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# AMRU HP B.Sc. NET

**Previous Year Paper**  
**07 Jul, 2024**





# Atal Medical & Research University, H.P. (A State Govt. University)

(SLBS Govt. Medical College & Hospital Campus, Ner Chowk, Mandi, H.P.)

Website:- [www.amruhp.ac.in](http://www.amruhp.ac.in) , Email: [coemedicaluniv.mandi@gmail.com](mailto:coemedicaluniv.mandi@gmail.com), Phone No. 01905-243967

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## Answer keys

### for B. Sc. Nursing Entrance test

### Paper Code-2401

held on 7<sup>th</sup> July, 2024

**Morning Shift (10:00 AM to 12:00 Noon)**

If a candidate does not satisfy with the key answers, he/she can make representation with documentary proof to the COE, Atal Medical and Research University, HP, at Nerchowk, Distt. Mandi, HP-175008 through email on [coemedicaluniv.mandi@gmail.com](mailto:coemedicaluniv.mandi@gmail.com) up to 09.07.2024 by 05:00 PM and thereafter, no representation will be entertained under any circumstances.

-Sd/-

**(Dr. Parveen Kumar Sharma)**

**Controller of Examinations**

Atal Medical & Research University, HP,

Ner Chowk, Distt. Mandi.

To be filled by the candidate)

Booklet S. No. \_\_\_\_\_

Roll No. (In figures) \_\_\_\_\_

Roll No. (In words) \_\_\_\_\_

Name of the Candidate : \_\_\_\_\_

Father's Name : \_\_\_\_\_

Center of Examination : \_\_\_\_\_

**Total No. of Questions : 100**

**Paper Code- 2401**

**Time Allowed : 2 Hours**

**Maximum Marks : 100**

**IMPORTANT NOTE:**

- (i) OMR Answer Sheet will be supplied by the Examination Centre Superintendent for answering the questions.
- (ii) Use **Blue/Black Ink/ Ball Pen only**, to darken the appropriate circle in the OMR Answer Sheet.
- (iii) Darken one circle deeply for each question in the OMR Answer Sheet, as faintly darkened circle might be rejected by the Optical Scanner.
- (iv) Darkening of more than one circle shall be rejected by the scanner. **Over-writing, cutting, erasing or use of White Fluid is not allowed.**
- (v) Before dealing with the question paper, fill-up the required information with Blue/Black Ball Pen correctly both in the Question Booklet and in the OMR Answer Sheet.
- (vi) Do not fold the OMR Answer Sheet nor put any mark here and there to avoid rejection by the Optical Scanner.
- (vii) Write Roll. No. carefully on the OMR Answer Sheet and darken the appropriate circle properly.
- (viii) **Each question carries One Mark. There will be No Negative Marking.**
- (ix) **Use of Calculator is not allowed.**
- (x) **No over-writing, cutting, erasing or use of white fluid is allowed.**
- (xi) Rough work be done on the sheet(s) at the end.
- (xii) **MOBILE TELEPHONES (EVEN ON SWITCH-OFF MODE) AND SUCH OTHER ELECTRONIC DEVICES ARE NOT ALLOWED INSIDE THE EXAMINATION HALL.**
- (xiii) The question paper-booklet will be retained by the candidate after the entrance test is over.
- (xiv) **Question No 1 - 20 is Biology, 21 – 40 is Physics, 41 – 60 is Chemistry, 61 – 80 is Nursing Aptitude and 81 – 100 is English.**



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## Biology

Q1. Pollination in closed flower is called

- (a) Cleistogamy
- (b) Chasmogamy
- (c) Xenogamy
- (d) Geitonogamy

Answer (a) Cleistogamy

Q2. The Uterus is single in female and it is also called as:

- (a) Cervix
- (b) Ovary
- (c) Womb
- (d) Ampulla

Answer (c) Womb

Q3. Family Planning Programme were initiated in the year

- (a) 1947
- (b) 1975
- (c) 1981
- (d) 1951

Answer (d) 1951

Q4.  $F_1$  generation resembles both the parents in

- (a) Incomplete dominance
- (b) (b) Co-Dominance
- (c) (c) Pleiotropy
- (d) (d) Law of Dominance

Answer (b) Co-Dominance

Q5. In Lac Operon the number of Structural genes are

- (a) Five
- (b) Four
- (c) Three
- (d) Two

Answer (c) Three

Q6. When original drifted population becomes founders, effect is called

- (a) Founder effect
- (b) Industrial Melanism
- (c) Adaptive Radiation
- (d) Mutation Effect

Answer (a) Founder effect

Q7. The Yellowish fluid Colostrum secreted by Mother during the initial days of lactation has Abundant

- (a) Antigens
- (b) Antibodies
- (c) Allergy
- (d) Oncogenes

Answer (b) Antibody

Q8. Large holes in "Swiss Cheese" are due to production of large amount of

- (a)  $H_2SO_4$
- (b)  $O_2$
- (c)  $CO_2$
- (d)  $H_2S$

Answer (c)  $CO_2$

Q9. DNA fragments can be joined together by using

- (a) Restriction Endonuclease
- (b) Okazaki Fragments
- (c) DNA Ligase
- (d) DNA Helicase

Answer (c) DNA Ligase

Q10. When one species cause harm to another organism without any cost or benefits to itself

- (a) Commensalism
- (b) Amensalism
- (c) Predation
- (d) Mutualism

Answer (b) Amensalism

Q11. The smallest living cells are

- (a) Mycoplasma
- (b) Bacteria
- (c) Fungus
- (d) Bacteriophage

Answer (a) Mycoplasma

Q12. Plants having naked seeds are

- (a) Angiosperms
- (b) Gymnosperms
- (c) Pteridophytes
- (d) Bryophytes

Answer (b) Gymnosperms

Q13. Presence of feathers are characteristics of

- (a) Mammals
- (b) Reptiles

(c) Aves

(d) Amphibians

Answer (c) Aves

Q14. When Sepals are united, condition is called

- (a) Polysepalous
- (b) Polypetalous
- (c) Gamopetalous
- (d) Gamosepalous

Answer (d) Gamosepalous

Q15. Cell Theory was given by

- (a) Singer and Nicolson
- (b) Rudolf Virchow
- (c) Schleiden and Schwann
- (d) Robertson

Answer (c) Schleiden and Schwann

Q16. Kranz Anatomy is found in leaves of

- (a) C<sub>4</sub> Plants
- (b) C<sub>3</sub> Plants
- (c) C<sub>2</sub> Plants
- (d) All of the above

Answer (a) C<sub>4</sub> Plants

Q17. Each Mammalian Haemoglobin molecule can carry a maximum number of.....molecules of Oxygen

- (a) 5
- (b) 4
- (c) 3
- (d) 2

Answer (b) 4

Q18. Which one of following is not a part of E.C.G.

- (a) P-Wave
- (b) Q -Wave
- (c) T-Wave
- (d) Z-Wave

Answer (d) Z-Wave

Q19. Accumulation of Urea in blood is called

- (a) Angina
- (b) Gout
- (c) Uremia
- (d) Osteoporosis

Answer (c) Uremia

Q20. The Site for Active ribosomal RNA Synthesis is

- (a) Ribosome
- (b) Mitochondria
- (c) Nucleolus
- (d) Vacuoles

Answer (c) Nucleolus

### Physics

Q21. The dimensions of Plank's Constant equals to that of

- a) Energy
- b) Momentum
- c) Angular momentum
- d) Power

Ans c

Q22. The angle between two equal vectors is

- a)  $0^\circ$
- b)  $30^\circ$
- c)  $90^\circ$
- d)  $180^\circ$

Ans a

Q23. Change in momentum is given by

- a) Force x Mass
- b) Force x Time
- c) Force x Velocity
- d) Force x Distance

Ans b

Q24. Ev is the unit of

- a) Charge
- b) Voltage
- c) Energy
- d) Acceleration

Ans c

Q25. For which of the following does the centre of mass lie outside the body?

- a) a pencil
- b) a dice
- c) a bangle
- d) a shotput

Ans c

Q26. The acceleration due to gravity at the centre of earth is

- a)  $9.8 \text{ ms}^{-2}$
- b)  $4.9 \text{ ms}^{-2}$
- c) Zero
- d) None of these

Ans c

Q27. An ice cube floats in a glass of water. What happens to the level of water in the glass when ice melts?

- a) Decreases
- b) Increases
- c) Remains the same
- d) First increases and then decreases

Ans c

Q28. Degree of freedom of a monoatomic gas molecule is

- a) 3
- b) 5
- c) 6
- d) 7

Ans a

Q29. The Phenomenon of round propagation in air is

- a) Isothermal process
- b) Adiabatic process
- c) Isobaric process
- d) Isochoric process

Ans b

Q30. For an ideal gas

- a)  $C_p < C_v$
- b)  $C_p = C_v$
- c)  $C_p > C_v$
- d)  $C_p = C_v = 0$

Ans c

Q31. In a nonuniform electric field, electric dipole experiences

- a) Torque only
- b) Torque as well as net force
- c) Force only
- d) None of these

Ans b

Q32. If mobility of electron is  $u_e$  and mobility of hole is  $u_h$  then

- a)  $u_e = u_h$
- b)  $u_e > u_h$
- c)  $u_e < u_h$
- d)  $u_e \leq u_h$

Ans b

Q33. A galvanometer acting as voltmeter will have

- a) High resistance in parallel with its coil
- b) High resistance in series with its coil
- c) Low resistance in parallel with coil
- d) Low resistance in series with coil

Ans c

Q34. A transformer is a device which transform

- a) DC voltage
- b) AC voltage
- c) AC and DC voltage
- d) None

Ans b

Q35. Which of the following has smallest wavelength

- a) Yellow rays
- b) X-rays
- c)  $\alpha$ -rays
- d)  $\gamma$ -rays

Ans d

Q36. Image formed by an objective of a compound microscope is

- a) Virtual and enlarged
- b) Virtual and diminished
- c) Real and diminished
- d) Real, enlarged and inverted

Ans d

Q37. If the particles are moving with same velocity, then maximum de-Broglie wavelength is for

- a) Proton
- b) Neutron
- c)  $\alpha$ -particle
- d)  $\beta$ -particle

Ans d

Q38. Demodulation is essential feature of a

- a) Transmitter
- b) Receiver
- c) Medium
- d) None of these

Ans b

Q39. Which sphere of atmosphere is closest to earth

- a) Troposphere
- b) Stratosphere
- c) Mesosphere
- d) Ionosphere

Ans a

Q40. Torque acting on electric dipole moment  $\vec{P}$  placed in uniform electric field  $\vec{E}$  is

- a)  $\vec{P} \times \vec{E}$
- b)  $\vec{P} \cdot \vec{E}$
- c)  $\vec{P} \times \vec{E} \times \vec{P}$
- d)  $\frac{\vec{E} \cdot \vec{P}}{D^2}$

Ans a

### Chemistry

Q41. Which of the following term is unitless-

- a) Molality
- b) Molarity
- c) Mole fraction
- d) Strength

Ans- C

Q42. The maximum number of electrons in a subshell is given by the expression

- a)  $4l - 2$
- b)  $4l + 2$
- c)  $2l + 1$
- d)  $2n^2$

Ans- B

Q43. Which of the following is not a transition metal

- a) Silver
- b) Lead (Pb)
- c) Tungsten (w)
- d) Manganese (Mn)

Ans- B

Q44. The ratio of  $\pi$  to  $\sigma$  bond in benzene is

- a) 1 : 2
- b) 1 : 6
- c) 1 : 4
- d) 1 : 1

Ans- C

Q45 The spherical shape of rain water droplet is due to

- a) Viscosity
- b) Surface tension
- c) Temperature
- d) Pressure

Ans- B

Q46. The normal P.H range of human blood is

- a) 0 – 5.25
- b) 7.35 – 7.45
- c) 6.25 – 6.75
- d) 8.00 – 9.25

Ans- B

Q47. The electrode potential of standard hydrogen electrode (SHE) fixed is

- a) 0.34 V
- b) – 0.44 V
- c) 0 V
- d) – 0.76 V

Ans- C

Q48. The formula of Soda ash is-

- a)  $\text{Na}_2\text{CO}_3 \cdot 10 \text{H}_2\text{O}$
- b)  $\text{Na}_2\text{CO}_3 \cdot 2 \text{H}_2\text{O}$
- c)  $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$
- d)  $\text{Na}_2\text{CO}_3$

Ans- D

Q49. Reduction process involve-

- a) Gain of electrons
- b) Addition of oxygen
- c) Loss of electrons
- d) Increase in oxidation number

Ans- A

Q50. An electrophilic reagent is

- a) Electron deficient species
- b) Electron rich species
- c) Negatively charged species
- d) None of above

Ans- A

Q51. The IUPAC Name of the compound

$\text{CH}_3 - \text{CH} = \text{CH} - \text{C} \equiv \text{CH}$  is

- a) Pent- 2 en-4-yne
- b) Pent-1-en-4-yne
- c) Pent-3-en-1-yne
- d) Pent-2-en-5-yne

Ans- C

Q52. The Chlorination of methane is an example of

- a) Elimination reaction
- b) Substitution reaction
- c) Addition reaction
- d) Oxidation reaction

Ans- B

Q53. Isotonic solutions have

- a) Same boiling point
- b) Same vapor pressure
- c) Same melting point
- d) Same osmotic pressure

Ans-D

Q54. The Concentration Term independent of temperature is

- a) Normality
- b) Volume percentage
- c) Molality
- d) Molarity

Ans-C

Q55. For redox reaction to proceed in a cell, the e.m.f must be

- a) Positive
- b) Negative
- c) Fixed
- d) Zero

Ans- A

Q56. The unit of cell constant is

- a)  $\text{Ohm}^{-1} \text{cm}^{-1}$
- b) Cm
- c)  $\text{Ohm}^{-1} \text{cm}$

d)  $\text{Cm}^{-1}$

Ans- D

Q57. For a zero order reaction, the rate of reaction is

- a) Independent of initial conc. of reactants
- b) Depends upon initial conc. of reactants
- c) Both of above
- d) None of above

Ans- A

Q58. Transition metals behave as good catalyst because

- a) High melting point
- b) High ionization enthalpy
- c) Alloy formation
- d) Variable oxidation states

Ans- D

Q59. EDTA is

- a) Unidentate ligand
- b) Bidentate ligand
- c) Tridentate ligand
- d) Hexadentate ligand

Ans- D

Q60 Which of the following is colligative property

- a) Relative Lowering in vapour pressure
- b) Lowering in vapour pressure
- c) Vapour pressure
- d) Saturated Pressure

Ans- A

### Subject-Nursing Aptitude

Q61. Highest source of vitamin A is

- a) Papaya
- b) Green Leafy vegetable
- c) Cod Liver oil
- d) Carrot

Answer - C

Q62. Which one of the following organs breaks fat to produce cholesterol?

- (a) Lungs
- (b) Intestine
- (c) Liver
- (d) Kidneys

Answer - C

Q63. Who has propounded the word "Vitamin"?

- (a) Darwin
- (b) Pasteur
- (c) Landeck
- (d) Carimir Funk

Answer - D

Q64. Which of the following has a oxygenated blood?

- (a) Renal Veins
- (b) Pulmonary Veins
- (c) Pulmonary artery
- (d) Hepatic portal veins

Answer - B

Q65. Which part of brain is responsible for respiration?

- (a) Pons
- (b) Cerebrum
- (c) Medulla oblongata
- (d) Gyri

Answer – C

Q66. The meiotic division takes place in

- a) Meristematic cells
- b) Conductive cells
- c) Reproductive cells
- d) Vegetable cells

Answer – c

Q67. What is the standard value of ph range of acids?

- (a) 0-7
- (b) 7-14
- (c) 2-7
- (d) 7-15

Answer - A

Q68. What is the SI unit of current?

- (a) Coulomb
- (b) Ampere
- (c) Ohm
- (d) Volt

Answer - B

Q69. Name the part of the body on which corona virus affects the most?

- (a) Heart
- (b) Liver
- (c) Kidney
- (d) Lungs

Answer – D

Q70. What is the chemical formula of alcohol?

- (a)  $C_2H_5OH$
- (b)  $C_2H_5$
- (c)  $C_2H_5COOH$
- (d)  $C_2H_5O$

Answer – A

Q71. What is the scientific name of Humans?

- (a) *Mangifera Indica*
- (b) *Rana Tigrina*
- (c) *Homo sapiens*
- (d) *Homo species*

Answer - C

Q72. Which of the following hormones stimulates the development of ovarian follicles?

- (a) FSH
- (b) Estrogen
- (c) Progesterone
- (d) L. H.

Answer - A

Q73. What to be call the nuclides having same mass numbers?

- (a) Isotopes
- (b) Isobars
- (c) Isotones
- (d) Such species don't exist

Answer - B

Q74. Who is the father of Genetics?

- (a) Gregor mendel
- (b) Thomas hunt morgan
- (c) Francis galton
- (d) Krateuas

Answer - A

Q75. Which of the following is the lens of the eye?

- (a) Concave
- (b) Biconcave
- (c) Biconvex
- (d) None of above

Answer – C

Q76. How many bones are present in the middle ear?

- (a) 2
- (b) 3
- (c) 6
- (d) 9

Answer - B

Q77. Which of the following is not an infectious disease?

- (a) Cholera
- (b) Chicken pox
- (c) Malaria
- (d) Alzheimers

Answer - D

Q78. Which vitamin is responsible for wound healing?

- (a) Vitamin A
- (b) Vitamin B
- (c) Vitamin K
- (d) Vitamin C

Answer- D

Q79. In RNA of humans adenine pairs with

- (a) Uracil
- (b) Guanine
- (c) Thymine
- (d) None of the above

Answer - A

Q80. Which of the following is the functional unit of body?

- (a) Mitochondria
- (b) Cytoplasm
- (c) Spleen
- (d) Cell

Answer - D

### English

Q81. She dyed her hair and wore dark glasses.....people wouldn't recognise her.

- (a) if only
- (b) so that
- (c) never again
- (d) even so

Answer - B

Q82. The doctor recommended that I..... More careful with my diet.

- (a) be
- (b) will be
- (c) am
- (d) was

Answer- A

Q83. Select the most appropriate synonym of the word "erase":

- (a) Dilute
- (b) Aerate
- (c) Delete
- (d) Ignite

Answer- C

Q84. Select the most appropriate Antonym of the word "glut":

- (a) Shortage
- (b) Shout
- (c) Sick
- (d) Shroud

Answer- A

Q85. Select the most appropriate  
Antonym of the word  
“incidental”:

- (a) Fortunate
- (b) Planned
- (c) Important
- (d) Arbitrary

Answer - B

Q86. Select the most appropriate  
synonym of the word “tedious”:

- (a) Interesting
- (b) Boring
- (c) Exiting
- (d) Confusing

Answer-B

Q87. Select the most appropriate  
synonym of the word  
“unpredictable”:

- A. Expected
- B. Surprising
- C. Clear
- D. Boring

Answer -B

Q88. Select the most appropriate  
Antonym of the word “jubilant”:

- (a) Happy
- (b) Depressed
- (c) Surprised
- (d) Confused

Answer -A

Q89. Choose the word that is spelled  
correctly.

- (a) Embarassment
- (b) Embarrassment
- (c) Embarrasment
- (d) Embarassmentt

Answer – B

Q90. Choose the word that is spelled  
correctly.

- (a) accomodate
- (b) accommodate
- (c) accomodation
- (d) accomodated

Answer - B

Q91. Choose the word that is spelled  
correctly.

- (a) Beleive
- (b) believe
- (c) belive
- (d) beleiveing

Answer -B

Q92. A person who renounces the  
world and practice self-discipline  
in order to attain salvation;

- (a) sceptic
- (b) Ascetic
- (c) Devotee
- (d) Antiquarian

Answer -B

Q93. A sad song is;

- (a) Ditty
- (b) Knell
- (c) Dirge
- (d) Lay

Answer - C

Q94. A disease which spread by contract;

- (a) incurable
- (b) Infectious
- (c) Contagious
- (d) Fatal

Answer – C

Q95. She is interested..... learning a new language

- (a) At
- (b) To
- (c) On
- (d) In

Answer - D

Q96. He ran .....the house

- (a) Onto
- (b) Into
- (c) TO
- (d) For

Answer- B

Q97. I usually.....for a walk every morning

- (a) Goes
- (b) Go
- (c) Will go

(d) Have go

Answer -B

Q98. What are you doing here? She asked me.

- (a) She asked what I was doing here
- (b) She wanted to know what I am doing here
- (c) She wants to know what I was doing here
- (d) She wanted to know what I was doing here

Answer - D

Q99. The lawyer said to his client, "We will win the case."

- (a) The lawyer told to his client that they would win the case.
- (b) The lawyer said that the client would win the case.
- (c) The lawyer told his client that they should win the case.
- (d) The lawyer told the client that they would win the case.

Answer – D

Q100. We must respect the elders

- (a) The elders deserves respect from us
- (b) The elders must be respected
- (c) The elder respect must respected
- (d) Respect the elder we must

Answer -B

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