

Seat No.
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Total No. of Pages : 24

**M. Tech. Entrance Examination 2024****Rural Technology****Subject Code : 71140**

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**Day and Date : Monday, 29-07-2024****Total Marks : 100****Time : 10.30 am to 12.00 pm**

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**Instructions :**

- 1) All questions are compulsory.
  - 2) Each question carries 1 mark.
  - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
  - 4) Follow the instructions given on OMR sheet.
  - 5) Rough work shall be done on the sheet provided at the end of question paper.
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1. FRS stands for
  - a. Fellow Research System
  - b. Federation of Regulation Society
  - c. Fellow of Royal Society
  - d. None of above
2. The chief purpose of crop rotation is to check the loss of top soil
  - a. by water erosion
  - b. by wind erosion
  - c. by weathering
  - d. of its mineral content

3. The most important river of Maharashtra which is a lifeline of the whole South Maharashtra is
- a. Koyna
  - b. Krishna
  - c. Warna
  - d. Wardha
4. The Nashik city is situated by the river
- a. Godavari
  - b. Tapi
  - c. Narmada
  - d. Kaveri
5. The second most important agro based industry of India after textiles is;
- a. Dairy industry
  - b. Pulp industry
  - c. Processed food industry
  - d. Sugar industry
6. The study of universe is called
- a. Astrology
  - b. Astronomy
  - c. Cosmology
  - d. Universology
7. Which of the following serves as a cooling and ventilation of engine lubricating oil?
- a. piston
  - b. cam shaft
  - c. oil sump
  - d. crank case

8. Acrobic bacterias
  - a. flourish in the presence of free oxygen
  - b. consume organic matter as their food
  - c. oxidise organic matter in sewage
  - d. All the above
9. Industry lobbying, local to international rules, Quality and food safety etc includes which component of the food industry?
  - a. R & D
  - b. Financial Services
  - c. Regulation
  - d. Wholesale and distribution
10. Which of the following are Milk Processing Operations?
  - a. Clarification
  - b. Pasteurization
  - c. Homogenization
  - d. All of the mentioned
11. What is mean by FSI?
  - a. Floor Space Index
  - b. Free Site Inspection
  - c. Free Site Index
  - d. Flat Square Index

12. Which of the following does NOT constitute 90% of dry weight of any food?
- a. Carbohydrates
  - b. Fibers
  - c. Proteins
  - d. Fats
13. If the value of  $n = 0$  in the equation  $pv^n = C$ , then the process is called
- a. constant volume process
  - b. adiabatic process
  - c. constant pressure process
  - d. isothermal process
14. For purifying drinking water alum is used
- a. for coagulation of mud particles
  - b. to kill bacteria
  - c. to remove salts
  - d. to remove gases
15. What frequency range is the High Frequency band?
- a. 100 kHz
  - b. 1 GHz
  - c. 30 to 300 MHz
  - d. 3 to 30 MHz
16. The function of compressor
- a. is to increase pressure of air
  - b. is to decrease pressure of air
  - c. is to increase speed of air
  - d. None of these.

17. 'Global warming' leads to
- a. low level of oxygen
  - b. high level of oxygen
  - c. floods and droughts
  - d. rain forests
18. Isotopes of an element contains-
- a. Same number of protons and different number of neutrons.
  - b. Same number of neutrons and different number of protons.
  - c. Same number of neutrons and protons.
  - d. Different number of neutrons and protons.
19. Current flows in a circuit when
- a. a switch is opened
  - b. a switch is closed
  - c. the switch is either open or closed.
  - d. there is no voltage
20. A computer program that converts assembly language to machine language is .....
- a. Compiler
  - b. Interpreter
  - c. Assembler
  - d. Comparator

21. Ozone hole refers to
- a. Hole in ozone layer
  - b. decrease in the ozone layer in troposphere
  - c. decrease in thickness of ozone layer in stratosphere
  - d. increase in the thickness of ozone layer in troposphere
22. The ozone layer restricts
- a. Visible light
  - b. Infrared radiation
  - c. X-rays and Gamma rays
  - d. Ultraviolet radiation
23. Full form of COD is.
- a. Catalytic Oxygen Demand
  - b. Chemical Oxygen Demand
  - c. Colloidal Oxide Demand
  - d. None of these.
24. Which of the following is not an air pollutant?
- a. Smoke
  - b. Carbon Dioxide
  - c. Nitrogen gas
  - d. Sulphur Dioxide

25. Unit of Noise level measurement
- a. Pascal
  - b. Decibel
  - c. kilo Jules
  - d. None of above
26. Cast iron is manufactured in
- a. blast furnace
  - b. cupola
  - c. open hearth furnace
  - d. bessemer converter
27. A thermistor is a type of
- a. Switch
  - b. Resistor
  - c. battery
  - d. power supply
28. Which of the following is not an explosive?
- a. INT
  - b. CMC
  - c. RDX
  - d. Lead azide
29. Which of the following is found in an automobile's electrical system?
- a. Lighting systems
  - b. Battery
  - c. Alternators
  - d. All of the mentioned
30. What is mean by LPG
- a. Liquefied petroleum gas
  - b. Liquid purified gas
  - c. Low pressure gas
  - d. Liquid pressure gas

31. Causes of air pollution includes
- a. chlorofluorocarbon
  - b. cars and motor vehicle
  - c. power plants and industries
  - d. All of above
32. What is the relationship between resistivity  $R$  and current  $I$  and voltage  $V$ ?
- a.  $V = I - R$
  - b.  $V = I + R$
  - c.  $V = I/R$
  - d.  $V = IR$
33. What is the function of the alternator?
- a. Recharging the Battery
  - b. Voltage Regulator
  - c. Auto-ignition
  - d. None of the above
34. Of the various non-conventional energy sources that are being tapped, which has the largest potential?
- a. Solar power
  - b. Wind power
  - c. Geothermal power
  - d. None of these

35. When a gas is turned into a liquid, the process is called
- a. Condensation
  - b. Evaporation
  - c. Deposition
  - d. Sublimation
36. Biochemical Oxygen Demand (BOD) of safe drinking water is
- a. 50 mg/l
  - b. 10 mg/l
  - c. 5 mg/l
  - d. 30 mg/l
37. Tetraethyl lead is used as
- a. pain killer
  - b. fire extinguisher
  - c. mosquito repellent
  - d. petrol additive
38. The kinematic viscosity is the
- a. ratio of absolute viscosity to the density of the liquid
  - b. ratio of density of the liquid to the absolute viscosity
  - c. product of absolute viscosity and density of the liquid
  - d. product of absolute viscosity and mass of the liquid

39. The diesel engines are also known as engines.
- a. Compression ignition
  - b. Spark ignition
  - c. both a and b
  - d. none of above
40. Which one of the following is incombustible?
- a.  $H_2$
  - b.  $CCl_4$
  - c.  $C_2H_2$
  - d. S
41. Pneumatic structure contains
- a. Metal
  - b. Water
  - c. Wood
  - d. Compressed air
42. Reduce, reuse and recycle principle by which wastes can be reduced is classified as
- a. waste organizer principle
  - b. waste management principle
  - c. RE principle
  - d. 3R principle

43. In the cement the compound quickest to react with water is
- a. Tricalcium aluminate
  - b. Tetra calcium alumina ferrite
  - c. Tricalcium silicate
  - d. Dicalcium silicate
44. Brass is an alloy of
- a. copper and zine
  - b. copper and tin
  - c. copper, tin and zine
  - d. none of these
45. Which part interprets program instructions and initiate control operations?
- a. Input
  - b. Storage unit
  - c. Logic unit
  - d. Control unit
46. The following type of bonding is strongly directional in solids,
- a. Vander waal's
  - b. Ionic
  - c. Metallic
  - d. Covalent
47. Programs that run on a computer are referred to as
- a. Hardware
  - b. Software
  - c. Soft firm
  - d. file ware

48. Organisms which feed on plants and animals both are called
- a. herbivores
  - b. carnivores
  - c. omnivores
  - d. ovivores
49. The lowest part of a structure which transmits the load to the soil is known as
- a. Super structure
  - b. Plinth
  - c. Foundation
  - d. Basement
50. The specific weight of water in S.I. units is taken as
- a.  $9.81 \text{ kN/m}^3$
  - b.  $9.81 \times 10 \text{ N/m}^2$
  - c.  $9.81 \times 10^{-6} \text{ N/mm}^3$
  - d. any of these
51. Ajanta Caves are located in the State of
- a. Maharashtra
  - b. Gujarat
  - c. Tamil Nadu
  - d. West Bengal
52. The water in an open pond remains cool even in hot summer because
- a. Of continuous evaporation of water
  - b. Water radiates heat more rapidly than the atmosphere
  - c. Water absorbs heat less rapidly than the atmosphere
  - d. Water absorbs heat more rapidly than the atmosphere

53. The Rath Yatra at Puri is celebrated in honour of which Hindu deity
- a. Ram
  - b. Jaganath
  - c. Shiva
  - d. Vishnu
54. The population of a town increases every year by 4%. If its present population is 50,000, then after 2 years it will be
- a. 53900
  - b. 54000
  - c. 54080
  - d. 54900
55. 40% of 280 = ?
- a. 112
  - b. 116
  - c. 115
  - d. 120
56. Wood is the main raw material for the manufacture of
- a. paper
  - b. paint
  - c. ink
  - d. gun powder
57. Wide variety of living things is called
- a. Diversity
  - b. Biodiversity
  - c. Habitat
  - d. Population
58. Persons working in cement plants and limestone quarries are more prone to disease like
- a. cancer
  - b. asthma
  - c. silicosis
  - d. fluorosis (bone disease)

59. Which of the following was Satyajit Ray associated with?
- a. Classical music
  - b. Commercial art
  - c. Film Direction
  - d. Classical dance
60. The central banking functions in India are performed by the
- a. Central Bank of India
  - b. Reserve Bank of India.
  - c. State Bank of India
  - d. Punjab National bank
61. The brain of any computer system is
- a. ALU
  - b. Memory
  - c. CPU
  - d. Control unit
62. Plastic is
- a. Ferrous Material
  - b. Metal
  - c. Non-Ferrous Material
  - d. None of these

63. The India's highest annual rainfall is reported at
- a. Namchi, Sikkim
  - b. Churu, Rajasthan
  - c. Mawsynram, Meghalaya
  - d. Chamba, Himachal Pradesh
64. The solid waste which is easily degradable that is called as
- a. Plastic waste
  - b. Inorganic waste
  - c. Organic waste
  - d. All of above
65. For which of the following disciplines is Nobel Prize awarded?
- a. Physics and Chemistry
  - b. Physiology or Medicine
  - c. Literature, Peace and Economics
  - d. all of above
66. The state having a largest area of forest cover in India is
- a. Arunachal Pradesh
  - b. Haryana
  - c. Madhya Pradesh
  - d. Assam

67. Which country is known as land of windmills?
- a. Netherland
  - b. Scotland
  - c. Finland
  - d. Bangla Desh
68. Find the area of a right angled triangle whose hypotenuse is 10 cm and base 8 cm.
- a. 34 sq.cm
  - b. 36 sq.cm
  - c. 24 sq.cm
  - d. 48 sq.cm
69. Which of the following states is highly flood prone as well as drought prone?
- a. West Bengal
  - b. Uttar Pradesh
  - c. Madhya Pradesh
  - d. Bihar
70. Which of the following statements is not correct?
- a. Rice is a commercial crop in Odisha
  - b. Coffee is an important plantation crop in Karnataka
  - c. Groundnut is a major Kharif crop in Gujarat
  - d. Meghlaya is a major pineapple producing states of India.
71. ICAO stands for
- a. International Civil Aviation Organization
  - b. Indian Corporation of Agriculture Organization
  - c. Institute of Company of Accounts Organization
  - d. None of the above

72. If speed of rotation of earth increases, weight of the body
- a. Increases
  - b. Remains Unchanged
  - c. Decreases
  - d. May decrease or increase
73. In which season do we need more fat?
- a. Rainy Season
  - b. Spring
  - c. Winter
  - d. Summer
74. Which of the following has the minimum atomic mass?
- a. Oxygen
  - b. Sulphur
  - c. Nitrogen
  - d. Carbon
75. Hydrographic surveys deal with the mapping of
- a. large water bodies
  - b. heavenly bodies
  - c. canal system
  - d. movement of clouds
76. Find the correct spelt word
- a. Accommodation
  - b. Accomodaton
  - c. Accommodation
  - d. Acomodation

77. Find the synonym for the word WARRIOR
- a. Soldier
  - b. Sailor
  - c. Pirate
  - d. Spy
78. Find the antonym for the word OBEYING
- a. Ordering
  - b. Following
  - c. Refusing
  - d. Contradicting
79. Find the correctly spelt word
- a. Humorous
  - b. Ganerous
  - c. Pupolous
  - d. Maretorious
80. Find the synonym for Fake
- a. Original
  - b. Imitation
  - c. Trustworthy
  - d. Loyal
81. Find the antonym for Aware:
- a. Uncertain
  - b. Ignorant
  - c. Sure
  - d. Doubtful

82. Choose the correct alternative for underlined word which improve the sentence.

I took the cycle which he bought yesterday.

- a. that he bought yesterday
- b. that which he had bought yesterday
- c. that he had bought yesterday
- d. No improvement

83. One who possesses many talents

- a. Versatile
- b. Nubile
- c. Exceptional
- d. Gifted

84. Fill in the blank with proper word.

Catching the earlier train will give us the ..... to do some shopping.

- a. chance
- b. luck
- c. possibility
- d. occasion

85. Select the pair which has same relationship

Light: Blind

- a. speech: dumb
- b. language: deaf
- c. tongue: sound
- d. voice: vibration

86. The skills of enquiry are mainly
- a. speaking skills
  - b. listening skills
  - c. creating and sharing ideas
  - d. all of above
87. During an oral presentation, which is the stage where you tell the audience, the aim of your presentation?
- a. Background
  - b. conclusion
  - c. introduction
  - d. question session
88. Initially, a presentation is a form of:
- a. one-way communication
  - b. two-way communication
  - c. intrapersonal communication
  - d. group communication
89. Which of these are vital for any organisation?
- a. Debates
  - b. Group discussions
  - c. Speeches
  - d. Arguments

90. Which of these qualities are important in a group discussion?
  - a. Emotional stability
  - b. Hostility
  - c. Ignorance
  - d. Aggressiveness
91. Which of these not important in an oral presentation?
  - a. Words
  - b. Body language
  - c. Gestures
  - d. The number of people as audience
92. In which of these people with similar interests contribute with their knowledge?
  - a. Seminar
  - b. Conference
  - c. Symposium
  - d. Convention
93. Which of these must be avoided in any presentation?
  - a. Proper grammar
  - b. Complex words
  - c. Short sentences
  - d. Clear voice
94. Which of these is not used to organise the seminar?
  - a. Oral reports
  - b. Written reports
  - c. Exchange of ideas
  - d. Recommendations

95. Which of these must be avoided in meeting?
- a. Patience
  - b. Tact
  - c. Leadership
  - d. Criticism
96. Effective paraphrasing avoids the risk of
- a. Changing
  - b. Noting
  - c. Copying
  - d. Plagiarism
97. Which of these is the most important tool of communication?
- a. Body language
  - b. Gestures
  - c. Language
  - d. Postures
98. Any word that adds more meaning to the noun is called an
- a. Adverb
  - b. Verb
  - c. Adjective
  - d. Noun
99. A group of words that gives the complete meaning is called as
- a. clause
  - b. sentence
  - c. phrase
  - d. principal clause
100. A speech must always present
- a. Facts
  - b. Opinions
  - c. Suggestions
  - d. Perspectives

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**ROUGH WORK**

