
- (B) fat and starch.
- (C) amino acids and reducing sugars.
- (D) fats and reducing sugars.

[Please Turn Over]

51. Which one of the following is commonly used in floor coverings, door mats, table runners?

- (A) Jamakkalam
- (B) Laharia
- (C) Mothra
- (D) Batic

52. Carbohydrate hydrolyzing enzyme present in saliva is:

- (A) Maltase
- (B) Sucrase
- (C) Amylase
- (D) Lactase

53. Mothers who drink alcohol heavily during pregnancy may have babies with problems like small head size, heart defects, irritability, hyperactivity, mental retardation or slowed motor development. This syndrome is incurable. Identify the disease:

- (A) Fetal alcohol syndrome
- (B) Blue baby syndrome
- (C) Erythroblastosis Fetalis
- (D) Fetal mutation syndrome

54. Choose the correct statement about BMR from the following options:

- (A) BMR has no effect on age matched males and females.
- (B) Males have equal BMR than same age females.
- (C) Males have higher BMR than same age females.
- (D) Males have lower BMR than same age females.

55. According to Bloom's Taxonomy of Education, objectives for knowledge based goals and levels of expertise involves:

- (A) Knowledge, Comprehension, Mechanism, Adaptation
- (B) Perception, Set, Guidance, Mechanism, Adaptation
- (C) Receiving, Responding, Valuing, Organization, Characterization by a value complex
- (D) Knowledge, Comprehension, Application, Analysis, Synthesis

56. For telecommunication infrastructure every applicant has to obtain permission from:

- (A) Standing Advisory Committee on radio frequency allocation, Ministry of Telecommunication.
- (B) Standing Advisory Committee on radio frequency allocation, Ministry of Education.
- (C) Standing Advisory Committee and sound frequency allocation, Ministry of Telecommunication.
- (D) Standing Advisory Committee on radio frequency allocation, Ministry of Transportation.

57. Lack of calcium in diet of an adult causes the disease known as:

- (A) Kawasaki
- (B) Blue baby syndrome
- (C) Osteomalacia
- (D) Cirrhosis

58. During jaundice, therapeutic diet recommends these foods except:

- (A) Barley
- (B) Butter
- (C) Fruits and Vegetables
- (D) Sea fish

59. Human beings can easily tolerate a lack of which of the following nutrients?

- (A) Protein
- (B) Lipids
- (C) Carbohydrate
- (D) Calcium

60. Which of the following is not a component of dietary fiber?

- (A) Pectin
- (B) Lignin
- (C) Agar
- (D) Cellulose

61. Most banned dyes have azo groups. Under certain condition azo bonds are broken and carcinogenic compounds are formed. These compounds are known as:

- (A) Amides
- (B) Amines
- (C) Acids
- (D) Alcohols

62. Optimum food and nutrition security refers to:

- (A) adequately available, accessible and utilizable food at all times to entire population.
- (B) adequately available, accessible and utilizable food at all times to vulnerable population.
- (C) proper absorption and metabolism of nutrients from food by all.
- (D) absence of nutrient deficiencies in women and children.

63. In the management of steatorrhea, which type of fat can be used?

- (A) Linolenic and Linoleic acids
- (B) Short chain fatty acids
- (C) Polyunsaturated fatty acids
- (D) Medium chain triglycerides

64. To grade the sweetness of sugar, which of the following is taken as standard?

- (A) Fructose
- (B) Glucose
- (C) Maltose
- (D) Sucrose

65. A child uses his straight stretched arms to represent an airplane. Sometimes he uses a stick and pretends to have a sword. These events suggest that the child uses symbols to represent words, images and ideas. According to Piaget's stages of cognitive development, in which stage does the child belong to?

- (A) Sensori-motor
- (B) Pre-operational
- (C) Concrete operational
- (D) Formal operational

66. Trypsin inhibitors in legumes can be deactivated by:

- (A) Boiling
- (B) Washing
- (C) Grinding
- (D) Soaking

67. Which of the following statement is a standard method of food preservation by destroying microorganisms and toxin accumulation by heat treatment?

- (A) Cooking, Freezing, Canning
- (B) Sterilization, Chemical preservations, Bacteriostatic method
- (C) Cooking, Sterilization, Irradiation
- (D) Pasteurization, Cooking, Irradiation

68. Which one of the following is the second largest university in the world that has emerged as a pioneering institution in non-formal education?

- (A) Netaji Subhas Open University
- (B) Karnataka State Open University
- (C) Tamil Nadu Open University
- (D) Indira Gandhi National Open University

69. The Green Rating Systems for buildings are:

- (A) different among states.
- (B) same among nearby states.
- (C) different among union territories.
- (D) different among districts.

70. *Ex-post-facto* study is a research design of following types:

- (A) Experimental
- (B) Non-experimental
- (C) Correlation
- (D) Naturalistic

71. Bulletproof Jackets belong to which segment of technical textiles?

- (A) Pro Tex
- (B) Pack Tex
- (C) Build Tex
- (D) Deko Tex

72. Which one of the following describes the nature of bacteriocins?

- (A) Antimicrobial peptides
- (B) Digestive carbohydrates
- (C) Natural additives
- (D) Pathogenic organisms

73. Which of the following is false in case of Down Syndrome?

- (A) Women older than 35 years are more likely to give birth to a child with Down Syndrome.
- (B) Doctors can use screening tests during pregnancy to estimate the probability that a child will have Down Syndrome.
- (C) In Down Syndrome, there are three copies of either complete or partial of chromosome 23.
- (D) The characteristics of Down Syndrome include low muscle tone, short stature, a flat nasal bridge and a protruding tongue.

74. In HACCP system CCP stands for

- (A) Critical Control Point
- (B) Crucial Control Point
- (C) Central Control Point
- (D) Clean Control Point

75. Which of the following can cause fatal food poisoning through contamination of canned foods?

- (A) *Clostridium botulinum*
- (B) *Clostridium perfringens*
- (C) *Escherichia coli*
- (D) *Salmonella*

76. Which is not the objective of non-formal education?

- (A) Increased literacy index
- (B) Empowering women
- (C) Youth development
- (D) Revenue generation

77. Identify the cluster of essential amino acids among the following:

- (A) Valine, Threonine, Isoleucine, Lysine
- (B) Methionine, Tyrosine, Glycine, Tryptophan
- (C) Phenylalanine, Aspartic acid, Histidine, Proline
- (D) Leucine, Glutamine, Arginine, Proline

78. Identify the incorrect answer from the following, when decorative weaves is otherwise known as:

- (A) Dobby weaves
- (B) Fabric and Trimmings
- (C) Leno weaves
- (D) Swivel weaves

79. Saccharine is _____ times sweeter than sucrose.

- (A) 100
- (B) 1000
- (C) 300
- (D) 2000

80. Calculation of energy content of a grain with the following composition, moisture-5%, protein-20%, fat-5%, CHO-50% and dietary fiber-12% is given. Choose the correct option below:

- (A) 349 kcal.
- (B) 325 kcal.
- (C) 300 kcal.
- (D) 396 kcal.

81. Coiling and folding of polypeptide chain determines the following in protein:

- (A) Tertiary structure
- (B) Amino acid sequence
- (C) Primary structure
- (D) Secondary structure

82. Which of the following fibers can be confirmed by performing microscopic test?

- (A) Polyester
- (B) Wool
- (C) Nylon
- (D) Acrylic

83. Identify the group of iron absorption inhibitors among the following:

- (A) Tannins, Oxalates, Phylates
- (B) Vitamin C, Lactose, Tannins
- (C) Calcium, Oxalates, Vitamin E
- (D) Fiber, Starch, Amino acids

84. Which of the following is identified to be the prime cause of ageing in human cells?

- (A) Telomere shortening
- (B) DNA replication slippage
- (C) Post transcriptional modifications
- (D) Alternative splicing of genes

85. Which one of the following is used to control ropiness in bread?

- (A) Fumarates
- (B) Propionates
- (C) Sorbates
- (D) Succinates

86. Prominent intestinal bacteria providing immunity to infants is:

- (A) Bifido bacteria
- (B) *Saccharomyces cerevisiae*
- (C) *Escherichia coli*
- (D) Proteo bacteria

87. Poly A tail is present in:

- (A) mRNA
- (B) mrRNA
- (C) tRNA
- (D) rRNA

88. Direct oxidative pathway of glucose breakdown is otherwise known as:

- (A) EMP Pathway
- (B) Cori Cycle
- (C) PP Pathway
- (D) Kreb's Cycle

89. During Corona pandemic the most important fruits and vegetable food supplements that have been recommended for boosting the immunity level includes:

- (A) Carotenoid, Neem, Spinach, Cauliflower
- (B) Spinach, Gilloy, Mango, Pineapple
- (C) Turmeric, Citrus fruits, Neem, Tulsi
- (D) Broccoli, Orange, Watermelon, Potato

90. A condition with absolute deficiency of insulin due to autoimmune destruction of pancreatic β -cells is classified as

- (A) Type I diabetes
- (B) Type II diabetes
- (C) Gestational diabetes
- (D) Transient diabetes

91. Anthropometry utilizes the ratios in the body to interpret the body proportions. Which among the following does not fall under this category?

- (A) Biacromium/Biiliacum (Biac/Bill)
- (B) Leg Length/Height (LL/H)
- (C) Sitting Height/Height (SH/H)
- (D) Leg Length/Sitting Height (LL/SH)

92. Identify the correct option for the patient on the following class of drugs that have increased the requirement of vitamin D:

- (A) Diuretics
- (B) Anticonvulsants
- (C) Anticoagulants
- (D) Antacids

93. The efficiency of blanching is checked by the following enzymes:

- (A) Pectinase/Amylase
- (B) Rennin/Catalase
- (C) Catalase/Peroxidases
- (D) Pepsin/Peroxidase

94. The following are among the vulnerable groups that comprise the children in need of care and protection (CNCP) except:

- (A) Day-care children
- (B) HIV affected children
- (C) Mentally ill children
- (D) Juveniles in conflict with law

95. Organoleptic estimation is a:

- (A) Microscopic method
- (B) Chemical method
- (C) Objective method
- (D) Subjective method

96. Most common source of food irradiation is:

- (A) Sunlight
- (B) X-rays
- (C) UV light
- (D) Gamma rays

97. The SCREAM stands for Supporting Children's Right through Education, Art and Media. What is SCREAM meant to do?

- (A) It is an initiative to educate youth of the world in order to spread awareness about child labour with the younger generation.
- (B) It is an initiative to educate the kindergarten children against child trafficking and child labour.
- (C) It is an initiative to educate the population of the country about the right family planning.
- (D) It is an initiative to educate the rural population about the children and family planning.

98. Chemical sanitizers and antimicrobial agents for use on food and food product contact surfaces are registered under which of these agencies?

- (A) EPA
- (B) FDA
- (C) USDA
- (D) HACCP

99. Vitamin D increases the absorption of:

- (A) Calcium and Phosphorus
- (B) Iron and Calcium
- (C) Sulphur and Potassium
- (D) Sodium and Phosphorus

100. While considering the technical factors influence office work place, planning and design, which of the following parameters are checked?

- (A) Adherence to life safety requirements mandated by the local legislation
- (B) Budget allocated for office work place programming
- (C) Specifications of common areas required by all divisions
- (D) Anticipation of the need to accommodate future changes in the organisations

X-13
Space for Rough Work

23-II

X-15
Space for Rough Work

23-II

