

Seat No.	
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P.G. Entrance Examination, July - 2023**M.Tech. RURAL TECHNOLOGY****Sub. Code: 71140****Day and Date : Tuesday, 18- 07 - 2023****Total Marks : 100****Time : 10.30 a.m. to 12.00 noon**

- 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) 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
- 2) Bromine is a
 - A) Black solid
 - B) Red liquid
 - C) Colourless gas
 - D) High inflammable gas

P.T.O.

- 3) Permanent hardness of water may be removed by the addition of
- A) Sodium carbonate
 - B) Alum
 - C) Potassium permanganate
 - D) Lime
- 4) Aerobic 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
- 5) 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
- 6) The foundations are placed below ground level, to increase
- A) strength
 - B) workability
 - C) stability of structure
 - D) all of above

- 7) Malaria is caused by
- A) Bacteria
 - B) Mosquito
 - C) Protozoa
 - D) Virus
- 8) Which of the following are Milk Processing Operations?
- A) Clarification
 - B) Pasteurization
 - C) Homogenization
 - D) All of the mentioned
- 9) Hydrographic surveys deal with the mapping of
- A) large water bodies
 - B) heavenly bodies
 - C) canal system
 - D) movement of clouds
- 10) What is mean by FSI?
- A) Floor Space Index
 - B) Free Site Inspection
 - C) Free Site Index
 - D) Flat Square Index
- 11) Which of the following does NOT constitute 90% of dry weight of any food?
- A) Carbohydrates
 - B) Fibers
 - C) Proteins
 - D) Fats

- 12) 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
- 13) For safety, the fuse wire used in the mains for household supply of electricity must be made of metal having
- A) low melting point
 - B) high resistance
 - C) high melting point
 - D) low specific heat
- 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) 'MOV' extension refers usually to what kind of file?
- A) Image file
 - B) Animation / movie file
 - C) Audio file
 - D) MS Office document
- 16) What frequency range is the High Frequency band?
- A) 100 kHz
 - B) 1GHz
 - C) 30 to 300 MHz
 - D) 3 to 30 MHz

- 17) 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.
- 18) The ratio of work done per cycle to the stroke volume of the compressor is known as
- A) compressor capacity
 - B) compression ratio
 - C) compressor efficiency
 - D) mean effective pressure
- 19) 'Global warming' leads to
- A) low level of oxygen
 - B) high level of oxygen
 - C) floods and droughts
 - D) rain forests
- 20) 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
- 21) Nuclear reactors are used
- A) to produce heat for thermoelectric power
 - B) to produce fissionable material
 - C) to propel ships, submarines, aircraft
 - D) all of the above

- 22) 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
- 23) A computer program that converts assembly language to machine language is
- A) Compiler
 - B) Interpreter
 - C) Assembler
 - D) Comparator
- 24) Fog is an example of colloidal system of
- A) solid dispersed in gas
 - B) solid dispersed in liquid
 - C) liquid dispersed in gas
 - D) gas dispersed in liquid
- 25) Which of the following is not an explosive?
- A) TNT
 - B) CMC
 - C) RDX
 - D) Lead azide
- 26) Which of the following parameter is not necessary for the description of an automobile?
- A) Model
 - B) Type
 - C) Capacity
 - D) Colour
- 27) 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

- 28) The surface Run-off is the quantity of water
- A) absorbed by soil
 - B) intercepted by buildings and vegetative cover
 - C) required to fill surface depressions
 - D) that reaches the stream channels
- 29) Isobaric process is
- A) Constant volume process
 - B) Constant temperature process
 - C) Constant pressure process
 - D) None of the above
- 30) The predominant micro-organisms in frozen foods are
- A) Bacteria
 - B) Micro-coccus
 - C) Yeast and moulds
 - D) None of the above
- 31) When price floor is set above equilibrium price it will result in?
- A) Shortage
 - B) Surpluses
 - C) Equilibrium
 - D) None of the above
- 32) If a material has identical properties in all directions, it is said to be
- A) Homogeneous
 - B) Isotropic
 - C) Elastic
 - D) Orthotropic
- 33) Which of the gas is not known as green house gas?
- A) Methane
 - B) Nitrous oxide
 - C) Carbon dioxide
 - D) Hydrogen
- 34) Which of the following is the lightest and most volatile liquid fuel?
- A) Gasoline
 - B) Kerosene
 - C) Fuel oil
 - D) Diesel

- 35) Made from a variety of materials, such as carbon, which inhibits the flow of current?
- A) Choke
 - B) Inductor
 - C) Resistor
 - D) Capacitor
- 36) The standard height of a standard rain gauge, is
- A) 10cm
 - B) 20cm
 - C) 30cm
 - D) 50cm
- 37) Hydrographic surveys deal with the mapping of
- A) large water bodies
 - B) heavenly bodies
 - C) canal system
 - D) movement of clouds
- 38) Speed of sound does not depend on-
- A) Temperature
 - B) Humidity
 - C) Pressure
 - D) None of these
- 39) 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
- 40) Causes of air pollution includes
- A) chlorofluorocarbon
 - B) cars and motor vehicles
 - C) power plants and industries
 - D) all of above

- 41) The primary goal of a computer is to turn data into _____.
- A) Ideas
 - B) Suggestions
 - C) Information
 - D) Reports
- 42) What is the function of the alternator?
- A) Recharging the Battery
 - B) Voltage Regulator
 - C) Auto-ignition
 - D) None of the above
- 43) The fundamental principle of surveying is to work from the
- A) whole to the part
 - B) part to the whole
 - C) lower level to higher level
 - D) higher level to lower level
- 44) The maximum bearing capacity of soil is that of
- A) hard rocks
 - B) black cotton soil
 - C) dry, coarse sandy soil
 - D) fine sandy soil
- 45) 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) $V=IR$

- 46) Radar is used for
- A) Locating Submerged submarines
 - B) Receiving the signals in the radio receiver
 - C) Locating geostationary satellites
 - D) Detecting and locating position of objects such as aeroplanes
- 47) Non stick cooking utensils are coated with
- A) Teflon
 - B) PVC
 - C) Black paint
 - D) Polysterene
- 48) Which of the following foods is NOT exempted from food labeling?
- A) Whole coffee beans
 - B) Dehydrated vegetables-condiment type
 - C) Plain instant tea (unsweetened)
 - D) Unpopped popcorn
- 49) Wood is the main raw material for the manufacture of
- A) paper
 - B) paint
 - C) ink
 - D) gun powder
- 50) Automobile can be classified based on which of the following parameter?
- A) Fuel Used
 - B) Transmission
 - C) Drive
 - D) All of the mentioned

- 51) The members of the Rajya Sabha are elected by
- A) The people
 - B) Lok Sabha
 - C) Elected members of legislative assembly
 - D) Elected members of legislative council
- 52) India Celebrates February 28 every year as 'National Science Day' because on this day
- A) First Indian Space craft was launched
 - B) Nehru laid the foundation of Science labs all over India
 - C) In 1928, V. Raman discovered what was later called the 'Raman Effect'
 - D) Vikram Sarabhai was born
- 53) Chemical formula for water is
- A) NaAlO_2
 - B) H_2O
 - C) Al_2O_3
 - D) CaSiO_3
- 54) The group of metals Fe, Co, Ni may best called as
- A) Transition metals
 - B) Main group metals
 - C) Alkali metals
 - D) Rare metals
- 55) Washing soda is the common name for
- A) Sodium carbonate
 - B) Calcium bicarbonate
 - C) Sodium bicarbonate
 - D) Calcium carbonate

- 56) Natural source of pollution is
- A) Rain forest
 - B) Mining for minerals
 - C) Forest fire
 - D) Falling of meteoroids
- 57) As you go down into a well, your weight
- A) Increases slightly
 - B) Decreases slightly
 - C) Remains exactly the same
 - D) None of the above
- 58) What is the end product of anaerobic treatment?
- A) Oxygen
 - B) Methane
 - C) Nitrogen
 - D) Hydrogen
- 59) Wide variety of living things is called
- A) Diversity
 - B) Biodiversity
 - C) Habitat
 - D) Population
- 60) Salinization is
- A) Accumulation of salts in water
 - B) Accumulation of salts in soil
 - C) Accumulation of salts in body
 - D) Accumulation of salts in animals
- 61) In 40KW there are
- A) 4W
 - B) 0.4MW
 - C) 40000W
 - D) all the above

- 62) Persons working in cement plants and limestone quarries are more prone to disease like
- A) cancer
 - B) asthma
 - C) silicosis
 - D) fluorosis (bone disease)
- 63) Water functions in the body to
- A) serve as a medium for chemical reactions
 - B) dissolve oxygen
 - C) induce glycogen
 - D) moderate metabolism
- 64) Viscosity is defined as
- A) Resistance of the body
 - B) Resistance to flow
 - C) Acceptance to flow
 - D) None of above
- 65) Filaria is caused by
- A) Bacteria
 - B) Mosquito
 - C) Protozoa
 - D) Virus
- 66) Dr. Zakir Hussain was
- A) the first Muslim president of India
 - B) first vice president of India
 - C) first president of Indian National Congress
 - D) first speaker of Lok Sabha

- 67) The landmass of which of the following continents is the least?
- A) Africa
 - B) Asia
 - C) Australia
 - D) Europe
- 68) Which of the following was Satyajit Ray associated with?
- A) Classical music
 - B) Commercial art
 - C) Film Direction
 - D) Classical dance
- 69) The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is:
- A) 2.3 m
 - B) 4.6 m
 - C) 7.8 m
 - D) 9.2 m
- 70) The curved surface area of a cylindrical pillar is 264 m^2 and its volume is 924 m^3 . Find the ratio of its diameter to its height.
- A) 3:7
 - B) 7:3
 - C) 6:7
 - D) 7:6

- 71) An error 2% in excess is made while measuring the side of a square. The percentage of error in the calculated area of the square is:
- A) 2%
 - B) 2.02%
 - C) 4.04%
 - D) 4%
- 72) Where is Sardar Sarovar project situated?
- A) Gujarat
 - B) Rajasthan
 - C) Madhya Pradesh
 - D) Maharashtra
- 73) Disease that are caused by air pollution includes
- A) Lung cancer
 - B) Respiratory illness
 - C) Skin diseases
 - D) All of above
- 74) 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

- 75) PDF extension usually refers to
- A) Post dispatch findings
 - B) Portable document format
 - C) Portable dispatch format
 - D) All of above
- 76) Her thinking leans _____ democracy.
- A) with
 - B) towards
 - C) for
 - D) None of these
- 77) Anything in this shop can be bought, _____.
- A) Can't it?
 - B) Can't anything?
 - C) Can't we?
 - D) Can't all?
- 78) A small house with all rooms on one floor
- A) Cottage
 - B) Bungalow
 - C) Castle
 - D) Flat

- 79) One who eats everything
A) Omnipotent
B) Omnivorous
C) Carnivorous
D) Gourmet
- 80) He got too tired _____ over work.
A) because of
B) because off
C) on
D) for
- 81) Building has been built _____ the new plan.
A) accordance to
B) in accordance with
C) for
D) about
- 82) Find the synonym for the word RECTIFY
A) To build
B) Correct
C) Destroy
D) To command
- 83) Find the synonym for the word PARAMOUNT
A) Very important
B) Wide and extensive
C) Above others in rank of authority
D) Famous
- 84) Fill in the blank with proper word.
An employment advertisement should _____ the number of vacancies.
A) Provide
B) Specify
C) Contain
D) Declare
- 85) Select the pair which has same relationship
GRAVITY:PULL
A) Iron: metal
B) North pole: directions
C) Magnetism: attractions
D) Dust: dessert

- 86) Which of these must be avoided for effective communication?
A) Sharing of activity
B) Listening
C) Ambiguity
D) Politeness
- 87) Positive classroom communication leads to
A) Coercion
B) Submission
C) Confrontation
D) Persuasion
- 88) Our dress code is an example of _____ communication.
A) Verbal
B) Non verbal
C) Written
D) Spoken
- 89) Which of these must be avoided in a group discussion?
A) Speaking facts
B) Asking questions
C) Speaking fast
D) Speaking with clarity
- 90) In an oral presentation, the speaker should not
A) Panic
B) Pause
C) Make eye contact
D) Inspire
- 91) Communication is a part of _____ skills.
A) Soft
B) Hard
C) Rough
D) Short
- 92) Which of these is not a commandment of effective communication?
A) Clarity in language
B) Listen poorly
C) Home communication skills
D) Adequate medium
- 93) A person of good understanding knowledge and reasoning power
A) Expert
B) Intellectual
C) Snob
D) Literate

- 94) Select the pair which has the same relationship
DISTANCE:MILE
A) liquid:litre
B) bushel:corn
C) weight:scale
D) fame:television
- 95) Types of interview include
A) Job interview
B) delegation
C) appraisal
D) all of above
- 96) A conversation is slowing down when
A) when person starts to dominate the conversation
B) when questions dry up
C) A and B
D) none of above
- 97) Effective paraphrasing avoids the risk of
A) Changing
B) Noting
C) Copying
D) Plagiarism
- 98) _____ refers to the time of action.
A) Tense
B) Transitive
C) Intransitive
D) Main
- 99) _____ listening means learning through conversation.
A) Evaluative
B) Appreciative
C) Dialogic
D) Empathetic
- 100) Any word that adds more meaning to the noun is called an
A) Adverb
B) Verb
C) Adjective
D) Noun



Rough Work