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Total No. of Pages : 20

PG ENTRANCE EXAMINATION, 2024
YASHWANTRAO CHAVAN SCHOOL OF RURAL DEVELOPMENT
M. TECH. (RURAL TECHNOLOGY)
Subject Code : 71140

Day and Date : Sunday, 19-05-2024

Total Marks : 100

Time : 10.30 a.m. to 12.00 p.m.

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.

1. Pump transfers input mechanical energy of an engine, into
 - a. pressure energy of a fluid
 - b. Kinetic energy of a fluid
 - c. both a and b
 - d. none of above
2. The most important river of Maharashtra which is a lifeline of the whole South Maharashtra is
 - a. Koyna
 - b. Krishna
 - c. Warna
 - d. Wardha
3. Which is the largest district in Maharashtra in terms of area?
 - a. Pune
 - b. Ahmednagar
 - c. Nagpur
 - d. none of above

11. A group of populations of different species living in the same habitat and interacting with one another is called
- a. Ecological community
 - b. Zoological community
 - c. Biological community
 - d. none of above
12. Sand stone, Conglomerate, limestone, Shale, Chalk and coal are example of
- a. Igneous rocks
 - b. Sedimentary rocks
 - c. Metamorphic rocks
 - d. none of above
13. The largest Indian mammal is
- a. Tiger
 - b. Hippopotamus
 - c. The Lion
 - d. Elephant
14. The predominant gases that constitute the Sun are
- a. Hydrogen and Helium
 - b. Hydrogen and Methane
 - c. Methane and Helium
 - d. Methane and CO₂
15. Indira Gandhi Zoological Park is located in
- a. Hyderabad
 - b. Kolkata
 - c. Vishakhapatnam
 - d. Ahmedabad
16. The largest producers of coffee in the world is
- a. India
 - b. Brazil
 - c. China
 - d. USA

17. EVM stands for

- a. Electric Vending Machine
- b. Electronic Vending Machine
- c. Electronic Voting Machine
- d. None of above

18. For the cause of national liberation Swami Dyanand stressed on

- a. Swabhasha and Swarajya
- b. Swadharma
- c. Swadeshi
- d. All of above

19. OTEC stands for

- a. Ocean Thermal Energy Conservation
- b. Oil and Thermal Energy Conservation
- c. Oil and Thermal Energy Convention
- d. Ocean Thermal Energy Conversion.

20. In India the Black soil is mostly found in state.

- a. Maharashtra
- b. Tamil Nadu
- c. Kerala
- d. Karnataka.

21. One horse power is equal to

- a. 746 watts
- b. 748 watts
- c. 756 watts
- d. 736 watts

22. Heavy water is
- a. Deuterium oxide
 - b. PH 7
 - c. Rain water
 - d. Tritium oxide
23. The absorption of ink by blotting paper involves
- a. Viscosity of ink
 - b. Capillary action phenomenon
 - c. Diffusion of ink through the blotting
 - d. Siphon action
24. Metals are good conductors of electricity because
- a. They contain free electrons
 - b. The atoms are lightly packed
 - c. They have high melting point
 - d. All of above
25. Rectifiers are used to convert
- a. Direct current to alternating current
 - b. Alternating current to direct current
 - c. High voltage to low voltage
 - d. Low voltage to high voltage

26. Pick out the Scalar quantity

- a. Force
- b. Pressure
- c. Velocity
- d. Acceleration.

27. Lux is the SI unit of

- a. intensity of illumination.
- b. luminous efficiency
- c. luminous flux
- d. luminous intensity

28. RADAR is used for

- a. locating submerged submarines
- b. receiving signals in a radio receiver
- c. locating geostationary satellites
- d. detecting and locating the position of objects such as Aeroplanes

29. Molecules are held together in a crystal by

- a. hydrogen bond
- b. electrostatic attraction
- c. Van der Waal's attraction
- d. dipole- dipole attraction

30. The strength of intermolecular forces from the ionic or covalent bond is

- a. weaker
- b. stronger
- c. equal
- d. none of above

31. Noble gases can be liquefied at

- a. low temperatures
- b. high temperatures
- c. low pressures
- d. high bond energies

32. In anaerobic treatment the organic acid and alcohol is undergone into process.

- a. Sedimentation
- b. Screening
- c. Catalysis
- d. Fermentation

33. Domestic water treatment is carried out under conditions..

- a. Aerobic
- b. Anaerobic
- c. both and b
- d. Depends on pollution level of water

34. The is an important requirement of aquatic life.

- a. Dissolved nitrogen
- b. Dissolved chlorine
- c. Dissolved oxygen
- d. Dissolved methane

35. Dried sludge can be used as

- a. Fertilizer
- b. Pesticide
- c. Reagent
- d. Medicine

36. All carbonates and bicarbonates are

- a. Alkaline
- b. Acidic
- c. Highly acidic
- d. Neutral

37. Which of the following is a non metal that remains liquid at room temperature?

- a. Phosphorous
- b. Bromine
- c. Chlorine
- d. Helium

38. Permanent hardness of water can be removed by adding:

- a. Chlorine
- b. Washing soda
- c. Potassium Permanganate
- d. Bleaching Powder

39. Which of the following is the lightest metal?

- a. Mercury
- b. Lithium
- c. Lead
- d. Silver

40. What is the unit for measuring the amplitude of a sound?

- a. Decibel
- b. Coulomb
- c. Hum
- d. Cycles

41. 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

42. Plants receive their nutrients mainly from

- a. Chlorophyll
- b. atmosphere
- c. light
- d. soil

43. Photosynthesis takes place faster in

- a. yellow light
- b. white light
- c. red light
- d. darkness

44. Plants developing in dry conditions are
- a. xerophytes
 - b. mesophytes
 - c. lithophytes
 - d. hydrophytes
45. The most abundant rare gas in the atmosphere is
- a. He
 - b. Ne
 - c. Ar
 - d. Xe
46. The luster of a metal is due to
- a. its high density
 - b. its high polishing
 - c. its chemical inertness
 - d. presence of free electrons
47. The main active constituent of tea and coffee is
- a. nicotine
 - b. chlorophyll
 - c. caffeine
 - d. aspirin
48. 'CD' computer abbreviation usually means
- a. Command Description
 - b. Change Data
 - c. Copy Density
 - d. Compact Disc
49. Which of these is a search engine?
- a. FTP
 - b. Google
 - c. Archie
 - d. ARPANET

50. Modem stands for
- a. Modulator Demodulator
 - b. Monetary Devaluation Exchange Mechanism
 - c. Memory Demagnetization
 - d. Monetary Demarkation
51. A JPG is:
- a. A Jumper Programmed Graphic
 - b. A format for an image file
 - c. A type of hard disk
 - d. A unit of measure for memory
52. What is the name of the person that controls a football match?
- a. A referee
 - b. An Umpire
 - c. A Spectator
 - d. A goalkeeper
53. The name Kunjarani Devi is associated with:
- a. Weight Lifting
 - b. Target Shooting
 - c. Athletics
 - d. Swimming
54. Friction can be reduced by changing from
- a. rolling to sliding
 - b. sliding to rolling
 - c. dynamic to static
 - d. potential energy to kinetic energy

55. For galvanizing iron which of the following metals is used
- a. Lead
 - b. Aluminium
 - c. Copper
 - d. Zinc
56. The unit of radioactivity is
- a. Electron volt
 - b. Electron ampere
 - c. Curie
 - d. MV
57. A power plant giving least running cost of production of electrical power is
- a. Steam power plant
 - b. Gas turbine power plant
 - c. Hydro electric power plant
 - d. Nuclear power plant
58. Superheated steam is generated in following reactor
- a. Boiling water
 - b. Gas cooled
 - c. Pressurised water
 - d. All of the above
59. The undesirable property of a refrigerant is
- a. Non-toxic
 - b. Non- flammable
 - c. Non-explosive
 - d. High boiling point
60. Pile foundations are suitable for
- a. water logged soils
 - b. Soft rocks
 - c. Compact soils
 - d. Multi- storeyed buildings

61. Addition of Pozzolana to ordinary portland cement increases
- a. Bleeding
 - b. Shrinkage
 - c. Permeability
 - d. Heat of hydration.
62. Which of the following has more fire resisting characteristics?
- a. Marble
 - b. Limestone
 - c. Compact sandstone
 - d. Graphite
63. Bulking of sand is caused due to
- a. Surface moisture
 - b. Air voids
 - c. Viscosity
 - d. Clay contents
64. Orthotolidine test is used for determination of
- a. Dissolved oxygen
 - b. Residual chlorine
 - c. Biochemical oxygen demand
 - d. Dose of coagulant
65. The characteristics of fresh and septic sewage respectively are
- a. Acidic and alkaline
 - b. Alkaline and acidic
 - c. Both acidic
 - d. Both alkaline
66. In water treatment, rapid gravity filters are adopted to remove
- a. Dissolved organic substances
 - b. Dissolved solids and dissolved gases
 - c. Floating solids and dissolved inorganic solids
 - d. Bacteria and colloidal solids

67. Biochemical Oxygen Demand (BOD) of safe drinking water must be

- a. nil
- b. 5
- c. 10
- d. 15

68. Rankin cycle comprises of two isothermal and two processes.

- a. Isobaric
- b. Polytropic
- c. Isentropic
- d. None of these

69. Free oxygen is removed from boiler feed water, because it

- a. Reduces heat transfer co-efficient
- b. is corrosive
- c. causes explosion
- d. none of these

70. A Bioreactor is

- a. Fermentation tank
- b. Culture containing radioactive isotopes
- c. Culture for synthesis of new chemicals
- d. Hybridoma

71. Damper in an automobile is used to

- a. Absorb the energy
- b. Dissipate the energy
- c. Release the energy
- d. Increase the energy

72. Which is not application software?
- a. Windows NT
 - b. Page Maker
 - c. Win Word XP
 - d. Photoshop
73. Which of the following is not an operating system?
- a. DOS
 - b. Linux
 - c. Windows
 - d. Oracle
74. Mercury as an electric contact material is
- a. A liquid
 - b. A metal
 - c. A metal liquid
 - d. A gas
75. Which of the following is semiconductor material?
- a. Phosphorous
 - b. Rubber
 - c. Silicon
 - d. Aluminium
76. The stars counted.
- a. can
 - b. can be
 - c. cannot be
 - d. must
77. Do not cry spilt milk.
- a. on
 - b. over
 - c. about
 - d. for

78. Fill in the blanks using correct tense forms:

Joe's cat..... into the river yesterday.

- a. fell
- b. was falling
- c. have fallen
- d. is falling

79. Fill in the blanks with most appropriate word:

Take your umbrella. It

- a. was raining
- b. rained
- c. rains
- d. is raining

80. The doctor gave me a prescription my cough.

- a. for
- b. with
- c. at
- d. to

81. He went so fast that I could not keep up him.

- a. for
- b. with
- c. to
- d. in

82. Find the synonym for **Abandon**

- a. Forsake
- b. Keep
- c. Cherish
- d. Enlarge

83. Find the synonym for **Sterile**

- a. Dry
- b. Barren
- c. Childless
- d. None of these

84. Find the Antonym for **Widely**

- a. Spaciously
- b. Succinctly
- c. Broad based
- d. Narrowly

85. Find the Antonym for **Mighty**

- a. Forcible
- b. Forceful
- c. Weak
- d. Tough

86. Story of old time gods or heroes is:

- a. Lyric
- b. Epic
- c. Legend
- d. Romance

87. A doctor who treat skin diseases

- a. Ophthalmologist
- b. Dermatologist
- c. Paediatrician
- d. Cardiologist

88. Find the correct spelt word:

- a. Adventitious
- b. Adventitous
- c. Adventitus
- d. Adventituos

89. A man travels equal distances of his journey at 40, 30 and 15 km/h respectively. Find his average speed for whole journey.

- a. 24
- b. 25
- c. 27
- d. 28

90. Select the pair which has same relationship.

Army: Logistics

- a. Business: Strategy
- b. Soldier: students
- c. War: logic
- d. team: individual

91. means communication without words.

- a. Object communication
- b. Written communication
- c. Oral communication
- d. Non- verbal communication

92. As a means of communication e-mails have features of the immediacy of both and

- a. reading, receiveing
- b. writitng, sending
- c. calling, receiveing
- d. receiveing, sending

93. The primary goal of communication is to

- a. to create barriers
- b. to create noises
- c. to effect a change
- d. none of these

94. is an annoucement sheet that is sent to specific group of people.

- a. notice
- b. memo
- c. circular
- d. letter

95. is done when you need to continue learning and studying that you develop your own thinking and skills.

- a. Professional reading
- b. action
- c. extensive
- d. intensive

96. is the most important aspect of style in a language
- a. alphabets
 - b. articles
 - c. punctuation
 - d. nouns
97. The environment in which the transmitter or receiver should be
- a. Complex
 - b. competent
 - c. complete
 - d. compatible
98. Listening means learning through conversation.
- a. Evaluative
 - b. Appreciative
 - c. Dialogic
 - d. Empathetic
99. In an interview when you do not know an answer, you should
- a. Keep guessing
 - b. remain quiet
 - c. admit you do not know the answer
 - d. bluff
100. To make a presentation effective and impressive, you should use
- a. complex sentences
 - b. a simple and active form of sentences
 - c. passive sentences
 - d. none of the above



- Rough Work -

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