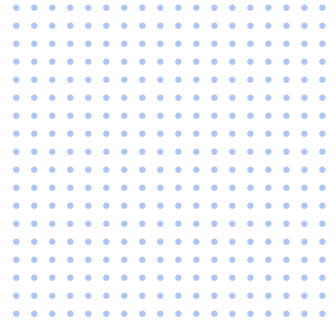




FOR KUET EXAM PREPARATION

KUET 2024 Question Paper · M.Sc. Food Science and Technology

EXAM	YEAR	TYPE	SUBJECT
KUET	2024	Question Paper	M.Sc. Food Science and Technology

Sr. No. 181.....

ENTRANCE TEST-2024**SCHOOL OF APPLIED SCIENCES & TECHNOLOGY****FOOD TECHNOLOGY**

Question Booklet Series

A

Total Questions : 60

Time Allowed : 70 Minutes

Roll No. :

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Instructions for Candidates :

1. Write your Entrance Test Roll Number in the space provided at the top of this page of Question Booklet and fill up the necessary information in the spaces provided on the OMR Answer Sheet.
2. OMR Answer Sheet has an Original Copy and a Candidate's Copy glued beneath it at the top. While making entries in the Original Copy, candidate should ensure that the two copies are aligned properly so that the entries made in the Original Copy against each item are exactly copied in the Candidate's Copy.
3. All entries in the OMR Answer Sheet, including answers to questions, are to be recorded in the Original Copy only.
4. Choose the correct / most appropriate response for each question among the options A, B, C and D and darken the circle of the appropriate response completely. The incomplete darkened circle is not correctly read by the OMR Scanner and no complaint to this effect shall be entertained.
5. Use only blue/black ball point pen to darken the circle of correct/most appropriate response. In no case gel/ink pen or pencil should be used.
6. Do not darken more than one circle of options for any question. A question with more than one darkened response shall be considered wrong.
7. There will be '**Negative Marking**' for wrong answers. Each wrong answer will lead to the deduction of 0.25 marks from the total score of the candidate.
8. Only those candidates who would obtain positive score in Entrance Test Examination shall be eligible for admission.
9. Do not make any stray mark on the OMR sheet.
10. Calculators and mobiles shall not be permitted inside the examination hall.
11. Rough work, if any, should be done on the blank sheets provided with the question booklet.
12. OMR Answer Sheet must be handled carefully and it should not be folded or mutilated in which case it will not be evaluated.
13. Ensure that your OMR Answer Sheet has been signed by the Invigilator and the candidate himself/herself.
14. At the end of the examination, hand over the OMR Answer Sheet to the invigilator who will first tear off the original OMR sheet in presence of the Candidate and hand over the Candidate's Copy to the candidate.

SP-4502-A

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♦

[Turn over

1. DNA is not present in one of the following :
 - (A) Mitochondria
 - (B) Chloroplast
 - (C) Bacteriophage
 - (D) Tobacco mosaic virus
2. A cell increases in volume when placed in a solution which is :
 - (A) Isotonic
 - (B) Slightly hypertonic
 - (C) Hypotonic
 - (D) Extremely hypertonic
3. What is the function of DNA ligases ?
 - (A) It catalyses the formation of phosphodiester bonds between two DNA fragments
 - (B) It catalyses hydrogen bond formation between two DNA fragments
 - (C) It is used to synthesize complementary DNA strand on DNA template
 - (D) All of these
4. Mitochondria are not found in :
 - (A) Nerve cell
 - (B) Sperm cell
 - (C) Mature RBC
 - (D) Mature WBC
5. Largest amount of phosphate bond energy is produced in the process of respiration during :
 - (A) Glycolysis
 - (B) Krebs Cycle
 - (C) Anaerobic respiration
 - (D) None of the above
6. Pernicious anemia is caused due to deficiency of :
 - (A) Vitamin B₁₂
 - (B) Vitamin B₁
 - (C) Vitamin C
 - (D) Iron
7. In C₃ plants first stable product of photosynthesis during dark reaction is :
 - (A) Malic acid
 - (B) Oxaloacetic acid
 - (C) Phosphoglyceraldehyde
 - (D) Phosphoglyceric acid
8. High concentration of synthetic auxins would :
 - (A) Prevent lateral buds to grow
 - (B) Kill weeds
 - (C) Cause root
 - (D) Control cell enlargement
9. When the cell is fully turgid, which of the following will be zero ?
 - (A) Osmotic pressure
 - (B) Turgor pressure
 - (C) Wall pressure
 - (D) Suction pressure
10. Which of the following is oilseed ?
 - (A) *Glycine max*
 - (B) *Arachis hypogea*
 - (C) *Brassica spp.*
 - (D) All the three
11. Which of the following vegetables are obtained from plant stems ?
 - (A) Potato
 - (B) Lotus
 - (C) Carrot
 - (D) Both (A) and (B)

12. Which of the following spices contains curcumin ?
- Turneric
 - Ginger
 - Garlic
 - Fennel
13. Which part of the human brain is more developed in comparison to others ?
- Cerebellum
 - Cerebrum
 - Medulla oblongata
 - Optic lobes
14. In an accident there is a great loss of blood and there is no time to analyze the blood group of the man. Which blood group can be safely transfused ?
- AB Rh+
 - AB Rh-
 - O Rh-
 - O Rh+
15. In humans, the urea is mainly produced in :
- Kidneys
 - Gall bladder
 - Spleen
 - Liver
16. Acid rains are due to excessive atmospheric pollution due to :
- NO_2
 - SO_2
 - NH_3
 - CO_2
17. Dimensional formula for torque is :
- L^2T^{-2}
 - $\text{M L}^2 \text{T}^{-2}$
 - ML^2T^{-1}
 - ML^2T^2
18. Two water droplets merge with each other to form a larger droplet. In this process :
- Energy is liberated
 - Energy is absorbed
 - Energy is neither liberated nor absorbed
 - Some mass is converted into energy
19. A piece of ice having a stone frozen in it floats in a glass vessel filled with water. How will the level of water in the vessel change when the ice melts ?
- the level will rise
 - the level will not change
 - the level will drop
 - some water will flow out
20. The relation between frequency n , wavelength λ and velocity of propagation v of the wave is :
- $n = v \lambda$
 - $n = \lambda/v$
 - $n = 1/\lambda$
 - $n = v/\lambda$
21. Which of the following metals can deposit copper from copper sulphate solution ?
- Mercury
 - Iron
 - Gold
 - Platinum

22. If a chemical change is brought about by one or more method, in one or more steps, then the amount of heat absorbed or evolved during the complete change is the same, whichever method was followed. The rule is known as :
- (A) Joule Thomson effect
(B) Le Chatelier principle
(C) Hess law
(D) None of these
23. A piece of glass is heated to a high temperature and then allowed to cool. If it cracks, a probable reason for this is the following property of glass :
- (A) Low thermal conductivity
(B) High thermal conductivity
(C) High specific heat
(D) High melting point
24. Microwaves are the electromagnetic waves with frequency of :
- (A) 300 MHz – 300 GHz
(B) 30 MHz – 300 MHz
(C) 50 MHz – 500 MHz
(D) 500 MHz – 500 GHz
25. Na^+ is isoelectronic with :
- (A) Li^+
(B) Mg^{2+}
(C) Ca^{2+}
(D) Ba^{2+}
26. Which of the following is soluble in water ?
- (A) $\text{C}_2\text{H}_5\text{OH}$
(B) CS_2
(C) CH_3OH
(D) Both (A) and (C)
27. The osmotic pressure of solution increases if :
- (A) Temperature is decreased
(B) Solution constant is increased
(C) Number of solute molecules is increased
(D) Volume is increased
28. Phenolphthalein acts as an indicator in the pH range of :
- (A) 4.5-6.5
(B) 6.8-7.0
(C) 8.3-10.0
(D) None of the three
29. Why alcohols have higher boiling points than the hydrocarbons from which they are derived ?
- (A) Due to higher molecular weight
(B) Due to the presence of hydroxyl groups
(C) Due to hydrogen bonding between molecules
(D) Due to polymerization of molecules
30. If formaldehyde and KOH are treated together, we get :
- (A) Methane
(B) Acetylene
(C) Ethyl acetate
(D) Methanol
31. If 1, w, w^2 are the cube roots of unity, then $1+w+w^2=?$
- (A) 0
(B) -1
(C) 2
(D) 3

32. For small values of θ , $\sin \theta = ?$
- 1
 - θ
 - 0
 - None of these
33. If $x + y = k$ is normal to a parabola $y^2 = 12x$, then $k = ?$
- 3
 - 9
 - +9
 - 3
34. For what value of k , $\int (x/1 + x^4) dx = k$:
- $\tan x^2 + c$
 - $\tan^{-1} x^2 + c$
 - $\frac{1}{2} \tan^{-1} x^2 + c$
 - None of them
35. The degree and order of a differential equation $x^2 d^3y/dx^3 + (d^2y/dx)^5 + 2y = e^{-x}$ are respectively given by :
- (2, 3)
 - (1, 2)
 - (3, 5)
 - (1, 3)
36. The product AB of two matrices A & B is possible if :
- The number of columns in A is equal to the number of rows in B
 - The number of rows in A is equal to the number of columns in B
 - Both statements (A) & (B) are correct
 - Neither (A) nor (B) is correct
37. A polynomial equation $x^3 - 1 = 0$ has :
- One real root
 - One complex root
 - All real roots
 - None of these
38. Production of polished rice involves :
- Removal of husk
 - Removal of husk and bran
 - Coating of dehusked rice with edible polish
 - None of the three
39. Which of the following grains are good sources of soluble fiber β -glucan ?
- Oat
 - Barley
 - Both (A) and (B)
 - None
40. Role of salt in pickles is :
- controls the fermentation
 - improves taste and flavour
 - hardens the texture
 - all the three
41. Equilibrium moisture content of food depends on :
- relative humidity
 - air temperature
 - nature of food
 - all the three
42. Protein content of red meat is around :
- 15 g/100g
 - 20 g/100g
 - 30 g/100g
 - 32 g/100g

43. Freezer burn of meat is due to :
- Over roasting of meat
 - Rupture of cells due to large ice crystal formation
 - Drying of the surface of frozen meat in freezer
 - All the three
44. On an average cholesterol content of an egg is :
- 50 mg
 - 100 mg
 - 150 mg
 - 200 mg
45. Moisture content of Ghee as per FSSAI standards should not be more than :
- 0.5%
 - 1%
 - 1.5%
 - 2%
46. Specific gravity of cow milk increases on :
- Addition of skim milk powder
 - Removal of cream
 - Addition of sugar
 - All the three
47. Which of the following bacterial species is known for its high rate of biomass production?
- Methylophilus methylotrophus*
 - Xanthomonas*
 - Clostridium*
 - Rhizomonas*
48. Which of the following microbe is used in the production of blue cheese?
- Streptococcus thermophilus*
 - Lactobacillus bulgaricus*
 - Penicillium roqueforti*
 - Rhizopus stolonifera*
49. Bacterial cell grown on hydrocarbon wastes from the petroleum industry are a source of :
- carbohydrates
 - proteins
 - vitamins
 - fats
50. Fungi are :
- prokaryotic
 - eukaryotic
 - prokaryotic and lack chlorophyll
 - eukaryotic and lack chlorophyll
51. Find the mode of the data: 11,13,13,17,19,23,25 :
- 11
 - 13
 - 17
 - 23
52. Variability of population is checked by :
- Mean
 - Mode
 - Median
 - Standard Deviation

53. If the values of two variables move in the opposite direction :
- The correlation is said to be linear
 - The correlation is said to be non-linear
 - The correlation is said to be positive
 - The correlation is said to be negative
54. What is the meaning of the testing of the hypothesis ?
- It is a significant estimation of the problem
 - It is a rule for acceptance or rejection of the hypothesis of the research problem
 - It is a method of making a significant statement
 - None of the above
55. Which of the following is a carotenoid ?
- Lycopene
 - β carotene
 - Lutein
 - All the three
56. Which of the following is exopeptidase ?
- Pepsin
 - Trypsin
 - Chymotrypsin
 - Carboxypeptidases
57. Potatoes, cereals, beans, pulses and oats are rich in ?
- Protein
 - Vitamins
 - Carbohydrates
 - Minerals
58. Which of the following has emulsifying properties ?
- Phospholipids
 - Monoglycerides
 - Diglycerides
 - All the three
59. Fish spoils faster due to :
- High pH of the muscles postmortem
 - Highly unsaturated body fat
 - Autolysis of muscles
 - All the above
60. Which of the following aims at food safety ?
- HACCP
 - GMP
 - GAP
 - All the three