

Seat No.	
-------------	--

M.Phil./Ph.D. Entrance Examination, September - 2022
FOOD TECHNOLOGY ENGINEERING
(For M.E./M.Tech. Students)
Sub Code : 87257

Day and Date : Friday, 23 - 09 - 2022
Time : 10.00 a.m. to 12.00 noon

Total Marks : 100

- Instructions :**
- 1) All questions are compulsory.
 - 2) Each question carries 2 marks.
 - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
 - 4) Use black ball point pen only for marking the circle. Do not make any stray mark on the OMR Answer Sheet.
 - 5) Follow the instructions given on OMR Sheet.
 - 6) Rough work shall be done on the sheet provided at the end of question paper.
 - 7) Only non-programmable calculators are allowed.

SECTION-I

- 1) Which of the following measurements of central tendency is not affected by extreme values in the sample data set - the mean, median or mode?

A) The mean	B) The median
C) The mode	D) The median and the mode

- 2) The first page of the research report is

A) Appendix	B) Bibliography
C) Index	D) Title Page

- 3) In Research Report _____ is used to acknowledge indebtedness

A) Bibliography	B) Index
C) Appendix	D) Foot-Notes

P.T.O.

M/P ENT - 15

- 4) Failure to acknowledge the borrowed material is called (Take and use of others as one's - own)
- A) Acknowledgement B) Foot note
C) Index D) Plagiarism
- 5) The order in which participants complete a task is an example of what level of measurement?
- A) Ordinal B) Nominal
C) Ratio D) Interval
- 6) What is the difference between data measured on an interval scale and data measured on a ratio scale?
- A) A ratio scale has a true zero point, so zero on the scale corresponds to zero of the concept being measured.
B) An interval scale has a true zero point, so zero on the scale corresponds to zero of the concept being measured.
C) A ratio scale has equal intervals between the points on the scale, whereas an interval scale does not.
D) A ratio scale puts scores into categories, while an interval scale measures on a continuous scale.
- 7) When concordant pairs exceed discordant pairs in a P-Q relationship, Kendall's tau b reports a(n) _____ association between the variables under study.
- A) Inverse B) Positive
C) Negative D) Weak
- 8) Research design is a blue print, outline and a_____.
- A) Plan B) System
C) Strategy D) Guide

M/P ENT - 15

- 9) _____ is concerned with discovering and testing certain variables with respect to their association or disassociation
 - A) Exploratory
 - B) Descriptive
 - C) Diagnostic
 - D) None of the above
- 10) Facts, figures and other relevant materials serving as bases for a study is called
 - A) Sample
 - B) Method
 - C) Data
 - D) Theory
- 11) Mr. Ary has conducted an extensive review of the literature and has deductively reasoned a hypothesis about his problem on the basis of this review. Which type of a research plan is Mr. Ary likely proposing?
 - A) Quantitative
 - B) Qualitative
 - C) Ethical
 - D) None of the above
- 12) What does a significant result in a chi-square test imply?
 - A) That homogeneity of variance has not been established
 - B) That there is a significant difference between the three categorical variables included in the analysis
 - C) It implies that the sample is not representative of the population
 - D) All of these are possible
- 13) The original source from which researcher collects information is
 - A) Primary Source
 - B) Secondary Source
 - C) Both Primary and Secondary
 - D) None of these

- 14) An instrument used in method is called
- A) Sample B) Technique
C) Tool D) Survey
- 15) Observation of an event personally by the observer is_____.
- A) Indirect observation B) Direct observation
C) Controlled observation D) Uncontrolled observation
- 16) An interval scale contains _____.
- A) Mutually exclusive and collectively exhaustive categories as well as the property of order, but not distance or unique origin
B) The properties of order, classification, and equal distance between points but no unique origin
C) Mutually exclusive and collectively exhaustive categories, but without the properties of order, distance, and origin
D) The properties of classification, order, equal distance, and unique origin
- 17) Sending Questionnaire to a respondent with a request to complete and return bypost is called
- A) Mail Survey B) Interview
C) Observation D) Panel
- 18) Schedule is filled by _____.
- A) Respondent B) Enumerator
C) Everybody D) None of the above

- 19) Questionnaire is filled by_____.
 - A) Respondent
 - B) Everybody
 - C) Enumerator
 - D) None of the above
- 20) Probability sampling is otherwise called
 - A) Multiple choice
 - B) Uni-variate Analysis
 - C) Random Sampling
 - D) Bi-variate Analysis
- 21) Two types of errors associated with hypothesis testing are Type I and Type II. Type II error is committed when
 - A) We reject a null hypothesis when it is true
 - B) We accept a null we reject the null hypothesis whilst the alternative hypothesis is true
 - C) hypothesis when it is not true
 - D) None of the above
- 22) Sampling which provides for a known non zero chance of selection is
 - A) Probability sampling
 - B) Non probability sampling .
 - C) Multiple Choices
 - D) Analysis
- 23) You obtained a significant test statistic when comparing three treatments in a one-way ANOVA. In words, how would you interpret the alternative hypothesis H_A ?
 - A) All three treatments have different effects on the mean response.
 - B) Exactly two of the three treatments have the same effect on the mean response.
 - C) At least two treatments are different from each other in terms of their effect on the mean response.
 - D) All of the above

M/P ENT - 15

- 24) To ensure adequate informed consent, a researcher should include all of the following components in an introduction except ____.
- A) Promise of anonymity and confidentiality
 - B) Sponsoring organization
 - C) Purpose of the research
 - D) Estimate of when the research study will be published
- 25) Summarizing raw data and displaying them on compact statistical tables for analysis is
- A) Tabulation
 - B) Coding
 - C) Transcription
 - D) Editing

SECTION-II

- 26) In a shell and tube heat exchanger, floating head is used for
- A) low pressure drop
 - B) high heat transfer co-efficient
 - C) less corrosion of tubes
 - D) large temperature differentials
- 27) Antibiotic “Nissin” is produced by
- A) *Achromobacter perolens*
 - B) *Pseudomonas graveolens*
 - C) *Pseudomonas mucidolens*
 - D) *Streptococcus lactis*

M/P ENT - 15

- 28) How many acts are repealed by Food Safety and Standards Act, 2006
- A) 4 B) 5
C) 7 D) 8
- 29) ISO 9000 standards was first released in
- A) 1987 B) 1990
C) 1992 D) 1995
- 30) During controlled atmospheric storage composition of which of the following set of gases is controlled_____.
- A) O₂+N₂
B) CO₂+N₂
C) C₂H₄+N₂
D) CO₂+O₂
- 31) Drying rate is influenced by
- A) Surface area
B) Air velocity
C) RH
D) All of these
- 32) Black spot in meat is generally caused by
- A) *Actinomyces*
B) *Micrococcus*
C) *Cladosporium herbarum*
D) *Chromobacterium*

- 33) Drying operation under vacuum is carried out to
- A) Increase drying temperature
 - B) Reduce drying temperature
 - C) Dry those materials which have very high unbound moisture content
 - D) Dry materials having high bound moisture content
- 34) Multiple effect evaporation accounts for
- A) Lower operating costs
 - B) Steam economy
 - C) None of these
 - D) Investment economy
- 35) Ammonia is being represented by
- A) R-717
 - B) R-723
 - C) R-790
 - D) R-700
- 36) Watery soft rot is due to_____.
- A) *Aspergillus niger*
 - B) *Botrytis cinerea*
 - C) *Trichotheismium roseum*
 - D) *Sclerotinia sclerotium*

- 37) Thermostabilization of egg by dipping in hot water is to
- A) give glossiness to surface
 - B) sterilize the egg
 - C) reduce rate of evaporation
 - D) increase the permeability of shell
- 38) Oxidation of butterfat makes them
- A) muddy
 - B) tallow
 - C) tainty
 - D) fishy
- 39) Which xerophilic micro-organism is responsible for the spoilage of confectionery products?
- A) torulopsis
 - B) hansenula
 - C) lactic acid bacteria
 - D) Leuconostoc spp.
- 40) Which enzyme involved in dye reduction and nitrate reduction test is
- A) uracil enzyme
 - B) thiamine enzyme
 - C) flavine enzyme
 - D) both (A) & (C)

- 41) Which lipid does not contain fatty acid
- A) complex B) simple
C) conjugate D) both (A) and (B)
- 42) Which of the following test used to distinguish between aldoses and ketoses
- A) selivanoff's test B) benedict test
C) iodine test D) both (B) & (C)
- 43) In hammer mill, the force involved is
- A) Impact B) Attrition
C) Crushing D) All
- 44) Which of the following is thermophilic bacteria?
- A) *E. coli*
B) *Salmonella typhimurium*
C) *Mycobacterium tuberculosis*
D) *Clostridium thermosaccharolyticum*
- 45) _____ is used as a radiation source.
- A) Hydrogen -3 B) Cobalt - 60
C) Sodium -24 D) Potassium - 32
- 46) Heat flow by conduction is governed by _____ law
- A) Stefan's B) Boltzman's
C) Fourier's D) Newton's

- 47) The thermal conductivity is minimum for
- | | |
|-------------|--------------------------|
| A) Silver | B) Chrome - nickel steel |
| C) Aluminum | D) Carbon steel |
- 48) _____ is a flavour enhancer.
- | | |
|---------|--------|
| A) MSG | B) GMS |
| C) PUFA | D) KMS |
- 49) Which of the following fuel has the highest calorific value per unit mass
- | | |
|----------------|----------------|
| A) Coal | B) Kerosene |
| C) Natural gas | D) Furnace oil |
- 50) 1BTU is equal to
- | | |
|--------------|-----------|
| A) 1 J | B) 1 kJ |
| C) 1 calorie | D) 1 kcal |



Rough Work