

Seat No.	
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**M.Phil / Ph.D. Entrance Examination, July - 2022****FOOD SCIENCE AND TECHNOLOGY****Under Faculty of Science (for M.Sc. Students)****Day and Date : Friday, 15 - 07 - 2022****Total Marks : 100****Time : 02.00 p.m. to 04.00 p.m.**

- 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.

- 1) Heat absorbed or released without changes in phase is called
  - A) Specific heat
  - B) Radiant heat
  - C) Latent heat
  - D) Magnetic heat
- 2) Hordein is a protein present in
  - A) Wheat
  - B) Egg
  - C) Meat
  - D) Barley
- 3) Reassociation of amylose and formation of crystalline structure upon cooling of cooked starch solution is called as
  - A) Syneresis
  - B) Retrogradation
  - C) Gelatinization
  - D) Denaturation

***P.T.O.***

- 4) Flavoring and pungent compound of onion
  - A) Allicin
  - B) Allyl isothiocyanate
  - C) Allyl propyl disulphide
  - D) Allylsulphide
- 5) Pulse electric field kills microbes by
  - A) Electric resistance
  - B) Electric conductance
  - C) Electroporation
  - D) None
- 6) Antioxidants used in oils and fat
  - A) PG
  - B) Citic acid
  - C) Starch
  - D) None
- 7) Anthracnose in the fruit and vegetable is caused due to
  - A) Colletotrichum
  - B) Trichothesium
  - C) Aspergillus
  - D) Botrytis
- 8) Monosaccharide in slightly acidic solution at 100°C reacts with excess phenylhydrazine to form
  - A) Sugar alcohols
  - B) Glycosylamine
  - C) Glycosides
  - D) Osazone
- 9) Which is the richest source of vitamin E
  - A) Wheat germ oil
  - B) Sunflower oil
  - C) Palm oil
  - D) Mustard oil

**10)** Linolenic acid is

- |                      |                      |
|----------------------|----------------------|
| A) w – 2 fatty acids | B) w – 4 fatty acids |
| C) w – 3 fatty acids | D) w – 6 fatty acids |

**11)** Energy value of alcohol in bomb calorimeter

- |             |             |
|-------------|-------------|
| A) 7.1 KCal | B) 8.1 KCal |
| C) 6.1 KCal | D) 5.1 KCal |

**12)** In cells the free fatty acids are present in combination with

- |              |                |
|--------------|----------------|
| A) Protein   | B) Q - protein |
| C) Z-protein | D) X - protein |

**13)** Adulteration of edible oil by mineral oil can be identified by

- |                |                |
|----------------|----------------|
| A) Halman test | B) Carls test  |
| C) Boudin test | D) Holdes test |

**14)** Tin cans can be patented by

- |                    |                  |
|--------------------|------------------|
| A) Nicholas appert | B) Louis pastuer |
| C) Peter durand    | D) Alexander     |

**15)** Talim is

- |                 |              |
|-----------------|--------------|
| A) Carbohydrate | B) Salts     |
| C) Protein      | D) Flavonoid |

**16) Buckwheat flour**

- |                        |                                  |
|------------------------|----------------------------------|
| A) Contain more starch | B) Is flour contains all         |
| C) Is mixture wheat    | D) Is flour obtained from hybrid |

**17) The edible portion of most the fruits and vegetable are made from**

- |                 |                  |
|-----------------|------------------|
| A) Parenchyma   | B) Osteoblastin  |
| C) Collenchymas | D) Squamous cell |

**18) Acidity of tomato ketchup**

- |         |         |
|---------|---------|
| A) 0.5% | B) 1.5% |
| C) 1.0% | D) 2.0% |

**19) Degree of methylation in low methoxy pectin is**

- |                 |           |
|-----------------|-----------|
| A) Less than 5% | B) 15-30% |
| C) 10-12%       | D) 20-40% |

**20) Green colour of whey is due to**

- |                |                  |
|----------------|------------------|
| A) Chlorophyll | B) Chlorophyceae |
| C) Riboflavin  | D) All           |

**21) What is superization**

- |                            |                           |
|----------------------------|---------------------------|
| A) Types of pasteurization | B) Types of sterilization |
| C) Inactivation of lipase  | D) None                   |

**22)** Which is the self-carbonated beverages

- |               |            |
|---------------|------------|
| A) Lassi      | B) Kefir   |
| C) Buttermilk | D) Chhachh |

**23)** The father of white revolution is

- |                |                |
|----------------|----------------|
| A) Dr.M.Kurien | B) Dr.A.Kurien |
| C) Dr.V.Kurien | D) Dr.S.Kurien |

**24)** Sausage is

- |             |                  |
|-------------|------------------|
| A) Emulsion | B) Precipitation |
| C) Solution | D) None          |

**25)** Excessive coagulation of contractile protein results in

- |                          |                               |
|--------------------------|-------------------------------|
| A) Tenderization of meat | B) Coagulation of contractile |
| C) Increase toughness    | D) None                       |

**26)** Which type of validity refers to the ability to infer that the independent and dependent variables are related and that the measured strength of the relationship is accurate?

- A) Internal validity
- B) Ecological validity
- C) Population validity
- D) Statistical conclusion validity

**M/P ENT- 15**

- 27) Which type of reliability refers to the consistency of a group of individual's scores on two equivalent forms of a test designed to measure the same characteristic?
  - A) Split-half
  - B) Split-forms
  - C) Test-retest
  - D) Equivalent forms
- 28) Which of the following is the correct order of Stevens' four levels of measurement?
  - A) Ordinal, nominal, ratio, interval
  - B) Nominal, ordinal, interval, ratio
  - C) Interval, nominal, ordinal, ratio
  - D) Ratio, interval, nominal, ordinal
- 29) According to the text, most of the outcome/dependent variable characteristics and attributes measured in educational research probably exist at the \_\_\_\_\_level of measurement.
  - A) Nominal
  - B) Interval
  - C) Ordinal
  - D) Ratio
- 30) \_\_\_\_\_ tests focus on information acquired through the informal learning that goes on in life.
  - A) Personality
  - B) Aptitude
  - C) Achievement
  - D) Intelligence
- 31) Which scale is the simplest form of measurement?
  - A) Nominal
  - B) Interval
  - C) Ordinal
  - D) Ratio

## M/P ENT– 15

- 32) The non-random sampling type that involves selecting a convenience sample from a population with a specific set of characteristics for your research study is called \_\_\_\_\_.
- A) Convenience sampling                      B) Purposive sampling  
C) Quota sampling                              D) Snowball sampling
- 33) A technique used when selecting clusters of different sizes is called \_\_\_\_\_.  
A) Cluster sampling  
B) Two-stage sampling  
C) One-stage sampling  
D) Probability proportional to size or PPS
- 34) Which of the following types of sampling involves the researcher determining the appropriate sample sizes for the groups identified as important, and then taking convenience samples from those groups?  
A) Proportional stratified sampling    B) One-stage cluster sampling  
C) Quota sampling                              D) Two-stage cluster sampling
- 35) Which of the following is a right of each participant according to the AERA?  
A) Deception                                      B) Freedom to withdraw  
C) Utilitarianism                                D) Participants have no rights
- 36) Concerning “authorship” in educational research, intellectual ownership is predominantly a function of:  
A) Effort expended                              B) Professional position  
C) Creative contribution                        D) Level of higher education

- 37)** IRB is an acronym for which of the following?
- A) Internal Review Board
  - B) Institutional Review Board
  - C) Institutional Rating Board
  - D) Internal Request Board
- 38)** Which of the three ethics approaches says research ethics should be a matter of the individual's conscience?
- A) Deontological approach
  - B) Utilitarianism
  - C) Ethical skepticism
  - D) Ontological skepticism
- 39)** The most frequently used quasi-experimental design is the \_\_\_\_\_ design.
- A) Nonequivalent comparison-group
  - B) Changing-criterion
  - C) Interrupted time-series
  - D) Regression discontinuity
- 40)** How many variables should be changed at a time when conducting a single-case design?
- A) 4
  - B) 2
  - C) 3
  - D) 1
- 41)** In a changing-criterion design, changes in criterion are best done:
- A) As soon as the prior criterion is met
  - B) When the previous criterion is met and the behavior has stabilized
  - C) Regardless of the previous criteria
  - D) After a fixed number of trials



**M/P ENT- 15**

- 42)** When a researcher identifies so completely with the group being studied that he or she can no longer remain objective you have what is called \_\_\_\_.
- A) Culture shock                                      B) Regression  
C) Going native                                        D) Cultural relativism
- 43)** What term refers to the insider's perspective?
- A) Ethnocentrism                                     B) Etic perspective  
C) Emic perspective                                  D) Holism
- 44)** Which of the following involves the studying of multiple cases in one research study?
- A) Intrinsic case study                                B) Instrumental case study  
C) Single case study                                  D) Collective case study
- 45)** Which of the following is a characteristic of qualitative research?
- A) Design flexibility                                  B) Context sensitivity  
C) Inductive analysis                                D) All of the above
- 46)** Which of the following is not an advantage of studying multiple cases?
- A) Multiple cases can be compared for similarities and differences  
B) Multiple cases can more effectively test a theory than a single case  
C) Generalizations about population are usually better when based on multiple cases.  
D) Cost is lower and depth of analysis is easier when you study multiple cases in a single research study.

- 47)** The primary data analysis approach in ethnography is:
- A) Open, axial and selective coding
  - B) Holistic description and search for cultural themes
  - C) Cross-case analysis
  - D) Identifying essences of a phenomenon
- 48)** Where do you provide a step-by-step account of what the researcher and participants did during the research study?
- A) Introduction
  - B) Procedure
  - C) Abstract
  - D) Design
- 49)** Which of the following is not one of the seven major parts to the research report?
- A) Results
  - B) Method
  - C) Abstract
  - D) Footnotes
- 50)** Which of the following is not true about the use of language in research reports?
- A) You should choose accurate and clear words that are free from bias
  - B) You should avoid labelling people whenever possible
  - C) You should avoid using the term “subjects” whenever possible
  - D) All of the above are true according to the APA Guidelines



**Rough Work**

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